

PROJECT 15004301



## **VOLUME I OF II**

# RCRA FACILITY INVESTIGATION:

I. DESCRIPTION OF CURRENT CONDITIONS
AND
II. PRE-INVESTIGATION EVALUATION OF
CORRECTIVE MEASURE TECHNOLOGIES

PPG INDUSTRIES, INC. 10800 SOUTH 13TH STREET OAK CREEK, WISCONSIN

SEPTEMBER 1992

PREPARED FOR:
PPG INDUSTRIES, INC.
OAK CREEK, WISCONSIN

PREPARED BY:
WARZYN INC.
MILWAUKEE, WISCONSIN



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## PPG Industries, Inc. 10800 South 13th Street Oak Creek, Wisconsin 53154 USA (414) 764-6000

September 1, 1992

Mr. Allan Debus, Minnesota/Wisconsin Section RCRA Permitting Branch HRD-8J United States Environmental Protection Agency, Region V 77 West Jackson Boulevard Chicago, Illinois 60604-3509

Re: PPG Industries, Inc.
Oak Creek, Wisconsin
EPA ID WID 059972935
RCRA Facility Investigation
Task I and II Report

Dear Mr. Debus:

Enclosed are two copies of the RCRA Facility Investigation report for Task I (Description of Current Conditions) and Task II (Pre-Investigation Evaluation of Corrective Measure Technologies) as required by the Corrective Action section of the RCRA Hazardous Waste Management Permit obtained by the PPG Industries, Inc. (PPG), Oak Creek, Wisconsin Coatings & Resins manufacturing facility.

The federal portion of the permit became effective May 4, 1992. PPG received approval for a Class I modification to the permit by letter dated June 5, 1992 which extended the permit compliance date for completion of Task I to within 120 days of the permit's effective date.

On August 24, 1992, we had a telephone conversation regarding an aerial photograph that was taken in 1975 that shows soil piles located north of the active portion of the PPG facility. Aerial photographs were obtained to prepare Task I. From the photograph, it appears that soils removed during construction of the complex were moved to this location. No other information regarding this area is known. I informed you that PPG will initiate an investigation to determine if any other activities took place in this area that would classify it as a solid waste management unit. You agreed that it should not be considered a solid waste management unit until a determination can be made.

Please feel free to contact me regarding any questions you may have as you review the Task I and II reports.

Sincerely,

Thomas J. Yurick

**Environmental Coordinator** 

Enclosures: As Stated

cc: Mr. Patrick Brady, Wisconsin Department of Natural Resources

Mr. Mike Netzer, Wisconsin Department of Natural Resources

Mr. Mitchell Magee, PPG Industries, Inc.

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## Introduction

Warzyn Inc. (Warzyn) was authorized by PPG Industries, Inc. (PPG) to prepare this portion of the required RCRA Facility Investigation (RFI) for their facility located at 10800 South 13th Street in Oak Creek, Wisconsin (EPA Identification Number WID 059972935).

This report was prepared to meet the initial requirements of the Corrective Action section of PPG's RCRA Hazardous Waste Management Permit as issued by the United States Environmental Protection Agency, Region V, (U.S. EPA) on March 31, 1992 with an effective date of May 4, 1992. Specifically, this report pertains to the Task I (Description of Current Conditions) and Task II (Pre-Investigation Evaluation of Corrective Measure Technologies) portions of the RFI process as specified in the permit.

Information contained in the Task I portion of this report (Section 1) was primarily obtained through discussions with PPG personnel; a review of facility environmental records, correspondence, and laboratory analytical results; and review of other pertinent information relative to the PPG facility or surrounding vicinity.

Information contained in the Task II portion of this report (Section 2) was primarily developed by Warzyn in-house, through use of various treatment technology databases and a review of available information pertaining to site geologic and hydrogeologic conditions and hazardous waste management practices (see Appendix A for a list of quoted references).

In addition to their active facility, PPG also owns adjacent surrounding land that has never been used for industrial purposes and has either been vacant greenspace or farmland. For the purpose of this document, the site referenced includes only the active portion of the PPG facility unless otherwise noted.

Throughout this document, various solid waste management units (SWMUs) are referenced by number. Warzyn has included both the numbering system first employed by the Wisconsin Department of Natural Resources (WDNR) in their 1988 RCRA Facility Assessment (RFA) and the SWMU numbering system

included in the federal permit. This dual numbering system was required because each SWMU has a unique number in the RFA whereas, the numbering system used in the federal permit grouped like units into a single number. For the purpose of this document, the reference numbers are provided in parentheses with the RFA number given first and the federal permit number second (also referenced as RFI in some of the tables). Thus, (SWMU RFA #35, permit #20) would indicate SWMU #35 in the original RFA and SWMU #20 as subsequently numbered in the federal permit.

## TASK I

## **DESCRIPTION OF CURRENT CONDITIONS**

This Section presents a discussion of the facility background (i.e., physical setting and historical perspective) and the nature and extent of contamination known or suspected to be present. This Section is intended to summarize the body of knowledge available regarding past and present hazardous constituent and hazardous waste management activities at the site. This Section will form the basis for subsequent decisions made during the RFI process, including the requirement for no further action or the need to obtain additional data to further assess potential impact at a particular solid waste management unit (SWMU).

#### A. FACILITY BACKGROUND

This Subsection summarizes background information for the site and surrounding vicinity. Figures and tables are referenced to supplement the discussion of physical setting (i.e., location, site features, site and vicinity setting). Both tables and appendices are referenced to supplement the discussion of site history. This Subsection is intended to present the setting and framework for evaluating the potential for impact from waste management practices at facility SWMUs.

#### A.1. Site Description

A.1.a. Site Location and Setting - The site is located at 10800 South 13th Street in a mixed agricultural, industrial, and residential area in the City of Oak Creek, Wisconsin. The site is located in the NW 1/4 of the SW 1/4 of the Section 32, Township 5 North, Range 22 East, in the City of Oak Creek, Milwaukee County, Wisconsin (Figure 1).

The site is bounded by agricultural land to the north; agricultural land and a Chicago, Milwaukee, and St. Paul railroad line to the east; agricultural land to the south; and South 13th Street and across the way by agricultural land to the west. The boundaries of the PPG-owned lands and adjacent property owners are shown

on the Plat Map depicted on Figure 2. Surrounding land use is shown on the Zoning Map depicted on Figure 3 and indicates the site is zoned IPD, Industrial Planned Development.

According to the RFA, water pumped from Lake Michigan, and not groundwater, is used as the primary source of drinking water for the City of Oak Creek. The City also has five deep water supply wells that have been used only as an emergency backup source since 1984. None of the City wells are located within a 1/2 mile radius of the PPG-Oak Creek facility.

Also, according to PPG's Feasibility Report 19 private wells are located within a one mile radius of the site (refer to Figure 4 for locations and Table 1 for further discussion). Of these, eight wells are located within 1/2 mile of one of the SWMUs at the site. These eight wells are located west and northwest of the site. Of the total of 19 wells within a one mile radius of the site, only two wells are completed within the sand and gravel aquifer and 17 in the dolomite aquifer (refer to Figure 4 for locations).

At its closest point (southwest corner of the facility) the Root River is approximately 700 to 800 feet from the site boundary (Figure 1). A small, unnamed creek collects runoff from the eastern portion of the site and flows south, to the Root River (Figure 1). According to the PPG Feasibility Report, the site is not located within the Zone A 100-year floodplain of the Root River or the unnamed creek. However, a small portion of the site has been classified as Zone B, which is an area between the limits of the 100-year and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one foot; or where the contributing drainage area is less than one square mile (Figure 5). No other waterbodies appear to exist within an approximate 1/2 mile radius of the site.

According to the WDNR Wetland Inventory Map for the vicinity, identified wetland areas are located approximately 3000 feet northeast, less than 100 feet at its closest to the east (along the unnamed creek), and 700 to 1,000 feet south (Root River) of the site (refer to the Figure 5 for approximate delineations). Lands adjoining the Root River and the unnamed creek, including a portion of the site, have been classified as a primary environmental corridor (Figure 5).

According to the RFA, an endangered plant, Heartleaf Plaintain (Plantago cordata), is located approximately 1/2 mile downstream from the site, along the unnamed creek. Apparently two other plants of concern, Red Trillium (Trillium recurvatum) and Golden Seal (Hydrostis canadensis) have also been observed along the unnamed creek. An approximate 40 acre beech woods, (known as the

Root River forest) is also located approximately 900 feet southeast of the site, along the unnamed creek (refer to Figure 5 for location).

According to the Southeastern Wisconsin Regional Planning Commission (SEWRPC) publication, A Solid Waste Management Plan for Milwaukee County, Wisconsin (July 1987); the 40 acre beech woods is classified as a natural and scientific area. Also, according to the SEWRPC publication, there are no historical and archaeological sites within a 1/2 mile radius of the site.

The only parkland known to exist within a 1/2 mile radius of the site is the Root River Parkway area to the south. No schools are now located within at least 3,500 feet of the site.

A.1.b. Site Description - The PPG-Oak Creek property consists of approximately 118 acres of land, of which approximately 51 acres comprises the active portion of the manufacturing facility (also referred to as the site). The manufacturing facility consists of two major production areas (a resin plant and a paint plant which includes a finished product warehouse and raw material storage area); a technical/administrative services building; a waste treatment center; a raw materials tank farm and associated impoundment basin; a boiler house; a contractor fabrication shop; and other miscellaneous support buildings. A railroad spur enters the site near the southeast corner and generally trends to the northwest, towards the center of the property. Figure 6 depicts the major features of the site. Figure 7 depicts the known locations of major site utilities, Figure 8 provides a wind rose, and Figure 9 depicts the tank farm and associated tank identification numbering system.

During the RFA the WDNR identified a total of 36 SWMUs which are depicted on Figure 6 and summarized in Table 2. Based on discussions of past practices with facility personnel, available information, and a site walk-through additional SWMUs have been identified and will also be further discussed.

A.1.c. Site Topography and Drainage - The general topography of the site slopes slightly from west to east ranging in elevation from 680 feet to 710 feet National Geodetic Vertical Datum (NGVD). Lake Michigan is located approximately 5 miles east of the property with an approximate mean water surface elevation recorded at 580 feet NGVD according to the Racine North, Wisconsin 7.5 minute USGS Topographic Quadrangle Map (dated 1958 and photorevised in 1971). Figures 10 and 10A provide detailed topographic maps of the site and adjoining lands.

Surface drainage at the site is primarily dictated by topography and the stormwater conveyance system. Figure 11, obtained from PPG's recent permit

application for stormwater discharge associated with industrial activities under the Wisconsin Pollutant Discharge Elimination System (WPDES) program, indicates there are four major drainage patterns at the site.

The north yard area, roof drains from the paint plant (except the finished goods warehouse area), a portion of the roof drains from the resin plant, and the main employee parking lot all drain through a stormwater collection system to an interceptor basin (SWMU RFA #35, permit #20). Internal roads and yard areas that are a part of this system are all paved and storm drains are plugged to provide for spill control. These drains are opened to allow for discharge to the interceptor basin only after stormwater is observed and determined not to be visually contaminated.

The interceptor basin normally discharges to WPDES permitted Outfall 001 (also identified as 1 on Figure 11). This outfall is monitored under the WPDES program and is equipped with a continuous total carbon analyzer. In the unlikely event elevated organic levels are detected, a signal from the analyzer will automatically shut a sluice gate, preventing discharge through the outfall.

Under normal conditions Outfall 001 discharges to the unnamed creek along the eastern boundary of the property and ultimately discharges to the Root River, south of the facility. Two other drainage swales also discharge to the unnamed creek (identified as 2 and 4 on Figure 11). The northernmost swale drains the north employee parking lot, the grass area along the north property line and a gravel area occasionally used to stage trailers. A small portion of the southeast corner of the site also drains to the unnamed creek from the southernmost outfall.

Runoff from the south side of the manufacturing facility along the shipping and receiving area, the grassy area along the west property boundary, the trailer and tank wagon parking areas as well as roof drains from the administrative/technical building and finished good warehouse is conveyed primarily through underground piping to the drainage ditch along South 13th Street (identified as 3 on Figure 11). This drainage ditch ultimately discharges to the Root River.

In the tank farm, aboveground tanks with concrete pads and curbing are connected to a concrete trench system that discharges to the impoundment basin (SWMU RFA #29, permit #17). In addition, the remainder of the roof drains from the resin plant, roof drains from the paint plant raw materials warehouse, and road and trailer parking areas between the resin and paint plant also discharge to the impoundment basin (historically this discharge has also gone to the unnamed creek and the interceptor basin). All water from the impoundment basin is now discharged to the sanitary sewer if within discharge limits (otherwise the water would be disposed off-site).

The underground storage tank portion of the tank farm has an underdrain system which discharges to a concrete sump (SWMU RFA #30, permit #18). The sump is periodically pumped and is discharged to the sanitary sewer.

Stormwater from two of the noted hazardous waste storage areas, including the former container accumulation area by the waste treatment center (SWMU RFA #4, permit #3) and the 3,000, 55-gallon drum equivalent container accumulation area (SWMU RFA #5, permit #4), are also discharged to the sanitary sewer. Both areas have a pitched slope towards a collection sump or basin as a part of required secondary containment.

A.1.d. General Physiography and Regional Hydrogeology - Four soil series were present at the site prior to construction, according to the U.S.D.A. Soil Survey for the area. The soil series included the Morley (84% of site), Blount (10% of site), Drummer (5% of site) and the Askum (1% of site). These soils are classified as poorly to well drained and consist of silty soils overlying calcareous silty clay loam glacial till. Permeability of these shallow soils are typically moderately slow to moderate with a high available water capacity. Groundwater in these undisturbed soil series is generally found at less than five feet from the ground surface.

Underlying the surface soils in the vicinity of the site are glacial till deposits of the Oak Creek formation. The Oak Creek till is comprised of fine textured glacial till, lacustrine clay, silt, sand, and some glaciofluvial sand and gravel. The till is strongly calcareous and fine grained, and commonly contains between 80% and 90% silt and clay. The average grain size distribution is typically 12% sand, 43% silt, and 45% clay. Underlying the Oak Creek till is the New Berlin formation. The New Berlin formation is a dense sandy till with an average grain size distribution typically ranging 58% sand, 29% silt and 13% clay. The Oak Creek till has a low permeability, generally ranging from  $1 \times 10^{-6}$  to  $3 \times 10^{-8}$  centimeters per second (cm/sec). The New Berlin till has a somewhat higher permeability, generally ranging from  $1 \times 10^{-4}$  to  $1 \times 10^{-5}$  cm/sec.

According to the log for PPG's abandoned waste supply well, the glacial till is approximately 180 feet thick at the site. Although the maximum thickness of the Oak Creek portion of the till is unknown, it has been observed to reach a thickness of at least 115 feet in some areas of exposed Lake Michigan bluff along the shoreline in southern Milwaukee County.

The uppermost bedrock in the vicinity of the site is Silurian-aged Niagara dolomite which is approximately 200 feet thick. Beneath the dolomite is Ordovician-age Maquoketa shale which is approximately 200 feet thick. Underlying the Maquoketa is a series of Ordovician dolomite formations

(Platteville, Deborah and Galena), with an overall thickness of approximately 250 to 350 feet. Beneath the dolomite layers is a thick sequence (300 feet) of Ordovician to Cambrian-age sandstone deposits. Beneath the sandstones is the Precambrian-age crystalline basement rock.

Three major aquifers are located in the vicinity of the site, including the sand and gravel aquifer located in the glacial till, the Silurian-age dolomite aquifer and the Ordovician and Cambrian-age sandstone aquifer.

The sand and gravel aquifer consist of unconsolidated sand and gravel deposits in glacial drift and alluvium. These surficial deposits may be saturated from near the ground surface to the Niagara dolomite. Recharge is primarily from precipitation in more permeable areas. Discharge may be to local waterbodies, the dolomite aquifer, or to Lake Michigan. General flow direction normally parallels surface topography. Based on a review of the log for PPG's abandoned well, it does not appear that the sand and gravel aquifer exists directly beneath the site.

The Silurian dolomite aquifer overlies the Maquoketa shale in the vicinity of the site and is used as a major source of water. When the till above the dolomite aquifer consists of sands and gravels, the dolomite and sand and gravel aquifers are often hydraulically connected. Conversely, the dolomite aquifer may be under artesian conditions when overlying till consists primarily of clays and silts. Recharge occurs in areas with permeable overlying till and hydraulic connection with overlying glacial sand and gravel deposits. Discharge occurs from wells and hydraulic connection with Lake Michigan. The natural flow direction in the dolomite aquifer is east towards Lake Michigan, but may be affected by local pumping.

Below the Silurian dolomite, the Maquoketa shale forms an aquatard which minimizes vertical groundwater flow to the deep sandstone aquifer. The deep sandstone aquifer extends from the bottom of Maquoketa shale down to the Precambrian crystalline rock. It is a major supplier of water to southeastern Wisconsin, but it is not hydraulically connected to the near surface hydrogeology in the site vicinity.

In evaluating regional geological and hydrogeologic information relative to waste management activities at the site, it is very improbable the primary water supply aquifer (i.e., sandstone) could be affected by a release from a SWMU. As discussed in the next Section, unconsolidated deposits overlying the bedrock (180 feet thick) consist of relatively impermeable clay, silt, and sand, making the likelihood for impact to the dolomite aquifer improbable. The most likely impact from a potential SWMU release would be to the shallow watertable. Contaminant migration would most likely be through isolated sand and gravel lenses or layers

and would be confined by silts and clays. This situation exists in the vicinity of the tank farm where sand and gravel layers/lenses were encountered extending northeast and southwest from the tank excavation.

### A.2. History of Facility

A.2.a. General History - The PPG manufacturing facility was constructed from 1973 to 1975 and began producing both solvent and water-based coatings for automotive, industrial and consumer clientele in December, 1975. A review of historical aerial photographs obtained from the Southeastern Wisconsin Regional Planning Commission for the years 1963, 1967, 1970, 1975, 1980, 1985, and 1990 indicated that prior to PPG construction, the site was farmland with a farmstead located along South 13th Street. Final facility construction and earthwork activities (at the parcel of land located immediately north of the site) were noted in the 1975 aerial photographs. The 1980, 1985, and 1990 photographs do not indicate any other changes of significance to the site or vicinity except that the present day interceptor basin was constructed between 1975 and 1980.

A.2.b Process History - Raw materials used in the manufacturing process are received in bags; cans; various sized fiber, plastic, and metal drums; tank wagons; and historically in rail cars. Approximately 85% of the plant's solvents and reactants are brought to the site by bulk tank wagons and off-loaded into the bulk storage tanks located in the southeast corner of the site. Pigments, extenders and drums of miscellaneous raw materials are brought to the site in box trailers and off-loaded on the south side fo the paint plant raw materials warehouse. From there, the raw materials may be transferred to various production areas or small dedicated storage areas.

Finished products are primarily packaged into 5 gallon pails, various sizes drums, totes, and tank wagons for distribution. Finished paint products are stored in and shipped from the finished goods warehouse. Finished resin products are transferred by pipeline to storage tanks or drums for use in production. Resin products are also shipped directly to customers.

Paint manufacturing activites occur on two floors and a mezzanine in the paint plant with the north side dedicated to industrial coatings and the south side to automotive coatings. In general, paint is manufactured by combining resin (a polymer solution), solvent, pigments, extenders and a small amount of additives in a tank equipped with a high intensity mixer. The resultant paste is pumped through a "dispersion" mill into a holding tank where adjustments to viscosity and color are made (i.e., thinning and tinting). From the holding tank, the batch is pumped through strainers and filters into various size containers and shipped to customers. Figure 12 provides a general diagram of the paint making process.

The major raw materials used in the paint plant are water, aromatic solvents (e.g., xylene, toluene, ethyl benzene, mineral spirits, VMP naphtha), ketones (e.g., MEK, MIBK), glycol ethers (e.g., butyl cellosolve), ether acetates (e.g., cellosolve acetate), alcohols (e.g., butanol, isopropyl, and isobutyl), pigments (predominantly titanium dioxide; although zinc oxide, iron oxide, carbon black, toludine red, and heavy metal pigment usage is significant), additives (lecithin, hydroxyethyl cellulose) and extenders (e.g., calcium carbonate, silica, talc, bentonite, aluminum silicates, clay). The major waste streams produced from paint manufacturing are spend solvents and washwater used to clean vessels and equipment, used filter media, QA/QC sample waste, pigment dust and off-specification products.

Synthetic resins (alkyd, epoxy, acrylic) are also manufactured at the facility for use in on-site paint production, shipment to other PPG facilities for use, or occasionally sold as finished goods. Resin manufacturing is a batch polymerization process that can be generally divided into two categories; high and low temperature processes. In the high temperature process, natural oils (e.g. soybean oil), monobasic and dibasic acids (e.g. phthalic anhydride) and solvents (e.g. mineral spirits) are "cooked" in a reactor resulting in a condensation reaction. This resin solution is then dropped into fixed thin tanks where additional solvent is added. After filtering, the resin solution is pumped to storage tanks, filled into drums or filled into bulk tank wagons. Figure 13 provides a general diagram of the resin making process.

The highest volume raw materials in high temperature resin production include natural oils (soybean, safflower, sunflower, and linseed), glycerin, phthalic anhydride, pentaerythritol, benzoic acid, tall oil fatty acids, aromatic and aliphatic mineral spirits, aromatic and aliphatic naphthas, xylene, ethylbenzene, and toluene. The major waste streams from this process are condensation (decanter) water, used solvent from equipment cleaning, QA/QC sample waste, and offspecification batches, filters, empty drums and empty bags.

Acrylic and epoxy polymers are produced in the low temperature process. Acrylic polymers are produced by rate feeding acrylic monomers (e.g. methyl methacrylate) and catalyst (e.g. peroxide based catalyst) into reactors of solvent, resulting in an addition reaction. Epoxy resins are also produced by an addition reaction between epoxy-based raw materials (e.g. EPON 828) and bisphenol A. As with the high temperature resins, these low temperature resin solutions are dropped into fixed thin tanks where additional water or solvent (e.g. MEK) is added. The product is then filtered and transferred to storage or filled into drums or tank wagons.

The high volume raw materials used in the low temperature resin manufacturing process include a variety of acrylates, epoxy resins, styrene, bisphenol A, methyl ethyl ketone, methyl isobutyl ketone, butanol, isopropanol, hexanol, isophorone, and smaller amounts of aromatics and naphtha solvents. The major waste streams include used solvent from cleaning equipment, QA/QC samples waste and off-specification batches.

Laboratories are also located at the site and are involved in product development and quality control activities.

A.2.c. Waste Generation History - Table 3 provides a summary of nonhazardous solid waste generation at the site for the time period of 1988 to 1992. The estimate is based on PPG solid waste invoices for waste collected in site dumpsters and compactors (i.e., empty pigment bags, empty containers, paper waste, food waste, rags, cardboard, empty lab cups, disposable clothing, and some empty fiber and metal drums).

Table 4 provides a summary of hazardous waste generation based on WDNR Hazardous Waste Reports from 1986 to 1991. As indicated in the Table, the vast majority of the hazardous waste at the site has been solvent-related (i.e., D001, F003, F005) and/or has contained heavy metals (i.e., D004-D009).

Excellent records were available at the site detailing the types of hazardous waste that have historically been generated. In addition, small amounts of out-of-date and off-specification finished product from local PPG distribution and retail centers have been shipped to the site. Table 5 provides a summary of the waste streams generated at the site and a listing of the applicable hazardous waste codes. Supporting analytical results can be found in Appendix B.

Although 26 waste streams are listed in Table 5, these waste streams can actually be grouped into only eight general classes, including: dirty wash solvents from the resin making process, dirty wash solvents from the paint making process, dirty wash water from the resin making process, dirty wash water from the paint making process, still sludge, filter waste, air pollution control dust and off-specification and obsolete products and materials.

As indicated in Table 5 and Appendix B, the vast majority of hazardous constituents in the waste streams have included a primary core of approximately 10-20 organic solvents (at least one of which will be found in almost any PPG product and waste) as well as certain heavy metals. As detailed in Table 6 a positive correlation also exists between the waste generating process involved (i.e., resin vs. paint production) and the type of waste stream produced. This type

of information will be used to select analytical parameter lists if further investigation is required in a specific area.

**A.2.d.** Waste Handling - Hazardous wastes are placed in containers at the point of generation or piped to accumulation or treatment tanks.

Container Accumulation Areas - When the containers (primarily 55-gallon drums) are full, they have historically been taken to a specifically located small container accumulation areas throughout the site. Primarily, the smaller container accumulation areas are located outdoors and all are located on concrete. Drums are never opened at the small container accumulation areas. Except for the container accumulation area near the technical/administrative area (up to 90 day storage), normally, within 24 hours (with a maximum of three days) the drums are transferred to the large container accumulation area (SWMU RFA #5, permit #4). From the large accumulation area, the containers are either loaded onto trucks, or transferred to tank trucks for bulk disposal.

Only minimal waste handling activities (i.e., palletizing drums) occur at these units, significantly reducing the potential for a release. If a release would occur at these smaller container accumulation areas, the wastes would be immediately recontainerized and the residues properly cleaned up, thereby minimizing the potential for impacts to the environment. All container accumulation areas have secondary spill containment, thus also minimizing the potential for impact to the environment.

Bulk Accumulation and Treatment Tanks - Used solvent is generated from cleaning operation in the paint and resin plants and is transferred through permanent aboveground piping to three aboveground tanks in the tank farm (SWMU RFA #11, #12, and #13, permit #8) prior to on-site reclamation in one of two solvent recovery stills (SWMU RFA #27 and #28, permit #16). The stills are located inside the resin plant. Each still is comprised of an evaporator and a receiver. The PPG reclamation system (which includes the three used solvent tanks, two evaporators and two receivers) meets the EPA definition of a closed system. Still bottoms from the reclamation process are transferred to two organic waste treatment tanks (SWMU RFA #2 and #3, permit #2). These two tanks are used to accumulate compatible organic wastes for off-site disposal, which is considered to be treatment by the WDNR. The two organic waste tanks are located inside the waste treatment center. Other organic wastes can be transferred to these tanks through permanent aboveground piping from the resin plant or via pumping from drums or tank wagons at the waste treatment center.

One resin manufacturing process involves stripping methyl isobutyl ketone (MIBK) which is condensed and accumulated in a tank (SWMU RFA #14, permit

#8) prior to off-site reclamation for reuse or sale. The tank is located outdoors and to the east of the resin plant.

Washwater is generated from cleaning operations in the paint and resin plants and these wastes are managed separately. Two washwater treatment tanks (SWMU RFA #9 and #10, permit #7) located inside the waste treatment center are used to treat paint plant washwater. Washwater is transferred through permanent aboveground piping from the paint plant to either tank. A batch treatment process is used that includes flocculating solids followed by sludge dewatering through a filter press. The supernatant is transferred to the POTW through a decanter (SWMU RFA #7, permit #6) located inside the waste treatment center. The dewatered sludge is placed in fiber drums for off-site disposal. The two treatment tanks and decanter are exempt from RCRA regulation and are regulated under the Clean Water Act.

Three tanks located inside the waste treatment center are used to manage resin plant washwater and process water. Washwater and process water from five of the six reactor systems located in the resin plant and water condensed from the solvent recovery process are transferred through permanent aboveground piping to a reclamation tank (SWMU RFA #8, permit #7). The tank meets the definition of legitimate recovery or reclamation of a hazardous waste and the tank is operated in accordance with the requirements of NR 625.06. The waste collected in this tank consists of a solvent-water mixture. The immiscible solvents in the mixture are recovered and returned to the solvent reclamation process for reuse. The immiscible solvent-water portion is transferred to another tank (SWMU RFA #1, permit #1) for storage prior to off-site disposal. Washwater and process water from the remaining reactor system is transferred through permanent aboveground piping to a cationic wastewater tank (arbitrarily assigned SWMU RFA #41, permit #7) for accumulation prior to off-site disposal. The tank is also equipped with an ultrafiltration unit that is presently not in service.

In 1991, an organic waste accumulation tank (SWMU RFA #6, permit #5) was transferred over to use as a product tank. The tank is located inside the resin plant.

A majority of the waste treatment and/or accumulation tanks are located indoors and are either used for temporary storage or minor treatment of waste. The indoor tanks are all located on concrete floors with a majority of these tanks (i.e., within the waste treatment center) also provided with secondary spill containment. All four tanks located outdoors are provided with secondary spill containment. Wastes are transferred to and from the tanks via aboveground permanent pipeline systems, or hose connections. If a spill were to occur from the tanks, the wastes would be collected for proper disposal and the residues cleaned up.

Spill Containment/Runoff Control - Three primary spill containment/runoff control structures are located at the facility. The impoundment basin (SWMU RFA #29, permit #17) is used to collect stormwater runoff or spills related to the tank wagon loading and unloading area and the aboveground tanks in the tank farm. Stormwater collected in the impoundment basin is discharged to the sanitary sewer.

The tank farm underdrain sump (SWMU RFA #30, permit #18) primarily functions to collect groundwater and rainwater infiltration into the underground storage tank basin. The basin consists of an excavation within the natural clay till to a depth of approximately 20 feet. At the bottom of this excavation, drainage tile was installed around each UST to remove surrounding groundwater. The entire basin was then backfilled with high permeable sand and gravel. Any past releases from the USTs (e.g., tank overflows) would have contaminated the sand and gravel and hence precipitation that accumulates in the tank farm underdrain sump. The sump water is currently monitored as part of a UST leak detection program and is directly discharged to the MMSD.

The stormwater interceptor basin outfall (SWMU RFA #35, permit #20) receives stormwater runoff from the northern portion of the facility. The outfall consists of a concrete basin and baffled spillway which is equipped with a total carbon analyzer. The total carbon analyzer sounds an alarm and closes a sluice gate if elevated carbon levels are detected.

Air Pollution Control Devices - Four dust collectors are used to remove and accumulate primarily pigment dust. The dust comes from point source industrial hygiene control and also serves to minimize particulates. The dust is primarily inert solids, but may contain heavy metals. Dust is primarily generated when pigments and other solids are introduced to the paint or resin batches. These dust collectors are enclosed units with concrete floors which capture the dust into 55-gallon drums. Once filled, the drums are properly closed, labeled and transferred to the large container accumulation area, thereby minimizing the potential for release to the environment. Minor amounts of fugitive dust may accumulate within the unit, but is collected and transferred to drums for disposal on a daily basis.

A scrubber system is also used to capture volatile organic compounds from the resin making process. The scrubber system is an enclosed system set on a concrete base with a concrete wall providing secondary containment.

Solid Waste Trash Compactors - Four trash compactors are used to store solid, nonhazardous waste generated during paint and resin production. The solid waste consists of: empty pigment bags; empty containers up to 5 gallons in capacity;

paper and food waste; rags; cardboard; empty lab sample cups; disposable clothing; and empty fiber and metal drums ranging from between 50 and 55 gallons in capacity. Once full, the compactors are properly closed and transported to a licensed solid waste landfill.

#### A.3. History of Past Releases

Table 7 summarizes the history of past releases from SWMUs to the environment. The Table indicates only those spills from a SWMU (i.e. not raw material or product spills) which were released to the environment.

As indicated by the Table, reportable releases to the environment have only occurred from the interceptor basin (SWMU RFA #35, permit #20), the three used solvent tanks in the tank farm (SWMU RFA #11, #12, and #13, permit #8), and the collection trench associated with the waste treatment center (SWMU RFA #4, permit #3).

#### A.4. Historical Permitting

Several permits have been required at the site for management, monitoring, storage, and disposal of residuals from the manufacturing process. A discussion of each permit is given below.

A.4.a. Wisconsin Hazardous Waste Operating License - In September 1980 the PPG-Oak Creek facility submitted a Federal Part A permit application for interim status as a storage and treatment facility. Waste treatment consists solely of mixing compatible wastes in bulk tanks. In 1986, PPG submitted a plan to burn used solvent in a facility boiler. However, this proposed activity has never been conducted.

Revised Part A applications for the addition and deletion of management units and the addition and deletion of hazardous waste codes generated at the site were submitted on March 13, 1981; October 23, 1981; May 5, 1984; July 10, 1985; March 12, 1986, and September 21, 1990. Table 8 provides a summary of the waste codes that have been included in the various Part A applications.

On January 6, 1983, PPG was issued two interim licenses (one for storage and one for treatment) by the WDNR. On October 23, 1984 the interim storage license was modified to include an additional storage tank.

On March 12, 1986, PPG submitted a *Feasibility Report* (first step in the state of Wisconsin for obtaining the site equivalent of a federal RCRA Part B permit) to the WDNR. The *Feasibility Report* was approved with modifications in May 1989. In February 1990 PPG submitted a *Plan of Operation* to the WDNR which

was approved with modifications, resulting in PPG receiving a Wisconsin Hazardous Waste Operating License on March 31, 1992.

In conjunction with the Wisconsin Operating License, the U.S. EPA issued the federal portion of the permit on March 31, 1992 with an effective date of May 4, 1992. The federal portion of the permit required an RFI be conducted. The RFI was required based on a January 1986 continuing release survey submitted by PPG, an August 1987 Visual Site Investigation/Preliminary Assessment (VSI/PA) conducted by the WDNR, and the May 1988 RFA prepared by the WDNR. Submittal of this document is the first step in the RFI process.

A.4.b. WPDES Permit - The PPG-Oak Creek facility submitted a Wisconsin Pollutant Discharge Elimination System (WPDES) application for permit to the WDNR on April 5, 1974 and the resulting WPDES permit (No. WI - 002949) was issued by the WDNR on November 15, 1974. According to the accompanying PPG cover letter, ultimate discharge to the Root River would occur at six different points, five of which would include only stormwater runoff. The sixth discharge point (presently referred to as Outfall 001) was to include blowdown from the two cooling towers and two boilers as well as uncontaminated stormwater runoff. At a later date, vacuum pump seal water and fire protection system test water were added as discharge sources to Outfall 001. Boiler and cooling tower blowdown as well as storm water from licensed hazardous waste management areas were subsequently rerouted to the sanitary sewer system. This was done to minimize the potential for a release to the environment.

In the fall of 1977 the WDNR approved engineering details for a stormwater interceptor basin to control discharges to Outfall 001 (SWMU RFA #35, permit #20). An internal monitoring system, comprised of a total carbon analyzer, is used by PPG to monitor the discharge. The monitor is capable of shutting the sluice gate, should an elevated total carbon reading be detected.

On August 5, 1985; PPG received a WPDES notification of noncompliance from the WDNR for numerous chemical oxygen demand (COD) exceedences for the time period between November 1984 and April 1985. Subsequently, the WDNR issued a notice of violation (NOV) for the COD exceedences and an enforcement conference was scheduled.

As the result of the enforcement conference, a higher interim COD effluent limit was established. At the enforcement conference, PPG was given from November 1, 1985 to May 1, 1986 to demonstrate "substantial compliance" so that the WPDES permit could be reissued. A second conference was held on June 27, 1986 pertaining to continuing COD problems and a second six month "substantial compliance" extension was given. Through an extensive program of investigation

to determine potential COD sources and various operational modifications, PPG brought the COD into acceptable compliance and the permit was reissued.

Eventually the interim COD limits were decreased by the WDNR and the requirements for TOD were discontinued.

A.4.c. MMSD Wastewater Discharge Permit - The PPG-Oak Creek facility maintains an industrial wastewater discharge permit (No. 4241.01) with the Milwaukee Metropolitan Sewerage District (MMSD) for the discharge of industrial wastewaters through two defined outfalls. MMSD sanitary sewer Outfall 1.0 is defined as the total manufacturing facility process water discharge including cooling tower and boiler blowdown, the impoundment basin, the tank farm sump, the paint plant treatment system water, water softener backwash and general sanitary discharge.

MMSD sanitary sewer Outfall 1.1 is defined as the holding tank for the permeate from the cationic washwater ultrafilter located in the waste treatment center building. U.S. EPA categorical pretreatment standards for organic chemicals, plastics and synthetic fibers point source category (40 CFR, Part 414) apply to MMSD sanitary sewer Outfall 1.1. Presently, the water collected in the holding tank is disposed off-site and not discharged to the sanitary sewer. Thus, no monitoring activities have been conducted for MMSD defined outfall 1.1, although the outfall still remains in the permit.

PPG is required to sample their MMSD sanitary sewer Outfall 1.0 discharge twice per year and meet effluent limits for pH, copper, nickel, lead, zinc, cadmium, oil and grease.

There are no enforcement actions relative to PPG's wastewater discharge permit.

A.4.d. Air Emissions Permits - The resin plant and paint plant are identified as separate stationary air emission sources (FID #241027490 and FID #241177530, respectively). Emission sources at the site include nine boilers (referred to as boilers 20-28), the resin manufacturing process (stack 11, process P30) equipped with a wet scrubber and direct flame afterburner control devices, the pigment dispensing process (stack 10, process P30) equipped with fabric filter baghouses, the solvent thinning/paint manufacturing operation (stack 11, process 31) with no listed control devices, and fugitive emissions from paint plant cleanup operations (F #99).

Since the manufacturing facility was constructed in 1973-1975, initial construction and operating permits were not required by the WDNR. However, PPG did receive an air pollution control permit (No. 88-DAA-223) from the

WDNR on December 14, 1988 for minor modifications to the pigment manufacturing operation. This permit authorized construction and paint operation as described in the required plans and specifications submitted.

PPG also submitted their Mandatory Operating Permit (MOP) application to the WDNR but has not received any permits. Recent changes in the federal air emission regulations have nessitated the need to evaluate changes to the WDNR MOP program.

There are no enforcement actions relative to PPG's air emission requirements.

#### B. NATURE AND EXTENT OF CONTAMINATION

This Section includes a description of the solid waste management units (SWMUs) and recent observations made at each unit. In addition, the site soil, hydrogeologic, and environmental data was used to assess the potential for and possible impacts from contamination at the site. The results of this assessment are presented as well as conclusions and recommendations for further actions at SWMUs.

#### **B.1. Summary of Solid Waste Management Units**

The RFA conducted at the PPG Oak Creek facility identified 36 SWMUs (refer to Figure 6 for locations). In addition, during completion of this report, five other SWMUs were identified and are discussed in detail in this Section. The SWMUs consist of six general types, based on the activities performed at each unit, including:

- container accumulation areas (13 SWMUs; 1 indoors, 12 outdoors)
- waste treatment and/or accumulation tanks (15 SWMUs; 11 indoors, 4 outdoors)
- air pollution control dust collectors (5 SWMUs; 1 indoors, 4 outdoors)
- solid waste trash compactors (4 SWMUs; all outdoors)
- spill containment/runoff control structures (3 SWMUs; all outdoors)
- wet scrubber (1 SWMU; outdoors)

The following Subsections describe the activities and observations associated with the individual SWMUs. For ease in discussion, the SWMUs have been grouped together based on their geographic locations.

**B.1.a.** Technical/Administrative Area - The administrative wing includes a cafeteria and office areas. The technical wing supports production through product formulation, product enhancement, and troubleshooting activities. Small batches of paint are prepared in pint, quart and gallon sized containers and undergo various physical and chemical tests. The wastes that are generated are similar to those generated in the paint plant but on a much smaller scale. All wastes are consolidated in drums. The technical/administrative area includes two SWMUs.

A solid waste trash compactor (SWMU RFA #31, permit #19) is used exclusively to accumulate discarded paper waste and food items but not hazardous waste. The solid waste compactor is on competent concrete with no evidence of staining apparent.

A container accumulation area (SWMU RFA #15, permit #9) is located at the north side of the technical wing and is used to accumulate (<90 days) laboratory generated paint and resin wastes. The container accumulation area is on concrete, although some cracking was observed. In addition, evidence of staining in this container accumulation area was apparent.

**B.1.b. Paint Plant - North Yard -** The North Yard is a paved surface that is equipped with spill control and a stormwater collection system. Raw materials, products and wastes are transported through the yard via fork trucks, tank wagons and trailers. Temporary storage of raw materials, products and empty containers occurs in the yard. This area also includes nine SWMUs.

A former 6'x6', 20 drum container accumulation area (SWMU RFA #16, permit #10) and a former 6'x16', 60 drum container accumulation area (SWMU RFA #17, permit #11) used to accumulate various types of paint waste are located in the paint plant north yard. Both former container accumulation areas are on competent concrete. There was no significant staining in the vicinity of either container accumulation area.

A dust collector (SWMU RFA #22, permit #13) with three collection chambers, and a dust collector (SWMU RFA #24, permit #14) with two collection chambers are located in the paint plant north yard. Both dust collectors are located inside separate, small steel-framed buildings with a competent concrete base. A minimal amount of residual dust was observed inside (but not outside) these buildings.

A solid waste trash compactor (SWMU RFA #32, permit #19) used to accumulate paint pigment bags and other discarded solids from the paint operation is also located in the north yard. The solid waste compactor is located on a sloped concrete base with curbing to provide secondary containment. There was no significant cracking or staining in the concrete curbing or base.

In addition to the SWMUs described in the RFA, four other SWMUs were identified in this area during completion of this report. These included four 6'x16' container accumulation areas directly north of the paint plant capable of accumulating approximately 60 drums of paint waste. These areas were located in the vicinity of door #26 (arbitrary assigned SWMU RFA #37, permit #11), door #27 (arbitrarily assigned SWMU RFA #38, permit #11), door #28 (arbitrarily assigned SWMU RFA #39, permit #11) and door #29 (arbitrarily assigned

SWMU RFA #40, permit #11). All these areas are located on concrete with only an occasional concrete joint or small crack. There was no significant staining at any of these container accumulation areas.

**B.1.c.** Paint Plant - South Yard - The South Yard is paved and is connected to the primary internal roadway that is used for plant deliveries and shipments. This area includes four SWMUs.

A former 6'x16', 60 drum container accumulation area (SWMU RFA #20, permit #11) used to accumulate various types of paint and resin wastes is located in the paint plant south yard. The former container accumulation area is located on a concrete floor inside the raw materials warehouse. There was no significant staining or cracking in the vicinity of this area.

A dust collector (SWMU RFA #23, permit #13) with three collection chambers, and a dust collector (RFA #25, permit #14) with two collection chambers are located in the paint plant south yard. Each dust collector is located inside a separate, small steel-framed building with a competent concrete base. A minimal amount of residual dust was observed inside the buildings. Residuals were not observed outside of the westernmost dust collector building (SWMU RFA #23, permit #13) and a minimal amount of residuals, reportedly carbon black, were observed outside the easternmost dust collector building (SWMU RFA #25, permit #14).

A solid waste compactor (SWMU #33, permit #19) used to accumulate discarded nonhazardous solids from the paint operation is also located in the paint plant south yard. The solid waste compactor has sloped concrete and curbing to provide secondary containment and is located on a concrete base. The concrete base slopes towards a sump with stormwater manually pumped to the waste treatment center. Curbing is competent with minimal cracking in the concrete base. Rust-colored staining is located within most of the containment area.

**B.1.d.** Waste Treatment Center - The waste treatment center is used for waste management activities. Bulk waste streams are transferred through permanent aboveground piping from the paint and resin plants to bulk tanks located inside the waste treatment center. This area includes nine SWMUs.

This area includes: a 10,000 gallon water-based treatment tank (SWMU RFA #1, permit #1), two 6,000 gallon organic waste treatment tanks (SWMU RFA #2 and #3, permit #2), a 2,500 gallon wastewater decanter tank (SWMU RFA #7, permit #6), three 6,000 gallon wastewater treatment/accumulation tanks (SWMU RFA #8, #9, and #10, permit #7), and a former 40.5'x50', 300 drum/equivalent container accumulation area (SWMU RFA #4, permit #3).

All the tanks in this area are aboveground and located indoors inside the wastewater treatment center, which has a concrete floor. The floor of the building is concave in shape and is pitched to the south, towards a grated collection trench with a sump which provides the required spill containment. There was no staining within the building. The joint between the floor and wall has been sealed with an epoxy-based sealant. The container accumulation area is located outdoors on concrete with a 4-inch curb and is pitched to the previously mentioned trench. According to the RFA, cracks were observed in the concrete base of the container accumulation area. At the time of the walk-through, the pad had been recoated to meet RCRA storage requirements and did not have cracks or stains.

In addition to the SWMUs described in the RFA, the aboveground catonic washwater accumulation tank associated with the resin ultrafiltration unit was identified during the preparation of this report as a SWMU (arbitrarily assigned SWMU RFA #41, permit #7). This tank was formerly used in the ultrafiltration process, but is now used only to accumulate the washwater for off-site disposal. This tank is also located within the waste treatment center.

**B.1.e.** Resin Plant - The resin plant contains six reactor systems and operations take place on three floors and a mezzanine. The solvent recovery stills that serve both the paint and resin plants are located on the first floor of the resin plant. This area includes eleven SWMUs.

Four accumulation areas including a large 100'x140', 3,000 drum equivalent container accumulation area (SWMU RFA #5, permit #4) which stores paint and resin waste generated at the site. A 6'x8', 20 drum container accumulation area (SWMU RFA and #19, permit #10) and a former 6'x8', 20 drum container accumulation area (SWMU RFA #19, #18, permit #10) used to accumulate resin waste and a former 20'x40', 1,000 drum container accumulation area (SWMU RFA #21, permit #12) used to accumulate resin waste are all located in the vicinity of the resin plant. The large 3,000 drum container accumulation area is located outdoors on a concrete base with curbing on three sides and is pitched to the northeast corner to a common collection area. The concrete base and curbing are competent with some minor staining within the containment area. The two small container accumulation areas are located outdoors, on two separate concrete bases, both of which had insignificant hairline cracks. Slight staining is present in one of the areas (SWMU RFA #19, permit #10) but did not appear to be significant. The former 1,000 drum container accumulation area (SWMU RFA #21, permit #12) is located outdoors on a concrete base in an area without containment. The concrete is competent and there was no significant staining.

A 6,000 gallon organic waste treatment tank (SWMU RFA #6, permit #5) formerly used to store resin waste, but now used to store product (tank closure has

been addressed with the WDNR), is an aboveground tank located indoors, on a concrete floor. Insignificant staining was observed in the vicinity of this tank.

A 15,000 gallon waste solvent accumulation tank (SWMU RFA #14, permit #8) used to store methyl isobutyl ketone condensate, is located outdoors and is entirely surrounded by a concrete wall and base, which are competent. There was no staining and rain water which had collected within the containment did not exhibit a sheen.

A dust collector (SWMU RFA #26, permit #15) with one collection chamber is located on the third floor of the resin building on a competent concrete floor with no evidence of staining.

Two 5,200 gallon solvent recovery stills (SWMU RFA #27 and #28, permit #16) used to recover solvents used in the resin process, are located inside the resin plant on a concrete floor with no evidence of staining.

A solid waste compactor (SWMU RFA #34, permit #19) used to store discarded nonhazardous solids from the resin operation, is located outdoors on a concrete base and did not have secondary containment. The concrete is competent and there was no evidence of significant staining.

A wet scrubber system which is a countercurrent packed column (SWMU RFA #36, permit #21) used as an air pollution control device for the resin plant which vents to a fume incinerator. The wet scrubber system is located outdoors and is entirely surrounded by a concrete wall and base which is competent. There was no staining in this area.

The dust collector operates only occasionally when solids additions are made to the resin kettles. During solids additions, a local ventilation system pulls general room air away from the reactor hatch to minimize operator exposure to the dust. This dust is then collected in the baghouse dust collector. No pigments are used in the resin making process. The major solid raw material used in the resin operation is Bisphenol A.

**B.1.f.** Outfall - Stormwater from the northern portion of the plant is discharged through Outfall 001 to an unnamed tributary of the Root River. The outfall is a SWMU.

This area includes the 41,295 gallon stormwater interceptor basin (SWMU RFA #35, permit #20). The basin is equipped with a total carbon analyzer which sounds an alarm and closes a sluice gate if a spill is detected. The basin is located

outdoors and consists of concrete. Sheening was not present on the water in the basin.

**B.1.g.** Tank Farm - The tank farm consists of both underground and above-ground storage tanks, and is used for raw material storage. Tank wagon unloading and rail loading operations also take place in the vicinity of the tank farm. Five SWMUs are located in the tank farm area.

Three 15,000 gallon solvent accumulation tanks (SWMU RFA #11, #12, and #13, permit #8), two of which accumulates used paint-related solvent (PPG tank Nos. 122 and 123) and one (PPG tank No. 124) which accumulates used resin-related solvent are located outdoors and are on concrete with curbing to direct surface flow to the impoundment basin collection system. Both the curbing and base have cracks and evidence of staining.

The 210,188 gallon impoundment basin (SWMU RFA #29, permit #17) is constructed of concrete with evidence of cracks. However, no visible staining was present.

The 3,770 gallon tank farm underdrain sump (SWMU RFA #30, permit #18) is constructed of concrete and appeared to be approximately 20 to 25 feet deep. Where observable, there was no evidence of cracks or staining.

#### **B.2.** Assessment of Contamination

Various subsurface investigations have been conducted at the site. The location of soil borings and monitoring wells for each investigation can be found on Figure 14. As indicated by the Figure, most environmental sampling was conducted in the southeast quarter of the site in the vicinity of the impoundment basin (SWMU RFA #29, permit #17) the tank farm (possibly including SWMU RFA #11, #12, and #13, permit #8) and the tank farm sump (SWMU RFA #30, permit #18).

Information contained in the investigations was used to form the basis of the discussions pertaining to site soils and hydrogeology, soil contamination, and groundwater contamination. Information from these investigations has been collected for reference and is presented in Appendix format as follows:

Appendix	Subject
C	Soil Boring Logs
D	Geologic Cross Sections
E	Monitoring Well Construction Details
F	Groundwater Contour Maps
G	Summary of Available Soil and Groundwater
	Investigations

For ease in identification, each Appendix is further subdivided by each individual report and is referenced by the firm preparing the report and the year of investigation.

**B.2.a.** Site Soils and Hydrogeology - Eighty-two deep (i.e., greater than 10 feet deep to a maximum depth of 35 feet) soil borings/monitor well installation borings have been conducted at the site and indicate that soils consist primarily of low permeability clay/silt till with occasional sand and gravel layers or lenses.

Boring logs for a majority of the site borings are included in Appendix C. Several of the Layne-Western Company, Inc. geotechnical boring logs, primarily near the western property boundary, could not be located. Several logs for borings apparently located outside the site are also included in the Appendix. Previously prepared geologic cross sections are included in Appendix D.

During the initial construction of the facility, various types of natural fill was placed on the site. Natural site subsoils consist primarily of glacial till composed primarily of silty clay and clayey silt. Four grain size analyses conducted by Warzyn Engineering Inc. in 1981 indicated the till consisted of 1-4% gravel, 8-20% sand, 34-83% silt and 9-57% clay.

In general silty clays and clayey silts are present at the site to a depth of at least 35 feet. Isolated layers and/or lenses of sand and occasionally gravel were also encountered in several borings. These deposits were inconsistent in thickness, depth, and composition and were located primarily in the eastern 1/2 of the property (excluding the eastern property boundary). When present, the layers/lenses were predominantly encountered in depths ranging from 10 to 20 feet, with thicknesses ranging from approximately 0.1 to 5 feet. These layers/lenses do not appear to be continuous. Beneath the sand and gravel layers/lenses, additional silty clays and clayey silts were encountered.

Infield baildown permeability tests conducted by Warzyn Engineering Inc. in 1981 to evaluate the horizontal permeability of the glacial till indicated the average horizontal permeability was  $3.2 \times 10^{-5}$  cm/sec and ranged from  $1.1 \times 10^{-4}$  cm/sec to  $2.2 \times 10^{-6}$  cm/sec. The highest permeability was in the vicinity

of TW4. Warzyn Inc. also conducted infield baildown permeability tests in 1992 with horizontal permeabilities reported between  $1.3 \times 10^{-5}$  cm/sec to  $6.8 \times 10^{-7}$  cm/sec. In 1992, Warzyn Inc. also submitted a sample of undisturbed lean clay from beneath the tank farm for laboratory analysis of hydraulic conductivity which was reported as  $4.1 \times 10^{-8}$  cm/sec. Slug tests were performed by Geraghty & Miller in 1987. Hydraulic conductivity ranged from  $4.14 \times 10^{-4}$  cm/sec to  $2.09 \times 10^{-6}$  cm/sec with a geometric mean of  $1.69 \times 10^{-5}$  cm/sec. Based on this information, the glacial till clays and silts are relatively impermeable and would tend to significantly limit contaminant migration. Therefore the only significant subsurface migration pathway would be through sand lenses and layers where present.

Twenty-two monitoring wells have been installed at the site, 18 of which are water table wells and 4 of which are piezometer wells (MW10, MW15, LP1, LP3). Available monitoring well construction details are located in Appendix D. Water levels have been measured in the wells at numerous times and are summarized in Table 9.

Groundwater contour maps (Appendix F) have been developed by Warzyn Engineering Inc. (1981) and Geraghty & Miller (1987). The depth to groundwater indicated by these maps ranges from approximately 5 to 10 feet below the ground surface. Both maps indicate an eastern and southerly component to flow direction. Flow direction may be due to the unnamed creek to the east and the Root River to the south, both of which may serve as groundwater discharge points. Horizontal hydraulic gradients were reported by Warzyn Engineering Inc. as ranging from 0.001-0.006 ft/ft along the axis where the easterly and southerly groundwater flow components divide and as 0.02-0.03 ft/ft in the south and eastern portion of the site. Downward vertical gradient was reported by Geraghty & Miller in 1987 to be 0.225 ft/ft in the vicinity of well nest MW15/MW16.

In their 1981 report, Warzyn Engineering Inc. suggested that discharge from the stormwater interceptor basin may be causing a localized shallow groundwater mound and the tank farm under drain system and sump may be causing a localized depression of the water table. The Warzyn Inc. report of 1992 also indicated the tank farm underdrain system may be causing a localized depression of the watertable with static water levels adjacent to the tank farm estimated to be 5 to 10 feet below ground surface and at 15 feet within the tank farm. Thus, it would appear localized shallow groundwater may flow into the tank farm, which would tend to limit outward contaminant migration. However, as previously discussed, isolated sand and gravel layers/lenses are also present at the site and may serve as a migration pathway.

**B.2.b.** Soil Contamination - A significant number of soil sampling investigations have been conducted which included 54 hand-auger/shallow soil borings and 60 deeper (i.e., greater than 10 feet) soil borings (refer to Figure 14 for locations). These investigations have primarily been performed in the southeast quarter of the site and represent data accumulated by PPG to assess the environmental conditions at these specific locations. Analytical testing performed in each study is described below.

O.H. Materials Corp. (1987) - Seven (25 feet deep) soil borings within the boundaries of the underground tank farm and nine (10 feet deep) soil borings outside the tank farm limits were drilled. Thirteen soil samples showing the highest PID readings were analyzed for aromatic volatile compounds (AVC) using EPA Method 8020. Eleven of the 13 samples were analyzed from shallow depths ranging from ground surface to seven feet. Of these, three samples inside the tank farm contained significant detectable concentrations of toluene, ethyl benzene, and total xylenes. An additional four samples contained only minor concentrations (0.50 - 6.15 mg/kg) of toluene or total xylenes. The remaining shallow samples inside and outside the tank farm did not contain detectable concentrations of AVCs (Appendix F).

One of the remaining two deeper boring samples (A1, 10-12 feet) was collected within sand backfill in the tank farm and contained significant concentrations (15,500 mg/kg, total) of toluene, ethyl benzene, and total xylenes. The other deeper sample collected inside the tank farm (A3, 15-17 feet) was collected in natural clay and contained only a minor concentration of total xylenes (2.78 mg/kg).

All borings outside the tank farm were relatively clean and soils consisted almost exclusively of clay. Sand lenses were encountered in a couple of borings, however, field analysis did not show any evidence of contamination.

Geraghty & Miller (1987) - Geraghty & Miller in 1987 collected and analyzed two soil samples collected in the southeastern quarter of the property for priority pollutant volatile and "Rexlist" compounds. Because no elevated TIP readings were measured in any of the samples collected, sample selection (i.e., 9 to 10.5 foot depth interval) was chosen on the basis of location, soil type, and depth of the watertable. The sample collected from the impoundment basin (MW9) and the sample collected near the southeast corner of the resin building (MW15) contained only low concentrations of o-xylene (1.8 mg/kg and 2.8 m/kg, respectively).

Warzyn Inc. (1992) - Warzyn Inc. in 1992 collected and analyzed 95 soil samples for VOCs (EPA Method 8240) from 54 shallow and 22 deeper (10 to 35

feet) soil borings performed at the site. Sample selection was based primarily on PID readings and establishing the maximum depth of contamination. The following conclusions were derived from this investigation.

- Detectable concentrations of VOCs were found in samples collected from the tank farm backfill material. In general, the concentrations were higher in the samples obtained from deeper backfill material (near the base of the underground storage tanks), with the exception of higher isolated surface concentrations. The contamination decreases significantly in the natural low permeability clay soil below the backfill material.
- The extent of contamination beyond the tank farm excavation appears isolated to the northeast and southwest corners. Soil contamination was encountered in borings in these areas at the depth of a sand lense. The depth of the sand lense roughly corresponds to the depth of the water level within the tank farm. The extent of the sand lenses was not determined.
- Soil contamination was identified in the subsoil directly underlying the concrete slab in the base of the impoundment basin. Based on PID readings from soil samples the vertical extent of soil contamination appears to be limited to within a few feet below the slab.
- The horizontal extent of contamination does not appear to extend east beyond the limits of the impoundment basin. However, contamination does appear to exist west of the impoundment basin at a depth of approximately 10 feet, based on detectable levels of VOCs obtained at boring GTB3 (approximately 10 feet west of the impoundment basin). Based on laboratory analysis conducted on deeper soil samples, contamination appears to be confined within a sand lense found at a depth of approximately 10 feet.
- Isolated shallow soil contamination was also identified at various locations surrounding the resin plant foundation.

In summary, a significant amount of data is available regarding VOC-related soil contamination in the southeast quarter of the site. This data as related to SWMUs suggests impact to shallow soils beneath the impoundment basin (SWMU RFA #29, permit #17) to a depth of 3 to 5 feet. In addition, the tank farm backfill material and natural soil extending northeast and southwest of the tank excavation also is impacted with VOCs (including SWMU RFA #11, #12, #13; permit #8 and SWMU RFA #30, permit #18). Soil contamination in the tank farm vicinity generally appears to be relatively shallow (i.e., 15 feet or less) based on analytical results of tank farm subsoils.

B.2.c. Groundwater Contamination - A significant amount of water quality data has been collected from the 18 watertable wells and 4 piezometer wells located at the site (refer to Figure 14 for locations). In addition, a significant amount of sampling has been conducted from water within the sump associated with the tank farm underdrain system. Analysis has primarily included various VOCs (EPA Method 8240 direct injection, EPA Method 8240 purge and trap, ASTM Method D-3328 for total complex petroleum hydrocarbons, EPA Method 602, priority pollutant volatiles, "RexList" organics EPA Method 624, and EPA Methods 501/502). In addition, total organic nitrogen (TON) as an indicator parameter of amines (EPA Methods 350.2 and 351.3), mercury (automatic absorption techniques, method unspecified), base/neutral extractable (EPA Method 625), acid extractables (EPA Method 625), base/neutral and acid extractables (EPA Method 8270), and dissolved lead (method unspecified) have also been conducted.

To date, TON analysis (sampled only in the southeast quarter of the site) has indicated minimal concentrations in groundwater. Only two base/neutral and acid extractable compounds have ever been detected during sampling. These include: one time occurrences of 2, 4-dimethylphenol at TW4 (35 ug/l) and MW16 (46 ug/l) as well as di-n-butylphthalate at TW7 (9 ug/l) and TW4 (5 ug/l). Low concentrations of mercury (0.002-0.007 mg/L) were reported as one time occurrences at TW4 and TW8 and three times at TW7. One relatively elevated concentration of dissolved lead was reported as a one time occurrence at MW15 (35 ug/l). None of these analytical results appear to indicate a significant impact to groundwater.

The majority of the detectable groundwater contaminants have been VOCs. VOCs have not been detected in any of the 4 piezometer wells except for a one time occurrence of 2-butanone at MW15 at a concentration of 29 ug/l. This suggests VOC groundwater contamination is likely limited to the shallow watertable.

According to the available data, various VOCs have been detected at different times in the shallow watertable wells at the facility. However, historical samples from 7 of the 18 wells (TW1, TW2, TW8, MW9, MW11, MW13, and MW14) have not contained detectable concentrations of VOCs. In addition, four wells have only had one time occurrences of a particular VOC.

Of these four, one-time occurrences, only two wells exhibited relatively high (i.e., > 40 ug/l) VOC concentrations. Both elevated toluene and xylene were reported in 1989 at TW7 and MW12 but no detectable concentrations were reported at these wells thereafter. Thus, those isolated incidents would not suggest a significant groundwater impact had occurred. Neither of the remaining two-time

occurrences contained concentrations which would pose a significant concern. Also, toluene has been reported twice at TW5 (1.6 ug/l and 3.6 ug/l) and does not suggest significant groundwater impact.

Of the remaining six wells not previously discussed, four wells (LW1-LW4) surrounding the tank farm have had detectable quantities of VOCs; but due to their recent installation (Warzyn, Inc. in 1992) a historical evaluation could not be made. Nevertheless, available data shows very low VOC concentrations in these newer wells (0.91 to 22 ug/l) have been found in groundwater in the vicinity of the southeast corner of the tank farm at LW1 (ethyl benzene, toluene, total xylenes), in the northeast corner of the tank farm at LW2 (ethyl benzene, toluene, total xylenes, 1,2, 4-trimethyl benzene) and in the northwest corner of the tank farm at LW3 (methyl ethyl ketone). These low concentrations do not indicate a significant impact to groundwater. Analytical results do indicate a significant impact to groundwater near the southwest corner of the tank farm (LW4), with eight different VOCs and total complex petroleum hydrocarbons reported up to a maximum of 28,000 ug/l.

The remaining two wells, TW4 and MW16 located near the southeast corner of the resin plant, have historically contained elevated concentrations of various VOCs. Likewise, samples from the tank farm sump have historically contained numerous different VOCs at elevated concentrations.

In summary, groundwater impacts have generally been noted at isolated locations at the site at the watertable but not in deeper piezometer wells. The majority of the data comes from the southeast quarter of the property and suggests potential impact to groundwater in the tank farm area (possibly including the spent solvent accumulation tanks and the underdrain sump) but cannot be attributed to other SWMUs. The groundwater contamination in the tank farm area exists in a sand and gravel seam which extends northeast and southwest from the tank excavation. The groundwater analytical results have indicated that VOCs are the predominant contaminants of concern.

Monitoring wells MW13 (likely downgradient) and MW12 (likely cross-gradient) are located in close proximity to the large container accumulation area (SWMU RFA #5, permit #4). Detectable concentrations of VOCs have never been reported at MW13 and only one time occurrences in 1989 of toluene and xylene have been reported at MW12. This suggests that the large container accumulation area has not had a significant impact on groundwater.

**B.2.d.** Potential Impact Assessment - The following discussion includes a preliminary assessment of potential contaminant migration pathways and a general description of the potential for impact to human health and the

environment. This is a qualitative assessment only, based on the review of available information described and referenced in this report.

Soils - Because of the regional glacial till which consists primarily of low permeability clays and silts, soil contaminants would not exhibit a significant potential for either horizontal or vertical migration. This is especially true where competent concrete exists below a SWMU and/or a complete berm or dike exists. Likewise SWMUs located indoors, with competent flooring, would not likely impact the environment.

Sand and gravel layers/lenses were encountered in the central portion of the site at depths ranging from approximately 10 to 20 feet below ground surface. These layers/lenses could potentially provide a limited horizontal migration pathway. The full extent of the sand and gravel layers/lenses is not known but they do appear to be discontinuous in nature. Contaminants from SWMUs which include temporary and/or minimal waste activites (i.e., dust collectors, trash compactors, temporary container accumulation areas) would not likely penetrate downward through the clay and silt zone and impact a sand and gravel layer/lens, creating a migration pathway. Only those SWMUs which include subsurface activities (i.e., tank farm sump, and drainage system impoundment basin, interceptor basin, the three used solvent tanks in the tank farm, and the collection trench for the waste treatment building) have a significant potential to impact a sand and gravel lense.

Information to date indicates that contaminant migration in soil has potentially occurred in the vicinity of the tank farm and the impoundment basin. Information was not available to evaluate whether the interceptor basin or collection trench near the waste treatment building had impacted a sand and gravel layer/lense.

Due to the strict security system maintained by PPG and the nature of the primary potential soil contaminant pathway (i.e., sand and gravel layers/lenses at 10 to 20 feet in depth), the potential for exposure through physical contact or ingestion of soils appears minimal.

Groundwater - The primary migration pathways for contaminants in groundwater appears to be lateral movement, through saturated sand and gravel layers/lenses or if a utility trench is present near or beneath a SWMU. Vertical transport is likely limited due to the presence of the low permeable glacial till soils which are prevalent to depths of at least 35 feet below ground surface (based on soil boring data). Ultimately shallow groundwater may discharge to surface/groundwater drainage features off-site. Receptors to shallow lateral contaminant migration likely include the unnamed creek to the east of the property and the Root River to the south. To date, analytical results from wells

along the eastern property boundary do not indicate the presence of impacted groundwater.

At this time, documented evidence of groundwater contamination in relation to a SWMU exists only for the area surrounding the tank farm. The shallow groundwater VOC contamination appears localized and exists primarily in areas where sand and gravel layers/lenses were encountered. (northeast and southwest of the tank farm). Groundwater analytical results from deep piezometer wells around the tank farm have not shown significant VOC contamination. On a localized basis, the tank farm underdrain system appears to create a localized depression in the watertable. The water is collected and discharged to the sanitary sewers, minimizing the potential for human contact.

Shallow groundwater downgradient of the site is not used as an industrial or potable water source for at least 1/2 mile. Wells identified within 1/2 mile of facility are all located either up-gradient or cross-gradient. In addition, these wells are completed in the deep sand and gravel or dolomite aquifer at depths ranging from 92 to 399 ft. Thus the potential for exposure to contaminated groundwater from the site through ingestion or physical contact appears minimal.

Surface Water - The primary migration pathway for surface water migration leaving the site is via the outfall from the interceptor basin, which discharges to the unnamed creek along the east property boundary. The quality of drainage to the unnamed creek from the interceptor outfall is regulated under a WPDES permit. Historical exceedences of COD limits have been documented. Potential exposure through ingestion (via biological accumulation through the food chain) or physical contact is possible as the unnamed creek discharges to the Root River which offers some limited fishing and recreational opportunities.

Of the three runoff outfalls identified by PPG on their recent stormwater discharge permit application, both the outfalls in the northeast and southeast corners of the site do not likely receive runoff from a SWMU. The fourth runoff outfall discharges from the property near the southwest corner and includes runoff from two dust collectors (SWMU RFA #25, permit 14, and RFA #23, permit #13) and a trash compactor (SWMU RFA #33, permit #19). Runoff from these SWMUs channels to a small ditch (partially underground) which then discharges through the outfall.

Air - Based on existing information, no long term migration pathways which would affect air quality have been identified. Any release that has occurred to the air would be relatively short in nature. Surrounding land is primarily farmland, minimizing the potential for human exposure. As the need for intrusive activities

(i.e., further subsurface investigation, soil excavation, and installation of remedial technologies) occurs, potential air migration pathways will be re-evaluated.

#### **B.2.e.** Recommendations For Further Action

Table 2 summarized relevant information pertaining to each SWMU as well as provides recommendations regarding further activities. The activities include no further action or further investigation, as described below.

No further action is recommended for areas where historical documentation of a release does not exist, observations did not indicate a significant evidence of impact, and the potential for impact to health and the environment was low. Factors evaluated to determine the potential at each SWMU included: location, (i.e., indoors vs. outdoors), maximum amount of waste anticipated to be present, at any one time, length of time waste would be present (i.e., 24 hours vs. long term storage), activities conducted (i.e. accumulative only, process- related activity), spill reports and containment and historical soil and groundwater analytical results. In addition, the observations and recommendations made by the WDNR on their Preliminary Investigation Report form were used in determining the need for further action.

The following SWMUs are recommended for no further action:

 Container accumulation areas - A majority of the container accumulation areas are recommended for no further action due to their competent concrete bases, no evidence of significant staining, no reported spills, and minimal waste handling activities and duration wastes are stored at the units. The container accumulation areas where no further action appears warranted include:

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SWMU RFA #16, #18, #19; permit #10
SWMU RFA #17, #20, #37, #38, #39, #40; permit #11
SWMU RFA #21; permit #12
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 Waste treatment and/or accumulation tanks - Many of the waste treatment and/or accumulation tanks are recommended for no further action primarily due to their location indoors (except the MIBK distillant tank) on concrete, no reported spills, no evidence of significant staining, and the recommendation for no further action by the WDNR in the Preliminary Investigation Report. These tanks include:

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SWMU RFA #1; permit #1
SWMU RFA #2, #3, permit #2
SWMU RFA #6; permit #5
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SWMU RFA #7; permit #6 SWMU RFA #8, #9, #10, #41; permit #7 SWMU RFA #14; permit #8 SWMU RFA #27, #28; permit #16

 Air pollution control dust collectors - All air pollution control dust collectors are recommended for no further action due to the enclosed nature of the units, no reported spills, no significant staining, minimal waste handling activities, solid nature of the waste, and the recommendation for no further action by the WDNR in the Preliminary Investigation Report. These units include:

> SWMU RFA #22, #23; permit #13 SWMU RFA #24, #25; permit #14 SWMU RFA #26; permit #15

 Solid waste trash compactors - All solid waste trash compactors are recommended for no further action based on their competent concrete bases, no hazardous waste management activities, no reported spills, and the recommendation by the WDNR in the Preliminary Investigation Report. These units include:

SWMU RFA #31, #32, #33, #34; permit #19.

• Wet scrubber system - The wet scrubber system (SWMU RFA #36; permit #21) is recommended for no further action based on the minimal waste handling activities, enclosed and contained concrete wall and base unit, no reported spills, no evidence of staining, and the recommendation by the WDNR for no further action.

**Further investigation** is recommended for SWMUs where sufficient information was not available for a complete impact assessment. The following SWMUs are recommended for further investigation:

• Container accumulation area - Three container accumulation areas are recommended for further investigation including:

SWMU RFA #4; permit #3 SWMU RFA #5; permit #4 SWMU RFA #15; permit #9 The presence of contamination has not been identified for any of these SWMUs, however, either significant staining or a reported spill has been associated with each unit. The investigation should begin with sampling of shallow soil to determine the presence or absence of contamination.

- Waste storage and/or treatment tanks Three tanks are recommended for further investigation including SWMU RFA #11, #12, #13; permit #8.
   Documented spills, observation of staining and soil data from the vicinity of the tanks indicate that the presence of contamination from these tanks is likely.
- Spill contaminant/runoff control structures The tank farm sump (SWMU RFA #30, permit #18), the impoundment basin (SWMU RFA #29, permit #17), and the interceptor basin outfall (SWMU RFA #35, permit #20) are recommended for further investigation. Documented soil contamination (tank farm sump, impoundment basin), groundwater contamination (tank farm sump) and reported spills (interceptor basin outfall) warrant further investigation.

For SWMUs where documented evidence of soil and/or groundwater contamination exists, further investigation will be necessary prior to implementing any corrective measure. The following Section (Task 2) provides a preliminary discussion of potential corrective measures which may be required as well as further data needs.

# TASK II

# PRE-INVESTIGATION EVALUATION CORRECTIVE MEASURE TECHNOLOGIES

This section presents a discussion of the general response actions and potential corrective measure technologies which may be implemented if corrective actions are deemed necessary based on the RFI at the site. The primary purpose of performing the Pre-Investigation Evaluation of Corrective Measure Technologies is to identify additional data needed to facilitate the evaluation and selection of final corrective measures (if required).

# A. IDENTIFICATION OF POTENTIAL CORRECTIVE MEASURE TECHNOLOGIES

The objective of the this preliminary evaluation of potential corrective measure technologies is to catalog the applicable remedial technologies which can then be further evaluated if a Corrective Measures Study (CMS) phase is warranted. For the PPG-Oak Creek site, this evaluation consisted of three steps:

- · Identification of media of concern
- Development of general response actions
- Identification of potential corrective measure technologies.

The following sections describe the procedures and results of this process.

#### A.1. Identification of Media of Concern

In this step, the various media of concern were identified for use in developing general response actions. The potential media of concern that were considered as part of this analysis included:

- Soil
- Groundwater
- Surface water
- Air

Based on the information assembled in Task 1 of this report, a release from a SWMUs could primarily impact surface or subsurface soil, groundwater or surface water. Therefore, general response actions and potential corrective measures were developed only for these types of media.

#### A.2. Development of General Response Actions

General response actions were developed for each of the media of concern. General response actions are typically developed based on-site conditions, results of the RFI, and media specific goals that may be established to protect human health and the environment. However, general response actions were limited to those actions considered applicable to the site rather than listing all response actions whether applicable or not. Therefore, general response actions identified for consideration are:

Media	General Response Action
Soil	No action/monitoring Access restrictions Containment Excavation and disposal off-site In-situ treatment Excavation and treatment on-site Excavation and treatment off-site Monitoring
Groundwater	No action/monitoring Groundwater use restrictions Gradient controls In-situ treatment Extraction and treatment Groundwater discharge
Surface Water	No action Source control

# A.3. Identification of Potential Corrective Measure Technologies

Potentially applicable corrective measure technologies were identified for soil and groundwater contamination. Corrective measures for surface water (if required) would be limited to source control response actions, which could potentially include spill containment, collection and routing to the wastewater treatment system or other typical engineering remedies. The data needed to design and implement these measures is already available and would be assembled during the Corrective Measure Study. Therefore, a detailed pre-investigation evaluation of these surface water remedies was not performed.

The corrective measures initially implemented at a specific SWMU may be a conditional remedy required to minimize the current or potential risks to human health and the environment, while allowing for continued operation of the manufacturing facility. The conditional remedy would be incorporated into the final clean-up of the SWMU when waste management at the unit ceases.

Similar to the general response actions, corrective measure technologies for soil and groundwater discussed below are limited to those actions considered potentially applicable to the site rather than listing the majority of known conventional and new remediation technologies. The list of technologies and discussion of applicable alternatives may change as additional information regarding the physical characteristics of the site and contaminant levels are obtained.

A.3.a. Potential Soil Corrective Measure Technologies - Several potential soil corrective measure technologies were identified for the general response actions described above. The potential technologies for each response action are presented in Table 10. The selection of the potential technologies for a specific SWMU area will be made based on several factors including:

- nature and extent of contamination
- risk to human health and environment
- operational needs of the facility.

The presence of soil contamination at a majority of the SWMUs is not anticipated based on a review of current information and recent site inspections and therefore no further action would be warranted in these areas. However, if soil contamination does exist, in most cases (except the tank farm sump) the source would tend to be related to more surficial management of waste materials. Therefore, soil contamination (if present) is anticipated to be at the highest levels at or near the ground surface, with the level of contamination decreasing significantly with depth. As the volume of impacted soil requiring corrective measures increases, the preferred response action would likely shift from removal based (excavation and treatment or disposal) to an in-situ based solution (containment or in-situ treatment).

A.3.b. Potential Groundwater Corrective Measure Technologies - Potential groundwater corrective measures were identified for the general response actions described in Section A.2. The potential groundwater corrective measures for each general response action are presented in Table 11. The selection of groundwater corrective measure technology will be based on several factors including:

- nature and extent of contamination
- risk to human health and environment
- geologic and hydrogeologic setting
- operational needs of the facility

The presence of groundwater contamination is known to exist in the vicinity of the tank farm area. Isolated occurrences of groundwater contamination may also exist related to other SWMUs. The general strategy for the treatment of isolated occurrences of groundwater contamination would be extraction and treatment technologies. Whereas, treatment of larger areas of impacted groundwater (if encountered) may be more efficiently corrected with in-situ response actions (gradient control and/or in-situ treatment technologies).

#### B. IDENTIFICATION OF DATA NEEDS

Additional data may be required in individual SWMUs, where suspected or known soil or groundwater contamination may exist. The general data needs to evaluate and select a specific corrective measure were assembled for each applicable technology and are included in Table 10 and 11. The specific data needs at each SWMU will vary depending on the following factors:

- · suspected media of concern
- · existing data at the SWMU
- · geologic and hydrogeologic setting
- applicable potential corrective measure

Therefore, only the general data needs for the technologies were included in this report. The specific data needs at each SWMU will be further evaluated and specified in the RFI Work Plan. The data collection during the RFI will be performed in a phased approach, with initial results utilized to determine the need and scope for subsequent data collection phases. For example, results from an investigation of near-surface soil in a SWMU where surface waste management occurs will be used to determine the need for a deeper subsurface soil investigation. This approach will enable the RFI to focus on the collection of specific data required to make decisions regarding the applicability of corrective measure technologies.

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TABLE 1

# Summary of Private Water Supply Well Information RCRA Facility Investigation Task I and II Report PPG Industries, Inc. Oak Creek, Wisconsin

Well-	Owner of Record, Address, Section-Township- Range	Total Depth <u>(ft)</u>	Completed <u>In:</u>	Casing Diameter and Depth	Yield <u>(gpm)</u>	Depth to Water <u>(ft)</u>	<u>Use</u>
A	H.K. Dawe W. Elm Road E 1/2, Sec. 31, T5N, R22E	189'	Gravel	5"@ 189'	8	47	Domestic
В	D.F. Goelzer 1501 W. Elm Road NW NE SE, Sec. 31, T5N, R22E	256'	Solid Limestone	6" @ 214'	15	55	Domestic
С	Russell Williams 1505 W. Elm Road NW NE SE, Sec. 31, T5N, R22E	259'	Solid Limestone	6"@ 219'	10	45	Domestic
D	Wayne Martinko 1535 W. Elm Road NW NE SE, Sec. 31, T5N, R22E	226'	Solid Limestone	6" @ 213'	15	53	Domestic
E	George Bahr 1575 W. Elm Road NW NE SE, Sec. 31, T5N, R22E	241'	Limestone	6" @ 241'	10	90	Domestic
F	Max Ketelsoro 1641 W. Elm Road NW NE SE, Sec. 31, T5N, R22E	246'	Limestone	6" @ 213'	15	60	Domestic
G	PPG Industries, Inc. 10800 South 13th Street NW SW, Sec. 32, T5N, R22E	228'	Limestone	6" @ 180	10	65	Abandoned
Н	Anton Huber 10484 S. 13th Street SW NW NW, Sec. 32, T5N, R22E	263'	Solid Limestone	6" @ 216'	15	55	Domestic
I	Joseph Plesko 10470 S. 13th Street SW NW NW, Sec. 32, T5N, R22E	245*	Lime Rock	6" @ 217'	12	60	Domestic

TABLE 1

# Summary of Private Water Supply Well Information RCRA Facility Investigation Task I and II Report PPG Industries, Inc. Oak Creek, Wisconsin

Well	Owner of Record, Address, Section-Township- Range	Total Depth <u>(ft)</u>	Completed <u>In:</u>	Casing Diameter and Depth	Yield (gpm)	Depth to Water (ft)	<u>Use</u>
J	James Schneber 8720 Nicholson Road NW, Sec. 5, T4N, R22E	215'	Lime Rock	6" @ 130'	10	40	Domestic
K	E. Paesche 8605 Hwy. V NE, Sec. 6, T4N, R22E	92'	Limestone	6" @ 56'	10	30	Domestic
Ļ	John Kruchter 8645 Hwy. V NE, Sec. 6, T4N, R22E	130'	Limestone	6" @ 80'	10	30	Domestic
M	Oscar Peterson County Trunk V Sec. 6, T4N, R22E	152'	Lime Rock	6" @ 150'	8	80	Domestic
N	Val Al Greenhouse 8644 Hwy. V Sec. 5, T4N, R22E	292'	Limestone	6" @ 44'	30	15	Commercial
0	John Kavitz Oakwood Road Sec. 32, T5N, R22E	285'	Limestone	6" @ 225'	5	57	Domestic
P	Valentine Lyhels Hwy. 41 and Oakwood Road NW NW, Sec. 31, T4N, R22E	215'	Gravel	6" @ 215	10	50	Unknown
Q	Lydia Delikat 547 Oakwood Road NW NW NE, Sec. 32, T5N, R22E	235'	Limestone	6" @ 207'	10	55	Domestic
R	Dennis Nommensen 595 Oakwood Road NW NW NE, Sec. 32, T5N, R22E	259'	Solid Lime	6" @ 210'	13	60	Domestic

#### Summary of Private Water Supply Well Information RCRA Facility Investigation Task I and II Report PPG Industries, Inc. Oak Creek, Wisconsin

Well	Owner of Record, Address, Section-Township- <u>Range</u>	Total Depth <u>(ft)</u>	Completed <u>In:</u>	Casing Diameter and Depth	Yield (gpm)	Depth to Water <u>(ft)</u>	<u>Use</u>
S	Henry Repa 823 W. Oakwood Road NE NW, Sec. 32, T5N, R22E	399'	Limestone	6" @ 197 <b>'</b>	10	60	Commercial

#### Notes:

- 1. Table identifies water supply wells located within a one mile radius of the PPG site. Refer to Figure 4 for well locations.
- 2. Source of well information: Baker/TSA, Inc. Feasibility Report for Storage and Treatment of Hazardous Waste Generated at the PPG Industries, Inc., Oak Creek, Wisconsin Coatings and Resins Facility (October, 1986, as revised).

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# SUMMARY OF SOLID WASTE MANAGEMENT UNITS RCRA FACILITY INVESTIGATION TASK I AND II REPORT PPG INDUSTRIES, INC. OAK CREEK, WISCONSIN

swmu #	F RFA	Description	LOCATION	CAPACITY	BASE	ACTIVITY	TIME	RELEASES	ANALYTICAL	WARZYN	WDNR	RECOMMENDATION
RFI	HFA.	TECHNICAL/ADMINISTRATIVE AREA			Ī		T			-		
9	4.5	container accumulation area	o	16 dr	c l	S	2	N	3	S	1	1
•	13	(15'x30')										
19	31	solid waste compactor	0	NA	С	S	2	N	3	1	NFA	NFA
		PAINT PLANT - NORTH YARD								1	1	NFA
10	16	container accumulation area (6'x6')	0	20 dr	С	S	1	N	3	ı	1	
11		container accumulation areas (6'x16')	0	60 dr	С	S	1	N	3	1	1	NFA
13	22	air pollution control dust	0	8 dr	С	S	2	N	3	I	NFA	NFA
14		air pollution control dust	0	7 dr	С	S	2	N	3	I	NFA	NFA
19	32	soild waste trash compactor	0	NA NA	С	S	2	N	3	1	NFA	NFA
		PAINT PLANT - SOUTH YARD			000000000000000000000000000000000000000		20 200000000000000000000000000000000000					
11	20	drum accumulation area (6'x15')	0	60 dr	С	S	1	N	3	I .	1	NFA
13	23	air pollution control dust	o	8 dr	С	S	2	N	3	I	NFA	NFA
14		collector air pollution control dust	O	7 dr	c	S	2	N	3	S	NFA	NFA
19		collector solid waste trash compactor	o	NA	С	S	2	N	3	S	NFA	NFA
		WASTE TREATMENT CENTER							3	•	NFA	NFA
1		water-based sludge treatment tank	ı	10,000 gal	С	Р	2	N	3			
2	2,3	organic waste treatment tanks (2)	I	6,000 gal	С	Р	2	N	3	I	NFA	NFA
6		tanks (2) wastewater decanter	ı	2,500 gal	С	P	2	N	3	1	NFA	NFA
7	41*,8,9,10	wastewater treatment/accum.	ı	6,000 gal	С	S	2	N	3,4	1	NFA	NFA
3	4	tanks (4) container accumulation area (40.5'x50')	O	300 dr	С	S	2	Y**	3	ı	1	[***

# SUMMARY OF SOLID WASTE MANAGEMENT UNITS RCRA FACILITY INVESTIGATION TASK I AND II REPORT PPG INDUSTRIES, INC. OAK CREEK, WISCONSIN

SWMU#		Description	LOCATION	CAPACITY	BASE	ACTIVITY	TIME	RELEASES	ANALYTICAL	WARZYN	WDNR	RECOMMENDATION
RFI	RFA		LOCATION	OAI AOITT	I							
4	5	RESIN PLANT container accumulation area	0	3,000 dr	С	s	2	N	5	s	1	1
5		(100'x140') organic waste treatment tank	ı	6,000 gal	С	Р	2	N	3	1	NFA	NFA
8	14	waste solvent accumulation	0	15,000 gal	С	S	2	N	3	ı	NFA	NFA
10	18	tanks (1) container accumulation area	o	20 dr	С	S	1	N	3	ı	ı	NFA
10	19	(6'x8') container accumulation area	0	20 dr	С	s	1	N	4	T.	1	NFA
12		(6'x8') former container accumulation	0	1,000 dr	С	S	1	N	3	ı	1	NFA
15		area (20'x40') air pollution control dust	1	1 dr	С	S	2	N	3	l	NFA	NFA
16	27,28	collector solvent recovery stills (2)	ı	5,200 gal	С	Р	2	N	3	I	NFA	NFA
19	34	solid waste trash compactor	О	NA NA	С	S	2	N	3	I	NFA	NFA
21	36	wet scrubber system	0	NA	С	Р	2	N	3	ı	N	NFA
		OUTFALL	0	41,295 gal	s	S	2	Y	3		CA	ı
20		stormwater interceptor basin		41,250 gar								
8	11,12,13	TANK FARM solvent accumulation tanks	0	15,000 gal	С	S	2	Y	1,2,5	S	NFA	1
17	29	(3) impoundment basin	0	210,188 gal	s	S	2	N	1,5	ı	ı	1
18	30	tank farm underdrain sump	0	3,770 gal	s	8	2	N	1,5	ı	CA	1

# SUMMARY OF SOLID WASTE MANAGEMENT UNITS RCRA FACILITY INVESTIGATION TASK I AND II REPORT PPG INDUSTRIES, INC. OAK CREEK, WISCONSIN

#### NOTES:

- 1. Location
- I = Indoors
- O = Outdoors
- Capacity = Maximum capacity dr = drums gal = gallons
- 3. Base
  - C = Concrete
- S = Soil
- 4. Activity
- S = Storage
- P = Process-related
- 5. Time = Indicates length of time waste anticipated to be present
- 1 = < 3 days
- 2 = > 3 days
- 6. Releases = Indicates documented release from SWMU potentially to environment
- Y = Yes
- N= No

- 7. Analytical = Indicates historical analytical results
- 1 = Documented soil contamination
- 2 = Documented ground water contamination
- 3 = No available data
- 4 = Available data does not indicate soil or groundwater contamination from SWMU
- 5 = Soil screening indicates the presence of VOCs
- 8. Warzyn = Observations made during recent site walk-through
- S = Evidence of staining observed
- 1 = Evidence of insignificant or no staining observed
- 9. WDNR = Indicates recommendations by WDNR in VSI/RA
- NFA = No Further Action
- I = Need further information
- CA = Corrective Action plan
- N = Not discussed
- 10. Recommendation
- NFA = No Further Action
- I = Need further investigation
- CA = Corrective Action plan

- 11. \* = Indicates RFI/RFA numbers arbitrarily assigned by Warzyn
- 12. \*\* = Indicates spill from containment trench to the environment
- 13. \*\*\* = Indicates investigation of containment trench area only

Annual Solid Waste Generation RCRA Facility Investigation Task I and II Report PPG Industries, Inc. Oak Creek, Wisconsin

YEAR	TOTAL SOLID WASTE DISPOSED (LBS)
1988	672,000
1989	816,000
1990	732,000
1991	808,000
1992, 1st Quarter	218,400
1992, 2nd Quarter	192,900

#### Notes:

- 1. Total annual solid waste disposed was estimated from disposal invoices received by PPG.
- 2. Solid waste is almost exclusively collected in site dumpsters and compactors. The solid waste consists of: empty pigment bags; empty containers up to 5 gallons in capacity; paper and food waste; rags; cardboard; empty lab sample cups; disposable clothing; and empty fiber and metal drums ranging between 50 and 55 gallons in capacity.

NMC/kak/CWI [mil-608-51c]

# Annual Hazardous Waste Generation RCRA Facility Investigation Task I and II Report PPG Industries, Inc. Oak Creek, Wisconsin

	Total Quantity of Waste Generated for Offsite Disposal *						Total Quantity of Facility Hazardous Waste Recycled and Treated Onsite			Total Hazardous Waste Generated	
Year	<u>D001</u>	<u>D002</u>	<u>D003</u>	D004- D008	<u>U190</u>	<u>F003</u>	Process A	Process B	Process C	Process D	
1991 1990 1989 1988** 1987** 1986**	2746840 3289211 4248810 40603945 35462267 19181040	25300	0 40058 64064 119160 0	2901125 4996586 9661823 23109454 15204915 895200	0 0 106080 0 0	20577397 28684847 25138795 0 0	9098837 19386641 16744160 NR NR NR	2231925 4291526 8675093 NR NR NR	3083780 700300 0 NR NR NR	0 1867500 3106050 NR NR NR	40660784 37010702 67780335 63848559 50692482 20077230

#### Notes:

- 1. All units are in pounds.
- 2. Table developed from available PPG Annual Hazardous Waste Activity Reports.
- Process Information

  - A= Distillation unit for recycling spent solvent waste from paint and resin plant production.

    B= Wastewater treatment tanks for chemical treatment of rinse water from paint manufacturing operations.

    C= Legitimate recovery of solvents from resin manufacturing process and cleaning operations.

    D= Ultrafiltration unit to filter resin solids from cationic wastewater.
- NR= Not a reportable column on this years Annual Hazardous Waste Activity Report.
- Does not include wastes received from offsite sources or storage operations.
- \*\*= Includes total quantity of site hazardous waste recycled and treated onsite due to reporting method.
- Hazardous waste generated for offsite disposal is grouped by the primary hazardous waste code indicated on the Annual Hazardous Waste Activity Reports.

NMC/vas/JEG/CWI [mil-608-51h] 15004301/139

# Summary of Waste Streams RCRA Facility Investigation Task I and II Report PPG Industries, Inc. Oak Creek, Wisconsin

Wa	ste Name	Present General Description	Historic EPA Waste Codes
A.	Paint Plant, Dirty Solvent	Solvent is used to clean process equipment in paint manufacturing. This waste is a single-phase organic liquid with resin and pigment solids. It is accumulated in two-15,000 gallon tanks prior to onsite recovery by batch distillation. On occasion, this waste may be shipped offsite for recovery when it cannot be handled onsite. The solvent varies in concentration but usually not in composition unless a different makeup solvent is added or a new product is produced. This variation, however, does not affect the solvent's major characteristics.	D001, D018, D035, D005, D006, D007, D008, F003, F005
В.	Resin Plant, Dirty Solvent	Solvent is used to clean process equipment in resin manufacturing. This waste is a single-phase organic liquid with resin solids. It is accumulated in one-15,000 gallon tank prior to onsite recovery by batch distillation. It may also be shipped offsite. Similar to paint plant dirty solvent in organic composition.	D001, D007, D018, D035, D008, F003, F005
C.	Solvent Recovery Still Sludge	Residues removed from the solvent recovery distillation systems are blended with other compatible wastes in one of two 6,000 gallon tanks prior to shipment to an offsite secondary fuel or incineration facility.	D001, D005, D006, D007, D008 D018, D035, D038, F003, F005
D.	Water-Base and Water-Reducible Paint Waste	Discarded, spilled, defective or obsolete paint or paint residues from industrial paint manufacturing using water as the main solvent. Liquids are either blended in a treatment tank or shipped directly in drums to an offsite incineration facility. Some absorbent material may be added to solids at the time the waste is placed in the container.	D001, D005, D006, D007, D008, D009
E.	Solvent-Base Paint Waste	Discarded, spilled, defective or obsolete paint or paint residues from industrial and automotive paint manufacturing. Liquids and solids are handled in a similar manner as Water-Base Paint Waste except that the two wastes are handled separately.	D001, D005, D007, D008, D009, D035
F.	Resin Waste	Discarded, spilled, defective or obsolete resin or resin residues from resin manufacturing. Liquids and solids are handled in a similar manner as solvent-base paint waste.	D001, D003, D007, D008, D035

# Summary of Waste Streams RCRA Facility Investigation Task I and II Report PPG Industries, Inc. Oak Creek, Wisconsin

Wa	ste Name	Present General Description	Historic EPA Waste Codes
G.	Cationic Distillate-MIBK	By-product of a resin manufacturing process. This waste is accumulated in a tank prior to shipment offsite to a solvent reclaimer, reuser, or secondary fuel processor. It may also be burned in a plant boiler as a replacement for natural gas.	F003
Н.	Paint Plant, Filter Cartridges and Bags	Fiber filter cartridge, bag and/or paper straining media contaminated with paint, resins, solvent or water and pigments. An inert absorbent material or solidifying agent may be added at the time the waste is placed in the container. Waste is shipped offsite to an incineration facility.	D005, D006, D007, D008, D009
I.	Resin Plant, Filter Cartridges and Bags	Fiber filter cartridge, bag or paper straining media contaminated with resins. An inert absorbent material or solidifying agent may be added at the time the waste is placed in the container. Waste is shipped offsite to an incineration facility.	Various Organic Constituents
J.	Paint Plant, Baghouse Dust	This is a solid waste generated from air pollution dust collection systems located at several points throughout the Paint Manufacturing Plant. Consists of pigment, resin, and other dry raw material particulates. This waste is shipped offsite to an incineration facility.	D005, D006, D007, D008, D009
K.	Resin Plant, Baghouse Dust	This is a solid waste generated from an air pollution dust collection system located at the Resin Manufacturing Plant. Consists of raw material particulates but no solvent. This waste is presently reused directly as a raw material but is identified as a waste in the event that it cannot be reused in the future. It has been shipped offsite to an incineration facility.	Various Organic Constituents
L.	Paint Plant, Trade Washwater	Washwaters from cleaning latex paint production equipment. Physically/chemically treated onsite supernatant is discharged to POTW.	D009
M.	Paint Plant, Industrial Washwaters	Washwaters from cleaning industry paint production equipment. Physically/chemically treated onsite. Supernatant is discharged to POTW.	D001, D002, D005, D006, D007, D008, D009,
N.	Paint Plant, Caustic Cleaning Water	Spent recycled caustic washwater from cleaning portable tanks used in paint production. Physically/chemically treated onsite. Supernatant is discharged to POTW.	D001, D002, D005, D006, D007, D008, D009
o.	Resin Plant, Caustic Cleaning Water	Spent caustic washwater from cleaning resin production equipment. This waste is generated infrequently, and is shipped offsite to an incineration facility.	D001, D002

# Summary of Waste Streams RCRA Facility Investigation Task I and II Report PPG Industries, Inc. Oak Creek, Wisconsin

			YYiqtawia
W	aste Name	Present General Description	Historic EPA Waste Codes
Р.	Resin Plant, Wastewaters	This waste can be a two-phase liquid by-product of resin manufacturing. This waste consists of mostly water with a small amount of soluble and insoluble organic solvents and/or other hydrocarbons. Waste-water also results from cleaning resin plant production equipment. The organic phase is returned for solvent reuse. The water phase is shipped offsite to an incineration facility.	D001, F003, F005
Q.	Cationic Washwater	Washwater from cleaning process equipment and product tankwagons. It is ultrafiltered onsite. The permeate is discharged to the POTW. The concentrate is shipped offsite to an incineration facility. Untreated cationic washwater is sometimes shipped offsite to an incineration facility.	D001, D007, D008, D035
R.	Wastewater Treatment Supernatant	Treated water from all process wastewaters which is discharged to a POTW. Waste is currently exempt under RCRA regulations.	D001, D007, D008, D009
S.	Wastewater Treatment Sludges	This waste consists of solids that are physically/chemically separated from process wastewaters. The sludge is dewatered and stored in drums prior to shipment offsite to an incineration facility. The water is discharged to the POTW.	D005, D006, D007, D008, D009
T.	Paint Plant, Caustic Sludge	Residues removed from the caustic cleaning recycling system. This waste is infrequent and stored in drums prior to shipment to and offsite incineration facility.	D001, D005, D006, D007, D008, D009
U.	Floor Sweepings	Solid floor sweeping compound contaminated with dry raw material pigment and resin residues. This waste is usually collected with waste filters and used as an additional absorbent material as filters are added to the drum.	D005, D006, D007, D008, D009
V.	Floor Cleaning Solution	Solvent or water floor cleaning wastes contaminated with pigments or other raw materials. Solvent is combined with dirty solvent wastes. Water is combined with washwater wastes.	D001, D005, D006, D007, D008, D009, or F003, F005
W	. Discarded or Spilled Raw Materials	Many raw materials would be listed hazardous wastes if discarded or spilled. Wastes would be stored in drums or blended in tanks with other compatible wastes prior to shipment offsite to an incineration facility.	P000-U000 refer to Table 8
X	Offsite Wastes	Off-specification or obsolete products returned to PPG-Oak Creek and declared waste if it cannot be reworked. These wastes are managed the same as paint wastes.  Wastes generated at offsite PPG product distribution centers	D001, D005, D006, D007, D008, D009, D018, D035, D038, F003,
		consisting of solvent-base paint waste, water-base paint water, dirty solvent and washwaters. The majority of the wastes come from small quantity generators.	F005

# Summary of Waste Streams RCRA Facility Investigation Task I and II Report PPG Industries, Inc. Oak Creek, Wisconsin

Waste Name	Present General Description	Historic EPA Waste Codes
Y. Off-Specification Products	Onsite off-specification or obsolete products are occasionally declared waste when reuse or reformulation is not possible. These materials could be either paint or resin and would be managed in the same manner as paint and resin wastes.	D001, D005, D006, D007, D008, D009, D018, D035, D038
Z. Laboratory Paint and Resin Wastes	Quality control samples taken from the production processes are discarded after analysis is complete and they are no longer needed. Samples are segregated by type. (e.g., paint, resin, raw material) and by compatibility (e.g., corrosive versus flammable). These wastes are handled in the same manner as similar plant wastes.	D001, D002, D003, D004, D005, D006, D007, D008, D009, D018, D035, D038

#### Notes:

- 1. Information taken from: Baker.TSA, Inc. <u>Feasibility Report for Storage and Treatment of Hazardous Waste Generated at the PPG Industries Inc.</u>, Oak Creek, Wisconsin Coating and Resins Facility (October 1986, as revised).
- 2. Analytical data for individual waste streams can be found in Appendix B.

[mad-406-206]

# SUMMARY OF WASTE MANAGED AT INDIVIDUAL SWMUS RCRA FACILITY INVESTIGATION TASK I AND II REPORT PPG INDUSTRIES, INC. OAK CREEK, WISCONSIN

r		Description										Was	ite S	rean	n Tyr	)e													Solid
SWMU !	r RFA	Description	Α	В	С	D	Ε	F	G	н	ı	J	κ		М		0	Р	Q	R	s	T	U	٧	W	Χ	Υ	Z	Waste
9	15	TECHNICAL/ADMINISTRATIVE AREA container accumulation area (15°x30°) solid waste compactor				x	×																					x	x
10		PAINT PLANT - NORTH YARD container accumulation area (6'x6') container accumulation areas				x	X			x		x										x	x	x	x	x	x		
13 14	22	(6'x16') air pollution control dust collector air pollution control dust										x																	
19	32	collector soild waste trash compactor																											х
11 13		PAINT PLANT - SOUTH YARD drum accumulation area (6'x16') air pollution control dust				x	x			x		x										x	x	×	x	x	×		
14 19		collector air pollution control dust collector solid waste trash compactor										x																	x
1		WASTE TREATMENT CENTER water-based sludge treatment tank organic waste treatment	x	x	x	x	x	x						x	x	x	x	x		x	x	x		x	×	x	x	×	
8 7	7	tanks (2)												x	x	x	X	x	x	x	x								
3		tanks (4) container accumulation area (40.5'x50')			×	×	×	x													×				X	x	x	x	

# SUMMARY OF WASTE MANAGED AT INDIVIDUAL SWMUS RCRA FACILITY INVESTIGATION TASK I AND II REPORT PPG INDUSTRIES, INC. OAK CREEK, WISCONSIN

SWMU#		Description										Was	te St	rean	тур	жe													Solid
RFI	RFA	'	A	В	C	D	Ε	F	G	Н	- 1	J	Κ	L	М	N	0	Р	Q	R	S	Τ	U	٧	W	X	Y	_ <b>Z</b> _	Waste
4	5	RESIN PLANT container accumulation area (100'x140') organic waste treatment tank		x		x	x	x		X	X	X	X								x	x	x	x	x	x	x	x	
8 10	18	waste solvent accumulation tanks (1) container accumulation area						x	X		x												x	x					
10 12	19	(6'x8') container accumulation area (6'x8') former container accumulation						x x			x		x										x	x x	x				
15 16	26	area (20'x40') air pollution control dust collector solvent recovery stills (2)	x	x	x		x	x					x																
19 21		solid waste trash compactor wet scrubber system																											×
20	35	OUTFALL stormwater interceptor basin																							х				
8		TANK FARM solvent accumulation tanks (3) impoundment basin	x	X																					x				
18		tank farm underdrain sump	×	×																					x				

#### NOTES:

- 1) \* Indicates RFI/RFA numbers arbitrarily assigned by Warzyn.
- 2) Information regarding a particular waste stream can be found in Table 5 with supporting analytical results found in Appendix B.
- 3) Solid waste includes only nonhazardous waste.

TABLE 7

### Summary of Known Releases from SWMUs RCRA Facility Investigation Task I and II Report PPG Industries, Inc. Oak Creek, Wisconsin

						SWMU	
Date	Substance	Destination	Quantity (gal)	Response	Location	<u>RFA</u>	Permit
6-10-79	Titanium Dioxide	Unnamed Creek & Interceptor Basin	400 (+)	Cleanup	Tank Car Unloading Area	#35	#20
8-23-84	Dirty Cleaning Solvent	Tank Farm Basin	40	Pumped Into Drums	Tank Farm	#11, #12, #13	#8
9-17-84	Dirty Cleaning Solvent	Drain and Impoundment Basin	300	Cleanup Containment Area	Solvent Recovery Still	#11, #12, #13	#8
5-16-85	Cationic Resin	Interceptor Basin and Storm Sewer	200-300	Containment & Cleanup	Plant Yard Area	#35	#20
4-30-87	Dirty Cleaning Solvent	Containment Area	100	Contained, Drummed	Tank Farm	#11, #12, #13	#8
7-30-87	Solvent Recovery Still Bottoms	Waste Treatment Containment Trench	2500	Mostly Contained, (2450 gal) in trench. 50 gal. released from trench to ditch with liquid vacuumed up.	Waste Treatment Containment Trench	#4	#3
8-15-88	Dirty Cleaning Solvent	Soil	30-40	Clean Diked Area	Tank Farm	#11, #12, #13	#8
4-10-89	Reclaimed Solvent	Soil	300	Excavated	Tank Farm	#11, #12, #13	#8
8/24/92	Dirty Cleaning Solvent	Soil	3900 1ь	Excavated Soils	Tank Farm	#11, #12,#13	#8

#### NOTES:

Table includes only those releases which originated from a SWMU and were released to the environment. Table does not include raw material or product spills that are unrelated to a SWMU. Table does not include spills to containment-type SWMUs (i.e., interceptor basin, impoundment basin, or tank farm sump) which did not result in a release to the environment but rather were captured in whole.

NMC/lek/JEG/CWI [mil-608-51f]

# Summary of Part A Application Waste Codes RCRA Facility Investigation Task I and II Report PPG Industries, Inc. Oak Creek, Wisconsin

Hazardous		_
Waste Code F003	Waste Description Spent nonhalogenated solvents	Status Active
F005	Spent nonhalogenated solvents	Active
D001	Ignitable wastes	Active
D001	Corrosive wastes	Active
D002	Reactive wastes	Active
D003	Arsenic, characteristic	Active
D005	Barium, characteristic	Active
D006	Cadmium, characteristic	Active
D007	Chromium, characteristic	Active
D008	Lead, characteristic	Active
D009	Mercury, characteristic	Active
D018	Benzene	Active
D035	Methyl ethyl ketone	Active
D038	Pyridine	Active
K078	Spent cleaning wastes	Deleted 3/13/81 -
		5/5/84
K079	Water/caustic cleaning waste	Deleted 3/13/81 -
		5/5/84
K081	Wastewater treatment sludge	Deleted 3/13/81 -
		5/5/84
K082	Emission control dust	Deleted 3/13/81 -
		5/5/84
P092	Phenylmercuric acetate	Active
P100	1,2-Propanediol	Active
U002	Acetone	Active
U007	Acrylamide	Active
U008	Acrylic acid	Active
U031	n-Butyl alcohol	Active
U056	Cyclohexane	Active
U057	Cyclohexanone	Active
U092	Dimethylamine	Deleted July 10, 1985

# Summary of Part A Application Waste Codes

# RCRA Facility Investigation

Task I and II Report

PPG Industries, Inc.

Oak Creek, Wisconsin

Hazardous		
Waste Code U112	Waste Description	Status
	Ethyl acetate	Active
U113	Ethyl acrylate	Active
U118	Ethylmethacrylate	Deleted July 10, 1985
U122	Formaldehyde	Active
U140	Isobutyl alcohol	Active
U154	Methanol	Active
U159	Methyl ethyl ketone (MEK)	Active
U161	Methyl isobutyl ketone (MIBK)	Active
U162	Methyl methacrylate	Active
U190	Phthalic anhydride	Active
U197	p-Benzoquinone	Active
U220	Toluene	Active
U223	Toluene diisocyanate	Active
U238	Carbamic acid, ethyl ester	Deleted July 10, 1985
U239	Xylene	Active
U009	Acrylonitrile	Deleted July 10, 1985
U032	Chromic acid, calcium salt	Deleted July 10, 1985
U069	1,2-Benzenedicarboxylic acid,	Active
	dibutyl ester	
U107	1,2-Benzenedicarboxylic acid,	Active
	di-n-octyl ester	Active
U123	Formic acid	Active
U147	Maleic anhydride	Active
U080	Dichloromethane	Active

#### Notes:

- Table developed from information contained in the RCRA Facility Assessment conducted by the Wisconsin Department of Natural Resources.
- 2. Revisions to the original Part A application of November 1980 made on March 13, 1981, October 23, 1981, May 5, 1984, July 10, 1985, and September 21, 1990.

JEG/lek/NMC/CWI [mil-608-51G]

TABLE 9

Summary of Available
Water Level Measurements
RCRA Facility Investigation
Task I and II Report
PPG Industries, Inc.
Oak Creek, Wisconsin

<u>Well</u>	Highest Recorded Water Level <u>Measurement</u>	Lowest Recorded Water Level Measurement	Average of Highest and Lowest Recorded Water Level Measurement
TW1	6.60	14.30	10.45
TW2	4.77	12.00	8.39
TW3	9.10	16.00	12.55
TW4	3.66	14.65	9.16
TW5	2.42	18.10	10.26
TW6	8.36	20.00	14.18
TW7	6.76	13.20	9.98
TW8	5.50	11.25	8.38
MW9	6.55	12.43	9.49
MW10	10.12	11.50	10.81
MW11	6.80	9.23	8.01
MW12	6.21	9.70	7.96
MW13	2.85	7.51	5.18
MW14	4.43	7.79	6.11
MW15	11.39	12.68	12.04
MW16	5.72	7.67	6.70
LW1	6.23	7.72	6.98
LW2	12.06	13.17	12.62
LW3	10.27	12.34	11.31
LW4	11.04	13.12	12.08
LP1	6.62	13.01	9.82
LP3	11.78	21.75	16.77

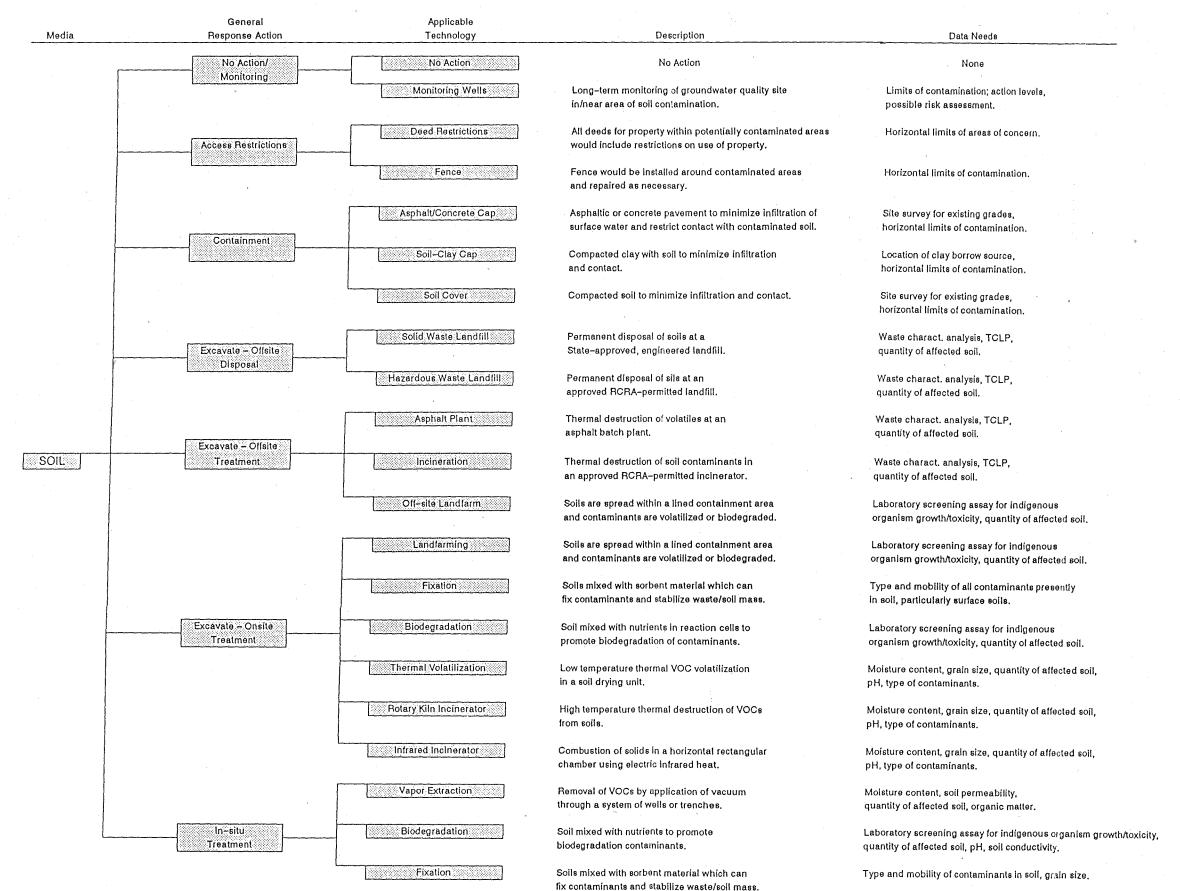
## NOTES:

1. Refer to Appendix G for summary of investigations involving groundwater sampling and water level measurements.

JEG/lek/NMC/CWI [mil-608-51i]

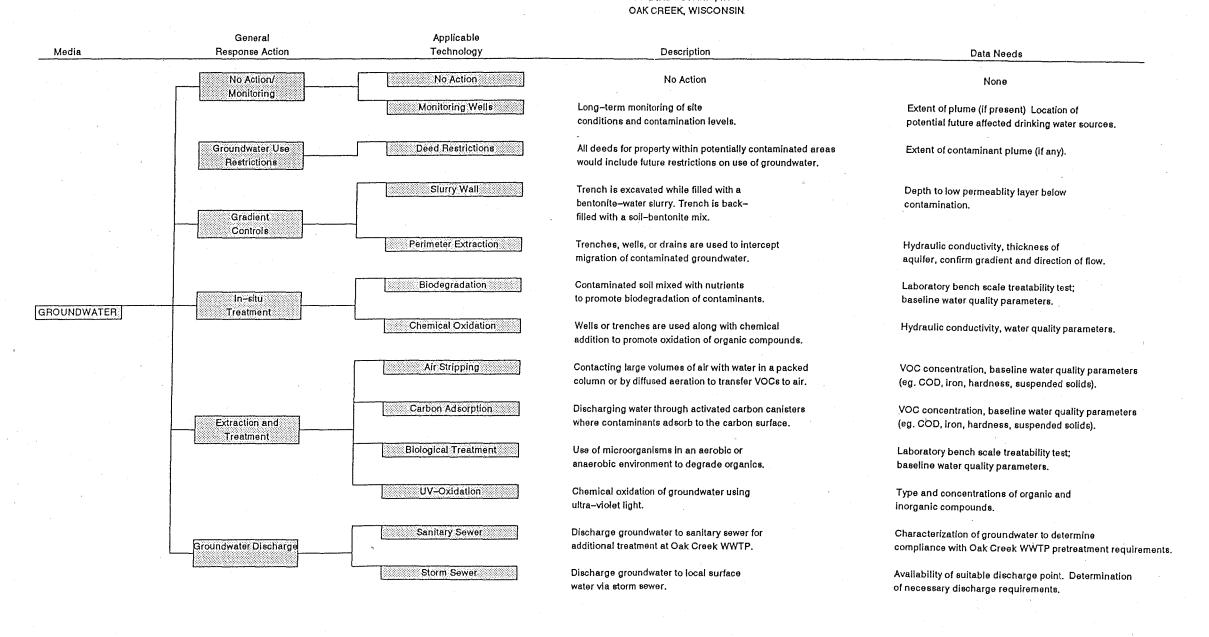
# POTENTIAL SOIL CORRECTIVE MEASURE TECHNOLOGIES PRE-INVESTIGATION EVALUATION OF CORRECTIVE MEASURE TECHNOLOGIES

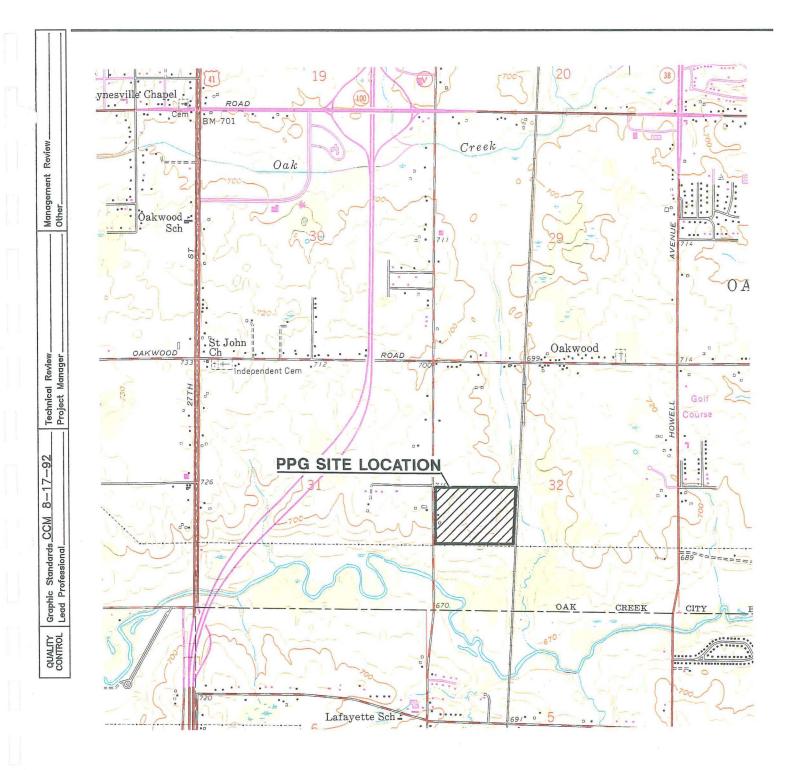
RCRA FACILITY INVESTIGATION
TASK I AND II REPORT
PPG INDUSTRIES, INC.
OAK CREEK, WISCONSIN



# POTENTIAL GROUNDWATER CORRECTIVE MEASURE TECHNOLOGIES PRE-INVESTIGATION EVALUATION OF CORRECTIVE MEASURE TECHNOLOGIES

# RCRA FACILITY INVESTIGATION TASK I AND II REPORT PPG INDUSTRIES, INC.





# NOTES

1. BASE MAP DEVELOPED FROM THE FRANKSVILLE, WISCONSIN 7.5 MINUTE U.S.G.S. TOPOGRAPHIC QUADRANGLE MAP, DATED 1958, PHOTOREVISED 1971.



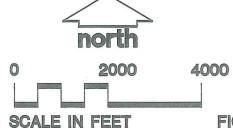
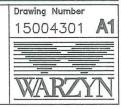


FIGURE 1

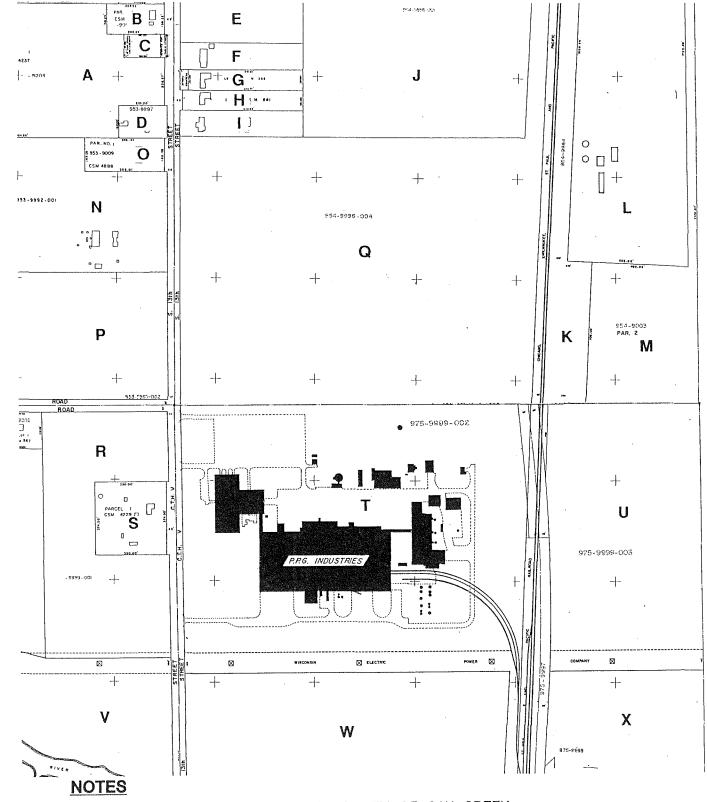
Drawn By: CCM	
Date:	
	CCIVI

# SITE LOCATION MAP

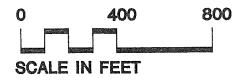
RCRA FACILITY INVESTIGATION TASK I AND II REPORT PPG INDUSTRIES, INC. OAK CREEK, WISCONSIN



WARZYN INC.



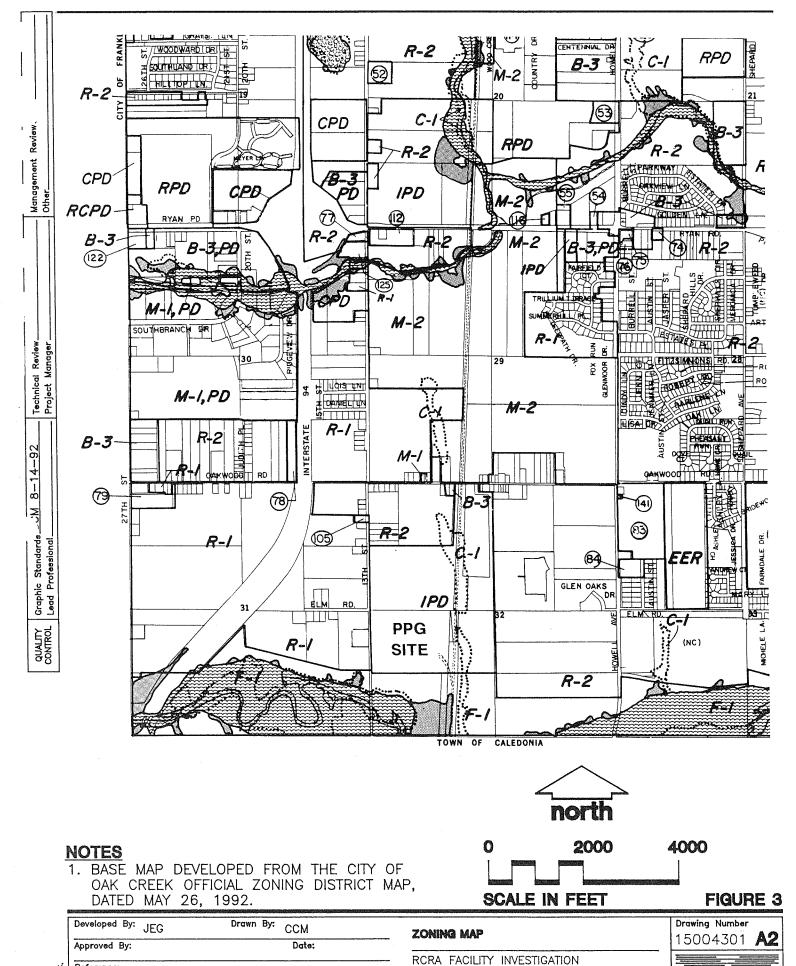
1. BASE MAP DEVELOPED FROM 1992 CITY OF OAK CREEK OFFICIAL PLAT MAPS.
2. PROPERTY OWNERSHIP RECORDS OBTAINED FROM THE 1992 CITY OF OAK CREEK PROPERTY OWNERSHIP LISTING.





PRO	PERTY OWNER	SHIP KEY
	TAX KEY #	OWNER NAME/ADDRESS
A	953-9004	JAMES A. & SARAH VESHI 10441 SOUTH 13th STREET
В	953-9003	ANDREW & META E. LOUREK 10401 SOUTH 13th STREET
C	953-9000	ELDEN J. BODENDORFER 10421 SOUTH 13th STREET
D	953-9997	CHARLES J. & KAREN CRAIG 10475 SOUTH 13th STREET
E	954-9987	ELLEN ODEGARD 10400 SOUTH 13th STREET
F	954-9986	BERT PETERSON 10460 SOUTH 13th STREET
G	954-9000	DELBERT J. & LAURA L. BERTLING 10470 SOUTH 13th STREET
Н	954-9001	ANTON HUBER JR. 10480 SOUTH 13th STREET
	954-9985	JAMES P. ROSZINA 10510 SOUTH 13th STREET
J	954-9996-01	NORMA B. & HATTIE GOELZER 1045 WEST OAKWOOD ROAD
K	954-9984	CMSTP & P RR CO. 725 WEST OAKWOOD ROAD
L	954-9002	AIR PRODUCTS & CHEMICALS, INC. 701 WEST OAKWOOD ROAD
M	954-9003	MILWAUKEE METROPOLITAN SEWERAGE DISTRICT 641 WEST OAKWOOD ROAD
N	953-9992-001	KENNETH R. DAWE 10543 SOUTH 13th STREET
0	953-9009	JAMES B. & JOYCE FUCILE 10501 SOUTH 13th STREET
P	953-9990-002	JAMES A. & SARAH VESHI 10601 SOUTH 13th STREET
Q	954-9996-004	PPG INDUSTRIES, INC. 10800 SOUTH 13th STREET
R	976-9999-001	PPG INDUSTRIES, INC. 10800 SOUTH 13th STREET
S	976-9005	JAMES G. & AUDREY PRUITT 10771 SOUTH 13th STREET
T	975-9999-002	PPG INDUSTRIES, INC. 10800 SOUTH 13th STREET
U	975-9999-003	MILWAUKEE METROPOLITAN SEWERAGE DISTRICT 10080-R SOUTH 13th STREET
٧	976-9996	MILWAUKEE COUNTY 11031 SOUTH 13th STREET
W	975–9998	MILWAUKEE COUNTY (PARK COMMISSION) 11000 SOUTH 13th STREET
X	975-9998	MILWAUKEE COUNTY (PARK COMMISSION) 11000 SOUTH 13th STREET

15004301 **B1** 



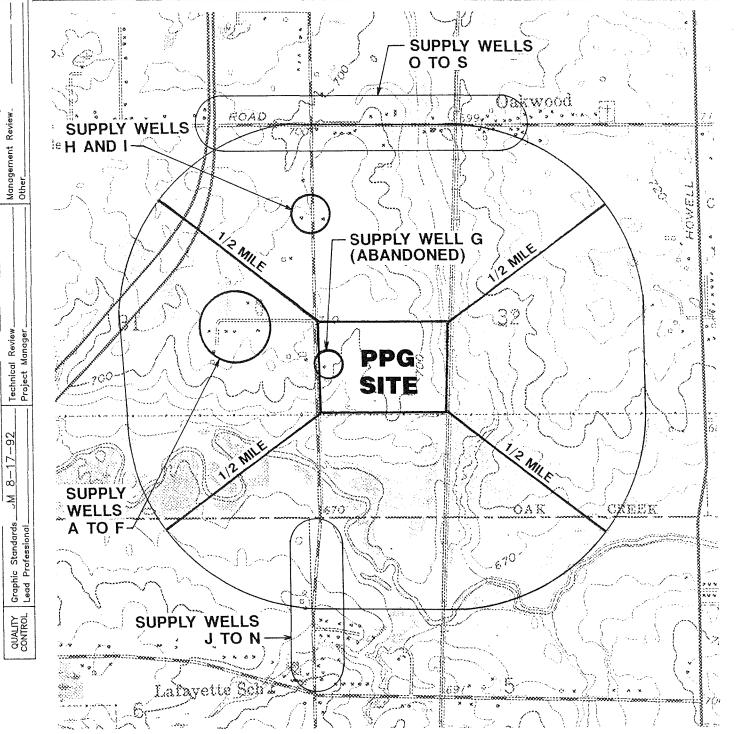
TASK I AND II REPORT PPG INDUSTRIES, INC.

OAK CREEK, WISCONSIN

WARZYN INC.

Reference:

Revisions:



### **NOTES**

- 1. BASE MAP DEVELOPED FROM THE FRANKSVILLE, WISCONSIN 7.5 MINUTE U.S.G.S. TOPOGRAPHIC QUADRANGLE MAP, DATED 1958, PHOTOREVISED 1971
- 2. SOURCE OF WELL INFORMATION: BAKER/TSA, INC. FEASIBILITY REPORT FOR STORAGE AND TREATMENT OF HAZARDOUS WASTE GENERATED AT THE PPG INDUSTRIES, INC. OAK CREEK, WISCONSIN COATINGS AND RESINS FACILITY (OCTOBER 1986 AS REVISED).

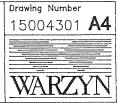


FIGURE 4

	Developed By: J	JEG	Drawn By: CCM
	Approved By:	***************************************	Date:
NC.	Reference:		
WARZYN	Revisions:		

WATER SUPPLY WELL LOCATION MAP

RCRA FACILITY INVESTIGATION TASK I AND II REPORT PPG INDUSTRIES, INC. OAK CREEK, WISCONSIN



	1		B A	man a
	-			
	$ \omega $	down	B B	

ROOT RIVER FOREST

- FLOOD PLAIN

PRIMARY ENVIRONMENTAL

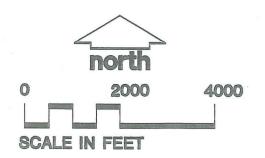
CORRIDOR

WETLAND

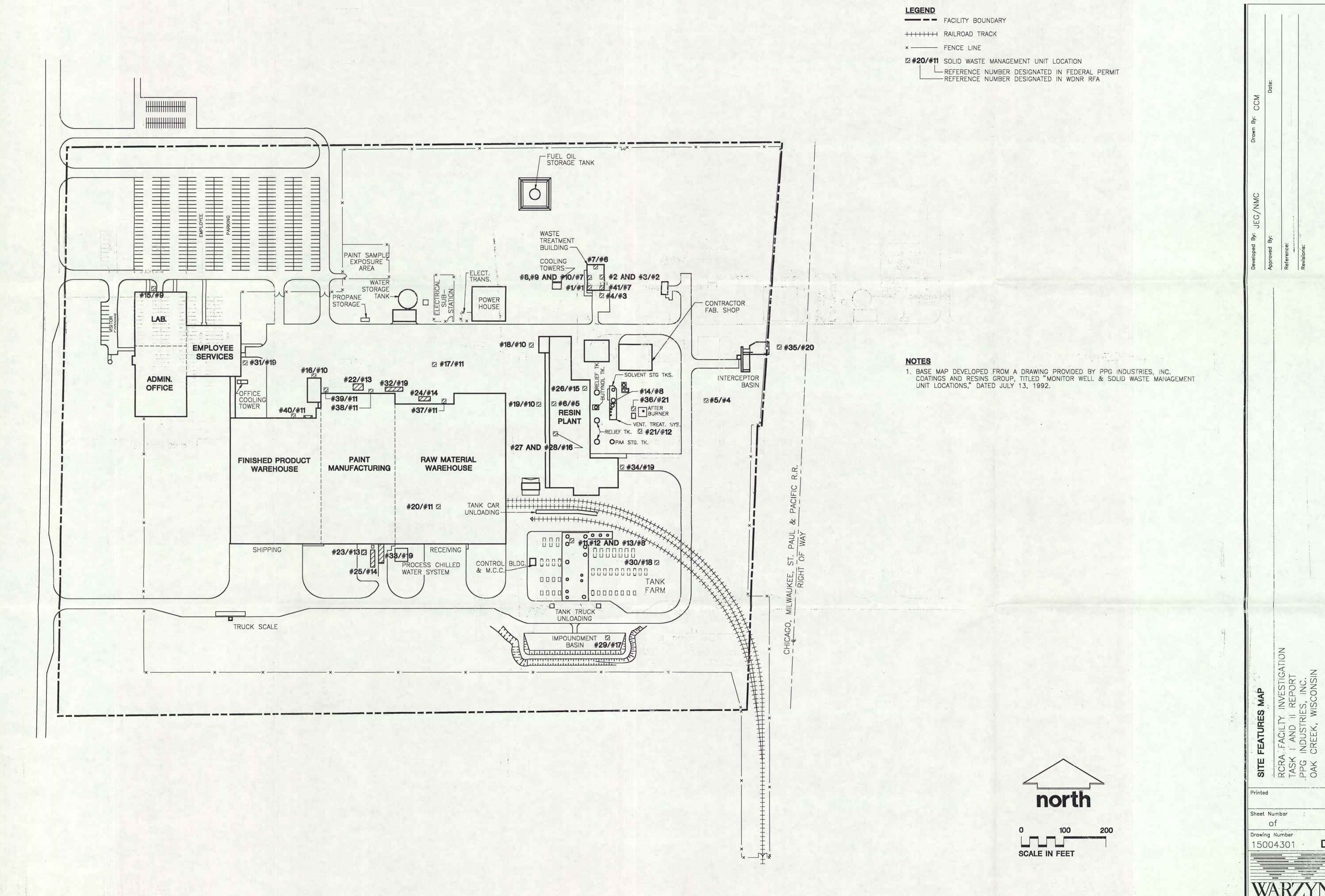
- CONSERVANCY

### **NOTES**

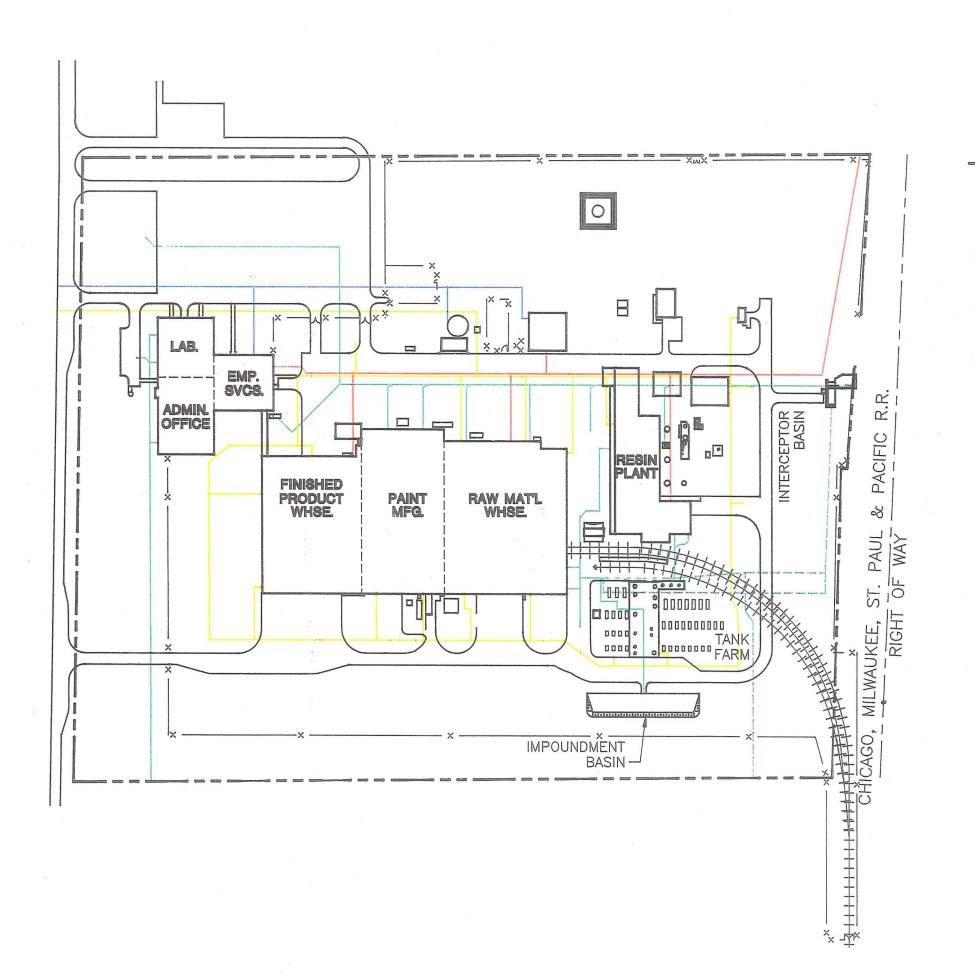
- 1. BASE MAP DEVELOPED FROM THE FRANKSVILLE, WISCONSIN 7.5 MINUTE U.S.G.S. TOPOGRAPHIC QUADRANGLE MAP, DATED 1958, PHOTOREVISED 1971.
- 2. SOUTHERN BOUNDARY OF MAP ENDS AT THE RACINE COUNTY LINE. SOME ENVIRONMENTALLY SENSITIVE AREAS EXTEND FURTHER TO THE SOUTH THAN SHOWN.
- 3. WETLAND AREAS OBTAINED FROM WDNR WISCONSIN WETLANDS INVENTORY MAP T5N, R22&23E, MIL—WAUKEE COUNTY, WISCONSIN, REVISED MARCH, 1989.
  4. FLOODPLAIN AND CONSERVANCY AREAS OBTAINED
- FROM THE CITY OF OAK CREEK OFFICIAL ZONING DISTRICT MAP.
- 5. PRIMARY ENVIRONMENTAL CORRIDOR LOCATIONS
  OBTAINED FROM THE SOUTHEASTERN WISCONSIN
  REGIONAL PLANNING COMMISSION A SOLID WASTE
  MANAGEMENT PLAN FOR MILWAUKEE COUNTY, DATED
  JULY, 1987.
- 6. ROOT RIVER FOREST LOCATION OBTAINED FROM WDNR RCRA FACILITY ASSESSMENT, DATED 1988.



15004301**B5** 



FIGURE



# <u>LEGEND</u>

- - FACILITY BOUNDARY

------ FENCE LINE

- SANITARY SEWER

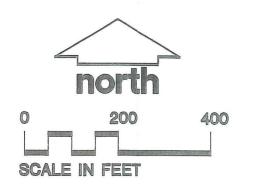
STORM SEWER
FORMER STORM SEWER

NATURAL GAS

POTABLE AND/OR FIRE SUPPRESSION WATER

# NOTES

- 1. BASE MAP DEVELOPED FROM A DRAWING PROVIDED BY PPG INDUSTRIES INC. COATINGS AND RESINS GROUP, TITLED "MONITOR WELL & SOLID WASTE MANAGE—MENT UNIT LOCATIONS," DATED JULY 13, 1992.
- 2. UTILITY LOCATIONS OBTAINED FROM PLANT CONSTRUCTION DRAWINGS, DATED MARCH 8, 1973 PROVIDED BY PPG INDUSTRIES, INC.
- 3. ELECTRICITY SUPPLIED TO PROPERTY BY OVERHEAD LINES ARE NOT SHOWN.



Developed By: JEG Drawn By: CCM
Approved By: Date:
Reference:
Revisions:

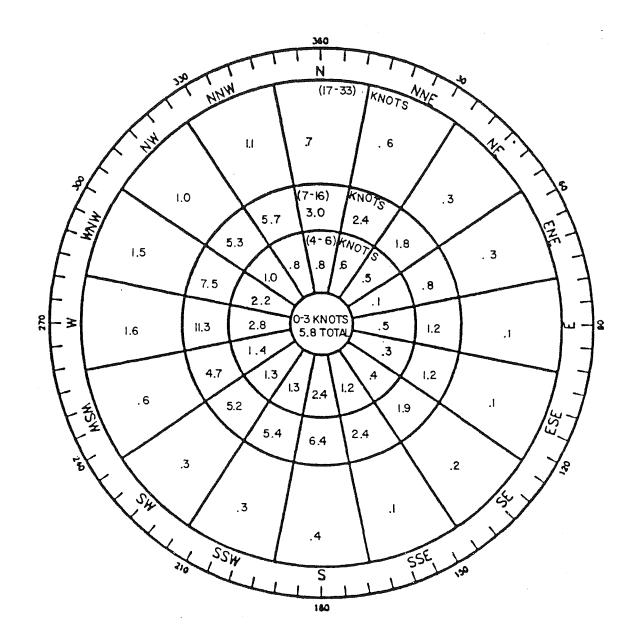
FIGURE 7

5 2 2 3 8

Drawing Number

15004301 B4

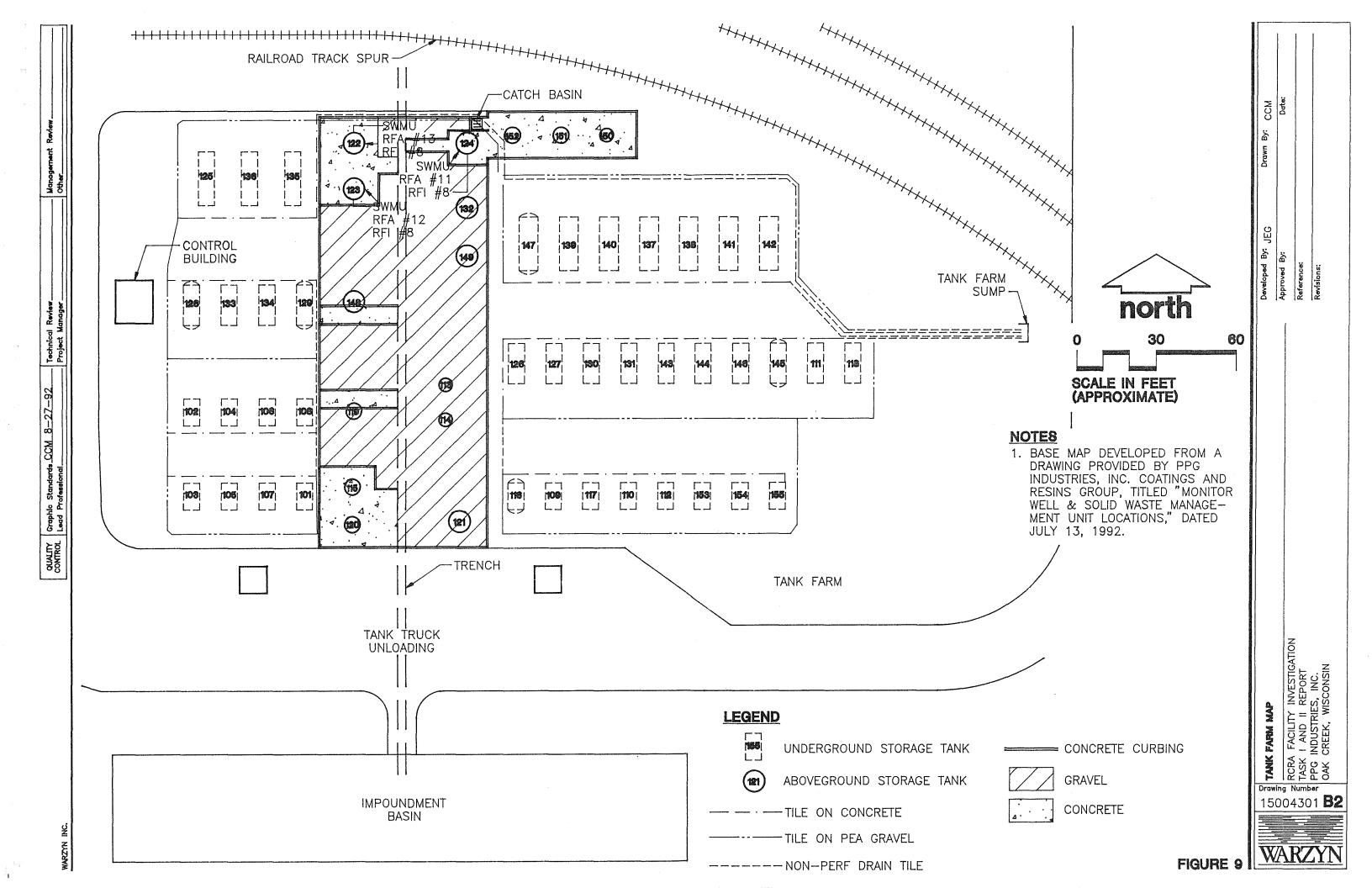
WARZYN

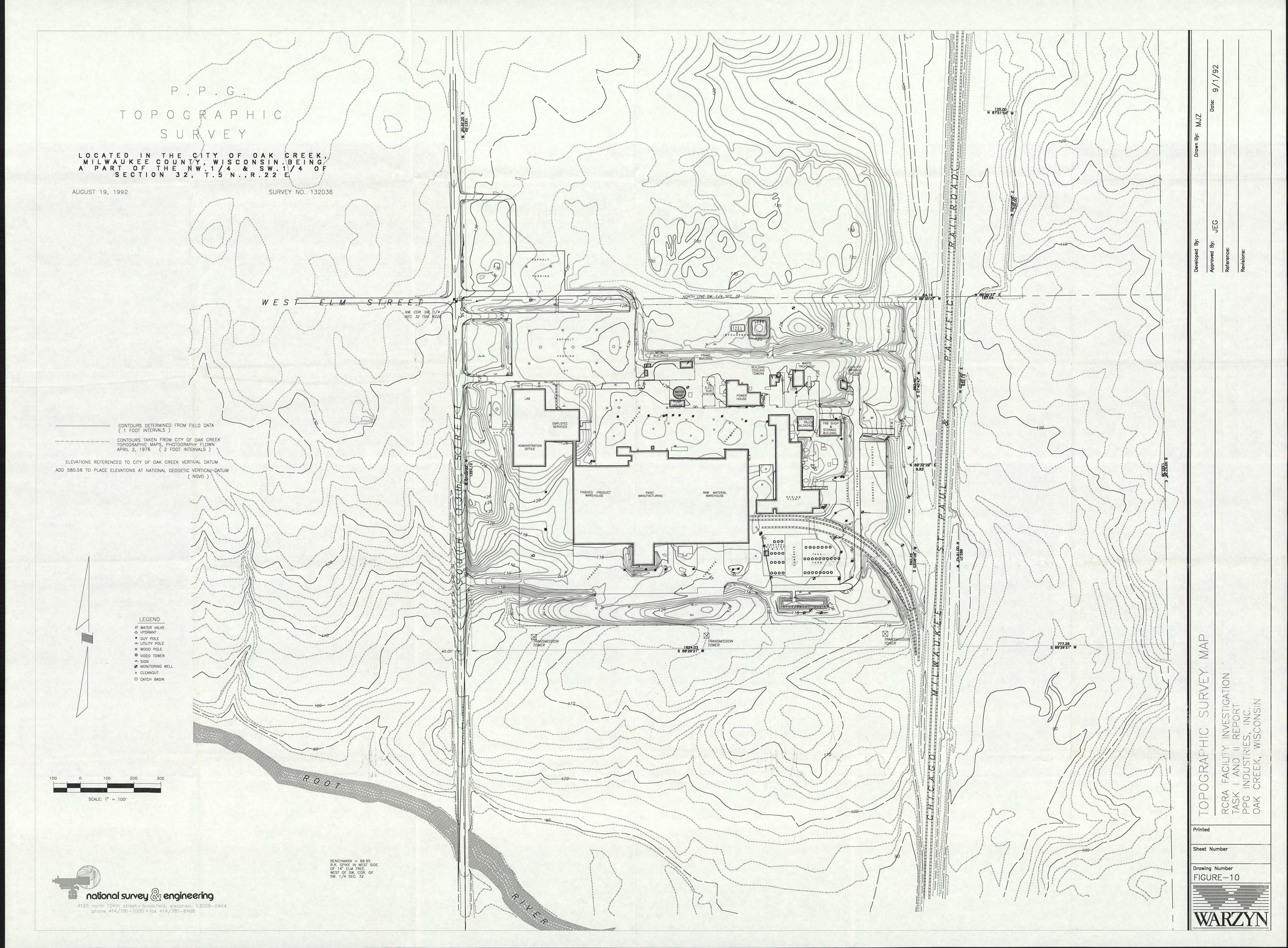


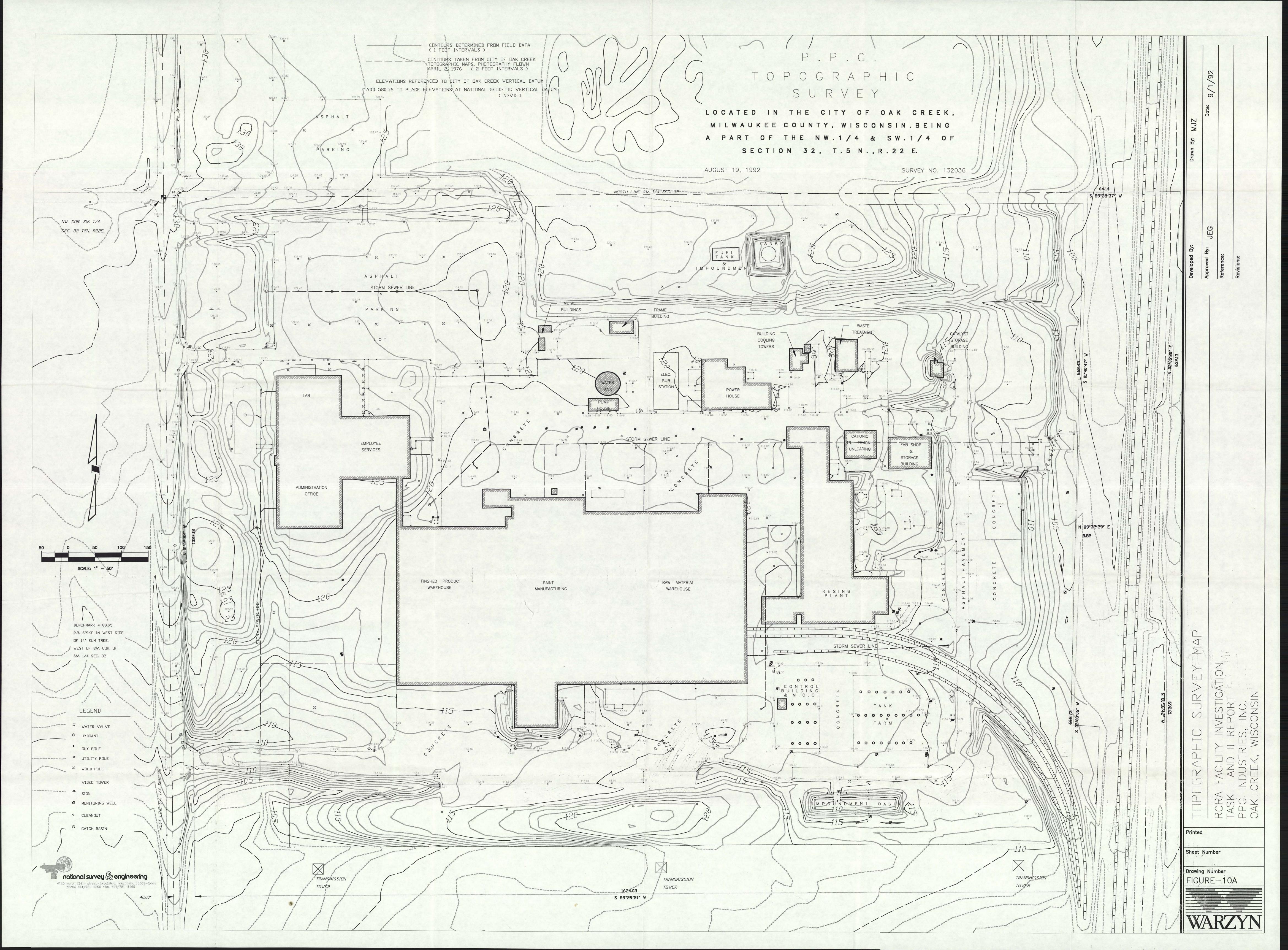
Source: N.O.A.A. Summary — Milwaukee Mitchell Field (1965—1974)
Climatography no. 90 (Feb. 1978)

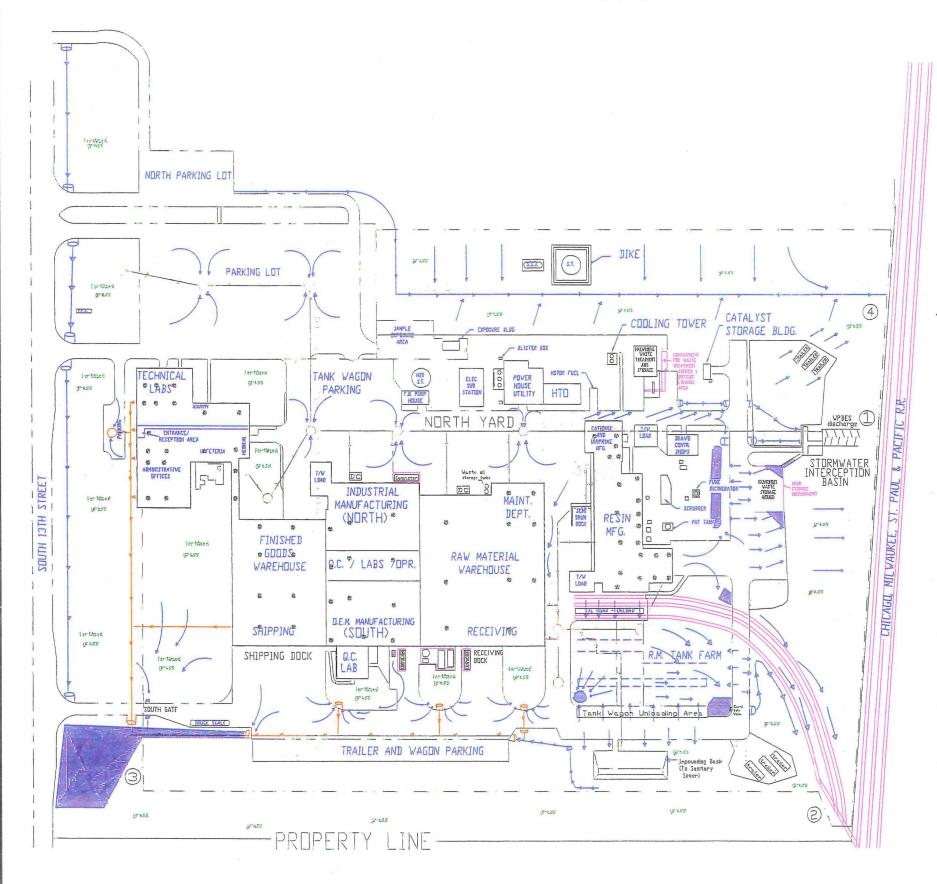
## FIGURE 8

1				
	Developed By: JEG	Drawn By: CCM	WIND ROSE	Drawing Number
	Approved By:	Date:	WIND ROSE	15004301 <b>A3</b>
Ž.	Reference:		RCRA FACILITY INVESTIGATION TASK   AND    REPORT PPG INDUSTRIES, INC.	
			OAK CREEK, WISCONSIN	WARZYN









**LEGEND** 

ROOF DRAIN

RAINWATER OUTFALL

GRAVEL AREA

- FENCE LINE AROUND PLANT

PLUGGED MANHOLE COVER

UNDERGROUND TRANSFER TO OUTFALL 3

UNDERGROUND TRANSFER TO STORMWATER COLLECTION SYSTEM

ABOVEGROUND WATER FLOW

DUST COLLECTOR

COMPACTOR TRASH COMPACTOR

CURBING AND DIKING TO PREVENT RUNOFF

WPDES OUTFALL 001, TRIBUTARY TO ROOT RIVER

SMALL OUTFALL ALONG RAILROAD TRACKS, SEEPS INTO GROUND

MARSHY DITCH ALONG 13th STREET, SEEPS INTO GROUND

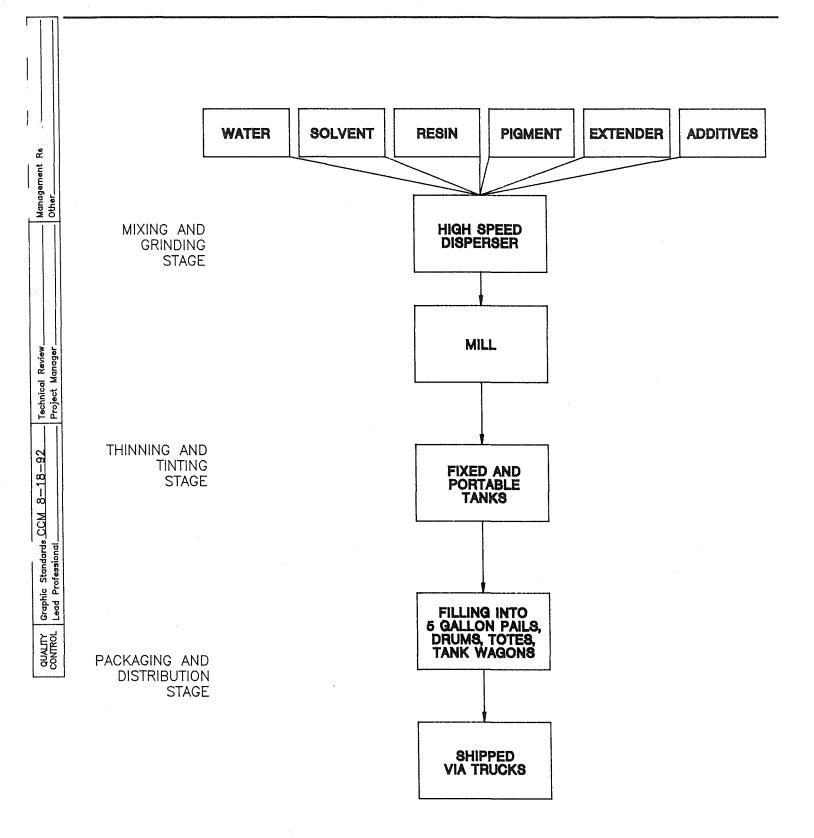
SMALL OUTFALL THAT NORMALLY
SEEPS INTO THE GROUND. ON THE
OCCASION OF A LARGE RAINFALL
IT WILL JOIN WITH OUTFALL 001

## **NOTES**

1. BASE MAP DEVELOPED FROM PPG STORM—WATER DIAGRAM.



15004301 **B3** 



#### FIGURE 12

	Developed By: NMC	Drawn By: CCM	PAINT PRODUCTION DIAGRAM	Drawing Number
	Approved By:	Date:		15004301 <b>A5</b>
NC.	Reference:	WEARING COMMISSION OF THE STATE PLANTS OF THE STATE OF TH	RCRA FACILITY INVESTIGATION TASK I AND II REPORT	Section 1 - Section 2 - Sectio
VARZYN	Revisions:		PPG INDUSTRIES, INC. OAK CREEK, WISCONSIN	WARZYN

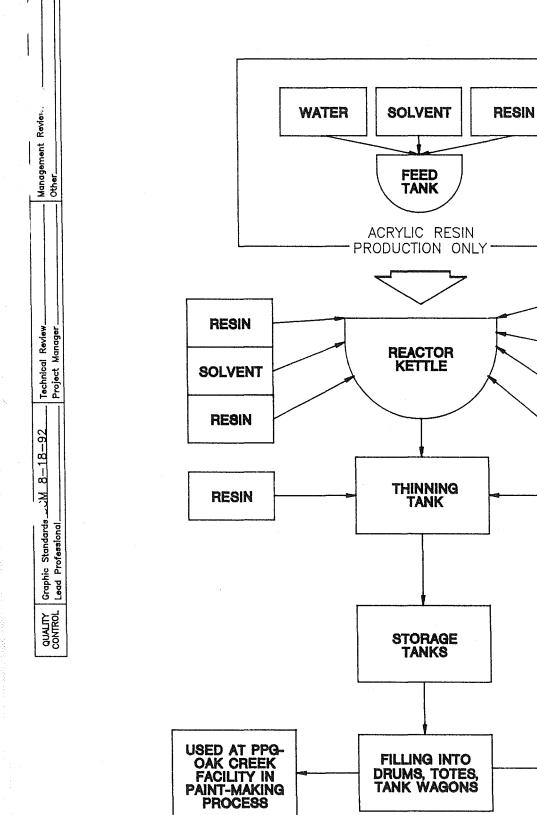


FIGURE 13

WATER

**ADDITIVES** 

WATER

**ADDITIVES** 

**PRODUCT** 

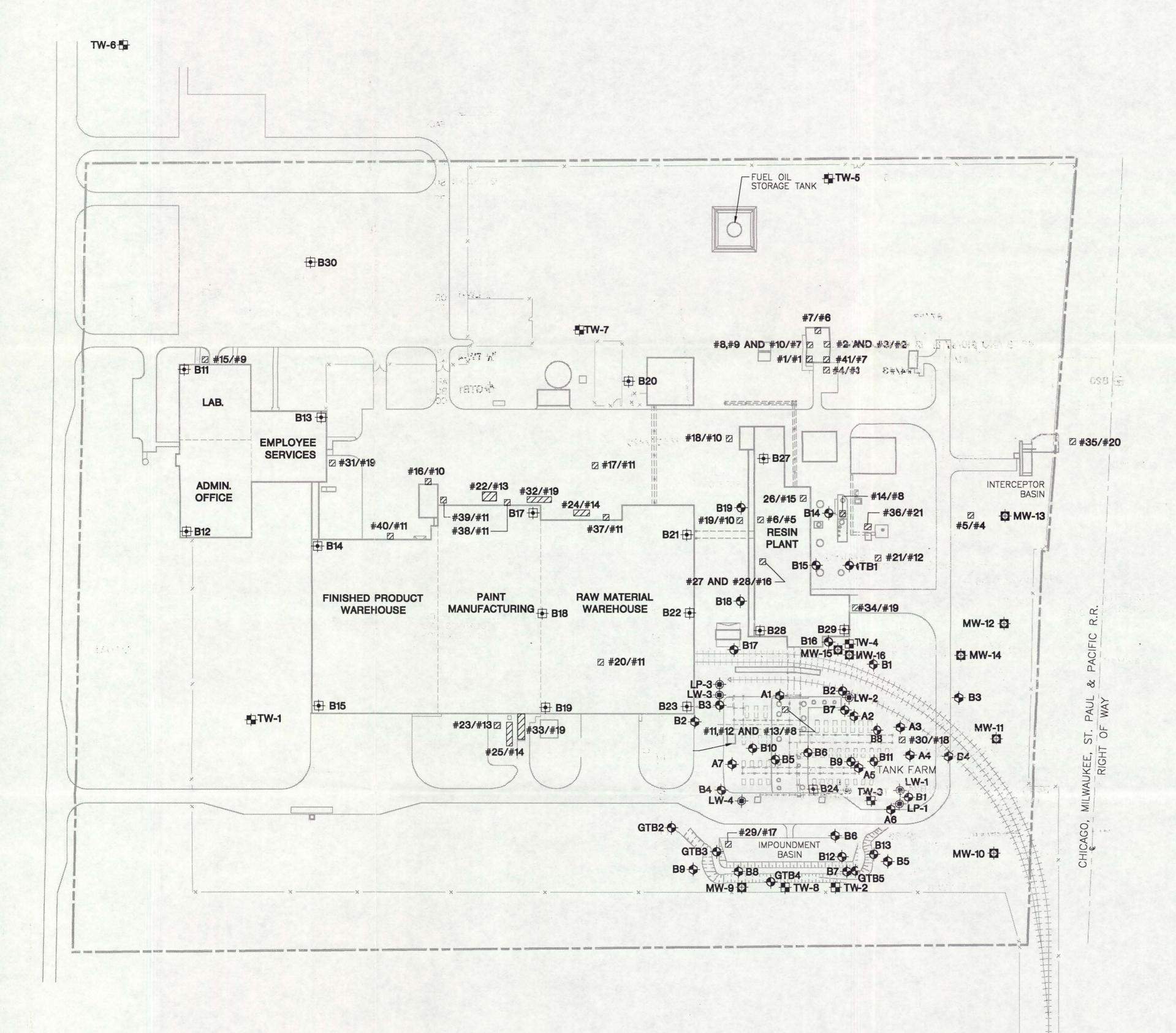
SPECIFIC

ADDITIVES

SHIPPED

VIA TRUCK

	Developed By: NMC	Drawn By: CCM	RESIN PRODUCTION DIAGRAM	Drawing Number 15004301 <b>A6</b>
	Approved By:	Date:		15004301 <b>AO</b>
NC.	Reference:		RCRA FACILITY INVESTIGATION TASK I AND II REPORT	Wilderstand of the control of the co
ARZYN	Revisions:		PPG INDUSTRIES, INC. OAK CREEK, WISCONSIN	WARZYN



LEGEND

FACILITY BOUNDARY

++++++ RAILROAD TRACK

× ---- FENCE LINE

REFERENCE NUMBER DESIGNATED IN FEDERAL PERMIT
REFERENCE NUMBER DESIGNATED IN WDNR RFA

B11 APPROXIMATE LOCATION OF GEOTECHNIAL BORING CONDUCTED BY LAYNE-WESTERN COMPANY, INC. IN 1973

MW-12 APPROXIMATE LOCATION OF MONITORING WELL INSTALLED BY GERAGHTY & MILLER IN 1987

APPROXIMATE LOCATION OF WATERTABLE WELL (LW) OR PIEZOMETER WELL (LP) INSTALLED BY WARZYN INC. IN 1992

B6 APPROXIMATE LOCATION OF SOIL BORING CONDUCTED BY O.H. MATERIALS CORP. IN 1987

APPROXIMATE LOCATION OF MONITORING WELL INSTALLED BY WARZYN ENGINEERING INC. IN 1981

APPROXIMATE LOCATION OF ENVIRONMENTAL SOIL BORING (B) OR GEOTECHNICAL SOIL BORING (GTB)

CONDUCTED BY WARZYN INC. IN 1992

NOTES

1. BASE MAP DEVELOPED FROM A DRAWING PROVIDED BY PPG INDUSTRIES, INC.
COATINGS AND RESINS GROUP, TITLED "MONITOR WELL & SOLID WASTE MANAGEMENT UNIT LOCATIONS," DATED JULY 13, 1992.



100 200 CALE IN FEET Printed

Sheet Number

of

Drawing Number

15004301

D2

FIGURE 14



PROJECT 15004301



# **VOLUME II OF II**

# **RCRA FACILITY INVESTIGATION:**

I. DESCRIPTION OF CURRENT CONDITIONS
AND
II. PRE-INVESTIGATION EVALUATION OF
CORRECTIVE MEASURE TECHNOLOGIES

PPG INDUSTRIES, INC. 10800 SOUTH 13TH STREET OAK CREEK, WISCONSIN

SEPTEMBER 1992

PREPARED FOR:
PPG INDUSTRIES, INC.
OAK CREEK, WISCONSIN

. . .

PREPARED BY:
WARZYN INC.
MILWAUKEE, WISCONSIN



# Volume II of II

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Appendix B	Waste Stream Analytical Results
Appendix C	Soil Boring Logs
	C1 Layne - Western Company, Inc., 1973
Ŧ	C2 Warzyn Engineering, Inc., 1981
	C3 O.H. Materials Corp., 1987
	C4 Geraghty & Miller, 1987
	C5 Warzyn Inc., 1992
Appendix D	Geologic Cross Sections
	D1 Warzyn Engineering, Inc., 1981
	D2 Warzyn Inc., 1992
Appendix E	Monitoring Well Construction Details
	E1 Warzyn Engineering, Inc., 1981
	E2 Geraghty & Miller, 1987
	E3 Warzyn Inc., 1992
Appendix F	Groundwater Contour Maps
	F1 Warzyn Engineering, Inc., 1981
	F2 Geraghty & Miller, 1987
Appendix G	Summary of Available Soil and Groundwater Investigations
	G1 Layne-Western Company, Inc., 1973
	G2 Warzyn Engineering, Inc., 1981
	G3 Geraghty & Miller, 1986
	G4 O.H. Materials Corp., 1987
	G5 Geraghty & Miller, 1987
	G6 Warzyn Inc., 1992
	G7 Periodic Groundwater Monitoring

# A

LIST OF REFERENCES

# A

# LIST OF REFERENCES

- Wisconsin Department of Natural Resources, RCRA Facility Assessment PPG Industries, Inc., Oak Creek, Wisconsin WID 059972935 (September 1987, Revised March 1988).
- Baker/TSA, Inc., Feasibility Report for Storage and Treatment of Hazardous Waste Generated at the PPG Industries, Inc. Oak Creek, Wisconsin Coatings and Resins Facility (October 1986, as revised).
- RMT, Inc., Plan of Operation for the Hazardous Waste Storage Facility at the PPG Industries, Inc. (February 1990, as revised).
- Geraghty and Miller, Oak Creek Groundwater Investigation Preliminary Investigation Results (June 1986).
- O.H. Materials Corp., Report for Environmental Services Conducted at PPG Industries, Inc. Oak Creek, Wisconsin Facility (October 1987).
- Geraghty and Miller, Groundwater Assessment (December 1987).
- Warzyn Inc., Soil and Groundwater Assessment (June 1992).
- Wisconsin Department of Natural Resources, Bureau of Planning, Wisconsin Wetlands Inventory Map, Township 5 North, Ranges 22 and 33 East, Milwaukee County Wisconsin (July 1979, latest revision March 1989).
- Southeastern Wisconsin Regional Planning Commission, A Solid Waste Management Plan for Milwaukee County, Wisconsin (July 1987).
- U.S. Department of Agriculture (USDA) Soil Conservation Service, Soil Survey of Milwaukee and Waukesha Counties Wisconsin (July 1971).

# B

# WASTE STREAM ANALYTICAL RESULTS

## TABLE VI-B-1

## LIST OF WASTESTREAMS

Description	Attachment
Paint Plant Dirty Solvent	VI-B-1
Resin Plant Dirty Solvent	VI-B-2
Solvent Recovery Still Sludge	VI-B-3
Water-Base Paint Waste	VI-B-4
Solvent-Base Paint Waste	VI-B-5
Resin Waste	VI-B-6
Cationic Distillate - MIBK	VI-B-7
Paint Plant Filter Cartridges and Bags	VI-B-8
Resin Plant Filter Cartridges and Bags	VI-B-9
Paint Plant Baghouse Dust	VI-B-10
Resin Plant Baghouse Dust	VI-B-11
Paint Plant Trade Washwaters	VI-B-12
Paint Plant Industrial Washwaters	VI-B-13
Paint Plant Caustic Cleaning Water	VI-B-14
Resin Plant Caustic Cleaning Water	VI-B-15
Resin Plant Wastewaters	VI-B-16
Cationic Wastewater	VI-B-17
Wastewater Treatment Supernatant	VI-B-18
Wastewater Treatment Sludges	. VI-B-19
Paint Plant Caustic Sludge	. VI-B-20
Floor Sweepings	. VI-B-21
Floor Cleaning Solution	. VI-B-22
Discarded or Spilled Raw Materials	. VI-B-23
Offsite Wastes	. VI-B-24
Off-Specification Products	. VI-B-25
Laboratory Paint and Resin Wastes	. VI-B-26

#### C-1-A(-1)

#### ATTACHMENT VI-B-1

Paint Plant Dirty Solvent (F003, F005, D001, D005, D006, D007, D008)

#### General Description:

Liquid Single Phase

Flash Point <100 F

Heating Value 10,000 - 15,000 BTU/LB

Total Resin Solids 1 - 5%

Total Pigment Solids 1 - 5%

Solvents 85 - 97%

iter 1 - 10%

Weight/Gallon 7 - 7.5 LB/GAL

### Basis for hazardous designation:

Listed for ignitability and toxicity depending on solvents. Assumed TCLP Toxic characteristics based on knowledge of product residues. Ignitable characteristic applies for solvents not listed.



#### ANALYSIS LAB REFORT

CLIENT MAME:

ADDRESS:

PPG INDUSTRIES, INC.

ROSANNA DRIVE

ALLISON PARK,

PA 15101

NUS CLIENT NO: HUS SAMPLE NO:

15040558

VENDOR NO:

01831710

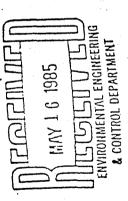
REPORT DATE: 05/15/85

MORK ORDER NO: DATE RECEIVED: 04/08/85

ATTENTION: CHRIS BABKA

SAMPLE INENTIFICATION: OC-85-0068-00 - Dirty Solvent -- Paint Plant

120	DETERHINATION	RESULTS	UNITS
N270	RORA METALS		
H030	Arsenic (As)	C.44	#g/1
1040	Barium (Ba)	1.0	• • • • • • • • • • • • • • • • • • •
#350	Codmium (Cd)	< 0.05	kg/1
#140 ·	Chromium (Cr)	6.6	±g/1
4200	Lesd (Pb)	6.9	mg/1
1250	Mercury (Hg)	1.4	ng/1
4.50¢	Selenium (Se)	< 0.04	1.g/1
#300	Silver (Aq)	< 0.1	mg/l
<b>5</b> 050	Rerullium (Re)	< 0.02	*g/l
#110	Calcium (Ca)	4 E	*g/l
¥141	Chromium, Hexavalent(Cr+6)	INT	•
3150	Cobalt (Ca)	< 0.1	<b>∌</b> g/1
M160	Copper (Cu)	2.7	*g/l
<b>#19</b> 0	Iron, total (Fe)	360	mg/1
H230	Magnesium (Mg)	9.5	mg/1"
4240	Mangariese (Mr.)	71	ag/1
¥,276	Nickel (Ni)	0.9	%g/l
#310	Sodium (No.)	34	±g/1
832¢	Strontium (Sr)	14	ag/1
N390	Zinc (Zn)	1.7	1/24
QFQ1	Xglenes	29000	<b>a</b> g/l
₿F Ç#	Acetone -	< 4000	mg/1
QFQ5	2-butanone	. 170000	mg/1
0FCB	4-methyl-2-pentanone	110000	mg/1
0X32	Butyl Cellosalve	23000	<b>b</b> g/1
PX58	i-Rutanal	√√ < 50000	mg/1
0479	Cellosolve Acetate	580	<b>m</b> g/l
2003	Benzene	₹ 2000	mg/1
0422	Methylene Chloride	< 2000	%g/1
0V25	Toluene	30000	<b>≥</b> g/1
8015	% Ash 2 550 C	0.3	7.



C-1-A(-2)

PAGE NO: 1



PPG Industries, Inc. Rosanna Drive P.O. Box 9 Allison Park, Pennsylvania 15101 (412) 487-4500

Research Center Coatings and Resins Division

PPG ENVIRONMENTAL LAB REPORT

SAMPLE #:

LOCATION:

DATE REC'D:

DATE SAMPLED:

ANALYSIS DATE RESULTS

SOLIDS

10000 INIT. DiH20 1760m FINAL DiH20 211m

uned ACID SOLN. 229ml INIT. PH FINAL PH

PT.

5 SOLIDS

C.O.D.

mg/1

OTHER:



PROCEDURES AND COMMENTS:

SW-846 METHOD 1310 (TEP) ASTM D-93-TI (FLASH 70=NT) "ACH METHOD (EPA ACCEPTED) MODEL 16500 (COD)

C-1-A(-5)



Laboratory Services Division 5350 Campbells Run Road Pittsburgh, PA 15205 REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

#### ANALYSIS REPORT LAB

CLIENT HAME: PPG INDUSTRIES, INC.

ADDRESS: 260 KAPPA DRIVE

PITTSBURGH,

PA 15238

HUS CLIENT NO: HUS SAMPLE NO: 320237

15042198

VENDOR NO:

01831710 55830

REPORT DATE: 06/04/85

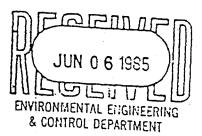
WORK ORDER NO: DATE RECEIVED:

04/26/85

ATTENTION: MS. CHRIS BABKA

SAMPLE IDENTIFICATION: 0C-05-0131-03 - Paint Plant Dirty Solvent

TEST	DETERMINATION	RESULTS	UNITS
1270	RCRA METALS	With Apparatus Gills (Mayagaraktus	
H030	Arsenic (As)	0.28	<b>≥</b> g/1:
1040	Barium (Ba)	. , 680	mg/1
H090	Cadmium (Cd)	0.12	<b>≥</b> g/1
1140	Chromium (Cr)	32	<b>≥</b> g/1
H200	Lead (Pb)	26	mg/1
1250	Mercury (Hg)	- 1.8	mg/1
H290	Selenium (Se)	< 0.04	mg/l
1300	Silver (Ag)	< 0.1	∌g/1
0F01	Xylenes	42000	mg/l
1F05	2-butanone	< 20000	mg/l
0F08	4-sethy1-2-pentanone	130000	<b>1</b> 9/1
1K32	Butyl Cellosolve	60000	<b>∌</b> g/1
0V25	Toluene	37000	<b>≥</b> g/1
3015	I Ash & 550 C	4.6	Z -
5040	British Thermal Units	15000	BTU/1b
\$165	I Solids, total at 103 C	7.8	I
5168	Specific Weight	7.3	lb/gal
\$195	I Water (Karl Fisher)	9.1	I
5210	Viscosity	9.0	CP
1270	Cyanide, total (CX)	0.35	• <b>•</b> g/1
¥500	Phenolics	13	<b>≥</b> g/1



COMMENTS:

< means derections limit

C-1-A(-6)

412-788-1080

#### 上台芝 ANALYSIS REPORT

CLIENT NAME:

ADDRESS:

FPG INDUSTRIES, INC.

ROSANNA DRIVE ALLISON PARK,

PA

15101

REPORT DATE: 05/15/85

HUS CLIENT NO: HUS SAMPLE NO:

VENDOR NO:

15040558

01831710

WORK ORDER NO: DATE RECEIVED: 04/08/85

55830

ATTENTION: CHRIS BABKA

SAMPLE IDENTIFICATION: 00-05-0048-00 - Dirty Solvent - Paint Plant

म्द्रङः	DETERMINATION	RESULTS	UNITS
\$040	British Thermal Units	15000	RTU/1b
5054	Chlorine, Organic	< ≎.:	X.
\$098	Fluorine, Organic	0.03 .	Z
3165	X Solids, total at 103 C	4.0	Z
5:48	Specific Weight	7.2	lt/gal
S195	I Water (Karl Fisher)	4.9	7
\$210	Viscosity	. 6.0	CP
5950	Acid Digestion		
\$971	Ashing		
5980	Oxygen Boat Preparation		
\$032	Ammonia as H (distillation)	< 1	ag/1
¥27¢	Cycnide, total (CN)	< 0.1	' #g/l
1435	Nitrogen, Kjeldehl (N)	68	mg/l
2440	Mitrogen, Organic (%)	88	%g/1
¥5∞	Phenalics	16	mg/1
W740	Sulfide (S)	< 4	<b>a</b> g/l



COMMENTS: INT for Srib because sample was not soluble in water.

means detection Limit. Benzene and chlorinated compounds should be much
 C-1-A(-3) 1000 - han deverted limits. / MB

Reviewed and Approved by: UMC

PAGE NO: 2





Laboratory Services Division 5350 Campbells Run Road Pittsburgh, PA 15205

REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

#### ANALYSIS REPORT LAB

CLIENT NAME:

PPG INDUSTRIES, INC.

ADDRESS:

ROSANNA DRIVE

ALLISON PARK,

PA 15101

REPORT DATE: 05/31/85

NUS CLIENT NO:

320237 MUS SAMPLE NO: 15041215

VENDOR HO: 01831710

WORK ORDER NO:

55830

ATTENTION: MS. C. BARKA

DATE RECEIVED: 04/17/85

SAMPLE IDENTIFICATION: 0C-85-0068-03A - Dirty Solvent Extract - Paint Plant

TEST	DETERMINATION		RESULTS	UNITS
1270	RCRA METALS	•		
. H030	Arsenic (As)		0.43	<b>∍</b> g/1
1040	Barium (Ba)		< 1	mg/l
H090	Cadmium (Cd)		. < 0.05	<b>≥</b> g/1
1140	Chromium (Cr)		0.3	<b>∍</b> g/1
H200	Lead (Pb)		< 0.3	mg/l
1250	Mercury (Hg)		0.03	mg/l
H290	Selenium (Se)		. 0.31	*g/1
1300	Silver (Ag)		< 0.1	<b>≥</b> g/1
5950	Acid Digestion			
\$971	Ashing		· · · · · · · · · · · · · · · · · · ·	



CONHENTS:

< means detection limit

C-1-A(-4)

Reviewed and Approved by: JHC



A Halliburton Company

CLIENT ORIGINAL

#### C-1-B(-1)

#### ATTACHMENT VI-B-2

Resin Plant Dirty Solvent (F003, F005, D001, D007, D008)

#### General Description

Liquid Single Phase

Flash Point <100 F

Heating Value 10,000 - 15,000 BTU/LB

Total Resin Solids 1 - 5%

Total Pigment Solids 0 - 0.5%

Solvents 90 - 99%

Water 0 - 5%

Weight/Gallon 7 - 7.5%

#### Basis for hazardous designation:

Listed for ignitability and toxicity depending on solvents. Assumed TCLP Toxic characteristics based on knowledge of product residues. Ignitability characteristic applies to solvents not listed. Analysis should be similar to Paint Plant Dirty Solvent except for pigment solids.

C-1-C(-1)

#### ATTACHMENT VI-B-3

Solvent Recovery Still Sludge (F003, F005, D001, D005, D006, D007, D008)

#### General Description:

Liquid Single Phase Pumpable Sludge

Flash Point <100 F

Heating Value 9,000 - 15,000 BTU/LB

Total Resin Solids 10 - 40%

Total Pigment Solids 5 - 25%

Solvents 40 - 70%

Water 1 - 15%

Weight/Gallon 7.9 - 9.2 LB/GAL

#### Basis for hazardous designation:

Listed for ignitability and toxicity depending on solvents. Assumed TCLP Toxic characteristics based on knowledge of product residues. Ignitability characteristic applies to solvents not listed.



Laboratory Services Division 5350 Campbells Run Road Pittsburgh, PA 15205

REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

#### 巨合窓 ANALYSIS REPORT

CUIENT NAME: PPG INDUSTRIES, INC.

ADDRESS:

RESEMBLE SKIVE ALLISON PARK,

74 15101

WIS SAMPLE WOT MES CTIENT HOP 1504005:

VENDOR NOT WORK ORDER NO:

01831710

ATTENTION: CHRIS BABKA

REPORT 5ATE: 05/15/85

DATE RECEIVED:

04/08/85

## SAMPLE INEXTIFICATION: 00-85-0088-03 - Solvent Recovery Sludge

TEST	RETERMINATION		RESULTS	⊕×176	
	and the last table table table to the last table				
<b>8270</b>	RORA METALS				
40 <u>3</u> 0	Ansenic (As)		Q.14	. #g/l	
XQ40	Farius (Ra)		170	-pg/1	
<b>K</b> 0±6	Sadmium (Cd)		0.27	±2/1⁄2	
3140	Chromium (Cr)		32	eg/1	
#200	Lead (Pt)	•	39	# <u>5</u> /1	
1250	Mercury (Mg)		5.8	%g/l	
h290	Selenium (Se)		₹ 0.04	8g/2	
1300	Silver (Ag)	•	< 0.1 ·	* <u>*</u> (2	
HOE!	Bergllium (Re)		0.02	ag/L	
8110	Calcium (Ca)		750	s agA	
H141	Chromium, Hemavalert/Crife)		INT		
M150	Cobalt (Co)		12	<b>+</b> g ′1	
#15 <b>0</b>	Copper (Cu)		10	Fg /1	
8190	Iron, total (Fe)		420	*§/1	· · · · · · · · · · · · · · · · · · ·
M230	Magnesium (hg)		50	ng/l	
¥5 <b>∀</b> \$	Manganese (Mn)		22	<b>3</b> g/1	
- ×270	Nickel (Ni)		1.6	ng/l	
X310	Sodium (No)		340	#g/1	-חת תובות
X320	Strentium (Sr)		33	Hg/1	
8390	Zinc (Zn)		700	#g/2(n)	
3548	Molesc Armyanise		< 10000	#g/:\\\	MAY 1 3 1985
5000	Carbon Tetrachloride		< 2000	F6/1 /C	( MAI 1 )
0022	Metrilene Oblorace		< 200€	25.1	I TITILY UNGERING
PHOE	Toluene		< 2000	// #\Z#	ENVIRONMENTAL ENGINEENT ENVIRONMENTAL ENGINEENT & CONTROL DEPARTMENT
0030	Trichlomoflasmomethane		< 2000	±g/1	ENVIRONMENT DEPARTMENT
5015	% Ash 0 550 C		21	<b>I</b> .	F COULTO
9040	British Thermal Units		14000	PTU/1h	
5064	Chlorine, Organia	•	< 0.1	%	
Şarş	Fluorine, Organic		< 0.01	<b>X</b>	
5165	% Solids, total at 103 C		3.6° d	7	
9145	Spenific Weight		, 8,2	lb/gal	

C-1-C(-2)

PAGE NO:





Laboratory Services Division 5350 Campbells Run Road Pittsburgh, PA 15205

REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

#### LAB ANALYSIS REPORT

SLIENT NAME: POG INSUSTRIES, INC.

HUS CLIENT NO:

320245

AMERESE: ROSANNA DRIVE

NUS SAMPLE NO:

ALLISON PARK,

PA 15101 VENDOR NO:

01631710

ATTENTION: CHRIS BARKA

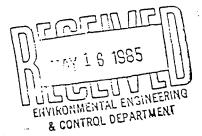
REPORT DATE: 05/15/85

MOSK OBLICE NO! DATE RECEIVED:

55830 04/08/85

SAMPLE INEMTIFICATION: 00-85-0056-03 - Solvent Recovery Sludge

TEST	NOTTANINATION	RESULTS	UNITS
	****		
31.95	% Water (Karl Fisher)	1.2	7.
\$310	Viscosity	35	СĎ
\$950	Acid Digestion		
S971	Ashing		
\$980	Oxygen Boat Preparation	•	
W032	Ammonia as N (distillation)	5.2	mg/l
¥270	Cyanide, total (CN)	0.3	¥g/1 .
32.35	Nitrogen, Kjeldahl (N)	< 50-	<b>»</b> g/1
ATTO	Mitrogen, Organic (N)	< 50	mg/1
¥500	Phenolics	<u> ۲</u> ۸	. ag/1
9740	Sulfide (S)	< 5	80/1



COMMENTS: INT for Crifé because eargle use not water soluble. I means detection limit. Chickney a should not be used to be an a form of the control of the c

C-1-C(-3)

Reviewed and Approved by: UNC

PAGE NG: 2



A Halliburton Company

CLIENT ORIGINAL



Laboratory Services Division 5350 Campbells Run Road Pittsburgh, PA 15205

REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

#### ANALYSIS REFORT LAE

REPORT DATE: 05/31/85

CLIENT NAME:

PPG INDUSTRIES, INC.

ADDRESS:

ROSANNA DRIVE

ALLISON PARK,

PA 15101

NUS CLIENT NO:

320201

HUS SAMPLE HO: VENDOR HO:

01831711

55830

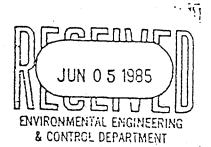
WORK ORDER NO: DATE RECEIVED:

04/19/85

ATTENTION: CHRIS RABKA

SAMPLE IDENTIFICATION: OC-85-0066-03A - Solvent Recovery Sludge Extract

TEST	DETERMINATION	RESULTS	UNITS
1270	RCRA HETALS	<b>30 49 40 40 44 44 44</b>	<del></del>
H030	Arsenic (As)	0.30	mg/l
1040	Barium (Ba)		mg/l
H090	Cadmium (Cd)	< 0.05	mg/l
¥140	Chronium (Cr)	8.2	mg/1
H200	Lead (Pb)	< 0.3	<b>₃</b> g/l
1250	Mercury (Hg)	0.005	<b>∌</b> g/l
H290	Selenium (Se)	< 0.04	<b>a</b> g/1
1300	Silver (Ag)	< 0.1	<b>x</b> g/1
5950	Acid Digestion		•
\$971	Ashing		



CONKENTS:

C-1-C(-4)

Reviewed and Approved by: JMC



PPG Industries, Inc. Rosanna Drive P.O. Box 9 Allison Park, Pennsylvania 15101 (412) 487-4500

Research Center Coatings and Resins Division

#### PPG ENVIRONMENTAL LAB REPORT

SAMPLE #:	00-85-	000000	LOCATION:	40	IK CEEK.	
DATE REC'D:	<u>3:8.85</u>	<u>-</u>	. DATE SAM	PLED:		<del></del>
ANALYSIS DATE	RESULTS	ı		· · · · · · · · · · · · · · · · · · ·	-	
T E.P. 41.85	SOLIDS	170 da	INIT. DiH <sub>2</sub> O	17 boal	FINAL DiH <sub>2</sub> O	4,4.2
beau	ACID SOLN.	25-9	INIT. pH	5.6	FINAL PH	5.0
PT.	•	***************************************			•	•
SOLIDS						
C.O.D.			mg/l .			

OTHER:

ANAL

T E.

& CONTROL DEPARTMENT

PROCEDURES AND COMMENTS:

5W-846 METHOD 1310 (TED) (FLASH: 70=NT) MACH METHOD (EPA ACCEPTED) MODEL 16500 (COD)

C-1-C(-5)

# E - A ENVIRO-ANALYSTS, INC.

LABORATORY REPORT

1300 S. Green Bay Road Racine, Wisconsin 53406

Report No.

8165.

Dan Scudder PPG

Subject

Laboratory anlaysis of

waste sample for

Barium

9/4/84 Date

P.O. #

Sample 7/31/84

Date Sample Identification Lab I.D. Number

7/31/84 7/31/84 8034

7/31/84 7/31/84 8034

Units

ppm/Wet Weight

ppm/Dry Weight

Barium

6.30

23.63

C-1-C(-6)

LAB MANAGER:

## LABORATORY REPORT

E-A ENVIRO-ANALYSTS, INC.

1300 S Green Bay Rd. Racine, Wisconsin 53406

Report No. 6660

Dan Scudder To PPG Industries Subject

Laboratory analysis of sludge samples for Barium

4/17/84 Date

P.O. #

Sample 3/13,15/84

Organic Tank 3/13

Organic

3/15

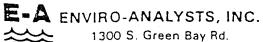
Barium, Total

308.3 mg/kg

343.0 mg/kg

C-1-C(-7)

## LABORATORY REPORT



1300 S. Green Bay Rd. Racine, Wisconsin 53406

To Dan Scudder PPG Industries Subject

Laboratory analysis of organic still bottoms:

Report No. 6452

Date 3/5/84

P.O. #

Sample 2/2/84

2/2/84 mg/l

Barium 217.8

% Solids 25.99

% Ash 3.82

C-1-C(-8)

LAB MANAGER: \_

Kolim



# AQUASEARCH

140 EAST RYAN ROAD (414) 764-7005 OAK CREEK, WISCONSIN 53154 - 4599

# LABORATORY REPORT

9/8/	83	1
	9/8/	9/8/ 83

PPG INDUSTRIES INC. 10800 s. 13th street oak creek, wi 53154

ATTN: DAN SCUDDER REFERENCE METHOD:

DATE RECEIVED	DATE COLLECTED	
7/8/83	· N/A	
SAMPLE	NAME	
ORGANIC SLUDGE		
ACCOUNT	NUMBER	
#771		

XXSTANDARD METHODS, APHA, 15th EDITION, 1980.
XXMETHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTE, EPA, 1979.

TEST METHODS FOR THE EVALUATION OF SOLID WASTE, PHYSICAL, CHEMICAL METHODS, EPA, 1980.

PARAMETER	SAMPLE	EP TOXICITY LIMITS
CADMIUM	0.88	1,0
HEXAVALENT CHROMIUM	3.1	5.0
TOTAL CHROMIUM	920	5,0
COPPER	4.0	
LEAD	160	5.0
NICKEL	2.2	•
ZINC	1,100	
BARIUM	510	100
SILVER = 4	0.15	5.0
IRON	2,300	
MAGNESIUM	160	
ARSENIC	0.041	5.0
SELENIUM	-0.01	1.0
MERCURY	0.12	0.2
MANGANESE	38	
SODIUM	38	
CALCIUM	2,300	
FLASH POINT	90 <sup>0</sup> F	
TOTAL CYANIDE	1.4	
% SOLIDS	23%	
SPECIFIC WEIGHT	1.053	
		1 1

\* ALL UNITS ARE EXPRESSED AS:

□ MG/KG

C-1-C(-9)

9/10/33

LABORATORY SUPERVISOR



AQUASEARCH
140 EAST RYAN ROAD (414) 764-7005
0AK CREEK, WISCONSIN 53154 - 4599

LABORATORY NUMBER	DATE	PAC
#83-5176	9/8/83	2
COMP	ANY NAME	
PPG INDUST	RIES INC.	

PARAMETER	SAMPLE
% ASH	14%
% WATER	35.33
TOTAL VOLATILE ORGANICS	UNABLE TO RESOLVE WITHOUT MAS SPEC IDENTIFICATION
VISCOSITY (CPS)	78.4
PHENOLS-	7.0
BTU'S	7,130
FLUORIDES	-1.0
KJELDAHL NITROGEN	1900
AMMONIA NITROGEN	2.6
TOTAL ORGANIC NITROGEN	1897
TOTAL SULFUR	0.42%
CHLORIDES	-10

A (-) SIGN DENOTES A 'LESS THAN' VALUE.

C-1-C(-10)

LABORATORY SUPERVISOR

\*UNITS ARE EXPRESSED IN MG/L UNLESS OTHERWISE STATED



#### Α

TO:

Mr. Martin Scheerbaum PPG Industries 10800 South 13th Street Oak Creek, WI 53154

Corporate Research & Development Group

Environmental Research Center 5103 West Beloit Road P. O. 80x 2022 Milwaukee, WI 53201 414/643-2761

DATE:

5/29/81

PURCHASE ORDER NO.:

19354

REXNORD WORK ORDER NO.:

% of Water

FG41435

Analysis of organic still sludge sample submitted on April 24, 1981.

#### Solids (%)

Total Solids 28.03% 20.83% Volatile Solids Non-Volatile Solids 7.20% (calculated)

#### Metal's (mg/l)

As	0.005	Рb	360
Ba	156	Mg	110
Cd	0.55	Mn	32
Ca	4500	Hg	5.6
Cr+3	11	Ni	1.5
Cr+6	<0.1	Se	<0.5
Cu	12	Ag	<0.01
Fe	3300	Na	1200
		Zn	1500

## Total Volatiles, 71.97% (calculated)

14%

% Solvents	57.97% (calculated)
	(43.66% identified)
Butyl Cellosolve	4.5%
Xylene (Total)	17.6%
MIBK	10.8%
n-butanol	3.66%
i-butanol	4.63%
Toluene	2.9%
Cellosolve Acetate	1.5%
Benzene	0.2%
Styrene	0.13%
MEK	2.5%
Acetone	0.24%
Density:	0.95 1154-1. 三7.

Density: Viscosity: Heating Value:

40 cp 11,945 BTU/1b

Flash Point:

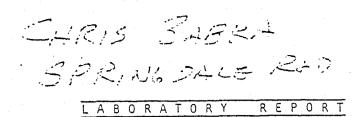
<75°F

Thank you for your order.

C-1-C(-11)

e Galeusi

Steve Galewski





Corporate Research & Development Group

Environmental Research Center 5103 West Beloit Road P. O. Box 2022 Milwaukee, WI 53201 414/643- 2761

Date:

1-27-81

T0: Mr. Howard Timian
PPG Industries Inc.
Coatings and Resins Division
10800 S. 13th Street
Oak Creek, WI 53154

Purchase Order No .:

18889

Rexnord Work Order No.: FG 41379

Still sludge sample submitted on January 12, 1981.

Substance	Concentration
% Solids	39.2%
% Water	13.3%
Density	8.42 lbs/gal.
Viscosity	400 cps @ 23°C
Heating Value	9,317 BTU/1b
% Solvent	47.5%
Flash Point	85°F

FEB - 4 1981

Thank you for your order.

C-1-C (-12)

Signature Galeuski





#### **INDUSTRIES**

M. Scheerbaum/H. Timian

# INTER-OFFICE CORRESPONDENCE

Date:

October 30, 1980

C. M. Babka

From:

Location: Springdale R&D

Subject:

Oak Creek Organic Waste

(Still Sludge)

The following is a summary of the results on this waste stream. Sample was taken week of 4/20/80.

Total Solids

Oak Sheek

46.3%

% Ash or Non-volatile solids

14.8%] Ave. 14.1%

% Volatile Solids or Resins (calculated)

32.2%

#### Metals (pum) (1.65% Identified)

As	<10	Pb	1800
· Ba	1300	Mg	720
Cđ -	<1	Mn	51
Ca	4600	Eg	<10
cr+3	730	Νi	10
cr+6	<1	Se	<10
Cu ·	23	Ag	<1
Fe	4650	Na	1800
		Zn	780

#### Total Volatiles (calculated)

53.7%

'n	Water	
7	Solvents	(calculated)

8.93% 44.77%

(31.71% identified)

15% Butyl Cellosolve Xylene (Total) 8.9% MIBK 1.7% 1.6% n-butanol 1.5% i-butanol 1.4% Toluene .96% Cellosolve Acetate Benzene .09% Styrene MEK .053% Acetone .047% To: M. Scheerbaum/H. Timian Re: O. C. Still Sludge Analysis

Page 2 - October 30, 1980

Wt/Gallon

8.85 lb/gallon

Flash Point

82°F

C. 14.12200

C. M. Babka

/n

cc: L. N. Streff

results in us/ml unless noted (ppm)

Laboratory/Supervisor/Director:

C-1-C(-15)Date:

Not 7.=7



#### PENN ENVIRONMENTAL CONSULTANTS, INC. FORT PITT PROFESSIONAL BUILDING 1517 WOODRUFF STREET PITTSBURGH, PA. 15220 412-381-1133

file. O.C. Waste Analyses

LAB ANALYSIS REPORT

CLIENT NAME: PPG INDUSTRIES, INC.

ATTENTION: MR. JIM DIXON

ADDRESS: 151 COLFAX STREET

SPRINGDALE, PA 15144

REPORT DATE: 06.09.80

PEC PROJECT NO: 0165-00

PEC JOB NUMBER: 9650.

PEC SAMPLE NO: 55132

DATE RECEIVED: 05.21.80

SAMPLE IDENTIFICATION: DAK CREEK STILL SLUDGE WK of 4120190

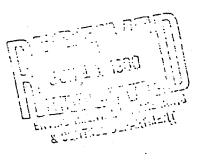
PARAMETER	SYMBÓL " ""	RESULTS	UNITS
CHLORIDE	α.	47	MG/L
TOTAL CYANIDE	CN	₹ .005	YG/L
FLUORIDE DISTILLATION	F. DIST	12	HG/L
PHENOLS	PHENOL	124	MG/L
TOTAL SULFUR	S	149	MG/L

COMMENTS:

Reviewed and Approved by:

cc: MS. CHRIS BABKA

C-1-C(-16)



Sustomer PPG, Ind	•		C/R No. 1108/
Address10800 S.	13th St. Oak Creek	, WI 53154	P.O. No. 12-595
SAMPLE INFORMATION:		•	4
	Organic waste-still	bottoms from solvent recov	very
Date Sampled: 3/1/79		Date Received: Feb. 3,	1979
	·		
pH		Arsenic, ppb	
Acidity, % as	1	Barium, as Ba, mg/l	
Alkalinity, % as	·	Cadmium, as Cd, mg/l	0.18
Specific gravity, g/cm <sup>3</sup>	0.9496	Chromium, Total, as Cr. mg/l	185
COD, mg/l	·	Chromium, hexav., as Cr. mg/l	15.36
800. mg/l		Copper, as Cu, mg/l	
Total solids. @ 105C		Iron, as Fe, mg/l	
Suspended solids		Lead, as Pb. mg/l	33
		Mercury, ppb. as Hg	0.510
Flash point, F	69 <sup>0</sup> F.	Nickel, as Ni, mg/l	
Heating value, BTU/Ib	·	Selenium, as Se, mg/l	
		Silver, as Ag, mg/l	
Cyanides, as Cn. mg/l		Zînc, as Zn, mg/l	688
Phenois, mg/l	1,395		
Chlorides, as Cl. mg/l	•	Soluble in:	
Sulfides, mg/l			
Fluorides, mg/l			
			,

REMARKS.

Chromium, lead, and zinc levels

The metals level is high and may require fixation in the future.

Cadmium

C-1-C(-17)

Janet Bussow

3/14/7

Date Completed

#### PPG INDUSTRIES, INC.

10800 South 13th Street, POB 28 Oak Creek, Wisconsin 53154

(414) 764-6000

Contact: Dan Scudder, Environmental Engineer

#### Organic Waste

Generation Rate: 600000 gallon/yr

Total Solids	25-50%		Tota	al Volatiles	<u>50-75%</u>
Total Volatile So Total Non-volati (% Ash @ 550°C Metals, mg/l =	le Solids	0-40% 5-20%		% Water % Solvents Solvent, %	1-20%
Arsenic Barium Cadmium Cr (total) Cr +6 Lead Mercury Selenium Silver	<.005 - 10 10 - 1500 .5 - 5 10 - 750 <.1 - 1 300 - 2000 3 - 10 <.5 - 10 <.01 - 1	Calcium Copper Iron Magnesium Manganese Nickel Sodium Zinc	1-25 2000-5000 100-1000 25-100 1-20 500-2000 500-2000	Butyl Cellosolves Xylene MIBK n-Butanol i-Butanol Toluene Cellosolve Acetate Benzene Styrene MEK Acetone	5-15 5-20 1-15 1-5 1-5 1-5 1-5 .15 .052 .055

\_ight/gallon 7.9 - 9.2 lb/gallon. Flash Point, P.M.C.C. <100°F 40-100 cps Viscosity 7000-12000 Btu/1b. Heating Value Total Cyanide <.005 ppm <150 ppm Phenols Fluorides <10 ppm Total Organic Nitrogen < 2% Sulfur <.5% Chlorides < .5%

DOT Shipping Name:

Waste Paint

DOT Hazard Class:

Flammable Liquid

DOT ID Number:

UN1263

EPA Waste Code:

F003, F005

12/15/81: C. M. Babka

C-1-C(-18)

11 7 11

3) Dows. Hy

M. Wilson . wa

FOF

1cKesson Envirosystems Co. 27 West Berry Street 00 Commerce Building ort Wayne, IN 46802 19 424-1940

## Spent Material / Waste Products Survey

McKESSON

ENVIROSYSTEMS

Please provide all information requested below, then return this form to your local McKesson Chemical Representa

							SIC N	UMBER	
COMPANY PPG INdos	· Laises					283	7 01	14 286	2/_
MAILING ADORESS	V			•	****		PROC	عادت حمور	<b>E</b>
10000 ( 17.7)	S CF	Cak C	] reek	WI. 532	54				
DESCRIPTION OF SPENT MATERIAL	L/WASTE	PRODUCT		INDICATE PROCESS (BE SPECIFIC)	WHICH G	ENEPATE	STHISS	PENT/WA	STE
Solvent reconve	77 S	HILL 73	52740	ms			<del>.,</del>		
VOLUME .	$\Gamma$ $\Gamma$ .			FREQUENCY	· .		PA	CXING	
19,000 10 22,000	711	clorus.		PER PER YEAR	ONI TIM	- ,	נא	ИВ ВU	LK.Y
PHYSICAL PROPERTIES: PHYSICAL STATE AT 70°F	. (0	DATE OF LA	B ANALY	SIS_/2/5/_)		IDOUS	PROPE	RTIES:	
SOLID	L!0	ouio X	FLAS	SH POINT <			رير		
SEMI-SOLID					Liste	dway	re r	cos F	2.05
SPECIFIC GRAVITY ~ /.								1 /6-	
% SULFUR <						/		۲٥٥	
EPA / DOT IDENTIFICATION			_					<u></u> .	
EPA HAZARDOUS WASTE NUM					D CODES	<u>د د عر</u>	3 , -	005	
DOT HAZARDOUS MATERIAL DES		(v'	CHSTE	P4.70T					
CHEMICAL COMPOSITION:				r			·····		
SUBSTANCE	MIN	MAX	TYP	SUBSTAN	CE		MIN	MAX	TYF
Solvents	30	07							
504,85	20	60		1				ì	
	,							-	1
WITER	1	2.5							
WITER	1	2.5							
GENERAL:			CVANIO		INCOENS.				
GENERAL:  1. PLEASE PROVIDE LAB ANALY	SIS IF HEA	VY METALS,				OR OTHE	ER TOXIC	S ARE INV	OLVED
GENERAL:  1. PLEASE PROVIDE LAB ANALY  2. PLEASE DISCUSS ANY OTHER	'SIS IF HEA	VY METALS,	MAY HE	ELP MCKESSON BE OF	SERVICE:		,		
GENERAL:  1. PLEASE PROVIDE LAB ANALY  2. PLEASE DISCUSS ANY OTHER  This WITSIL	SIS IF HEAR INFORMA	VY METALS,	H MAY HE	ELP MCKESSON BE OF	SERVICE:	U , /3	ch.	emica	
GENERAL:  1. PLEASE PROVIDE LAB ANALY  2. PLEASE DISCUSS ANY OTHER  This WITSIL-  Commylesition	SIS IF HEAR INFORMA	VY METALS,	H MAY HE	ELP MCKESSON BE OF be Vur. 111	SERVICE:	U , /3	ch.	emica	
GENERAL:  1. PLEASE PROVIDE LAB ANALY  2. PLEASE DISCUSS ANY OTHER  This WITSIL	SIS IF HEAR INFORMA	VY METALS,	H MAY HE	ELP MCKESSON BE OF be Vur. 111	SERVICE:	U , /3	ch.	emica	
GENERAL:  1. PLEASE PROVIDE LAB ANALY  2. PLEASE DISCUSS ANY OTHER  This WITSILE  Corney Da. Hinn	SIS IF HEAR INFORMA	VY METALS,	1 MAY HE	ELP MCKESSON BE OF be Vur. 113 	SERVICE:	v ijs	l on	emica	
GENERAL:  1. PLEASE PROVIDE LAB ANALY  2. PLEASE DISCUSS ANY OTHER  This WITSIL:  Complexition  Attricked of	SIS IF HEAR INFORMA	ADDITIONAL	HAZARC	DAND HANDLING INFO	SERVICE:	O, 13	l on	emica	
GENERAL:  1. PLEASE PROVIDE LAB ANALY  2. PLEASE DISCUSS ANY OTHER  This WITSIL:  Complexition  Attriched January  PLEASE ATT	SIS IF HEAR INFORMA	VY METALS, TION WHICH ADDITIONAL T OF MY KNI ETE AND AC	HAZARO	AND HANDLING INFO	SERVICE:	O, 13	l on	emica	
GENERAL:  1. PLEASE PROVIDE LAB ANALY  2. PLEASE DISCUSS ANY OTHER  This WITSIL:  Complexition  Attricked of	SIS IF HEAR INFORMA	VY METALS, TION WHICH ADDITIONAL T OF MY KNI ETE AND AC	HAZARC	AND HANDLING INFO	SERVICE:	10 THIS IS AL.	SHEET.	em.c.	
GENERAL:  1. PLEASE PROVIDE LAB ANALY  2. PLEASE DISCUSS ANY OTHER  This WITSIL:  Complexition  Attriched January  PLEASE ATT	SIS IF HEAR INFORMA	VY METALS, TION WHICH ADDITIONAL T OF MY KNI ETE AND AC	HAZARO	AND HANDLING INFO	SERVICE:	intes  TO THIS  HIS IS  AL.	SHEET.	em.c.	

PART

PPG Sample #E-1424

OCT Shipping Name: Waste Paint Mixture
DCT hazard Class: Flammable Liquid
CCT Code Number: UN1263

EPA Waste Codes: F003, F005

<u>Generation Rate</u>: 600000 gallons/year

Application Number PPG Industries, Inc. 10800 South 13th Street (W100599729) GeneratorOak Creek, WI 53154 (W100599729)

Date 12/17/81 C. M. Babka (412) 274-4500, Ext. 337

3.	SAMPLE ANALYSIS					
A . ~	Physical/Chemical	Parameters	<u></u>			
	Heat Content	7000 - 12000		_Bcu/#		
	Viscosity	40-100		_Centipo	ise ,	- 1
	Solids	25-50%		_Percent	volume	
,	Sulfate	<.5%	_	_Percent	weight	- :
	Nitrace	< 2%		Percent	weight	
	Halogens Cl	<.5%, F <.5%		_Percent	weight .	
	Aqueous Extractio	n		pH		
	Water (Separated	Phase) 1-20	%	Percent	volume	
	Ash	5-20%		Percent	r weight	
	Specific Gravity	.95 - 1.1				
В.	Organic Analysis					
	Constituents as :	identified by gas	chromatograph			
	Cellosolves	5-15 %	Cellosolve Acetate	1-5	_%	
	Xylene		styrene	.05 - 2	<u>%</u>	
	MIEK	1-15 %			9/	
	MEK	.05 - 5 %			<b>%</b>	
	Butanols	1-5 %			9/ /o	
	Toluene	1-5 %	*-		<u>"</u>	
	Acetone		Benzene	1 - 6	9/	

	Zinc	E00 2000 55	m	senia	. 005 10	
	Linc	500-2000 pp:	n AFS	enic -	< .005-10	ppm
	Chromium	<u>10 - 750</u> pp	n Bar	ium .	10 - 1500-	
	Copper	<u>1-25</u> pp	m Cac	imium	.5 - 5	π <i>q</i> c
	Lead		m Kei	cury	3-10	ppn
	Manganese	25~100 pp	m Sei	lenium	< .5 - 10	
	Nickel	1-20 pp	m Si	lver	<.01 - 1	
D.	Recommenda	tion regarding the	use of this ma	terial a	s a	
	supplement	al fuel				
	l. Analys	t comments				
	Signat	1178		<del></del>		-
	<u> </u>					
	2. Techni	cal representative	comments	•		
	Signa	ure			,	
	3. Submi	cred to General Por	tland Inc. for	approva	l as a	
	quali	fied source				
		_ Yes				
	,	No				
	ъу		•	•		
		te		•	т п	
· E	. Reviewed	and accepted/rejec	ced by GPI			v
	Ву		Date			· · · · · · · · · · · · · · · · · · ·
	Reasons	for rejection				
	· ·			<del></del>		

# . Equiert Hoss & Bons Inc.

到红田 1510 0 GALTOX, 0田0 任任任 1216)743-2171 0 (216) 235-3050 CEVELNO LINE

•	•		, WAST	E PRODUCT SURV
US/EPA Faci	lity ID# OHD048415665	•	<b>*</b>	
		•		
	DDC Industries Inc	110/773	TD 4. WIĞAĞQQ7202	<b>.</b>
Generator:	PPG Industries, Inc.	US/LFA	TD W: WIOODDD/25)	
Mailing Ad	dress: POB 28, Oak Creel	k, WI 53154		
Plant Addr	ess: 10800 South 13th Str	eet, Oak Creek, WI 5	3154	
Business C	ontact: Martin Scheerbaum/	Dan Scudder	Phone: (41	4) 764-6000
Technical	Contact: Martin Scheerbau	m/Dan Scudder	Phone: (4)	14) 764-6000
THIS INFOR ANALYSIS.	MATION IS BEING REQUIRED I	O COMPLY WITH RCRA 4	0 CFR PART 265.13	GINERAL WASTE
	STE INFORMATION			
Waste Mate	rial Name: Organic Wast	e	defined by RC	
Generator	Code(if used):		If yes, list	ES] (circle) applicable EPA
Describe p	process that generates wast	te: Paint and Resin		ste Number(s) be
Plant Sol	vent Recovery Batch Distill	lation		-
STC Codal	optional): 2851, 2821			• 5.5
55 gallon inside);	ll types of containerizati steel drums; 70 g 55 gallon fiber drum I would like a quote for p	allon recovery drum_ ; 5 gallon pail	; (with fib	her
. WASTE STR	EAM CHEMICAL COMPOSITION .			
			• • • •	
Component	s including contaminants	Concentration Range WT%	Average WTX Must Total 100%	<ul> <li>TLV (if publ: +ACGIH 0</li> </ul>
Polymeric	Resins (acrylic, alkyd,			·
polyureth	, vinyl, amine, epoxy,	to	30	
	c Pigments	$\frac{20}{7}$ $\frac{10}{20}$	10	
% Water		_ 1 20	10	
Solvents	(total)	45 60	· 50 ·	
	ellosolves	515	9	
Xylene		10 20	15	
MIBK		1 10	6	
Butanol		2 10	5	
	o this form any additional			
	the waste in accordance vi			
	d under RCRA 261, laborato	ry analysis, technic	ai publications o	r safety data s
_	d under RCRA 261, laborato	ry analysis, technic 1 - ?	5, .	r safety data s
Toluene	e	ry analysis, technic 1 - 3 1 - 3	2, 1.5	r safety data s
Toluene	e olve Acetates	ry analysis, technic 1 - 3 1 - 3 .15	1 1.5	r safety data s
Toluene Celloso Benzene	e olve Acetates e	ry analysis, technic 1 - 3 1 - 3 .15	2, 1.5 .3	r safety data
Toluene Celloso Benzene	e olve Acetates	ry analysis, technic 1 - 3 1 - 3 .15 C-1-C(-22)	1 1.5	r safety data

•		* # \ .		
IV.	SPECIFIC	ANALYSYS	OF	WASTE

ANSWER	EVERY	ITEM IN	THIS S	ECTION	Į .
TON OO	LEAVE	BLANKS.	. If th	e spec	ific
element	t is no	ot preser	nt, ind	licate	"none"

Organic	Bound Sulfur*	None	ZWT
11	" Chlorine*	· Trace	TWI
. 11	" Flourine*	Trace	ZWI
11.	" Bromine*	None	ZWI
17	" lodine*	None	ZWT
	" Nitrogen	<2	ZWI
11	"Phosphorous	None	ZWT
	(Base %WI on	Molecular Struc	ture)

#### Metals

•		
. Lead*	300 - 2000	PPM
Mercury*	3 - 10	PPM
Arsenic	<.01 - 1	PPM
Barium	10 - 1500	PPM
Cadnium	< .5 - 3	PPM
Chromium	10 - 800	PPM
Selenium	· <.5 - 1	PPM
Silver	<.01 - 1	PPM

\*These items are specifically required by RCRA Part 265 Subpart 0

Does this waste contain PCBS? (circle)

[NO] YES If yes, give the concentration and attach supporting documentation.

PPM

Does this waste contain Insecticides, Pesticides, Herbicides or Rodenticidies?

[NO] YES If yes, identify each in the space below and the concentrations.

	****	PPM
		PPM

## v. TOXICITY

Check applicable data

_	<u>.</u> X	_Ingestion;	explain	Heavy	Metals	3 3	Solvent
	X_	Inhalation;	explain	Avoid	Breath	ning	Vapors
	X	_Dermal;	explain	May·be	e an Ir	rit	ant
	X	Eyes;	explain	Avoid	Contac	<u>t</u>	
_		Other;	explain	•			
_	X.	Carcinogen	(suspect	ed or	knoun)	;ex	plain
			r Q.				

#### VI. PHYSICAL PROPERTIES

Physical State @70°F (circle)  Normally Similar to Paint  [Liquid] Semisolid Solid  Possibly
Slurry [Sludge] Gas
Viscosity @ 70°F <1000 [cps]
Is material pourable/pumpable? (circl
NO [YES]
Is waste multi-layered? NO YES
1.(top)
2. <u> </u>
Dissolved Solids N/A XW
Suspended Solids N/A ZW. (identify and indicate % by WT)
BTU Value/1bs.* 7000 - 12000
*Specifically required by RCRA Part 265 Subpart O. Normal
Flash Point: 75 - 100°F °F
Specific Gravity: 9 - 1.1
pH:N/A
Characteristics
Color: Varies (usually brown to gray)
Odor: Solvent
Other:
'II. REACTIVITY
(circle) [Stable] Unstable
Handling conditions to avoid
Chemical Incompatibility

· .C-1-C(-23)

## 1. SHIPPING INFORMATION FOR WASTE

Christine M. Babka  Authorized Signature	/ Environmen Tit Coatings &	ral Engineer / tle Resins Division 4500, Ext. 337	10/20/8 Date	
<u>Christine M. Babka</u>	/ Environmen Tit Coatings &	tle Resins Di <b>vi</b> sion		
<u>Christine M. Babka</u>	/ Environmen Tit Coatings &	tle Resins Di <b>vi</b> sion		
<u>Christine M. Babka</u>	/ Environmen Tit Coatings &	tle Resins Di <b>vi</b> sion		
<u>Christine M. Babka</u>	/ Environmen Tit	tle		
Christine M. Bahka	/ Environmen	tal Engineer /	10/20/8	
				osed.
submitted in this and all attache immediately responsible for obtain	d documents. Based ning the informatio	l on my inquiry of ton, the submitted in	hos indivi	duals is
Generators of Hazardous Waste shi RCRA 40 CFR Part 262.	pments must also co	mply with the label	ing requir	ements o:
Phone: (800)424-9158		.**		
For assistance call Hazardous Mate	erial Transportation	n of the Department	of Transpo	ortation
Placard(s): Flammable Liqu	ıid			
	<del>-</del>	less)		
Container Label(s): N/A				•
		June 30, 1981.)		
•			,	•
In accordance with the Department	of Transportation 4	9 CFR Parts 171 thr	cough 177	
	DOT Proper Shipping Name: Wasted  DOT Hazard Class: Flamm  DOT UN or NA Number: UN186  (Required on a Container Label(s): N/A (For containers)  Placard(s): Flammable Lique  For assistance call Hazardous Mater Phone: (800)424-9158  Generators of Hazardous Waste ship RCRA 40 CFR Part 262.  I hereby certify that I have pers submitted in this and all attache immediately responsible for obtain	DOT Proper Shipping Name: Waste Resin Solution  DOT Hazard Class: Flammable Liquid  DOT UN or NA Number: UN1866 (Required on all shipments after  Container Label(s): N/A (For containers of 110 gallons or  Placard(s): Flammable Liquid  For assistance call Hazardous Material Transportation Phone: (800)424-9158  Generators of Hazardous Waste shipments must also co RCRA 40 CFR Part 262.  I hereby certify that I have personally examined and submitted in this and all attached documents. Based immediately responsible for obtaining the information	DOT Proper Shipping Name: Waste Resin Solution  DOT Hazard Class: Flammable Liquid  DOT UN or NA Number: UN1866	DOT UN or NA Number:  UN1866  (Required on all shipments after June 30, 1981.)  Container Label(s):  N/A  (For containers of 110 gallons or less)  Placard(s):  Flammable Liquid  For assistance call Hazardous Material Transportation of the Department of Transportation:  Phone: (800)424-9158  Generators of Hazardous Waste shipments must also comply with the labeling requir RCRA 40 CFR Part 262.  I hereby certify that I have personally examined and am familiar with the informat submitted in this and all attached documents. Based on my inquiry of thos indivising immediately responsible for obtaining the information, the submitted information

Components including Contaminants	Concentration Range WT%	Average WT% Must Total 100%	TLF (if published) +ACGIH OSHA
Styrene MEK Acetone Others	.0515 .05 - 3 .053 5 - 15	.1 1 .1 10	100 200 1000

C-1-D(-1)

#### ATTACHMENT VI-B-4

Water-Base Paint Waste (D005, D006, D007, D008) Possibly D001, D009

#### General Description:

Liquid or Liquid and Sludge

Flash Point <100 F - >140 F

Heating Value <1,000 - 5,000 BTU/LB

Total Resin Solids 15 - 30%

Total Pigment Solids 10 - 30%

Solvents 0 - 60%

Water 15 - 60%

Weight/Gallon 8.9 - 9 LB/GAL

Description will vary depending on product.

#### Basis for hazardous designation:

Assumed TCLP Toxic characteristics based on knowledge of the product.

C-1-E(-1)

#### ATTACHMENT VI-B-5

Solvent Base Paint Waste (D001, D005, D007, D008, D035) Possibly D009

#### General Description:

Liquid or Liquid and Sludge

Flash Point <100 F

Heating Value 8,000 - 15,000 BTU/LB

Total Resin Solids 15 - 40%

Total Pigment Solids 5 - 20%

Solvents 40 - 80%

Water 5 - 15%

Weight/Gallon 7 - 8 LB/GAL

Basis for hazardous designation:

Assumed TCLP Toxic characteristics based on knowledge of the product. Also tested for ignitability.

C-1-F(-1)

#### ATTACHMENT VI-B-6

Resin Waste (D001, D007, D008, D035) Possibly D003

#### General Description:

Liquid, semi-solid or solid

Flash Point <100 F to >140 F

Heating Value <100 - >10,000 BTU/LB

Total Resin Solids 20 - 70%

Total Pigment Solids <.5%

Solvents 15 - 75%

Water 0 - 75%

Weight/Gallon 7.5 - 9 LB/GAL

Description will vary depending on product.

Basis for hazardous designation:

Usually ignitable waste. Assumed TCLP Toxic characteristics based on knowledge of product.

Certain types of resins may also be reactive when mixed with water or may spontaneously ignite. These are generated infrequently.

#### REPORT LAB ANALYSIS

CLIENT HAME:

PPG INDUSTRIES, INC.

ADDRESS:

ROSANNA IRIYE

ALLISON PART.

15101 FA

REPORT DATE: 05/15/85

NUS CLIENT NO:

NUS SAMPLE NOT

YENIOR NO:

WORK ORDER NO: DATE RECEIVED:

55830 04/08/85

ATTENTION: CHPIS BARNA

SAMPLE INEXTIFICATION: OC-85-0067-00 - Cationic Sample Waste

TEST	DETERMINATION	RESULTS	STINIA	
DYTT	Meinglene Chlorade	< 2	±g/1	
0425	Toluerie	< 2	¥g/l	
<b>0</b> 430	Trichlorofluoromethane	< 2 ⋅	mg/l	
S015	% ABY 8 550 C	< 0.1	χĺ	
\$040	British Therwol Units	WHO		
\$0.64	Chictine, Organic	< 0.1	7	
<u>୧</u> ୬ବନ୍ତ	Fluorine, Organia	< 0.01	ĭ	
\$165	2 Solids, total at 103 C	y < 0.1	ž .	
\$168	Specific Weight	8.8	lb/gel	
\$195	% Water (Korl Fisher)	75.1	× -	recheck '
\$210	Viscosity	10	Ct.	
\$950	Acid Nigestion			
5971	Ashing			
5980	Cxyger Rowh Preparation			
9032	Ammonia as N (distillation)	< 1	mg/1	
W270	Cyanide, total (DX)	< 0.1	<b>s</b> g/l	
1435	Nitrogen, Kjeldahl (N)	15	mg/1	
¥44¢	Nitrogen, Organic (N)	15	<b>a</b> ⊊/]	
#2(X)	Phenolics	< 0.4	*g/l	
<b>W74</b> 0	Scifide (S)	< 1	±g/1	



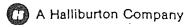
78%

MENTS: NNC indicates that the sample will not combust. < means detection Limit

C-1-F-(-3)

Reviewed and Approved by: UMC

PAGE NO: 2



C-1-G(-1)

ATTACHMENT VI-B-7

Cationic Distillate (F003)

General Description:

Liquid

Flash Point

<100 F

Heating Value

10,000 - 15,000 BTU/LB

Total Resin Solids

<1%

Total Pigment Solids

0

Solvents

70 - 95%

Water

5 - 30%

Weight/Gallon

7.5 - 8 LB/GAL

Basis for hazardous designation:

Listed for Ignitability.

C-1-H(-1)

ATTACHMENT VI-B-8

Paint Plant Filter Cartridges and Bags (D005, D006, D007, D008)

General Description:

Fiber filter cartridge, bag, and/or paper straining media contaminated with paint, resins, solvent or water and pigments. An inert absorbent material may be added at the time the waste is placed in the container.

Basis for hazardous designation:

Assumed TCLP Toxic characteristics based on knowledge of the products.



REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

#### LAB ANALYSIS REPORT

CLIENT HAME:

PPG INDUSTRIES, INC.

ADDRESS: ROSANNA DRIVE

ALLISON PARK,

15101

HUS CLIENT NO:

320237

HUS SAMPLE HO:

15041223

VENDOR NO: WORK ORDER HO: 01831710 55830

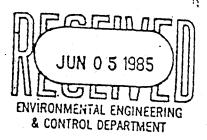
DATE RECEIVED:

ATTENTION: MS. C. BABKA

SAMPLE IDENTIFICATION: OC-85-0077-03A - Paint Filter Bag

REPORT DATE: 05/31/85

TEST	DETERMINATION	RESULTS	UNITS
			<del></del>
\$015	% Ash @ 550 C	5.2	1
SO40	British Thermal Units	10820	BTU/1b
\$120	% Moisture (As received)	30	X
S1 65	% Solids, total at 103 C	70	I
\$170	Specific Gravity	THT	
5410	Barium (Ba)	960	mg/kg
\$417	Beryllium(Be)	< 0.2	mg/kg
S430	Chronium (Cr)	700	ng/kg
\$450	Lead (Pb)	3600	æg/kg
5460	Mercury (Hg)	2.7	ng/kg
\$950	Acid Digestion	4	, ,
5971	Ashing		



DIMIENTS: < means de ketion limits

C-1-H(-2)

Reviewed and Approved by: JMC



A Halliburton Company

CLIENT ORIGINAL



REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

#### LAB ANALYSIS REPORT

CLIENT HAVE: PP

PPG INDUSTRIES, INC.

ADDRESS:

ROSANNA DRIVE

ALLISON PARK,

PA 15101

•

MUS CLIENT NO:

320237

MUS SAMPLE MO:

15041221

VEHDOR NO:

01831710 55830

REPORT DATE: 05/31/85

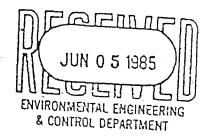
WORK ORDER NO: DATE RECEIVED:

04/17/85

ATTENTION: MS. C. BABKA

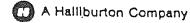
SAMPLE IDENTIFICATION: OC-85-0077-03-A1 - Paint Filter Bag Extract

TEST	DETERMINATION	RESULTS	UNITS
1270	RCRA HETALS		
H030	Arsenic (As)	0.34	æg/l
1040	Barium (Ba)	· <1	mg/1
H090	Codmium (Cd)	< 0.05	mg/1
1140	Chromium (Cr)	1.1	mg/1
H200	Lead (Pb)	< 0.3	mg/l
1250	Mercury (Hg)	0.0003	mg/1
H290	Selenium (Se)	0.28	<b>≥</b> g/1
1300	Silver (Aq)	< 0.1	<u>⊪q</u> /1
H141	Chromium, Hexavalent(Cr+6)	< 0.01	<b>≥</b> g/1
\$950	Acid Digestion		_
5971	Ashing		



DIMENTS: L nears defection limit

C-1-H(-3)





REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

#### LAB ANALYSIS REPORT

CLIENT NAME: PPG INDUSTRIES, INC.

ADDRESS: ROSANNA DRIVE

ALLISON PARK.

PA 15101

MUS CLIENT NO: MUS SAMPLE NO: 320237 15041224

WENDOR NO:

01831710

\* AFRINK I

55830

REPORT DATE: 05/31/85

WORK ORDER HO: DATE RECEIVED:

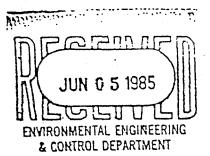
\$5830 04/18/85

ATTENTION: MS. C. BABKA

SAMPLE IDENTIFICATION: OC-85-0077-038 - Paint

Filter

TEST	DETERMINATION	RESULTS	UNITS
3015	7 Ash 8 550 C	45	7
5040	British Thermal Units	6099	BTU/1b
\$120	I Moisture (As received)	20	Z .
5165	I Solids, total at 103 C	77	2
\$170	Specific Gravity	TKI	
S410	Barium (Ba)	4300	<b>≥</b> g/kg
\$417	Beryllium(Be)	< 0.2	æg/kg
S430	Chromium (Cr)	170	∎g/kg
\$450	Lead (Pb)	280	∎g/kg
5460	Mercury (Hg)	0.40	<b>≥</b> g/kg
\$950	Acid Digestion		
5971	Ashina		



وروية

COMMENTS: L means deficient

C-1-H(-4)

Reviewed and Approved by: JMC



A Halliburton Company

CLIENT ORIGINAL



Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

#### ANALYSIS LAB REPORT

CLIENT HAME:

PPG INDUSTRIES, INC.

Acid Digestion

Ashing

ADDRESS:

\$950

5971

ROSANNA DRIVE ALLISON PARK,

15101 PA

MUS CLIENT NO:

320237

HUS SAMPLE NO:

15041225

VENDOR NO:

01831710

REPORT DATE: 05/31/85

WORK ORDER NO: DATE RECEIVED:

55830 04/18/85

ATTENTION: MS. C. BABKA

SAMPLE IDENTIFICATION: OC-85-0077-03C - Paint

Filter

UNITS TEST DETERMINATION RESULTS 7 \$015 % Ash @ 550 C 23 British Thermal Units 8673 BTU/1b 5040 I Moisture (As received) 28 7 \$120 Z Solids, total at 103 C 70 Z S165 INT \$170 Specific Gravity g/cc S410 Barium (Ba) 120 mg/kg < 0.2 \$417 Beryllium(Be) mg/kg \$430 Chromium (Cr) 2.0 æg/kg \$450 Lead (Pb) < 3 æg/kg 5460 Mercury (Hg) 0.26 **≥**g/kg



COMENTS: L means detetinolimit

C-1-H(-5)





REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

#### LAB ANALYSIS REPORT

CLIENT NAME:

PPG INDUSTRIES, INC.

ADDRESS:

ATTENTION:

260 KAPPA DRIVE

PITTSBURGH,

PA 15238

REPORT DATE: 06/04/85

MUS CLIENT NO: MUS SAMPLE NO: 320237

VEHIOR NO:

15042187 01831710

55830

MS. CHRIS BABKA

WORK DRIBER NO: DATE RECEIVED:

04/26/85

SAMPLE IDENTIFICATION: OC-85-0077-03 C1 - Paint

Filter Extract

TEST	DETERMINATION	RESULTS	UNITS
1270	RCRA HETALS		
H030	Arsenic (As)	< 0.01	mg/1
1040	Barium (Ba)	< 1	mg/l
H090	Cadmium (Cd)	< 0.05	mg/l
1140	Chromium (Cr)	0.1	mg/1
H200	Lead (Pb)	< 0.3	mg/l
1250	Mercury (Hg)	0.0003	<b>a</b> g/1
N290	Selenium (Se)	< 0.04	mg/1
1300	Silver (Ag)	< 0.1	mg/1



COMMENTS: I means detection limit

C-1-H(-6)

Reviewed and Approved by: JMC



A Halliburton Company

CLIENT ORIGINAL



REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

#### ANALYSIS REPORT

CLIENT HAME: PPG INDUSTRIES, INC.

> ADDRESS: ROSANNA DRIVE

ATTEMTIOM:

\$971

ALLISON PARK,

Ashing

MS. C. BABKA

PA 15101

REPORT DATE: 05/31/85

MUS CLIENT NO: MUS SAMPLE NO: 320237 15041226

VENDOR NO:

01831710

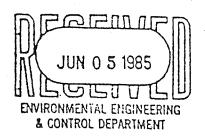
WORK DRIVER HO: DATE RECEIVED:

55830 04/18/85

SAMPLE IDENTIFICATION: OC-85-0077-03D - Paint ...

Filter

TEST	DETERNINATION	RESULTS	UNITS
	10-10-to-to-to-to-to-to-to-to-to-to-to-to-to-	-	
2040	British Thermal Units	4891	BTU/1b
\$120	I Moisture (As received)	18	I
\$170	Specific Bravity	IHT	
5410	Barium (Ba)	6700	æg/kg
\$417	Beryllium(Be)	< 0.2	mag/kg
\$450	Lead (Pb)	220	mog/kg
\$460	Mercury (Hg)	0.13	æq/kg
5950	Acid Digestion		, ,



( means deferming limit COMMENTS:

C-1-H(-7)





REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

#### ANALYSIS REPORT LAB

PPG INDUSTRIES, INC. CLIENT HAME:

ATTENTION:

ADDRESS: 260 KAPPA DRIVE

PITTSBURGH,

MS. CHRIS BABKA

PA 15238

REPORT DATE: 06/04/85

HUS CLIENT HO: HUS SAMPLE NO:

15042186

VENDOR NO: 01831710 WORK ORDER HO:

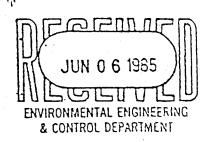
55830

DATE RECEIVED: 04/26/85

SAMPLE IDENTIFICATION: DC-85-0077-03 D1 - Paint

Filter Extract

TEST	DETERMINATION		RESULTS	UNITS
1270	RCRA HETALS		Confliction (sections)	
H030	Arsenic (As)	•	< 0.01	<b>≥</b> g/1
1040	Barium (Ba)		< 1	<b>≥</b> g/1
H090	Codmium (Cd)		< 0.05	mg/l
1140	Chromium (Cr)	Y	< 0.1	<b>≥</b> g/1
<b>X200</b>	Lead (Pb)	•	< 0.3	mg/l
1250	Mercury (Hg)		< 0.0002	<b>≥</b> g/1
H290	Selenium (Se)		< 0.04	mg/1
1300	Silv <del>er</del> (Ag)		< 0.1	mg/l



COMENTS: Linearisty -ensor

C-1-H(-8)



REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

#### LAB ANALYSIS REPORT

CLIENT NAME: PPG INDUSTRIES, INC.

> ADDRESS: ROSANNA DRIVE

ALLISON PARK,

15101

HUS CLIENT NO: MUS SAMPLE HO:

15041485

VENDOR NO:

01831711

REPORT DATE: 05/31/85

WORK ORDER HO: DATE RECEIVED:

55830 04/19/85

ATTENTION:

CHRIS BABKA

SAMPLE IDENTIFICATION: OC-85-0077-03E - Paint

1 Filter

TEST	DETERNINATION	RESULTS	UNITS
	Y A.L. A EEA C	·	~
\$015	I Ash 8 550 C	40	<i>k</i>
S040	British Thermal Units	6930	BTU/1b
\$120	I Moisture (As received)	· i9	I ,
\$165	% Solids, total at 103 C	78	7.
\$170	Specific Gravity	TKI	
S410	Barium (Ba)	350	mg/kg
\$417	Beryllium(Be)	< 0.2	a∞g/kg
\$430	Chromium (Cr)	8.1	mg/kg
\$450	Lead (Pb)	14	<b>≥</b> g/kg
\$460	Hercury (Hg)	. 0.3	æg/kg
\$950	Acid Digestion		
S971	Ashing		



COMMENTS: INT indicates sample matrix interference during sample analysis. Linears describe which C-1-H(-9)





Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

#### LAB ANALYSIS REPORT

CLIENT NAME: PPG INDUSTRIES, INC.

ADDRESS: ROSANHA DRIVE

ALLISON PARK,

ARK, PA 15101

101

HUS CLIENT HO:

320237

HUS SAMPLE NO:

15041222

VENDOR NO: WORK ORDER NO: 01831710

WURK UKDEK IT

55830

ATTENTION: MS. C. BABKA

REPORT DATE: 05/31/85

DATE RECEIVED:

04/17/85

SAMPLE IDENTIFICATION: OC-85-0077-03-E1 - Paint

Filter Extract

TEST	DETERMINATION	RESULTS	UNITS
1270	RCRA METALS	<del>*************************************</del>	•
H030	Arsenic (As)	0.32	mg/l
1040	Barium (Ba)	1	mg/l
H090	Codmium (Cd)	< 0.05	<b>1</b> g/1
1140	Chromium (Cr)	0.1	mg/1
N200	Lead (Pb)	< 0.3	<b>≥</b> g/1
1250	Hercury (Hg)	< 0.0002	<b>3</b> 9/1
H290	Selenium (Se)	0.25	<b>1</b> g/1
1300	Silver (Ag)	∘< 0.1	mg/1
H141	Chromium, Hexavalent(Cr+6)	0.01	ig/1
\$950	Acid Digestion		
S971	Ashing		

JUN 0 5 1985

ENVIRONMENTAL ENGINEERING
& CONTROL DEPARTMENT

DOMENTS: < means asternimente.

C-1-H(-10)

Reviewed and Approved by: JMC



A Halliburton Company

## E = A ENVIRO-ANALYSTS, INC.

#### LABORATORY REPORT



1300 S. Green Bay Road Racine, Wisconsin 53406

То Dan Scudder PPG Industries Subject Chemical and Physical Characterization of Paint Filter Waste.

Report No. 8090

P.O. # 31459

Date 8/13/84

Sample 7/18/84

pН 3.17

86°F Flashpoint

Specific Gravity

1.16

Specific Weight

9.72 lb/gal

Total Solids 77.0%

% Ash Content

47.5%

% Volatile Solids

29.5% (by calculation)

Metals (ppm)

Arsenic <0.1

Barium <1.0

Cadmium 0.77

Chromium, total 18.0

< 0.1 Chromium, +6

Copper 14.0

Iron 1900 .

9.9 Lead

< 0.01 Mercury

6.0 Nickel

**<** 0.5 Silver

< 0.1 Selenium

29.0 Zinc

#### Inorganic/Reactive Components (ppm)

**<**0.03 Cyanide

Sulfide <0.25

<1.0 Sulfite

**Total Volatiles** 23.0% (based on calculation)

% water

% oil

% solvents

C-1-H(-11) °

## E - A ENVIRO-ANALYSTS, INC.



1300 S. Green Bay Road Racine, Wisconsin 53406

Dan Scudder PPG Industries Subject EP Toxicity test on Paint Filter Waste.

## LABORATORY REPORT

Report No. 8089

Date 8/13/84

P.O. # 31459

Sample 7/18/84

Sample Identification Lab I.D. Number	Paint Filter Waste 7866
Units	mg/l
Arsenic	<b>&lt;</b> 0.1
Barium	<b>&lt;</b> 0.3
Cadmium	<b>&lt;</b> 0.1
Chromium	0.35
Lead	<0.1
Mercury	<b>&lt;</b> 0.01
Selenium	<0.1
Silver	<0.1
Copper	0.40
Zinc	0.7
Nickel	<0.1

(

C-1-H(-12)

LAB MANAGER:

A-Telbera

## E-A ENVIRO ANALYSTS, INC. 1300 S Green Bay Ad

Hacine, Wisconsin 53406

### LAMORATORY REPORT 10ITANIMAXE RETAW ETEAW

Report No. 2949

To Dan Scudder PPG Industries Subject Chemical and Physical Characterizationate

of Paint and Resin Filter waste

P.O. # Scudder

7/15/82

Sample

7/9/82

рН .	6.05	
Flashpoint	98°C,	208°F

Specific Gravity

0.24

Specific Weight

2.00 lb/gal

Total Solids 75.5%

> % Ash Content 21.8%

% Volatile Solids 53.7% (by calculation)

#### Metals(ppm)

Arsenic	<0.1	Lead	3.1
Barium	258.2	Mercury	0.86
Cadmium	4.9	Nickel	18.3
Chromium, total	290.0	Silver	<0.1
Chromium, +6	18.5	Selentum	0.2
Copper	16.2	Zinc	119.0
Iron	9 766 5		

## Inorganic/Reactive Components(ppm)

Cyanide	< 0.03
Sulfide	< 0.25
Sulfite	<1.0

#### 24.5% (by calculation.) Total Volatiles

· % water

% oil

% solvents

(Aliphatic hydrocarbons)

C-1-H(-13)

C-1-I(-1)

ATTACHMENT VI-B-9

Resin Plant Filter Cartridges and Bags

General Description:

Fiber filter cartridge, bag, and/or paper straining media contaminated with resins. An inert absorbent material may be added at the time the waste is placed in the container.

Basis for hazardous designation:

Declared hazardous based on organics.



REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

#### LAB ANALYSIS REPORT

CLIENT NAME:

PPG INDUSTRIES, INC.

ADDRESS:

ROSANNA DRIVE

ALLISON PARK,

PA 15101

HUS CLIENT HO: HUS SAMPLE NO:

320201 15041486

VENDOR HO:

01831711

WORK ORDER NO:

55830

ATTENTION:

CHRIS BABKA

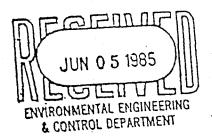
REPORT DATE: 05/31/85

DATE RECEIVED:

04/19/85

SAMPLE IDENTIFICATION: OC-85-0078-03A - Resin Filter Bag

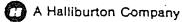
TEST	DETERMINATION	RESULTS	UNITS
\$015	7 Ash 8 550 C	0.2	I
5040	British Thermal Units	14640	BTU/15
\$120	I Moisture (As received)	16	7
\$165	% Solids, total at 103 C	83	I
\$170	Specific Gravity	INT	
\$410	Barium (Ba)	290	<b>≥</b> g/kg
\$417	Beryllium(Be)	< 0.2	ma/ka
\$430	Chronium (Cr)	5.0	∎g/kg
\$450	Lead (Pb)	15	ng/kg
5460	Mercury (Hg)	0.2	ng/kg
\$950	Acid Digestion		3 3
5971	Ashing		



S. 20

COMMENTS: INT indicates sample matrix interference during sample analysis.

C-1-I(-2)





REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

#### LAB ANALYSIS REPORT

CLIENT NAME:

ADDRESS:

ATTENTION:

PPG INDUSTRIES, INC.

ROSANNA DRIVE

CHRIS BABKA

DAUTAE

ALLISON PARK, PA

PA 15101

01 REPORT DATE: 05/31/85 HUS CLIENT NO:

320201

HUS SAMPLE NO:

15041487 01831711

VENDOR NO:

55830

WORK ORDER HO: DATE RECEIVED:

04/19/85

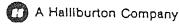
SAMPLE IDENTIFICATION: 0C-85-0078-03B - Resin Filter Cartridge

TEST	DETERMINATION	RESULTS	CTIKU
\$015	Z Ash @ 550 C	< 0.1	7
5040	British Thermal Units	10490	BTW1b
\$120	I Moisture (As received)	2.3	7
\$165	% Solids, total at 103 C	<b>9</b> 7	Z
\$170	Specific Gravity	INT	
S417	Beryllium(Be)	< 0.2	æg/kg
\$430	Chronium (Cr)	3.0	mg/kg
S450	Lead (Pb)	< 3	æg/kg
\$460	Mercury (Hg)	0.1	æg/kg
5950	Acid Digestion		•
\$971	Ashing		



COMMENTS: INT indicates sample matrix interference during analysis. < means detection limit

C-1-I(-3)





REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

#### LAB ANALYSIS REPORT

CLIENT NAME:

PPG INDUSTRIES, INC.

ADDRESS:

260 KAPPA DRIVE

PITTSBURGH,

PA 15238

MUS CLIENT NO:

320237

VENDOR NO:

MUS SAMPLE NO: - 15042185 01831710

WORK ORDER NO:

55830

ATTENTION:

HS. CHRIS BABKA

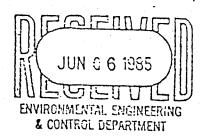
REPORT DATE: 06/04/85

DATE RECEIVED:

04/26/85

SAMPLE IDENTIFICATION: OC-85-0078-03 B1 - Resin Filter Cartridge Extract

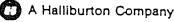
TEST	DETERMINATION	RESULTS	UNITS
	th the factor area and a second report of the second secon		
1270	RCRA KETALS	•	
H030	Arsenic (As)	< 0.01	<b>≥</b> g/1
1040	Barium (Ba)	< 1	<b>⊪</b> g/1
H090	Cadmium (Cd)	< 0.05	≥g/1
1140	Chromium (Cr)	0.1	- mg/l
H200	Lead (Pb)	< 0.3	mg/1
1250	Mercury (Hg)	< 0.0002	• <b>•</b> g/l
N290	Selenium (Se)	< 0.04	mg/1
1300	Silver (Ag)	< 0.1	<b>≥</b> g/l



CONNENTS:

L means dotestion limit

C-1-I(-4)



## E - A ENVIRO-ANALYSTS, INC.



1300 S. Green Bay Road Racine, Wisconsin 53406

Dan Scudder PPG Industries Subject

Chemical and Physical Characterization of Resin Filter Waste

LABORATORY REPORT

Report No. 8095

8/13/84 Date

P.O. # 31459

Sample 7/18/84

pН 7.27

Flashpoint

113°F

Specific Gravity

0.5

Specific Weight

4.1 1b/gal

**Total Solids** 

95.28%

1.55% % Ash Content

% Volatile Solids

93.73% (by calculation)

#### Metals (ppm)

<0.1 Arsenic

Barium

**<**1.0

2.0 Cadmium

Chromium, total

Chromium, +6 <0.1

Copper <0.1

Iron

450.0

Lead

26.0

Mercury

<0.01

Nickel

12.0

Silver

< 0.1

Selenium

< 0.1

Zinc

41.0

#### Inorganic/Reactive Components (ppm)

Cyanide

< 0.03

Sulfide

**<**0.25

Sulfite

**<1.0** 

**Total Volatiles** 

4.72% (by calculation)

% water

% oil

% solvents

C-1-I(-5)

LAB MANAGER:

## E - A ENVIRO-ANALYSTS, INC.

1300 S. Green Bay Road Racine, Wisconsin 53406

Dan Scudder PPG Industries

 $\tau_0$ 

Subject EP Toxicity test on Resin Filter Waste

LABORATORY REPORT

Report No. 7096

Date 8/13/84

P.O. # 31459

Sample 7/18/84

Sample Identification Lab I.D. Number	Resin Filter Waste 7855
Units	mg/l
Arsenic	<b>∠</b> 0.1
Sarium	<b>~</b> 0.3
Cadmium	∠0.1
Chromium	<b>&lt;</b> 0.1
Lead	<b>&lt;</b> 0.1
Mercury	∠0.01
Selenium	۷٥.1
Silver	<0.1
Copper	0.08
Zinc	0.17
Nickel	<0.1

C-1-I (-6)

LAB MANAGER:

### LABORATORY REPORT

E-A ENVIRO-ANALYSTS, INC.

1300 S Green Bay Rd. Racine, Wisconsin 53406

To Dan Scudder
PPG Industries

Subject EP Toxicity Test on Resin Filters

waste

Report No.

3103

Date 9/23/82

P.O. # Scudder

Sample 8/23/82

Resin Filters mg/l Arsenic <0.01 Barium 0.42 < 0.01 Cadmium Chromium < 0.01 Lead 15.6 < 0.01 Mercury Selenium < 0.01 < 0.01 Silver Copper < 0.01 . Zinc 0.05 Nickel < 0.01

C-1-I(-7)

LAB MANAGER:

RESchesser

## E-A ENVIRO-ANALYSTS, INC. 1300 S. Green Bay Rd.

Racine, Wisconsin 53406

## LABORATORY REPORT WASTE WATER EXAMINATION

Report No. 3101

To Dan Scudder PPG Industries

Subject

Chemical and Physical Characterization of Resin Filter Waste

P.O. # Scudder

9/23/82

Sample 8/23/82

6.58 рΗ

>212°F, does not flash Flashpoint

0.48 Specific Gravity

4.0 1b/gal Specific Weight

73.7% Total Solids

> % Ash Content 13.2%

> 60.5% % Volatile Solids (by calculation)

Metals(ppm)

Iron

Arsenic 0.2 202.2 Lead Barium 126.5 Mercury < 0.01 Cadmium 1.4 Nickel 8.4 Chromium, total < 0.1 Silver 2.7 Chromium, +6 < 0.1 Selenium < 0.1 Copper 3.4 Zinc 6.1

Inorganic/Reactive Components(ppm)

Cyanide 1.2 Sulfide < 0.25 Sulfite < 1.0

Total Volatiles 26.3% (by calculation)

74.8

% water.

% 011

% solvents

(Aliphatic hydrocarbons)

C-1-I(-8)

LAB MANAGER: LCZ

## E-A ENVIRO-ANALYSTS, INC. 1300 S Green Bay Rd

Hacine Wisconsin 53406

### LABORATORY REPOR IOITANIMAXE RETAW ETEAW

Report No. 2949

To Dan Scudder PPG Industries Subject Chemical and Physical Characterizationate of Paint and Resin Filter waste

7/15/82

Scudder P.O. #

Sample

7/9/82

6.05

98°C, 208°F Flashpoint

Specific Gravity 0.24

Specific Weight 2.00 lb/gal

#### Total Solids 75.5%

% Ash Content 21.8%

% Volatile Solids 53.7%

(by calculation)

#### Metals(ppm)

Arsenic	<0.1	Lead .	3.1
Barium	258.2	Mercury	0.86
Cadinium	4.9	Nickel	.18.3
Chromium, total	290.0	Silver	<0.1
Chromium, +6	18.5	Selenium	0.2
Copper	16.2	Zinc	119.0
Iron	9,766.5		`

#### Inorganic/Reactive Components(ppm)

Cyanide < 0.03 Sulfide < 0.25 <1.0 Sulfite

Total Volatiles 24.5% (by calculation)

1 water

% oil

- (Aliphatic hydrocarbons) I solvents

C-1-I(-9)

C-1-J(-1)

ATTACHMENT VI-B-10

Paint Plant Baghouse Dust (D005, D006, D007, D008)

General Description:

This is a solid waste generated from air pollution dust collection systems located at several points throughout the Paint Manufacturing Plant. Pigment and resin raw material particulates are drawn away from the operator by a hood at the point where these materials are charged to the production equipment.

Basis for hazardous designation:

Assumed TCLP Toxic characteristics based on knowledge of the waste.



#### ANALYSIS REPORT LAB

CLIENT NAME:

PPG INDUSTRIES, INC.

ADDRESS:

ATTENTION:

260 KAPPA DRIVE

MS. CHRIS BABKA

PITTSBURGH,

PA

15238

REPORT DATE: 07/02/85

MUS CLIENT NO: MUS SAMPLE NO: . 15040565

VENDOR NO:

01831710

WORK ORDER HO:

55830

DATE RECEIVED:

04/08/85

SAMPLE IDENTIFICATION: OC-85-0075-03 - Paint Baghouse Dust

TEST	DETERMINATION	F	RESULTS	UHITS	
1270	RCRA METALS	• •	<del></del>	<del></del>	
H030	Arsenic (As)		4.1	mag/kg	
1040	Barium (Ba)		5800	∌g/kg	
H090	Cadmium (Cd)		2.6	ag/kg	
1140	Chromium (Cr)		5600	mg/kg	
H200	Lead (Pb)		4500	∌g/kg	
1250	Mercury (Hg)		2.5	∎g/kg	
H290	Selenium (Se)		< 0.4	∎g/kg	
1300	Silver (Ag)		< 1.0	<b>≥</b> g/kg	
14050	Beryllium (Be)		< 0.2	∎g/kg	
1110	Calcium (Ca)		16000	<b>a</b> g/kg	
H141	Chromium, Hexavalent(Cr+6)		3800	∎g/kg	Rev.
1150	Cobalt (Co)		7.0	<b>≥</b> g/kg	, (2.1)
M160	Copper (Cu)		1500	<b>≥</b> g/kg	
1190	Iron, total (Fe)		99	nog/kg	
N230	Nagnesium (Ng)	•	2000	mg/kg	
1240	Hanganese (Kn)		63	<b>∍</b> g/kg	
- X270	Hickel (Ni)		94	mg/kg	<u>-</u>
1310	Sodium (Ha)		880	∎g/kg	
H320	Strontium (Sr)		5100	nog/kg	D S
1390	Zinc (Zn)		11000	∍g/kg	A " ALEE
0499	Infrared Analysis				7 8 7 9
\$010	Ammonia, distillation (N)		590	∍g/kg	8 1985 TUTC
S015	I Ash @ 550 C		78	I	
1064	Chlorine, Organic	•	< 0.1	7	기 · 티 <sup>독</sup> 리
\$080	Cyanide, Total (CH)		く 2	<b>a</b> g/kg	JUL JUL
\$098	Fluorine, Organic		0.02	I	引う日産
\$120	I Moisture (As received)		1.5	I	A Még
\$125	Nitrogen, Kjeldahl (N)		3600	<b>≥</b> g/kg	JUL - 8 1985  SENVIRONMENTAL ENGINEERING  & CONTROL DEPARTMENT
\$126	Nitrogen, Organic (N)		3000	mg/kg	
\$165	I Solids, total at 103 C		98.3	7	
S170	Specific Gravity		IHT		

A Halliburton Company



Laboratory Services Division 5350 Campbells Run Road Pittsburgh, PA 15205

REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

#### ANALYSIS LAB REPORT

CLIENT HAME:

PPG INDUSTRIES, INC.

ROSANNA DRIVE

ALLISON PARK,

15101

MUS CLIENT NO: NUS SAMPLE NO: 320245 15040565

VENDOR NO: WORK ORDER HO: 01831710 55830

: HOITHITTA

ADDRESS:

CHRIS BABKA

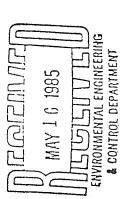
REPORT DATE: 05/15/85

DATE RECEIVED:

04/08/85

SAMPLE IDENTIFICATION: OC-85-0075-03 - Paint Baghouse Dust

TEST	DETERMINATION	RESULTS	UNITS
\$174	Sulfide by W2 decemation (S)	< 5	>a /\ a
	Sulfide by H2 generation (S)	· •	<b>∍</b> g/kg
S170	Sulfur, total	0.60	I
\$950	Acid Digestion		
5755	Water Digestion	•	
\$980	Oxygen Bomb Preparation		
¥490	рН	7.2	



COMMENTS: No resins were detected by the infrared analysis. I means that come

C-1-J(-3)

Reviewed and Approved by: JMC

PAGE NO: 2



A Halliburton Company



Laboratory Services Division 5350 Campbella Run Road Pittsburgh, PA 15205

REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

#### ANALYSIS LAB REPORT

CLIENT NAME: PPG INDUSTRIES, INC.

> ADDRESS: ROSANNA DRIVE

ALLISON PARK,

PA

15101

REPORT DATE: 05/31/85

HUS CLIENT HO: HUS SAMPLE NO:

320237 15041219

VENDOR HO:

01831710

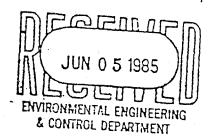
WORK ORDER HO: DATE RECEIVED:

55830 04/17/85

ATTENTION: MS. C. BABKA

SAMPLE IDENTIFICATION: OC-85-0075-03A - Paint Baghouse Dust Extract

TEST	DETERMINATION	RESULTS	UNITS
	DODA WETALO		
1270	RCRA METALS		
H030	Arsenic (As)	0.36	<b>≥</b> g/l
1040	Barium (Ba)	1	<b>≥</b> g/1-
H090	Cadmium (Cd)	0.11	<b>æ</b> g/1
1140	Chromium (Cr)	92	mg/l
N200	Lead (Pb)	0.8	mg/l
1250	Mercury (Hg)	0.035	<b>≥</b> g/l
<b>H290</b>	Selenium (Se)	0.28	<b>≥</b> g/l
1300	Silver (Ag)	< 0.1	<b>≥</b> g/1
\$950	Acid Digestion		• .
\$971	Ashing		•



CONMENTS:

L means delection

C-1-J(-4)

Reviewed and Approved by: JMC



A Halliburton Company

# E = A ENVIRO-ANALYSTS, INC.

~~~

1300 S. Green Bay Road Racine, Wisconsin 53406

Report No. 8093

LABORATORY REPO

То

Dan Scudder PPG Industries Subject

Chemical and Physical Characterization of Paint Plant Dust Wastes. Date 8/13/84

P.O. # 31459

Sample 7/18/84

pH 7.13

Flashpoint 212°F, does not flash

Specific Gravity 0.39

Specific Weight 3.25 lbs/gal

Total Solids

81.23%

% Ash Content 72.07% % Volatile Solids 9.16% (by calculation)

### Metals (ppm)

| Arsenic <0.1           | Lead     | 3.2   |
|------------------------|----------|-------|
| Barium <b>&lt;</b> 1.0 | Mercury  | 0.39  |
| Cadmium 2.7            | Nickel   | 18.6  |
| Chromium, total 876.0  | Silver   | 0.8   |
| Chromium, +6 <0.1      | Selenium | <0.1  |
| Copper 975.0           | Zinc -   | 683.0 |
| Iron 12,600            |          | •     |

# Inorganic/Reactive Components (ppm)

Cyanide <0.03 Sulfide <0.25

Sulfite <1.0

Total Volatiles 18.77% (by calculation)

% water

% oil

% solvents

C-1-J(-5

LAB MANAGER:

# E - A ENVIRO-ANALYSTS, INC.

\*\*\*

1300 S. Green Bay Road Racine, Wisconsin 53406

To Dan Scudder PPG Industries

Subject EP Toxicity test on Paint Plant Dust Waste.

LABORATORY REPO.

Report No. 8094

Date 8/13/84

P.O. # 31459

Sample 7/18/84

| Sample Identification Lab I.D. Number | Paint Plant Dust<br>7847 |
|---------------------------------------|--------------------------|
| Units                                 | ma /1                    |
| CHICS                                 | mg/l                     |
| Arsenic                               | <0.1                     |
| Barium                                | <b>&lt;</b> 0.3          |
| Cadmium                               | <0.1                     |
| Chromium                              | 160.0                    |
| Lead                                  | 0.19                     |
| Mercury                               | 0.021                    |
| Selenium                              | <0.1                     |
| Silver                                | <0.1                     |
| Copper                                | 32.0                     |
| Zinc                                  | 53.0                     |
| Nickel                                | 0.21                     |

Note: EP Toxicity for Chromium

C-1-J (-6)

LAB MANAGER:

ER: Afellows

# LABORATORY REPORT

E-A ENVIRO-ANALYSTS, INC.

1300 S. Green Bay Rd. Racine, Wisconsin 53406

To Dan Scudder PPG

Subject EP Toxicity Test on Paint Dust

Composite

Report No. 3211

Date 11/5/82

Scudder P.O. #

Sample 8/30/82

|           | 8/30<br>mg/1 |
|-----------|--------------|
| Arsenic   | < 0.01       |
| Barium    | 1.50         |
| Cadmium   | 0.32         |
| ∠Chromium | 8.60         |
| Lead      | < 0.01       |
| Mercury   | 0.012        |
| Selenium  | < 0.01       |
| Silver    | < 0.01       |
| Copper    | 0.06         |
| Zinc      | 3.82         |
| Nickel    | 0.15         |

for chromiam

C-1-J(-7)

# E-A ENVIRO ANALYSTS, INC.

# LABORATORY REPOR

1300 S. Green Bay Rd., Hacine, Wisconsin, 53406

Report No. 3022

Dan Scudder
PPG Industries

Subject Chemical and Physical Characterization of Paint Powder Waste composite

8/19/82

P.O. # Scudder

Sample 6/23/82

рН 6.72

Flashpoint >212°F, does not flash

Specific Gravity 0.33

Specific Weight 2.8 lb/gal

Total Solids 98.3%

% Ash Content 80.4%

% Volatile Solids 17.9%

(by calculation)

Metals(ppm)

| Arsenic         | 0.2   | Lead     | 135.0 |
|-----------------|-------|----------|-------|
| Barıum          | 150.0 | Mercury  | <0.01 |
| Cadinium        | 9.3   | Nickel   | 110.1 |
| Chromium, total | 760.0 | Silver   | 12.4  |
| Chromium, +6    | 2.3   | Selenium | < 0.1 |
| Copper          | 186.1 | Zinc     | 583.2 |

Iron 11,323.1

Inurganic/Reactive Components(ppm)

Cyanide <0.03
Sulfide <0.25
Sulfite <0.25

Total Volatiles 1.7% (by calculation)

% water

X oil

% solvents

C-1-J(-8)

LAB MANAGER LE Choes

# 1300 S. Green Bay Rd.

PPG Industries

LABORATORY REPORT WASTE WATER EXAMINATION

Report No. 3023

То

Racine, Wisconsin 53406

Dan Scudder

Subject EP Toxicity Test Results of Paint Powder composite

Date 8/17/82

P.O. # Scudder

Sample 6/23/82

| Paint<br>Powder<br>mg/l |
|-------------------------|
| <0.01                   |
| 0.85                    |
| 0.10                    |
| 1.70                    |
| 0.12                    |
| < 0.01                  |
| < 0.01                  |
| < 0.01                  |
| 0.25                    |
| 0.95                    |
| 0.80                    |
|                         |

LAB MANAGER:

# E-A ENVIRO-ANALYSTS, INC. 1300 S. Green Bay Rd.

Racine, Wisconsin 53406

LABORATORY REPORT WASTE WATER EXAMINATION

Report No. 3021

To Dan Scudder PPG Industries Subject

EP Toxicity Test: U.V. Paint

Powder and Dust

Date 7/23/82

Scudder P.O. #

Sample 6/23/82

U.V. Paint Powder mg/1Arsenic < 0.01 Barium 0.47 Cadmium <0.01 Chromium 0.10 Lead <0.01 Mercury < 0.0001 Selenium < 0.01 Silver 0.75 < 0.01 Copper Zinc 0.11 Nickel 0.09

C-1-J(-10)

PAINT DUST COLLECTION WASTE PPG INDUSTRIES \$250.00 WASTE ANALYSIS REPORT A64307 LABORATORY: \_ CONTROLLED WARTE DIVISION WASTE PROFILE SHEET CODE PROFILE SHEET RECEIVED ON: 9/13/82 REPRESENTATIVE SAMPLE RECEIVED ON: 9/13/82 CERTIFICATE OF REP. SAMPLE RECEIVED: 9/13/82 \_\_\_\_\_ SAMPLE TAKEN: 6/23/82 PROPOSED TREATMENT/DISPOSAL FACILITY: THE ANALYSES BELOW REPORTED WERE SELECTED BY ME, BASED UPON THE GENERATOR'S REPRESENTATIONS IN THE PROFILE SHEET AND ANY APPLICABLE WASTE ANALYSIS PLAN ESTAB-LISHED BY THE PROPOSED FACILITY FOR WASTE OF THIS TYPE, ANALYSES REQUIRED BY A WASTE ANALYSIS PLAN ARE INDIGATED BY AN ASTERISK ( \* ). DATE OF ANALYSIS: .. LAB MANAGER: Analyst Analyst Test Leachair Received initials Received 0,,2G Stacific Gravity Acidity, 10 as Altrainoly "- as Theolois, mg/i Cyclindes as Chi. Total and i C C 0, mg + Cynnides as CN, Free 1991 8 C. D. Inch latar Schos & 105°C Nerrogen Ammonia as N. mg. I Letai Dusorena Solids, mon WASTE IN.
DI. ASTE DIVIDIT.
THE SELLES IS Tr. 7. Puspendeu Solids, mg/l Nitragen, Organic, as N. mg/l Secului on Evaporation & 180°C fotal Kjeldahl Naroden, as N. nej i Total Alkannity (P), as CaCO ing. L flash Point. F Total Alkalimity (M), as CaCO, mg 15" Cartent, un ignition rteating /aive, ETU/lb Total Hardness, as CaCU, mg/l Catalogn Handbers, as CaCO, and 1 Acid burde, igNaOH g Monnesium Stardness, us CaCO Arger .. as AS mg i Mains in les Ballmuil C. and Share man Boron las Bulnique Calmium is Cd mg t <0.078 Caramiurs, Foth as Cr. mg.) esercas stont Chromium 22 Cr. nop.1 Aların, raq i Copper as Claimgil. Chlordaes mod nor Total as Felling I DDT: e.l mon dissolved, at Fe, mg/ Coestam and 1 3429191 xead is eb. mga Endrin, ing i Manquineles as Mo, mai-Heptachtar p. ; I Mignesium as Mg. mgri Umina ia, ni

OF TANTO PANAGRAPHICAL INC.

incurporates as mCO., min-

Tivecome as CC (mg)) Corposition Compil

Norate us hou bin to

tions as body gra-Prospection as P. mail

Sur John St. 30 y miles

Similar as ma real

June man las Ser (1913)

Kilver as All mall

50.07

<0,107

C-1-J(-11)

Methathyoptics, ever

Tox prome, mg 1

Parathion mail:

Larranea

Color

Oden

2, 4, 5, 10 (Savex) PCB's ing/f

Physical State



## PENN ENVIRONMENTAL CONSULTANTS, INC. FORT PITT PROFESSIONAL BUILDING 1517 WOODRUFF STREET PITTSBURGH, PA. 15220 412-381-1133

#### LAB ANALYSIS REPORT

CLIENT HAVE: PPG INDUSTRIES, INC.

ATTENTION: MR JIH DIXON

ADDRESS: 151 COLFAX STREET

SPRINGDALE PA 15144

REPORT DATE: 10.06.80

DATE RECEIVED: 09.19.80

PEC PROJECT NO: 0165-00

PEC JOB NUMBER: 0371

PEC SAMPLE NO: 59450

#### SAMPLE IDENTIFICATION: O.C. TRADE DUST EXTRACT 8-14

| PARAMETER                   | SYMBOL  | RESULTS | UNITS |
|-----------------------------|---------|---------|-------|
| BARIUM                      | BA      | 4. 1    | HG/L  |
| CAIRLIUM                    | co      | 0. 12   | MG/L  |
| MIRORIUM                    | CR      | 9. 7    | MG/L  |
| LEAD                        | P8      | 0. 12   | HG/L  |
| HEROURY (COLD VAPOR HETHOD) | HG CV   | < 10    | W/L   |
| SILYER                      | AG      | < .01 ⋅ | MG/L  |
| ARSENIC                     | AS(LOH) | 0.004   | YG/L  |
| SELENIUM                    | SE(LOH) | < . 002 | KG/L  |

CONTENTS:

Limeary de right lines

C-1-J(-12)

Reviewed and Approved by:

cc: MS. CHRIS BABKA

C-1-K(-1)

ATTACHMENT VI-B-11

Rayo Plant Baghouse Dust

General Description:

This is a solid waste generated from air pollution dust collection systems located at the Resin Manufacturing Plant. Raw material particulates are drawn away from the operator by a hood at the point where these materials are charged to the production equipment. This waste is presently reused directly as a raw material but is identified here as a waste in the event that it cannot be reused in the future.

Basis for hazardous designation:

Declared hazardous based on organics.

412-788-1080

#### LAB ANALYSIS REPORT

CLIENT NAME:

PPG INDUSTRIES, INC.

NUS CLIENT NO:

320245

ADDRESS:

ROSANNA DRIVE

HUS SAMPLE HO:

15040564

Hirry Co.

ALLISON PARK,

15101

VENDOR NO:

01831710

ATTENTION:

CHRIS BABKA

REPORT DATE: 05/15/85

WORK ORDER NO:

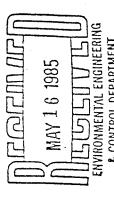
55830

DATE RECEIVED:

04/08/85

SAMPLE IDENTIFICATION: 0C-85-0074-03 - Resin Baghouse Dust

| TEST         | DETERMINATION              | RESULTS | UNITS           |
|--------------|----------------------------|---------|-----------------|
| 1270         | RCRA METALS                |         |                 |
| M030         | Arsenic (As)               | 3.8     | <b>≥</b> g/kg   |
| 1040         | Barium (Ba)                | 1900    | .⊪g/kg          |
| H090         | Cadmium (Cd)               | 49      | ∎g/kg           |
| 1140         | Chromium (Cr)              | 210     | - <b>≥</b> g/kg |
| H200         | Lead (Pb)                  | 510     | <b>≥</b> g/kg   |
| 1250         | Hercury (Hg)               | 3.4     | . ∎g/kg         |
| H290         | Selenium (Se)              | < 0.4   | ≥g/kg           |
| 1300         | Silver (Ag)                | 1.0     | • ∎g/kg         |
| H050         | Beryllium (Re)             | < 0.2   | <b>≥</b> g/kg   |
| B110         | Calcium (Ca)               | 7500    | mg/kg           |
| N141 -       | Chromium, Hexavalent(Cr+6) | < 10    | <b>⊪</b> g/kg   |
| 1150         | Cobalt (Co)                | 9.0     | ng/kg           |
| H160         | Copper (Cu)                | 12      | ° ∎g/kg         |
| ¥190         | Iron, total (Fe)           | 7800    | <b>≥</b> g/kg   |
| M230         | Magnesium (Mg)             | 9100    | <b>≥</b> g/kg   |
| 1240         | Manganese (Mn)             | 210     | <b>∍</b> g/kg   |
| N270         | Nickel (Ni)                | 38      | mg/kg           |
| 1310         | · Sodiu∍ (Na)              | 1100    | <b>≥</b> g/kg   |
| X220         | Strontiu≝ (Sr)             | 100     | ⊪g/kg           |
| <b>5</b> 370 | Zinc (Zn)                  | 8000    | <b>∍</b> g/kg   |
| 0.199        | Infrared Analysis          |         |                 |
| \$010        | Ammonia, distillation (N)  | 1500    | <b>≥</b> g/kg   |
| S015         | % Ash & 550 C              | 82      | <b>Z</b> ,      |
| \$0.40       | British Thermal Units      | 2500    | BTU/1b          |
| S064         | Chlorine, Organic          | 1.5     | 1               |
| \$080        | Cyanide, Total (CX)        | < 2     | <b>≥</b> g/kg   |
| 5098         | Fluorine, Organic          | 0.01    | 7               |
| \$120        | I Moisture (As received)   | 1.9     | I               |
| \$125        | Nitrogen, Kjeldahl (N)     | .3300   | <b>≥</b> g/kg   |
| \$126        | Nitrogen, Organic (X)      | 1800    | ng/kg           |
| S140         | Phenolics                  | 180     | <b>≥</b> g/kg   |



C-1-K(-2) .

PACE NO: 1



Laboratory Sarvices Division 5350 Campbells Run Road Pittsburgh, PA 15205

REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

#### ANALYSIS REPORT

PPG INDUSTRIES, INC. CLIENT HAME:

HUS CLIENT NO:

ADDRESS: ROSANNA DRIVE

15101

HUS SAMPLE HO: VENDOR NO:

15040564 01831710

ALLISON PARK,

WORK ORDER NO:

55830

ATTENTION: CHRIS BABKA

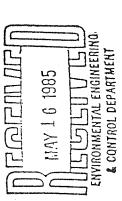
REPORT DATE: 05/15/85

DATE RECEIVED:

04/08/85

SAMPLE IDENTIFICATION: 0C-85-0074-03 - Resin Baghouse Dust

| TEST  | DETERMINATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | RESULTS | UNITS |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------|
|       | Secretaria de la composito de | ****    |       |
| \$165 | I Solids, total at 103 C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 98.0    | I     |
| S170  | Specific Gravity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | INT     |       |
| \$174 | Sulfide by H2 generation (S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | < 5     | ∌g/kg |
| 5950  | Acid Digestion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |         | •     |
| \$955 | Water Digestion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |       |
| 5980  | Oxygen Bomb Preparation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |         |       |
| 1490  | PH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 7.1     |       |



COMMENTS: No resins were detected by the infrared analysis. I means Liketian limit

C-1-K(-3)

Reviewed and Approved by: JMC

PAGE NO: 2





Laboratory Services Division 5350 Campbells Run Road Pittsburgh, PA 15205

REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

#### LAB ANALYSIS REPORT

CLIENT NAME: PPG INDUSTRIES, INC.

ADDRESS: ROSANNA DRIVE

ALLISON PARK,

PA

15101

REPORT DATE: 05/31/85

HUS CLIENT NO:

320237

MUS SAMPLE NO:

15041218 01831710

VENDOR NO:

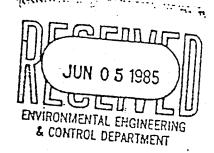
WORK DRIDER NO: DATE RECEIVED:

55830 04/17/85

ATTENTION: MS. C. BARKA

SAMPLE IDENTIFICATION: OC-85-0074-03A - Resin Dust Extract

| TEST  | DETERNINATION  |   | RESULTS | UHITS         |
|-------|----------------|---|---------|---------------|
|       |                |   |         | · <del></del> |
| 1270  | rcra hetals    |   |         |               |
| H030  | Arsenic (As)   | • | 0.36    | mg/l          |
| 1040  | Barium (Ba)    |   | 1       | <b>≥</b> g/1  |
| H090  | Cadmium (Cd)   |   | 0.05    | <b>≥</b> g/l  |
| 1140  | Chromium (Cr)  |   | 1.8     | mg/l          |
| H200  | Lead (Pb)      |   | €.0 >   | mg/1          |
| 1250  | Mercury (Hg)   |   | 0.0006  | mg/1          |
| H290  | Selenium (Se)  |   | 0.27    | mg/l          |
| 1300  | Silver (Ag)    |   | < 0.1   | mg/l          |
| 5950  | Acid Digestion |   |         |               |
| \$971 | Ashing         |   | •       |               |
|       |                |   | · ·     |               |



CONNENTS:

L mears deferion

C-1-K(-4)

Reviewed and Approved by: JHC



A Halliburton Company

# LABORATORY REPORT

E-A ENVIRO-ANALYSTS, INC. 1300 S. Green Bay Rd.

Racine, Wisconsin 53406

Report No. 3210

To Dan Scudder PPG

Subject

EP Toxicity Test on Resin Dust

11/5/82 Date

P.O. # Scudder

Sample October, 1982

| •        | mg/l   |
|----------|--------|
|          |        |
| Arsenic  | <0.01  |
| Barium   | < 0.01 |
| Cadmium  | < 0.01 |
| Chromium | 0.20   |
| Lead     | < 0.01 |
| Mercury  | < 0.01 |
| Selenium | < 0.01 |
| Silver   | < 0.01 |
| Copper   | 0.04   |
| Zinc     | 0.84   |
| Nickel   | < 0.01 |

C-1-K(-5)

PPG INDÚSTRIES WASTE RESTN POWDER P.O.#24645 \$250.00

SPECIAL WASTE ANALYSIS REPORT

CWO A64306

| LABORATORY | CONTROLLED WAS TE | pivisto: |
|------------|-------------------|----------|
|------------|-------------------|----------|

WAS A PRIMILE SHEET CODE

PROPILE SHEET RECEIVED ON \_\_\_\_\_9/13/82 REPRESENTATIVE SAMPLE RECLIVED ON \_\_\_\_9/13/82 \_\_\_\_\_\_ CERTIFICATE OF REP. SAMPLE RECEIVED: \_\_\_\_9/13/82 \_\_\_\_\_ SAMPLE PAKEN. \_\_\_\_8/4/82\_\_\_\_\_\_

PROPOSED TREATMENT DISPOSAL FACILITY.

THE ANALYSES BELOW REPORTED WERE SELECTED BY ME. BASED UPON THE GENERATOR'S REPRESENTATIONS IN THE PROPILE SHEET AND ANY APPLICABLE WASTE ANALYSIS PLANTESTABLISHED BY THE PROPOSED FACILITY FOR WASTE OF THIS TYPE ANALYSES REQUIRED BY A WASTE ANALYSIS PLAN ARE INDICATED BY AN ASTERISK ( \* ).

DATE OF ANALYSIS: 16/5/52

LAB MANAGER:

| Test                                         | As<br>Progred                           | Leachate      | Analyst initials | That                                         | A.S                        | Leachate           | Analys       |
|----------------------------------------------|-----------------------------------------|---------------|------------------|----------------------------------------------|----------------------------|--------------------|--------------|
| pe, the Gravity                              | 10.45                                   |               | 170              |                                              | Received                   | Leachate           | Initial      |
| H 2-7, UY 016                                | 1274                                    | ļ;            | 7                | *****                                        | ·                          |                    | l            |
| Ciulte, % 35                                 |                                         | · · · ·       |                  |                                              |                            |                    |              |
| Naofaty, *2 38                               |                                         |               |                  |                                              |                            |                    |              |
| C D mg+                                      | ļ — — — — — — — — — — — — — — — — — — — | <del></del>   | ····             | menen, meet                                  | 1500                       |                    |              |
| O D. mail                                    |                                         |               |                  | Committee as CN, Total engal                 |                            |                    |              |
| Car Sonas @ 1953C                            | 9812                                    | 15            | 10               | Cyanines is CN Free mon                      | くという                       |                    | 717          |
| otal Discoved Solids (mg.)                   | 1-7-0-1-X                               | <u> </u>      | in _             |                                              |                            | ]                  |              |
| sta. Suspen ted Splids ing f                 |                                         |               |                  | Nitropen, Comonia, as M. ma, L.              | -                          |                    |              |
| en ruc on Evaporation (1.1561)               |                                         |               |                  | Philips is Organic as H. gapa                | 1 6                        | E                  |              |
| The second area and a second                 |                                         |               |                  | Total Kendahi Natronen, as N. m. i.          | 1 1/2 1/5                  | 200 -              | <del> </del> |
| hot Punt Ff                                  | 66 33                                   | <del></del> . | _                |                                              | THE<br>MANAGE<br>TE DIV.SI | VESS IS<br>CEIVING | j · · · · ·  |
|                                              | 110.00                                  | (2C)          | /                | Trialish dening the as Callery may a         | H S C                      | Pss≥               | ļ            |
| sa petent so podar                           |                                         |               |                  | Total All hends (Ms. ar CaCO) hag i          | 三言世                        | FLE TALL ENESS I   |              |
| esting V+ ETU-5                              |                                         |               |                  | Fotal Huraneys, as CaCO , night              | C 12                       |                    |              |
| Kasa Sarus - ghaidhna,                       |                                         |               |                  | Care im constructs to CACO incom             | FOR                        | · (2) -            | !            |
|                                              |                                         | 7,44          |                  | Magneso in consider the Car Total            | 10                         | 1 7 5              |              |
| mac as AS mad                                | C.DI,k                                  |               |                  |                                              |                            | i (2               |              |
| dom as the right                             | 20.06                                   | 7             | 77 0 11          |                                              | Éà                         | 193                |              |
| ាមក្នុងភូមិស្រីស្ប                           | 1 -0.                                   | •••           |                  | L.<br>L. O. or d. Garchie mig. (             | おこます                       | = 3                |              |
| a many is Od mg f                            | <0.064                                  |               | 7.               |                                              | 新聞日子                       | ت د ا              |              |
| resimilar Total as Or mail                   | -01.034                                 |               |                  | · · · · · · · · · · · · · · · · · · ·        | 生活品企                       | 36                 | 1            |
| s seatout Chromium in Cr. mg/l               | <0,066                                  | ,             | /::              | · · · · · · · · · · · · · · · · · · ·        |                            | そう                 |              |
| Opport, as Cu, mg t                          | ∠0.06 G                                 |               | , , , ,          | Album mg.)                                   | 100                        |                    |              |
| n Total as Fe, eng I                         | 10,0 0 W                                |               | J                | Chloroans, mg.1                              |                            | £                  |              |
| dissolved, as Fe ng/1                        |                                         |               |                  | ODT's mg.t                                   |                            | : 0                | 1            |
| est at the indi                              | 45.066                                  |               |                  | Dialatin mail                                | 4 ! !                      | <u></u> برا        | i            |
|                                              | 20,000                                  |               |                  | Endon inqui                                  | はいない。                      | 放送 ピーニ             |              |
| st parmie da Marina, t                       |                                         | ****** .      |                  | heptacritor in ; !                           | 16 1                       | 발전설                |              |
| ignission, as tig incil                      | 1.7.                                    | •.            |                  | Lindani mpa                                  | 155 古土                     | 19 프 윤             |              |
| many as rin, max                             | ₹0.co.                                  | }             |                  | Methoxychim mg/l                             |                            | <b>[ H H</b>       |              |
| chel in Nr mg i                              | 2006                                    |               | ( \              | Toxiphene, mad  Pacethoon mad  Freedings mad | 건조무조                       | S                  |              |
| Consum as Lin and 1                          | KO.066!                                 |               | (                | Pacelloca mail                               | EXCLU<br>MENT<br>NO RES    | HERED.<br>JHIS RE  | ì            |
| The Market Control                           |                                         | <i>7</i>      | 1                | ₹ 4 Dime.t                                   |                            | 1 - F              |              |
| c as in mai                                  | 28.85                                   |               |                  | 2 4.5 TO Milvex) man.                        | 1                          |                    | J            |
| الراب والمستوال المستوالية والمستواط المامات | '                                       |               |                  | PG6 sings                                    | j                          |                    | • · · - · -  |
|                                              | į                                       |               | ••               |                                              | -                          |                    |              |
| Tirecharm as indicating (                    | l i                                     | •             |                  | Lavorou                                      | ļ                          | !                  |              |
| But the da day of a                          | !                                       | - 1           |                  |                                              | 1                          | i .                | 15           |
| Net the first of the second                  |                                         |               |                  | r<br>British na kalangan                     |                            |                    | 1 ' - '      |
| And the second of the second                 |                                         |               | •                | PROPERTY AND ALEX                            | 1. 1900                    |                    | ]            |
| The state of the state of the state of       | ,                                       | :             |                  |                                              | 1                          | •                  | Ī            |
| to be North to                               | į l                                     | ;             |                  | [                                            | i                          | 1                  | !            |
| Lander as Forest                             | : ;                                     | i             | 7                |                                              | 1                          | :                  |              |
| ate was a                                    | ;                                       |               | •                |                                              | 1 / 1                      | :                  | 1            |
|                                              | ! • - !                                 | į             | . 1              | i e e e e e e e e e e e e e e e e e e e      | :                          | 1                  |              |

## LABORATORY REPORT

E=A ENVIRO-ANALYSTS, INC. 1300 S. Green Bay Rd.

1300 S. Green Bay Rd. Racine, Wisconsin 53406 Report No. 3212

To Dan Scudder PPG

Subject EP Toxicity Test on Resin Dust

Date 11/5/82

P.O. # Scudder

Sample 8/30/82

|          | 8/30<br>mg/1<br><0.01<br>Fig. to xi c.i.d. |
|----------|--------------------------------------------|
| Arsenic  | < 0.07 HATER TO XICITION                   |
| Barium   | < 0.01                                     |
| Cadmium  | < 0.01                                     |
| Chromium | < 0.01                                     |
| Lead     | 2.00                                       |
| Mercury  | < 0.01                                     |
| Selenium | < 0.01                                     |
| Silver   | < 0.01                                     |
| Copper   | < 0.01                                     |
| Zinc     | 0.04                                       |
| Nickel   | < 0.01                                     |

C-1-K(-7)

LAB MANAGER:

# E-A ENVIRO-ANALYSTS, INC. 1300 S. Green Bay Rd. Racine, Wisconsin 53406

LABORATORY REPORT WASTE WATER EXAMINATION

Report No. 3020

То Dan Scudder PPG

Subject

EP Toxicity Test: Resin Dust composite

Date 8/19/82

Scudder P.O. #

Sample 8/4/82

|          | Resin Dust<br>mg/l |
|----------|--------------------|
| Arsenic  | <0.01              |
| Barium   | 0.17               |
| Cadmium  | <0.01              |
| Chromium | < 0.01             |
| Lead     | 39.00              |
| Mercury  | 0.017              |
| Selenium | < 0.01             |
| Silver   | < 0.01             |
| Copper   | 0.13               |
| Zinc     | 0.68               |
| Nickel   | 0.01               |

C-1-K(-8)

# E-A ENVIRO ANALYSTS, INC. TJOO S Green Bay Rd

Hacina Wisconsin 53406

# LABORATORY REPORT 10ITAMIMAXE RETAW STEAM

Report No. 3018

10 Dan Scudder PPG

Subject Chemical and Physical Characterization of Resin Dust Composite sample

8/18/82

P.O. N Scudder

Sample 6/21/82

рΗ

3.22

Flashpoint

>212°F, does not flash

Specific Gravity

0.56

Specific Weight

4.7 1b/gal

Total Solids

98.9%

% Ash Content

14.3%

% Volatile Solids

84.6%

(by calculation)

Metals(ppm)

| Arsenic         | 0.6  |
|-----------------|------|
| Barium          | 7.5  |
| Cadin i um      | 1.2  |
| Chromium, total | <0.1 |
| Chromium, +6    | <0.1 |
| Copper          | 2.4  |

Lead 1228.5 Mercury 0.06

Nickel Silver

12.2 3.7

Selenium Zinc

< 0.1 9.8

Iron

-

268.1

Inuryanic/Reactive Components(ppm)

Cyanide

<0.03 mg/kg

Sulfide

`<1.0 mg/kg

Sulfite

<1.0 mg/kg

Total Volatiles

1.1% (by calculation)

I water

% vil

% solvents

C-1-K(-9)

# E-A ENVIRO-ANALYSTS, INC. 1300 S. Green Bay Rd. Racine, Wisconsin 53406

LABORATORY REPORT WASTE WATER EXAMINATION

Report No. 3019

To Dan Scudder PPG

Subject EP Toxicity Test: Resin Dust

composite

Date 8/19/82

P.O. # Scudder

Sample 6/21/82

|          | Resin Dust<br>mg/l |
|----------|--------------------|
| Arsenic  | <0.01              |
| Barium   | 0.17               |
| Cadmium  | 0.04               |
| Chromium | 0.05               |
| Lead     | 5.16               |
| Mercury  | 0.017              |
| Selenium | <0.01              |
| Silver   | < 0.01             |
| Copper   | 0.28               |
| Zinc     | 0.76               |
| Nickel   | <0.01              |

C-1-K(-10)

LAB MANAGER:

# C-1-L(-1)

#### ATTACHMENT VI-B-12

Paint Plant Trade Washwater (D009)

General Description:

Liquid

1 77

Flash Point >140 F

Heating Value <1,000 BTU/LB

Total Resin Solids 1 - 5%

Total Pigment Solids 1 - 5%

Solvents Negligible

Water 95 - 99%

Weight/Gallon 8.3 - 8.5 LB/GAL

Basis for hazardous designation:

Assumed TCLP Toxic characteristic based on knowledge of the product.



Laboratory Services Division 5350 Campbells Run Road Pittsburgh, PA 15205

REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

#### LAB ANALYSIS REPORT

CLIENT NAME:

PPG INDUSTRIES, INC.

ADDRESS:

ATTENTION:

260 KAPPA DRIVE

HS. CHRIS BABKA

PITTSBURGH,

15238

REPORT DATE: 06/04/85

HUS CLIENT HO:

MUS SAMPLE NO:

15042200

VENDOR NO: WORK ORDER NO: 01831710 55830

DATE RECEIVED:

04/26/85

SAMPLE IDENTIFICATION: OC-85-0130-03 - Trade Washwater Holding Tank

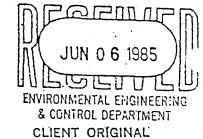
| TEST   | DETERHINATION               | RESULTS | UNITS          |
|--------|-----------------------------|---------|----------------|
| - IX48 | Maleic Anhydride            | 6800    | ±g/1           |
| 0V25   | Toluene                     | 50      | mg/l           |
| 1430   | Trichlorofluoromethane      | < 2     | <b>≥</b> g/1   |
| DV46   | Carbon Tetrachloride        | < 2 ⋅   | mg/1           |
| 1462   | Methylene Chloride          | 67      | mg/l           |
| 5271   | RCRA HETALS - SOLID         |         | . •            |
| \$400  | Arsenic (As)                | 0.20    | mg/l           |
| S410   | Barium (Ba)                 | ₹1,     | - <b>b</b> g/l |
| \$420  | Cadmium (Cd)                | 0.07    | mg/l           |
| 9430   | Chromium (Cr)               | ₹ 0.1   | <b>k</b> g/l   |
| \$450  | Lead (Pb)                   | < 0.3   | <b>≥</b> g/1   |
| 5460   | Mercury (Hg)                | - 2.3   | mg/l           |
| \$490  | Selenium (Se)               | < 0.04  | mg/1           |
| 5500   | Silver (Ag)                 | < 0.01  | <b>≥</b> g/1   |
| \$950  | Acid Digestion              |         | -              |
| 5010   | Ammonia, distillation (N)   | 22      | mg/l           |
| \$015  | I Ash & 550 C               | 0.6     | . <b>Z</b>     |
| 5065   | COD (02)                    | 32000   | <b>≥</b> g/1   |
| \$080  | Cyanide, Total (CX)         | · < 0.1 | <b>≥</b> g/1   |
| S140   | Phenolics                   | 1.7     | mg/l           |
| \$168  | Specific Weight             | 8.6     | lb/gal         |
| S195   | I Water (Karl Fisher)       | 91      | Z              |
| \$437  | Chromium, Hexavalent (Cr+6) | < 400   | <b>≥</b> g/l   |
| S440   | Copper (Cu)                 | 0.3     | <b>≥</b> g/l   |
| \$510  | Zinc (Zn)                   | 61      | <b>≥</b> g/1   |
| \$525  | Iron (Fe)                   | 160     | mg/1           |
| \$971  | Ashing                      |         |                |
| ₩022   | Alkalinity, Total (CaCO3)   | 450     |                |
| 1590   | Solids, dissolved at 180 C  | 10500   | <b>≥</b> g/l   |
| W610   | Solids, suspended at 103 C  | 4400    | . mg/l         |

COMMENTS:

C-1-L(-2)

Reviewed and Approved by: JAC

A Halliburton Company





Laboratory Services Division 5350 Campbells Run Road Pittaburgh, PA 15205

REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

#### ANALYSIS REPORT LAB

CLIENT NAME: ADDRESS:

PPG INDUSTRIES, INC.

260 KAPPA DRIVE

PITTSBURGH,

PA 15238 HUS CLIENT HO: HUS SAMPLE NO:

320237 15042188

01831710

YENDOR HO:

ATTENTION:

REPORT DATE: 06/04/85

WORK ORDER HO:

55830

MS. CHRIS BABKA

DATE RECEIVED: 04/26/85

SAMPLE IDENTIFICATION: OC-85-0130-03A - Trade Washwater Holding Tank Extract

| TESÍ . | HOITANIHATION  | RESULTS                                | UNITS           |
|--------|----------------|----------------------------------------|-----------------|
| 1270   | RCRA NETALS    | ************************************** | · deconomic res |
| N030   | Arsenic (As)   | < 0.01                                 | æg/l            |
| 1040   | Barium (Ba)    | 1                                      | . <b>≥</b> g/1  |
| 7090   | ~ Codmium (Ed) | < 0.05                                 | mg/l            |
| 1140   | Chromium (Cr)  | < 0.1                                  | mg/l            |
| H200   | Lead (Pb)      | < 0.3                                  | <b>≥</b> q/1    |
| 1250   | Hercury (Hg)   | 0.033                                  | mg/1            |
| N290   | Selenium (Se)  | < 0.04                                 | <b>≥</b> g/1    |
| 1300   | Silver (Ag)    | < 0.1                                  | mg/l            |



: STHEHHOO

1 means defection limit

C-1-L(-3)

Reviewed and Approved by: JMC



A Halliburton Company

# THE PARTY OF THE P

PPG Industries, Inc. Rosanna Drive P.O. Box 9 Allison Park, Pennsylvania 15101 (412) 487-4500

| Research | Cer | iter   |          |
|----------|-----|--------|----------|
| Coatings | and | Resins | Division |

# PPG ENVIRONMENTAL LAB REPORT

| SAMPLE #:         | 0c. 85.0   | 130.00  | LOCATION:                | 2       | DAK CT          | KEEK                                  | ·<br> |
|-------------------|------------|---------|--------------------------|---------|-----------------|---------------------------------------|-------|
| DATE REC'D:       | 4.8516     | .95     | DATE SAME                | PLED: _ |                 | · · · · · · · · · · · · · · · · · · · |       |
| ANALYSIS DATE     | RESULTS    |         |                          |         | % € <del></del> |                                       |       |
| T.E.P. 4.23.85    | SOLIDS     | 110apon | INIT. DiH <sub>2</sub> O | 1760m   | \ FINAL         | DiH <sub>2</sub> O                    | 429m  |
| beau              | ACID SOLN. | IIm     | INIT. pH                 | 8.1     | FINAL           | · pH                                  | 4.9   |
| F.PT. 5.4-95      |            | 100°    | <del>-</del>             |         |                 | •                                     |       |
| % SOLIDS          |            |         | :                        |         | ·               | •                                     | •     |
| C.O.D.            |            | -       | mg/l .                   |         |                 |                                       |       |
| OTHER:<br>PH 5985 | /          | 6.7     |                          | •       | •<br>•          |                                       |       |
|                   |            | •       |                          |         |                 | •                                     | -     |



#### PROCEDURES AND COMMENTS:

EPA SW-ZAG METHOD 1310 (TEP)

HIGH D-013-TT (FLASH POEIT)

HACH METHOD (EPA ACCEPTED) MODEL 16500 (COD)

C-1-L(-4)

Journes Polymon

.DATE: 5.13.85

C-1-M(-1)

#### ATTACHMENT VI-B-13

Paint Plant Industrial Washwater (D005, D006, D007, D008)
Possibly D001

General Description:

Liquid

Flash Point <140 F - >200 F

Heating Value <1,000 BTU/LB

Total Resin Solids .5 - 2%

Total Pigment Solids 1 - 5%

Solvents 1 - 10%

Water 85 - 98%

Weight/Gallon 8.3 - 8.5 LB/GAL

Basis for hazardous designation:

Assumed TCLP Toxic characteristics based on knowledge of the product. May be ignitable occasionally due to trace solvents.

412-788-1080

#### ANALYSIS REFORT

CLIENT NAME: PPG INDUSTRIES, INC.

> ADDRESS: ROSANNA DRIVE

PA 15101

ALLISON PARK,

NUS CLIENT NO: NUS SAMPLE NO:

15040551

VENDOR NO: 01831710

WORK ORDER NO:

ATTENTION: CHRIS BABKA REPORT DATE: 05/15/85

DATE RECEIVED:

04/08/85

SAMPLE IDENTIFICATION: 00-85-0072-03 - Paint Production Washwater

| M030                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| #040 Barium (Ba) 3 #090 Cadmium (Cd) < 0.05 #140 Chromium (Cr) 46 #1200 Lead (Pb) 7.2 #1250 Mercury (Hg) 0.74 #1290 Selemium (Se) < 0.04 #1300 Silver (Ag) < 0.1 #050 Berglium (Be) < 0.02 #110 Calcium (Ca) 64 #141 Chromium, Hexavalent(Crié) 45 #150 Cohalt (Co) 0.5 #150 Copper (Cu) 1.3 #190 Iron,total (Fe) 110 #1230 Magnesium (Hg) 7.5 #1240 Manganese (Mn) 4.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |
| MC90   Cadmium (Cd)   C0.05     M140   Chromium (Cr)   A6     M200   Lead (Pb)   7.2     M250   Mercury (Hg)   0.74     M290   Selenium (Se)   C0.04     M300   Silver (Ag)   C0.1     M050   Berglium (Be)   C0.02     M10   Calcium (Ca)   64     M141   Chromium, Hexavalent(Crifé)   A5     M150   Cohalt (Co)   0.5     M150   Copper (Cu)   1.3     M190   Iron,total (Fe)   110     M230   Magnesium (Mg)   7.5     M240   Manganese (Mn)   4.5     M250   Manganese (Mn)   Manganese (Mn | ng/l         |
| M140   Chromium (Cr)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>a</b> g/1 |
| M200       Lead (Pb)       7.2         M250       Mercury (Hg)       0.74         M290       Selenium (Se)       < 0.04                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>15/1</b>  |
| #250 Mercury (Hg) 0.74 #290 Selemink (Se) < 0.04 #300 Silver (Ag) < 0.1 #050 Berglium (Be) < 0.02 #110 Calcium (Ca) 64 #141 Chromium, Hexavalent(Crié) AS #150 Cobalt (Co) 0.5 #160 Copper (Cu) 1.3 #190 Iron,total (Fe) 110 #230 Magnesium (Mg) 7.5 #240 Manganese (Mn) 4.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>∌</b> g/1 |
| M290   Selenium (Se)   (0.04   M300   Silver (Ag)   (0.1   M050   Bergilium (Be)   (0.02   M110   Calcium (Ca)   64   M141   Chromium, Hexavalent(Crié)   A5   M150   Cobalt (Co)   (0.5   M160   Copper (Cu)   1.3   M190   Iron,total (Fe)   110   M230   Magnesium (Mg)   7.5   M240   Manganese (Mn)   4.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | *g/l         |
| #290 Selenium (Se) (0.04 #300 Silver (Ag) (0.1 #050 Berglium (Be) (0.02 #110 Calcium (Ca) 64 #141 Chromium, Hexavalent(Crifé) 45 #150 Cabalt (Ca) 0.5 #150 Capper (Cu) 1.3 #190 Iron,total (Fe) 110 #230 Magnesium (Mg) 7.5 #240 Manganese (Mn) 4.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | mg/l         |
| M050       Berglluw (Be)       < 0.02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>≥</b> g/1 |
| X110       Calcium (Ca)       64         X141       Chromium, Hexavalent(Crié)       45         X150       Cabalt (Ca)       0.5         M160       Copper (Cu)       1.3         X190       Iron, total (Fe)       110         M230       Magnesium (Mg)       7.5         A240       Manganese (Mn)       4.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>1</b> 9/1 |
| #141 Chrosius, Hexavalent(Crié) 45 #150 Cobalt (Co) 0.5 #160 Copper (Cu) 1.3 #190 Iron,total (Fe) 110 #230 Magnesium (Mg) 7.5 #240 Manganese (Mn) 4.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>1</b> 4/1 |
| M150   Cohelt (Co)   0.5   M160   Copper (Cu)   1.3   M190   Iron,total (Fe)   110   M230   Magnesium (Mg)   7.5   M240   Manganese (Mn)   4.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>≥</b> g/1 |
| M160       Copper (Cu)       1.3         M190       Iron, total (Fe)       110         M230       Magnesium (Mg)       7.5         M240       Manganese (Mn)       4.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ag/1         |
| N190       Iron, total (Fe)       110         N230       Magnesium (Mg)       7.5         A240       Manganese (Mn)       4.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ≥g/1         |
| M230       Magnesium (Mg)       7.5         A240       Manganese (Mn)       4.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | *#g/l        |
| N230         Magnesium (Mg)         7.5           N240         Manganese (Mn)         4.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |
| M270 Nickel (Ni) 0.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>≥</b> g/1 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | *g/1         |
| #310 Sodium (Na) 4600                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | -            |
| M320 Strontium (Sr) 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | kg/1         |
| #390 Zinc (Zn) 8.9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | mg/1         |
| 0F01 Xglenes < 200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ) *g/l       |
| 0F05 2-butanone < 400                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |
| CFGS 4-meshgl-2-pentanone 540                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |
| MED Butyl Cellosolve 520                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |
| , SMAS : Maleic Anhysriae < 500                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |
| NESS i-Butanol 1100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |
| 9M79 Cellosolve Acetate < 100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |
| DVO6 Combon Tetrachloride < 200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |
| 0V22 Methylene Chloride 71                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |
| 0V25 Toluene < 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0 mg/l       |
| - QU30 Trichlorofluoromethane < 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 00 mg/l      |



C-1-M(-2)

PACE NO: 1



🕜 A Halliburton Company



Laboratory Services Division 5350 Campbells Run Road
Pittsburgh, PA 15205

REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

#### LAB ANALYSIS REPORT

CLIENT MANE:

PPG INDUSTRIES, INC.

ANDRESS:

ROSANNA DRIVE ALLISON PARK,

PA 15101

HUS CLIENT NG:

320245

NUS SAMPLE NO: VENDOR NO: 15040562 01831710

WORK ORDER NO:

V1031/10 FECTA

FILENLION:

CHRIS BABKA

REPORT BATE: 05/15/85

DATE RECEIVED:

04/09/85

#### SAMPLE IDENTIFICATION: 00-05-0072-03 - Paint Production Washwater

| TE                | DETERMINATION               | RESULTS | UNITS                  |
|-------------------|-----------------------------|---------|------------------------|
| \$0.40            | British Toerwal Units       | Maic    |                        |
| 3064              | Chlorine, Organic           | < 0.1   | Z                      |
| \$0 <del>80</del> | Cyanide, Total (CN)         | < 0.1   | <b>m</b> g/1           |
| 5098              | Fluorine, Organic           | < 0.01  | , <u>z</u>             |
| \$169             | Specific Weight             | 8.5     | lb/gal                 |
| S195              | X Water (Karl Fisher)       | 90,2    | z <sup>3</sup>         |
| \$210             | Viscosity                   | 10      | CP                     |
| 5050              | Acid Digestion              |         |                        |
| \$971             | Ashing                      |         |                        |
| 638¢              | Gwygen Borb Preparation     |         |                        |
| 3622              | Alkelinity, Total (CaCO3)   | 8100    | mg/l                   |
| ¥032              | Ammoria as X (distillation) | 28      | mg/1                   |
| \$050             | 800, 5-day (02)             | 8200    | <b>≥</b> g/1           |
| W120              | COD (02)                    | 22000   | mg/1                   |
| 8435              | Nitrogen, Kjeldahl (N)      | < 50    | mg/l                   |
| ¥440              | Mitrogen, Organic (N)       | < 50    | mg/1                   |
| 1500 .            | Phenolics                   | 5.8     | mg/1                   |
| VE90              | Solids, dissolved at 180 C  | 18500   | ±3/1                   |
| ¥610              | Solids, suspended at 103 C  | . 3440  | mg/1                   |
| WAGE              | Solids, vol total at 550 C  | 6440    | * <b>*</b> g/ <b>:</b> |
| ¥7.40             | Sulfide (S)                 | < 4     | 8g/1                   |



COMMENTS: WHS indicates that the sample will not combast.  $\angle$  means detection in  $\pm$  C-1-M(-3)

Reviewed and Approved by: JMC

PAGE NO: 2



A Halliburton Company



Laboratory Services Division 5350 Campbells Run Road Pittsburgh, PA 15205

REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

#### ANALYSIS REFORT LAB

CLIENT NAME:

PPG INDUSTRIES, INC.

ADDRESS:

ROSANNA DRIVE

ALLISON PARK,

PA

15101

**HUS CLIENT HO:** HUS SAMPLE NO:

320201

15041483 01831711

VENDOR HO:

REPORT DATE: 05/31/85

WORK ORDER NO: DATE RECEIVED: 55830 04/19/85

ATTENTION:

CHRIS BABKA

SAMPLE IDENTIFICATION: OC-85-0072-03A - Paint Production Washwater Extract

| TEST        | DETERMINATION  | RESULTS     | UNITS        |
|-------------|----------------|-------------|--------------|
|             |                | <del></del> |              |
| 1270        | RCRA HETALS    |             |              |
| H030        | Arsenic (As)   | 0.26        | • mg/l       |
| 1040        | Barium (Ba)    | 1           | <b>m</b> g/1 |
| M090        | Cadmium (Cd)   | < 0.05      | <b>m</b> g/1 |
| 1140        | Chromium (Cr)  | 2.2         | <b>≥</b> g/1 |
| H200        | Lead (Pb)      | < 0.3       | <b>≥</b> g/1 |
| 1250        | Mercury (Hg)   | 0.0084      | mg/1         |
| <b>H290</b> | Selenium (Se)  | < 0.04      | mg/1         |
| 1300        | Silver (Ag)    | < 0.1       | mg/1         |
| 5950        | Acid Digestion |             |              |
| \$971       | Ashing         |             |              |
|             |                |             |              |

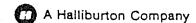


CONKENTS:

< means detection limit

C-1-M(-4)

Reviewed and Approved by: JMC



PPG Industries, Inc. Rosanna Drive P.O. Box 9 Allison Park, Pennsylvania 15101 (412) 487-4500

Research Center Coatings and Resins Division

PPG ENVIRONMENTAL LAB REPORT

SAMPLE #:

00- 45- 0072-00

LOCATION:

DAK CREEK

DATE REC'D:

æ 3·8·85

DATE SAMPLED:

12.19.85

NALYSIS DATE RESULTS

.E.P. 4.10.85 SOLIDS

Win INIT. Dityo 1760m FINAL Dityo 376m

Lines ACID SOLN. 65m INIT. PH

11.4 FINAL PH

5.0

PT.

>2000F

% SOLIDS

J.O.D.

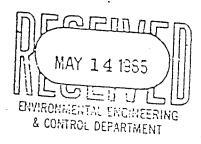
mg/l

DTnER:

4/2

4.18.85

12.5



PROCEDURES AND COMMENTS:

EPA SW-846 METHOD 1310 (TEP) ASTM D-93-TI (FLASH POINT)

HACH METHOD (EPA ACCEPTED) MODEL 16500 (COD)

C-1-M(-5)

James Rabinson

512.85

412-788-1080

#### LAB ANALYSIS REPORT

CLIENT NAME: PPG INDUSTRIES, INC.

ADDRESS:

260 KAPPA DRIVE

PITTSBURGH,

PA 15238

REPORT DATE: 06/04/85

HUS CLIENT HO:

320237 15042199

MUS SAMPLE NO: VENDOR NO:

01831710

WORK ORDER NO: DATE RECEIVED:

55830

ATTENTION: MS. CHRIS BABKA

04/26/85

## SAMPLE IDENTIFICATION: OC-85-0129-03 - Industrial Washwater

| TEST  | DETERNINATION               | RESULTS | UNITS          |
|-------|-----------------------------|---------|----------------|
| 1848  | Maleic Anhydride            | 5700    | *g/l           |
| 0V21  | Methyl Chloride             | < 20    | ±g/1           |
| 1725  | Toluene                     | 1300    | mg/l           |
| 0030  | Trichlorofluoromethane      | < 20    | mg/1           |
| 1446  | Carbon Tetrachloride        | < 20    | <b>ag/1</b>    |
| S271  | RCRA HETALS - SOLID         |         | <del>-</del> . |
| \$400 | Arsenic (As)                | 0.44    | mg/1           |
| 5410  | Barium (Ba)                 | 22      | <b>≥</b> g/l   |
| \$420 | Codmium (Cd)                | < 0.05  | mg/1           |
| \$430 | Chromium (Cr)               | 190     | ≥g/l           |
| \$450 | Lead (Pb)                   | 8.2     | mg/1           |
| \$460 | Hercury (Hg)                | 1.7     | <b>≥</b> g/1   |
| \$490 | Selenium (Se)               | < 0.04  | mg/1 -         |
| \$500 | Silver (Ag)                 | < 0.01  | mg/1           |
| \$950 | Acid Digestion              |         | •              |
| 5010  | Assonia, distillation (N)   | 100     | - 3±g/l        |
| \$015 | I Ash 8 550 C               | 1.0     | 7              |
| 2062  | COD (02)                    | 140000  | <b>≥</b> g/l   |
| \$080 | Cyanide, Total (CH)         | < 0.1   | <b>⊪</b> g/l   |
| \$125 | Nitrogen, Kjeldahl (N)      | 2000    | mg/l           |
| \$126 | Nitrogen, Organic (N)       | 1900    | <b>≥</b> g/1   |
| \$140 | Phenolics                   | 2.8     | <b>≥</b> g/l   |
| \$168 | Specific Weight             | 8.5     | lb/gal         |
| S195  | % Water (Karl Fisher)       | 85      | 7              |
| \$210 | Viscosity                   | 11.0    | CP             |
| S437  | Chromium, Hexavalent (Cr+6) | < 400   | <b>a</b> g/l   |
| \$440 | Copper (Cu)                 | 0.2     | <b>≥</b> g/1   |
| \$510 | Zinc (Zn)                   | 240     | <b>≥</b> g/1   |
| \$525 | Iron (Fe)                   | 76      | <b>∍</b> g/l   |
| 5971  | Ashing                      |         |                |
| 1022  | Alkalinity, Total (CaCO3)   | 2100    | . mg/l         |
| V590  | Solids, dissolved at 180 C  | 19000   | mg/1           |

**ENVIRONMENTAL ENGINEERING** & CONTROL DEPARTMENT

C-1-M(-6)

PACE NO: 1



A Halliburton Company



Laboratory Services Division 5350 Campbells Run Road Pittsburgh, PA 15205

REMIT TO: Park West Two Cliff Mine Road : Pittsburgh, PA 15275

412-788-1080

#### ANALYSIS REPORT LAB

CLIENT HAME:

PPG INDUSTRIES, INC.

ADDRESS:

260 KAPPA DRIVE

PITTSBURGH,

ATTENTION: MS. CHRIS BABKA

15238

REPORT DATE: 06/04/85

MUS CLIENT NO:

320237

HUS SAMPLE NO:

15042199

VEHDOR NO: WORK DRIVER HO: 01831710 55830

DATE RECEIVED:

04/26/85

SAMPLE IDENTIFICATION: OC-85-0129-03 - Industrial Washwater

TEST

DETERNINATION

RESULTS

UNITS

1610

Solids, suspended at 103 C

4740

mg/1

ENVIRONMENTAL ENGINEERING & CONTROL DEPARTMENT

CONMENTS:

¿means defection limit

C-1-M(-7)

Reviewed and Approved by: JMC

A Halliburton Company

PAGE NO: 2



Laboratory Services Division 5350 Campbells Run Road Pittsburgh, PA 15205

REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

#### LAE ANALYSIS REFORT

CLIENT HAME:

PPS INDUSTRIES, INC.

ADDRESS:

260 KAPPA DRIVE

PITTSBURGH,

PA 15238

HUS CLIENT NO:

320246

HUS SAMPLE HO:

01831710

VENDOR NO: WORK ORDER HO:

.55830

ATTENTION: HS. CHRIS BABKA

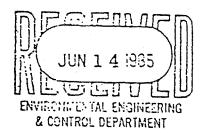
REPORT DATE: 06/12/85

DATE RECEIVED:

05/03/85

SAMPLE IDENTIFICATION: OC-85-0129-03-A - Holding Tank #1148
Tridustrial Wasters

| TEST        | DETERMINATION  |                                       | Industrial RESULTS | Wastewater Ext | ract |
|-------------|----------------|---------------------------------------|--------------------|----------------|------|
|             | ****           | •                                     | <del></del>        |                |      |
| 1270        | RCRA HETALS    |                                       |                    |                |      |
| H030        | Arsenic (As)   |                                       | < 0.01             | mg/l           |      |
| 1040        | Barium (Ba)    | * •                                   | 1                  | mg/1           |      |
| 14090       | Cadmium (Cd)   |                                       | < 0.05             | mg/l           |      |
| 1140        | Chromium (Cr)  |                                       | 4.9                | mg/1           |      |
| <b>H200</b> | Lead (Pb)      |                                       | < 0.3              | mg/l           |      |
| 1250        | Hercury (Hg)   |                                       | 0.031              | mg/1           |      |
| H290        | Selenium (Se)  |                                       | < 0.04             | <b>≥</b> g/1   |      |
| 1300        | Silver (Ag)    | • • • • • • • • • • • • • • • • • • • | < 0.1              | mg/1           |      |
| 5950        | Acid Digestion |                                       |                    |                |      |
| \$971       | Ashing         |                                       |                    |                |      |



COMMENTS: 4 means detection limit

C-1-M(-8)

Reviewed and Approved by: JMC



A Halliburton Company

# Rexnord

#### REPORT ABORATOR

Mr. Martin Scheerbaum PPG Industries 10800 S. 13th Street Oak Creek, WI 53154

Corporate Research & Development Group

Environmental Research Center -5103 West Beloit Road P. O. Box 2022 Milwaukee, WI 53201 414/643-2761

DATE: 5/26/81

Page 1 of 2

PURCHASE ORDER NO.: 19291

REXNORD WORK ORDER NO.: FG 41427

Analysis of Aqueous Waste Stream from Wate Treatment Center.

| WASHWATER                                       | ·    |          | Par      | ameter |         |      |      |
|-------------------------------------------------|------|----------|----------|--------|---------|------|------|
| Sample Identification                           | Lead | Titanium | Chromium | Zinc   | Mercury | рН   | TOC  |
| 816 - 614 Before Treatment (Washwater)          | 76   | 6        | 51       | 52     | 0.600   | 10.9 | 4400 |
| 816 - 014 Decant<br>Top                         | 1.8  | 4        | 11       | 0.22   | 0.036   | 10.9 | 2000 |
| 816 - <b>0</b> 14 After<br>Treatment<br>(Sloge) | 68   | <0.5     | 47       | . 43   | 2.560   | 10.8 | 5000 |
| 816 - 614 Decant<br>Bottom                      | 1.2  | 2.5      | 7.2      | 0.17   | 0.112   | 9.2  | 2700 |
|                                                 | •    |          |          |        |         |      |      |
| 817 - 025 Before  Treatment  (washwater)        | 40   | 5        | 24       | 41     | 4.300   | 11.3 | 6400 |
| 817 - 025 Decant<br>Top                         | 1.7  | <0.5     | 12       | 0.22   | 0.162   | 11.3 | 4500 |
| 817 - C25 After<br>Treatment<br>(Sludge)        | 57   | 6.5      | 27       | 58     | 2.440   | 11.3 | 6000 |
| 817 - 025 Decant<br>Bottom                      | 1.8  | <0.5     | 8.7      | 0.33   | 0.085   | 9.6  | 8300 |

(continued page 2) Thank you for your order. C-1-M(-9)

A COMMICE DEPARTMENT

#### ABORATORY REPORT

TO: Mr. Martin Scheerbaum PPG Industries 10800 S. 13th Street Oak Creek, WI 53154

Corporate Research & Development Group

Environmental Research Center . 5103 West Beloit Road P. O. Box 2022 Milwaukee, WI 53201 414/643-2761

DATE: \_5/26/81

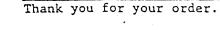
Page 2 of 2

PURCHASE ORDER NO.: 19291 REXNORD WORK ORDER NO.: FG 41427

#### Parameter

| Sample Identification                  | Lead | Titanium | Chromium | Zinc | Mercury | рН  | TOC  |
|----------------------------------------|------|----------|----------|------|---------|-----|------|
| 816 - 815 Before Treatment (washwater) | 16   | 2        | 3.55     | 27   | 1.220   | 9.9 | 2400 |
| 816 - <b>8</b> 15 Decant Top           | 8.4  | 0.5      | 2.16     | 1.5  | 0.077   | 9.8 | 1700 |
| 815 - 015 After Treatment Slodge       | 21   | 2.5      | 5.1      | 23   | 1.460   | 9.8 | 2200 |
| 816 - <b>0</b> 15 Decant<br>Treatment  | 5.4  | <0.5     | 1.79     | 2.7  | 0.140   | 9.5 | 1800 |

All results in  $mg/\ell$  except pH. Samples submitted on 5/6/81.



C-1-M(-10)

Here Galenski

# C-1-N(-1)

## ATTACHMENT VI-B-14

Paint Plant Caustic Cleaning Water (D005, D006, D007, D008)
Possibly D001, D002

# General Description:

Liquid

Flash Point <140 F - >140 F

Heating Value <1,000 BTU/LB

Total Resin Solids 1 - 5%

Total Pigment Solids 15 - 25%

Solvents 1 - 5%

Water 75 - 80%

Weight/Gallon 8.5 - 9 LB/GAL

# Basis for hazardous designation:

Assumed TCLP Toxic characteristics based on knowledge of similar wastes generated at other PPG facilities. May be ignitable and/or corrosive occasionally.

C-1-O(-1)

# ATTACHMENT VI-B-15

Resin Plant Caustic Cleaning Water (D001, D002)

General Description:

Liquid

Flash Point

<140 F

Heating Value

<1,000 BTU/LB

Total Resin Solids

1 - 5%

Total Pigment Solids

None

Solvents

1 - 5%

Water

90 - 98%

Weight/Gallon

8.3 - 8.5 LB/GAL

Basis for hazardous designation:

Assumed ignitable and corrosive based on knowledge of the waste.

C-1-P(-1)

# ATTACHMENT VI-B-16

Resin Plant Wastewaters (F003, F005, D001)

# General Description:

Liquid

Flash Point <140 F

Heating Value <5,000 BTU/LB

Total Resin Solids 1 - 5%

Total Pigment Solids None

Solvents 1 - 5%

Water 90 - 98%

Weight/Gallon 8 - 8.3 LB/GAL

Basis for hazardous designation:

Listed solvents carried over from recycling spent solvent. Ignitability characteristic applies for solvents not listed.

C-1-Q(-1)

ATTACHMENT VI-B-17

Cationic Washwater (D007, D008, D035) Possibly D001

General Description:

Liquid

Flash Point <140 F

Heating Value <1,000 BTU/LB

Total Resin Solids .5 - 5%

Total Pigment Solids None

Solvents 1 - 10%

Water 89 - 99%

Weight/Gallon 8.3 - 8.5 LB/GAL

Basis for hazardous designation:

Assumed TCLP Toxic characteristics based on knowledge of product. May be ignitable due to trace solvents.



Laboratory Services Division 5350 Campbells Run Road Pittsburgh, PA 15205 REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

## LAR ANALYSIS REPORT

CLIENT NAME:

PPS INDUSTRIES, INC.

NUS CLIENT NO:

320245

ADDRESS:

ROSANNA DRIVE

NUS SAMPLE NO:

15040559

255000000

ALLISON PARK,

15101

VENDOR NO:

01831710

ATTENTION:

CHRIS BABKA

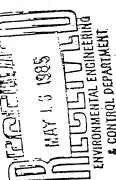
REPORT DATE: 05/15/85

WORK ORDER NO: DATE RECEIVED:

04/08/851

SAMPLE INENTIFICATION: OC-85-0069-03 - Cationic Washwater

| ग्द्रहा      | DETERMINATION              | RESULTS | UNITS          |          |
|--------------|----------------------------|---------|----------------|----------|
| 1270         | RCRA METALS                |         |                |          |
| X030         | Arsenic (As)               | < 0.01  | <b>m</b> g/l   |          |
| 1040         | Barium (Ba)                | 1.0     | mg/1           |          |
| HQ90         | Cadrium (Cd)               | < 0.05  | <b>a</b> g/1   |          |
| 1140         | Chromium (Cr)              | 0.1.    | mg/1           |          |
| M200         | Lead (Ph)                  | < 0.3   | mg/l           |          |
| 1250         | Heroury (Hg)               | 0.06    | mg/l           |          |
| <b>X290</b>  | Selenium (Se)              | < 0.04  | æg∕l           |          |
| 1300         | . Silver (Ag)              | < 0.1   | ng/1           |          |
| <b>#05</b> 0 | Rerullium (Re)             | < 0.02  | ¥g/1           |          |
| X110         | Calcius (Ca)               | 2.0     | , <b>x</b> g/1 |          |
| 8141         | Chromium, Hexavalent(Cr+6) | < 1     | *g/l           |          |
| N150         | Cobalt (Co)                | < 0.1   | mg/l           |          |
| M160         | Copper (Cu)                | 1.7     | <b>m</b> g/1   |          |
| X190         | Iron,total (Fe)            | C.4     | mg/l           |          |
| M230         | Magnesiuæ (Mg)             | 0.4     | mg/1           |          |
| ¥240         | Manganese (Mn)             | 0.9     | mg/1           |          |
| X270         | Michel (Mi)                | 0.5     | mg/l           |          |
| <b>#310</b>  | Sodium (No)                | 210     | mg/1           |          |
| <b>X320</b>  | Strontium (Sr)             | < 1     | *g/1           | [:       |
| N390         | Zinc (Zm)                  | 0.6     | <b>1</b> /9#   | ř.       |
| 0F01         | Xylenes                    | ₹ 2     | mg/l           |          |
| DFO4         | Acetone                    | 44      | mg/1           |          |
| <b>∂</b> F¢€ | 2-butanone                 | 790     | mg/l           | <b>F</b> |
| \$F08        | 4-methyl-2-pentanone       | 140     | <b>≥</b> g/1   | نے ا     |
| ପ୍ରପ୍ରବ      | Styrene                    | ₹ 2     | <b>≥</b> g/1   | ĺζĺ      |
| 9X32         | Butyl Cellosolve           | 77000   | <b>a</b> g/1   |          |
| 0:558        | - 1-Butanol                | 3700    | ` mg/l         | 띹.       |
| 1×79         | Cellosolve Acetate         | < 100   | <b>≥</b> g/1   |          |
| 0003         | Benzene                    | < 2     | <b>≥</b> g/1   | ستست     |
| 5040         | British Thermal Units      | WHC .   | -              |          |
| 5064         | Chlorine, Organic          | < 0.1   | Z              |          |



C-1-Q(-2)

PAGE NO:



A Halliburton Company

CLIENT ORIGINAL

PEMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

# LAB ANALYSIS REPORT

CLIENT NAME:

PPG INDUSTRIES, INC.

ADDRESS:

ATTENTION:

ROSANNA DRIVE

ALLISON PARK,

CHRIS BARKA

DA 451A

PA 15101

REPORT DATE: 05/15/85

NUS CLIENT NO:

3,20245

MUS SAMPLE NO:

15040559 01831710

VENDOR NO: WORK ORDER NO:

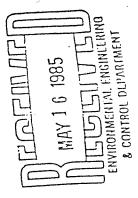
55830

DATE RECEIVED:

04/08/85

SAMPLE IDENTIFICATION: 00-25-0069-03 - Cationic Washwater

| TEST         | DETERMINATION               | RESULTS      | STIMU          |      |
|--------------|-----------------------------|--------------|----------------|------|
| 5098         | Fluorine, Organic           | < 0.01       | 7              |      |
| \$168        | Specific Weight             | 8.5          | lt/gal         |      |
| \$195        | % Water (Karl Fisher)       | 71.7         | * - recheck    | 8470 |
| \$210        | Viscosity                   | 10           | Cb             |      |
| \$950        | Acid Digestion              |              |                |      |
| 5971         | Ashing                      | -            |                |      |
| \$980        | Oxygen Boab Preparation     |              |                |      |
| A035         | Ameonia as N (distillation) | 5.7          | mg/l           |      |
| 1050         | BOD, 5-day (B2)             | <b>4</b> 900 | <b>≥</b> g/1   |      |
| ¥120         | CGF ( 02 )                  | 170000       | <b>a</b> g/1   |      |
| <b>127</b> 0 | Cyonide, total (CX)         | 7.0.1        | , <u>¥</u> g∕1 |      |
| F732         | Nitrogen, Kjeldchl (N)      | 59           | <u> </u>       |      |
| 8440         | Mitrogen, Organic (M)       | 53           | mg/1 , '       |      |
| R2X          | Phenolics                   | 2.6          | mg/1           |      |
| <b>#</b> 590 | Solids, dissolved at 180 C  | 3410         | · mg/1         |      |
| ¥610         | Solids, suspended at 103 C  | 56           | mg/1           |      |
| 1625         | Solids, vol total at 550 C  | 2180         | mg/1           |      |
| <b>¥</b> 740 | Sulfide (S)                 | 2.1          | <b>1</b> 5/1   |      |



PMENTS: NHC indicates that the sample will not combust.  $\angle$  means detection limit C-1-Q(-3)

Reviewed and Approved by: JMC

PAGE NO: 2





L'aboratory Services Division 5350 Campbells Run Road Pittsburgh, PA 15205

Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

## LAE ANALYSIS REPORT

CLIENT NAME: PPG INDUSTRIES, INC.

ADDRESS: ROSANNA DRIVE

- ALLISOH PARK,

PA 15101

REPORT DATE: 05/31/85

HUS CLIENT HO:

320237

HUS SAMPLE NO:

VENDOR NO: WORK ORDER NO: 01831710 55830

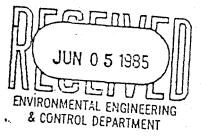
DATE RÉCEIVED:

04/17/85

ATTENTION: MS. C. BABKA

SAMPLE IDENTIFICATION: OC-85-0069-03A - Cationic Washwater Extract

| TEST        | DETERMINATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | RESULTS | UNITS          |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|----------------|
| <del></del> | Afternia alle alle and annual and annual and annual |         |                |
| 1270        | RCRA HETALS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |         |                |
| H030        | Arsenic (As)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.38    | <b>≥</b> g/l , |
| 1040        | Barium (Ba)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 4 1 **  | mg/1           |
| H090        | Cadmium (Cd)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | < 0.05  | <b>≥</b> g/1   |
| 1140        | Chromium (Cr)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0.1     | mg/1           |
| H200        | Lead (Pb)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | < 0.3   | <b>b</b> g/l   |
| 1250        | Hercury (Hg)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.0006  | <b>B</b> g/l   |
| H290        | Selenium (Se)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0.30    | mg/1           |
| 1300        | Silver (Ag)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | < 0.1   | mg/1           |
| \$950       | Acid Digestion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |         |                |
| \$971       | Ashing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |         |                |



L means delection limit CONNENTS:

C-1-Q(-4)

Reviewed and Approved by: JHC



🔼 A Halliburton Company

CLIENT ORIGINAL

PPG Industries, Inc. Rosanna Drive P.O. Box 9 Allison Park, Pennsylvania 15101 (412) 487-4500

Research Center Coatings and Resins Division

PPG ENVIRONMENTAL LAB REPORT

SAMPLE #: 06-85-0069-00

LOCATION:

DATE REC'D:

DATE SAMPLED:

ANALYSIS RESULTS

SOLIDS

INIT. DiH, 0 1632m FINAL DiH, 0 406m

ACID SOLN. 2 m

INIT. pH

5.2 FINAL PH

F.PT. 4.4.95

% SOLIDS

mg/l

OTHER:

C.O.D.

7/4

5.8



PROCEDURES AND COMMENTS:

SW-846 METHOD 1310 (TEP) (FLASH POINT) HACH METHOD (EPA ACCEPTED) MODEL 16500 (COD)

C-1-Q(-5)

C-1-R(-1)

# ATTACHMENT VI-B-18

Wastewater Treatment Supernatant (D001, D007, D008)

# General Description:

Liquid

Flash Point Possibly <140 F

Heating Value <1,000 BTU/LB

Total Resin Solids <.5%

Total Pigment Solids <.05%

Solvents Trace

Water 99.5%

Weight/Gallon 8.3 LB/GAL

pH 7.5 - 9.5

Basis for hazardous designation:

Assumed TCLP Toxic characteristics based on total metal analysis of the waste. Possibly ignitable based on similar waste from other PPG facilities.

# Rexmord

# LABORATORY REPORT

TO: Mr. Martin Scheerbaum PPG Industries 10800 S. 13th Street Oak Creek, WI 53154 Corporate Research & Development Group

Environmental Research Center -5103 West Beloit Road P. O. Box 2022 Milwaukee, WI 53201 414/643-2761

DATE:

5/26/81

Page 1 of 2

PURCHASE ORDER NO.; 19291

REXNORD WORK ORDER NO.: FG 41427

Analysis of Aqueous Waste Stream from Wate Treatment Center.

Supernatant

## Parameter

| Sample Identification              | Lead | Titanium | Chromium | Zinc | Mercury | рН   | TOC  |
|------------------------------------|------|----------|----------|------|---------|------|------|
| 816 - 614 Before<br>Treatment      | 76   | 6        | 51       | 52   | 0.600   | 10.9 | 4400 |
| 316 - <b>6</b> 14 Decant<br>Top    | 1.8  | 4        | 11       | 0.22 | 0.036   | 10.9 | 2000 |
| 816 - 814 After Treatment (Sludge) | 68   | <0.5     | 47       | 43   | 2.560   | 10.8 | 5000 |
| 816 - 614 Decant Bottom            | 1.2  | 2.5      | 7.2      | 0.17 | 0.112   | 9.2  | 2700 |
| 817 - 025 Before<br>Treatment      | 40   | 5        | 24       | 41   | 4.300   | 11.3 | 6400 |
| 817 - 025 Decant<br>Top            | 1.7  | <0.5     | 12       | 0.22 | 0.162   | 11.3 | 4500 |
| 817 - C25 After Treatment (Sludge) | 57   | 6.5      | 27       | 58   | 2.440   | 11.3 | 6000 |
| 817 - 025 Decant<br>Bottom         | 1.8  | <0.5     | 8.7      | 0.33 | 0.085   | 9.6  | 8300 |

(continued page 2)

Thank you for your order.

C-1-R(-2)

A PART OF SALES AND A SALES AN

insmirkase journalist

# Rexmord

# LABORATORY R'EPORT

TO: Mr. Martin Scheerbaum PPG Industries 10800 S. 13th Street Oak Creek, WI 53154 Corporate Research & Development Group

Environmental Research Center 5103 West Beloit Road P. O. Box 2022 Milwaukee, WI 53201 414/643-2761

DATE: 5/26/81

DALL.

Page 2 of 2

PURCHASE ORDER NO.: 19291 REXNORD WORK ORDER NO.: FG 41427

## Parameter

| Sample Ident:              | ification                 | Lead | Titanium | Chromium | Zinc | Mercury | рН  | TOC  |
|----------------------------|---------------------------|------|----------|----------|------|---------|-----|------|
| 816 - <b>0</b> 15 Be       | fore<br>eatment           | 16   | 2        | 3.55     | 27   | 1.220   | 9.9 | 2400 |
| 816 <b>- 8</b> 15 De<br>To |                           | 8.4  | 0.5      | 2.16     | 1.5  | 0.077   | 9.8 | 1700 |
|                            | ter<br>reatment<br>ludy & | 21   | 2.5      | 5.1      | 23   | 1.460   | 9.8 | 2200 |
| 816 <b>- @</b> 15 De<br>Ti | ecant<br>reatment         | 5.4  | <0.5     | 1.79     | 2.7  | 0.140   | 9.5 | 1800 |

All results in mg/2 except pH. Samples submitted on 5/6/81.

Thank you for your order.

C-1-R(-3)

Steve Galewsi

Rexnerd 

# LABORATORY

TO: Mr. Martin Scheerbaum PPG Industries 10800 S. 13th Street Oak Creek, WI 53154

Corporate Research & Development Group

Environmental Research Center 5103 West Beloit Road P. O. Box 2022 Milwaukee, WI 53201 414/643-2761

DATE: 3/26/81

PURCHASE ORDER NO.: 19119

REXNORD WORK ORDER NO.: FG 41405

Analysis of aqueous waste stream from waste treatment center.

|           |      |          | 200  | . Paramete | r        |       |            |
|-----------|------|----------|------|------------|----------|-------|------------|
| Sample    | Lead | Chromium | Zinc | Mercury    | Titanium | pН    | TOC        |
| 818-006 A | 18   | 20       | 14   | 0.0053     | <0.5     | 7.30  | 1,900      |
| 818-006 B | 12   | 12       | 9.5  | 0.0048     | <0.5     | 7.90  | 2,900      |
| 817-011 A | 15   | 7.0      | 5.7  | 0.0098     | <0.5     | 7.10  | 1,200      |
| 817-011 B | 7.4  | 7.2      | 4.7  | 0.0031     | <0.5     | 4.45  | 7,700      |
| 818-007 A | 2.5  | 2.5      | 8.2  | 0.0050     | <0.5     | 7.20  | 2,000      |
| 818-007 B | 1.4  | 1.8      | 3.9  | 0.0066     | <0.5     | 6.9   | 3,500      |
| 817-010 A | 18   | 15       | 5.4  | 0.0053     | 0.5      | 7.45  | 2,900      |
| 817-010 B | 16   | 16       | 17   | 0.0098     | 0.8      | ·     | · <b>-</b> |
| 818-005 A | 0.6  | 9.2      | 13   | 0.0065     | <0.5     | . 6.0 | 3,800      |
| 818-005 B | 2.1  | 6.7      | 10   | 0.0053     | <0.5     |       | -          |
|           |      |          |      |            |          |       |            |

All results reported in mg/l except pH.

Thank you for your order.

C-1-R(-4)

C-1-S(-1)

# ATTACHMENT VI-B-19

Wastewater Treatment Sludges - Dewatered (D005, D006, D007, D008)

General Description:

Solid

Heating Value <5,000 BTU/LB

Total Resin Solids 2 - 20%

Total Pigment Solids 5 - 20%

Water <1%

Basis for hazardous designation:

Assumed TCLP Toxic characteristics based on knowledge of the waste.

412-788-1080



## REPORT LAE ANALYSIS

CLIENT NAME:

PPG INDUSTRIES, INC.

ADDRESS:

260 KAPPA DRIVE

PITTSBURGH,

PA

15238

REPORT DATE: 07/02/85

MUS CLIENT NO: MUS SAMPLE NO:

VENDOR NO:

15040561 01831710

WORK ORDER NO:

55830

DATE RECEIVED:

04/08/85

ATTENTION: NS. CHRIS BABKA

SAMPLE IDENTIFICATION: OC-85-0071-03 - Aqueous Treatment Sludge

| TEST         | DETERMINATION         |                                         | RESULTS | STINU        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------|-----------------------|-----------------------------------------|---------|--------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1270         | RCRA NETALS           |                                         | *       |              |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| H030         | Arsenic (As)          | •                                       | 0.81    | mg/l         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1040         | Barium (Ba)           |                                         | 61      |              |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| H090         | Codmium (Cd)          |                                         | 0.53    | mg/1         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1140         | Chromium (Cr)         |                                         | 14      | mg/l         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| N200         | Lead (Pb)             |                                         | 66      | <b>≥</b> g/l |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1250         | Mercury (Hg)          |                                         | 5.0     | mg/1         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| N290         | Selenium (Se)         |                                         | < 0.04  | <b>≥</b> g/l | aga.   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1300         | Silver (Ag)           |                                         | 0.1     | mg/l         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| H050         | Beryllium (Be)        | •                                       | < 0.02  | <b>≥</b> g/1 |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1110         | Calcium (Ca)          |                                         | 3400    | mg/l         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| H141         | Chromium, Hexavalenti | (Cr+6)                                  | < 2     | mg/l         | Rev.   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1150         | Cobalt (Co)           |                                         | 2.8     | mg/l         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| M160         | Copper (Cu)           |                                         | 2.7     | mg/1         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1190         | Iron, total (Fe)      |                                         | 17000   | mg/1         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| M230         | Hagnesium (Ng)        | •                                       | 100     | mg/1         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1240         | Hanganese (Hn)        |                                         | 14      | mg/l         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| H270         | Nickel (Ni)           | •                                       | 2.4     | mg/l         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1310         | Sodium (Na)           |                                         | 5600    | mg/1         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1320         | Strontium (Sr)        | *                                       | 19      | mg/l         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1390         | Zinc (Zn)             |                                         | 570     | <b>≥g/1</b>  |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>OF</b> 01 | Xylenes               |                                         | < 2000  | mg/1         | 4      | \n\§=                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 8F04         | Acetone               |                                         | < 4000  | <b>m</b> g/l | П      | 8 1985<br>U U U<br>ENGINEER<br>PARTMEN]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 0F05         | 2-butanone .          |                                         | < 4000  | mg/l         |        | & D 8 €                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 8F08         | 4-methyl-2-pentanone  | •                                       | < 4000  | <b>∍</b> g/1 | 귀      | MEN W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| DF09         | Styrene               |                                         | < 2000  | <b>≥</b> g/1 | Щ      | · IU독유                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 1K32         | Butyl Cellosolve      |                                         | 450     | mg/1         | ત્ય    | 7 250                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| DH48         | Naleic Anhydride      | *                                       | < 500   | <b>∍</b> g/1 | 7      | Men Jano                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 1X58         | i-Butanol.            | * · · · · · · · · · · · · · · · · · · · | 740     | mg/l         |        | - /ngg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| DH79         | Cellosolve Acetate    |                                         | < 100   | mg/1         |        | FINITE OF THE STATE OF THE STAT |
| 1403         | Benzen <del>e</del>   |                                         | < 2000  | mg/1         | 11 . 1 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 9008         | Carbon Tetrachloride  | <b>2</b>                                | < 2000  | . ≥g/l       |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|              |                       |                                         |         |              |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

412-788-1080



## ANALYSIS REFORT 上合区

CLIENT MAHE:

PPG INDUSTRIES, INC.

ADDRESS:

ROSANNA DRIVE

ALLISON PARK,

PA 15101

REPORT DATE: 05/15/85

MUS CLIENT NO:

320245

NUS SAMPLE NO:

15040561 01831710

VENDOR NO: WORK ORDER HO:

55830

ATTENTION:

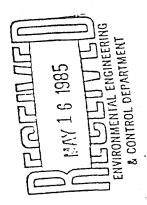
CHRIS BARKA

DATE RECEIVED:

04/08/85

SAMPLE INENTIFICATION: OC-85-0071-03 - Aqueous Treatment Sludge

| TEST         | DETERMINATION              | RESULTS | SIINU                 |
|--------------|----------------------------|---------|-----------------------|
| \$V22        | Methylene Chloride         | 150000  | ng/1 X - not possible |
| 0025         | Toluere                    | < 2000  | #C/1                  |
| <b>0</b> 050 | Trichlorofluoromethore     | < 2000  | mg/l                  |
| 5040         | British Theracl Units      | MHC     | . <b>3</b>            |
| ६०६५         | Chlorine, Organic          | < 0.1   | Z .                   |
| 5145         | Specific Weight            | 9.2     | 1b/qc1                |
| \$195        | % Water (Karl Fisher)      | 72.2    | I -recheck 78%        |
| 8210         | Viscosity                  | * 15    | CP CP                 |
| 3950         | Acid Digestion             |         |                       |
| \$271        | Ashing                     |         |                       |
| \$980        | Oxygen Rowb Preparation    | • • •   | •                     |
| ¥022         | Alkalinity, Total (CaCO3)  | 1700    | <b>∌</b> ç/],         |
| \$270        | Cyanide, tetal (CN)        | 1.1     | <b>∌</b> g/1          |
| ¥500         | Phenolics                  | 7.4     | <b>≥</b> g/]          |
| 1590         | Solids, dissolved at 180 C | 16200   | mg/l                  |
| ¥510         | Solids, suspended at 103 C | 10300   | ag/1                  |
| 1625         | Solids, vol total at 550 C | 29900   | mg/l                  |
| ¥740         | Sulfit= (8)                | < 4     | ⊪g/l .                |



\*MENTS: WHI indicates that the sample will not combust. < means detection limits. Chlorinated compounds should be nuch less than detection limits.

C-1-S(-3)

Reviewed and Approved by: JAC

PAGE NO: 2





Laboratory Services Division 5350 Campbells Run Road Pittsburgh, PA 15205

REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

## ANALYSIS REPORT LAB

CLIENT NAME:

ATTENTION:

PPG INDUSTRIES, INC.

ADDRESS:

ROSANNA DRIVE ALLISON PARK,

CHRIS BABKA

15101 PA

REPORT DATE: 05/31/85

MUS CLIENT NO:

320201

MUS SAMPLE NO:

15041482

VENDOR NO:

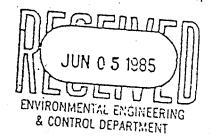
01831711

WORK ORDER NO: DATE RECEIVED:

55830 04/19/85

SAMPLE IDENTIFICATION: OC-85-0071-03A - Aqueous Treatment Sludge Extract

| TEST  | DETERMINATION  | RESULTS | UNITS        |
|-------|----------------|---------|--------------|
| 1270  | RCRA METALS    |         |              |
| M030  | Arsenic (As)   | 0.30    | <b>≥</b> g/1 |
| 1040  | Barium (Ba)    | < 1     | mg/1         |
| H090  | Cadmium (Cd)   | < 0.05  | <b>≥</b> g/1 |
| 1140  | Chromium (Cr)  | 0.1     | mg/l         |
| H200  | Lead (Ph)      | < 0.3   | mg/1         |
| 1250  | Hercury (Hg)   | 0.0068  | <b>≥</b> g/1 |
| H290  | Selenium (Se)  | < 0.04  | mg/1         |
| 1300  | Silver (Ag)    | < 0.1   | <b>≥</b> g/1 |
| 5950  | Acid Digestion |         | -            |
| \$971 | Ashing .       |         |              |



COMMENTS: < mean detection

C-1-S(-4)

Reviewed and Approved by: JMC



A Halliburton Company

CLIENT ORIGINAL

PPG Industries, Inc. Rosanna Drive P.O. Box 9 Allison Park, Pennsylvania 15101 (412) 487-4500

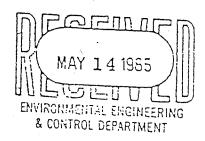
Research Center Coatings and Resins Division

| SAMPLE #:     | 0C-95:00   | 71-00   | LOC    | : NOITA            | 0     | AK CRI  | EEK                |      |
|---------------|------------|---------|--------|--------------------|-------|---------|--------------------|------|
| DATE REC'D:   | 3.885      |         | DAT    | E SAMP             | LED:  | 12-19   | <u>85</u>          |      |
| ANALYSIS DATE | RESULTS    |         |        |                    |       |         | · •                |      |
| E.P. 4.8.85   | SOLIDS     | 110 ola | INIT.  | DiH <sub>2</sub> O | 1760m | , FINAL | DiH <sub>2</sub> O | 413m |
| beau          | ACID SOLN. | 27m     | INIT.  | рН                 | 6.7   | FINAL   | рH                 | 5.2  |
| .PT.          | • .        | 70°F    | / sa   | <b></b>            |       |         | •                  |      |
| SOLIDS        |            |         | :      |                    |       |         |                    |      |
| C.O.D.        |            | ·       | mg/1 . |                    |       |         |                    |      |

JTHER:

ANAL

" .E.



PROCEDURES AND COMMENTS:

SW-846 METHOD 1310 (TEP) ASTM D-93-77 (FLASH 70=NT) HACH METHOD (EPA ACCEPTED) MODEL 16500 (COD)

C-1-S (-5)

# E-A ENVIRO-ANALYSTS, INC. 1300 S: Green Bay-Rd.

Racine, Wisconsin 53406

LABORATORY REPORT WASTE WATER EXAMINATION

Report No. 6047

To Dan Scudder PPG Industries Subject

Characterization of Aqueous Sludge: Date 10/15/83 Analysis for Mercury content

P.O. #

Sample 9/29,9/30/83

|                | Trial 1<br>- 9/29 | Trial 2<br>9/29 | Trial 1<br>9/30 | Trial 2<br>9/30 | Mean Value |
|----------------|-------------------|-----------------|-----------------|-----------------|------------|
|                | ,                 | ,               |                 | 3,00            | •          |
| % Solids       | 21%               | •               | 37.8%           | -               | 29.4%      |
| % Ash Content  | 6%                | ·               | 17.5%           |                 | 11.8%      |
| Mercury, Total | 24.6              | 88.32           | 11.1            | 3.45            | 31.87      |

C-1-S(-6)

LAB MANAGER



AQUASEAR CH 140 EAST RYAN ROAD (414) 76A OAK CREEK, WISCONSIN 53154 - 4599 (414) 764-7005

| LABORATORY NUMBER | 37 A.C. | PAG       |
|-------------------|---------|-----------|
| #83-5175          | 9/8/83  | 11        |
|                   |         | <u>.i</u> |
|                   |         |           |
|                   |         |           |

# LABORATORY REPORT

PPG INDUSTRIES, INC. 10800 s. 13TH STREET OAK CREEK, WI 53154

ATTN: DAN SCUDDER REFERENCE METHOD:

| DATE RECEIVED | DATE COLLECTED . |
|---------------|------------------|
| 7/8/83        | N/A              |
| SAMPLE        | NAME             |
| AQUEOUS TR    | REATMENT         |
| SLUI          | OGE -            |
| ACCOUNT       | NUMBER           |
| #77           | <u> </u>         |

**VERBAL** 

| XX | STANDARD METHODS, APHA, 15th EDITION, 1980.                                        |      |
|----|------------------------------------------------------------------------------------|------|
| KX | METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTE, EPA, 1979.                       |      |
|    | TEST METHODS FOR THE EVALUATION OF SOLID WASTE, PHYSICAL, CHEMICAL METHODS, EPA. 1 | 980. |

| <u>PARAMETER</u><br>CADMIUM | SAMPLE                   | EP TOXICITY LIMITS |
|-----------------------------|--------------------------|--------------------|
| HEXAVALENT CHROMIUM         | 1.7<br>0.17              | 1.0                |
| TOTAL CHROMIUM              | 37                       | 5.0<br>5.0         |
| COPPER                      | 23                       | ٠,٠                |
| LEAD                        | 85                       | 5.0                |
| NICKEL                      | 7.8                      | ٥,٠                |
| ZINC                        | 1,300                    |                    |
| BARIUM                      | 230                      | 100                |
| SILVER                      | 0.2                      | 5.0                |
| IRON                        | 15,000                   | <b>3.0</b>         |
| MAGNESIUM                   | 410                      |                    |
| ARSENIC                     | 0.029                    | 5.0                |
| SELENIUM                    | -0.01                    | 1.0                |
| MERCURY                     | 0.20                     | 0.2                |
| MANGANESE                   | 82                       |                    |
| SODIUM                      | 480                      |                    |
| CALCIUM                     | 2,800                    |                    |
| TOTAL SOLIDS                | 23%                      |                    |
| % WATER                     | 73.8                     |                    |
| РΗ .                        | 9.15 a 26 <sup>0</sup> c |                    |
| FLASH POINT                 | 125 <sup>0</sup> f       |                    |
|                             |                          |                    |

\* ALL UNITS ARE EXPRESSED AS: ☐ MG/L

☐ MG/KG

C-1-S(-7)



AQUASEARCH
140 EAST RYAN ROAD (414) 764-7005
OAK CREEK, WISCONSIN 53154 - 4599

| LABOR. | ATORY NUMBER | DATE     |    | PAG |
|--------|--------------|----------|----|-----|
| #83-   | -5175        | 9/8/     | 83 | 2   |
|        | COMP         | ANY NAME |    |     |
| PPG    | INDUST       | RIES     | _  |     |

| PARAMETERS              | SAMPLE    | · <del>-</del> · · ·                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TOTAL CYANIDE           | 2.4       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| B.O.D.5                 | 18,900    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| C.O.D.                  | 32,300    | and the second s |
| SPECIFIC WEIGHT         | 1.111     | * *<br>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| T.O.C.                  | 8600      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| AMMONIA NITROGEN        | 150       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| CHLORIDE                | 170       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| FLUORIDE                | 2.9       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| PHENOLS                 | 5.8       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| VISCOSITY(cps)          | 32.4      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| % ASH                   | 14%       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| TOTAL VOLATILE ORGANICS | UNABLE TO | RESOLVE WITHOUT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                         | MASS SPEC | IDENTIFICATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

A (-) SIGN DENOTES A 'LESS THAN' VALUE.

C-1-S(-8)

\*UNITS ARE EXPRESSED IN MG/L UNLESS OTHERWISE STATED

LH



M. Scheerbaum

Oak Creek Plant

To:

# INTER-OFFICE CORRESPONDENCE

Date: 8

June 8, 1981

From:

C. M. Babka

· tr

C. M. Bab

Location:

Springdale R&D

Subject:

Oak Creek Aqueous Treatment

Sludge

File: Waste Analysis

Sample Date: February 4, 1981

# Toxic Extraction Results: 4/13/81

| Parameter                   | TEP          | RCRA TEP Limit      |
|-----------------------------|--------------|---------------------|
| Units                       | /ug/ml = ppm | mg/l ≥ pom          |
| Arsenic Barium              | <.03<br><5   | 5                   |
| Cadmium<br>Chromium (Total) | <0.1<br>0.2  | 1 5                 |
| Chromium (+6)<br>Lead       | 0.02<br>2.0  | (5 proposed)<br>· 5 |
| *Mercury Selenium           | 0.4<br><.02  | 0.2                 |
| Silver                      | .075         | . 5                 |

<sup>\* -</sup> Exceeds RCRA TEP Limit.

This waste is an EP Toxic Hazardous waste due to Mercury (D009).

C.M. Balka

C. M. Babka

/n

FORM 303-A REV 8-1-70

cc: L. N. Streff/File



# LABORATORY REPORT

TO:

Mr. Martin Scheerbaum PPG Industries 10800 South 13th Street Oak Creek, WI 53154 Corporate Research & Development Group

Environmental Research Center 5103 West Beloit Road P. O. Box 2022 Milwaukee, WI 53201 4147643-2761

DATE: 5/29/81

PURCHASE ORDER NO.:

19354

REXNORD WORK ORDER NO.:

FG41435

Analysis of Aqueous still sludge sample submitted on April 24, 1981.

# Solids %

Total Solids 8.36%
Volatile Solids 2.21%
Non-Volatile
Solids 6.5%

## Metals mg/l

| As   | 0.073 | pb 9.0  |
|------|-------|---------|
| Ba   | 31    | Mg 5.0  |
| Cd   | 0.15  | Mn 3.5  |
| Ca 🦼 | 140   | Hg 6.3  |
| Cr+6 | 1.6   | Ni 0.5  |
| Cr+p | <0.1  | Se<0.5  |
| Cu   | 1.6   | Ag<0.01 |
| Fe   | 195   | Na 1950 |
|      |       | Zn 230  |

# % Solvents (1.607% identified)

| Butyl Cellosolve Xylene (Total) MIBK n-butanol i-butanol Toluene Cellosolve Acetate Benzene Styrene MEK | .021% 1.08% .126% .018% .079% .018% .016% .005% .015% .220% |
|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| MEK<br>Acetone                                                                                          | ,009%                                                       |
|                                                                                                         |                                                             |

Flash Point: Density: >212°F

1.013 lbs/gal.

Viscosity:

y: 46 cp

Thank you for your order.

& CONTROL DEPARTMENT

C-1-S(-11)

Steve Gileuski

Steve Galewski

# Rexnord

# LABORATORY REPORT

TO: Mr. Martin Scheerbaum PPG Industries 10800 S. 13th Street Oak Creek, WI 53154 Corporate Research & Development Group

Environmental Research Center 5103 West Beloit Road P. O. Box 2022 Milwaukee, WI 53201 414/643-2761

DATE: -5/26/81

Page 1 of 2

PURCHASE ORDER NO.: 19291

REXNORD WORK ORDER NO.: FG 41427

Analysis of Aqueous Waste Stream from Wate Treatment Center.

| Treatment S                           | Ludg | e        | Par      | ameter |         |       |      |
|---------------------------------------|------|----------|----------|--------|---------|-------|------|
| Sample Identification                 | Lead | Titanium | Chromium | Zinc   | Mercury | рН    | TOC  |
| 816 - <b>©</b> 14 Before<br>Treatment | 76   | 6        | 51       | 52     | 0.600   | 10.9  | 4400 |
| 816 - <b>0</b> 14 Decant Top          | 1.8  | 4.       | 11       | 0.22   | 0.036   | 10.9  | 2000 |
| 816 - 014 After - Treatment (Sloge)   | 68   | <0.5     | 47       | 43     | 2.560   | 10.8. | 5000 |
| 816 - 814 Decant<br>Bottom            | 1.2  | 2.5      | 7.2      | 0.17   | 0.112   | 9.2   | 2700 |
| 817 - C25 Before<br>Treatment         | 40   | 5        | 24       | 41     | 4.300   | 11.3  | 6400 |
| 817 - 025 Decant<br>Top               | 1.7  | <0.5     | 12       | 0.22   | 0.162   | 11.3  | 4500 |
| 817 - C25 After Treatment (Sludge)    | 57   | 6.5      | 27       | 58     | 2.440   | 11.3  | 6000 |
| 817 - 025 Decant<br>Bottom            | 1.8  | <0.5     | 8.7      | 0.33   | 0.085   | 9.6   | 8300 |

(continued page 2)

Thank you for your order.

C-1-S (-12)

A COMMUNICATION OF THE MEAN OF THE PARTY OF

## T O R A B O R A

TO: Mr. Martin Scheerbaum PPG Industries 10800 S. 13th Street Oak Creek, WI 53154

Corporate Research & Development Group

Environmental Research Center -5103 West Beloit Road P. O. Box 2022 Milwaukee, WI 53201 414/643-2761

DATE: 5/26/81

PURCHASE ORDER NO.: 19291

REXNORD WORK ORDER NO.: FG 41427

# Parameter

| Sample Identification                       | Lead | Titanium | Chromium | Zinc | Mercury | рН  | TOC  |
|---------------------------------------------|------|----------|----------|------|---------|-----|------|
| 816 - 15 Before Treatment                   | 16   | 2        | 3.55     | 27   | 1.220   | 9.9 | 2400 |
| 816 - <b>8</b> 15 Decant<br>Top             | 8.4  | 0.5      | 2.16     | 1.5  | 0.077   | 9.8 | 1700 |
| 81 <b>6</b> 15 After<br>Treatment<br>Sledge | 21.  | 2.5      | 5.1      | 23   | 1.460   | 9.8 | 2200 |
| 816 - <b>C</b> 15 Decant<br>Treatment       | 5.4  | <0.5     | 1.79     | 2.7  | 0.140   | 9.5 | 1800 |

All results in  $mg/\ell$  except pH. Samples submitted on 5/6/81.

Thank you for your order.

C-1-S(-13)

Here Galenszi

Tile -Oan Ouch Wirte Franzes

# ANALYTICAL LABORATORY FINAL REPORT SPRINGDALE WET LAB

| TO: BARKA                                                             |                   |                                | DATE:                 | 3/3/81                        |                       | <del>(:::</del>        |
|-----------------------------------------------------------------------|-------------------|--------------------------------|-----------------------|-------------------------------|-----------------------|------------------------|
| SAMPLE CODE CH                                                        | IG TES            | Γ                              | RESULT                | DATE DONE                     | - <del></del>         | -                      |
| 22058 E 1220<br>O.C. Aquerus Waste<br>2/4/81                          | 18                | WATER<br>WGT/GAL<br>FL FT PM   | 83.2<br>9.02<br>103 F | 2/26/81<br>2/25/81<br>3/ 3/81 |                       |                        |
| 22059 E.1221<br>Delaware W-B Florable<br>Rint Waste<br>Jan-Feb. 1981. | 18.               | WATER<br>WGT/GAL<br>FL PT PM / | 8.90                  | 2/26/81<br>2/25/81<br>3/ 3/81 | ZIII (1177)<br>4 1981 | AL ENGINEER DEPARTMENT |
| 22060 E 1222<br>Dev-Center Coustic 8/10.                              | 83 17<br>18<br>19 | WATER<br>WGT/GAL<br>FL PT PM   | 96.8<br>8.98<br>124 F | 2/26/81<br>2/25/81<br>3/-3/81 | MAR 2                 |                        |
| 22061 E 1223<br>Sp1. Still Studge 2/19/81                             | 83 17<br>18<br>19 | WATER<br>WGT/GAL<br>FL FT FM   | 0.59<br>9.33<br>71 F  | 2/26/81<br>2/25/81<br>3/ 3/81 |                       |                        |
| 22062 E 1224<br>Spi- Rice Plant<br>Caustic Washington                 | 83 17<br>18<br>19 | WATER<br>WGT/GAL<br>FL FT PM   | 94.3<br>8.84<br>144 F | 2/24/81<br>2/25/81<br>3/ 3/81 |                       | <u> </u>               |



# PERN ENVIRONMENTAL CONSULTANTS, INC. FORT PITT PROFESSIONAL BUILDING 1517 WOODRUFF STREET PITTSEURGH, PA. 15220 412-381-1133

## LAB ANALYSIS REPORT

CLIENT NAME: PPG INDUSTRIES, INC.

ATTENTION: MR JIH DIXON

ADDRESS: 151 COLFAX STREET

SPRINGDALE PA 15144

PEC FROJECT NO: 0165-00

PEC JOB NUMBER: 0371

PEC SAMPLE NO: 59451

REPORT DATE: 10.06.80

DATE RECEIVED: 09, 19, 80

SAMPLE IDENTIFICATION: Q. C. AQUEQUS WASTE 4-27

| PARAMETER                   | SYMBOL        | RESULTS | UNITS  |  |
|-----------------------------|---------------|---------|--------|--|
| BARIUM                      | BA            | 5. 7    | KG/L   |  |
| CARMIUM                     | æ             | 16      | NG/L   |  |
| CALCIUM                     | CA            | 52800   | HG/L   |  |
| CHROMIUM                    | <b>CR</b> , ∮ | 25. 8   | PG/L   |  |
| OFFER                       | α             | 6.7     | жол.   |  |
| TOTAL IRCH                  | FE TOTAL      | 4440    | HG/L   |  |
| MAGNESIUM                   | MG            | 740     | HG/L   |  |
| NHIGHESE                    | . KA          | 162     | ngal   |  |
| MERCURY (COLD VAPOR METHOD) | HG CV         | 10200   | UG/L   |  |
| - NICKEL                    | NI .          | 5.1     | ĦG/L   |  |
| IINC                        | ZN            | 5700    | . MG/L |  |
| ARSENIC                     | AS(LGH)       | 0.464   | KG/L   |  |
| SELEHIUM                    | SE(LOH)       | ₹ . 020 | HG/L   |  |
| ACID DIGESTION              | ACID DIG      |         |        |  |

CORPENTS:

C-1-S(-15)

Reviewed and Approved by:

cc: MS. CHRIS BAEKA

File - O. C. Waste Analy



# PENN ENVIRONMENTAL CONSULTANTS, INC. FORT PITT PROFESSIONAL BUILDING 1517 WOODRUFF STREET PITTSBURGH, PA. 15220 412-381-1133

## LAB ANALYSIS REPORT

CLIENT NAME: PPG INDUSTRIES, INC.

ATTENTION: MR. JIH DIXON

ADDRESS: 151 COLFAX STREET

SPRINGDALE, PA 15144

PEC PROJECT NO: 0165-00

PEC JOB NUMBER: 9650

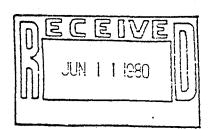
PEC SAMPLE NO: 55133

REPORT DATE: 06.09.80

DATE RECEIVED: 05.21.80

SAMPLE IDENTIFICATION: OAK CREEK AQUEDUS WASTE 4-27-80

| PARAMETER                        | SYMBOL.       | RESULTS | UNITS |
|----------------------------------|---------------|---------|-------|
|                                  |               |         |       |
| BIOCHENICAL OXYGEN DEVAND, 5 DAY | <b>200-</b> 5 | 23000   | MG/L  |
| TOTAL ORGANIC CARBON             | TOC           | 26000   | MG/L  |
| CHEMICAL OXYGEN DEMAND           | CCC           | 3175    | HG/L  |
| CHLORIDE                         | α             | 100     | NG/L  |
| TOTAL CYANIDE                    | CN            | 0.20    | HG/L  |
| FLUORIDE DISTILLATION            | F. DIST       | ል 5     | MG/L  |
| ANNONIA NITROGEN DISTILLATION    | HH3-H D       | 23      | MG/L  |
| PHENOLS                          | PHENOL        | 3.1     | HG/L  |



COMMENTS:

C-1-S(-16)

Reviewed and Approved by:

cc: MS. CHRIS BABKA

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| ANALYTICAL LABORATORY FINAL SPRINGDALE WET LAB | REFORT |
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| TU: BABKA                             | The state of the s |                                | •                                                   |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------------------------------------|
|                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | DATE:                          | 5/22/80                                             |
| SAMPLE CODE CHG                       | TEST                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | RESULT                         | DATE DONE                                           |
| 7500 E 1197 83                        | 19 FL PT PM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 74'F                           | 5/22/80                                             |
| Chinetend Still Water                 | 15 ASH<br>17 WATER<br>18 WGT/GAL<br>19 FL PT PM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | .15%<br>92.3<br>8.48<br>101′F  | 5/22/80<br>5/21/80<br>5/21/80<br>5/22/80            |
| O.C. Aqueou Waste                     | 15 ASH<br>17 WATER<br>18 WGT/GAL<br>19 FL PT FM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 22.0%<br>65.7<br>9.96<br>136'F | 5/22/80<br>5/21/80<br>5/21/80<br>5/21/80<br>5/22/80 |
| 17503 F 1200 85<br>O.C. Still Seriege | 15 ASH<br>17 WATER<br>18 WGT/GAL<br>19 FL FT PH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 13.47%<br>8.93<br>8.85<br>82'F | 5/22/80<br>5/21/80<br>5/21/80<br>5/22/80            |

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PPG INDUSTRIES, INC.
10800 South 13th St.
POB 28
Oak Creek, Wisconsin 53154
(414) 764-6000

EPA ID#: WID059972935
Facility Contact: Dan Scudder,
Environmental Engineer

# Aqueous Treatment Sludge Generation Rate: 5000 gallons/week

| tal Solids                     | 6-35% (Normal 10-15%) | Total Volatiles     | 65-945  |
|--------------------------------|-----------------------|---------------------|---------|
| Total Suspended Solids         | 5-30%                 | %Water              | 64-91%  |
| Total Dissolved Solids         | 1- 5%                 | %Solvent            | <1-3%   |
| Total Volatile Solids          | 1- 5%                 | Butyl Cellosolve    | < .17   |
| Total Non-Volatile Solids      | 5-30%                 | Methyl Ethyl Ketone | e <3%   |
| (%Ash @ 550°C)                 |                       | Xylene              | <1.17   |
|                                |                       | Toluene             | < .2%   |
| As < .5ppm Ca < 6              | %                     | Ethyl Benzene       | <.01%   |
| Ba < 50ppm Cu < 10pp           | m.                    | i-Butanol           | <. 15   |
| Cd < 2ppm Fe < .5              | <b>%</b>              | n-Butanol           | < .1%   |
| Cr <100ppm Mg < .1             | व/<br>/0              | Ethyl Cellosolve    | <.005%  |
| Cr+6< 3 <b>0</b> ppm Mn <200pp | m                     | Methyl IsoButyl Ke  | tone<.2 |
| Pb <200ppm Ni < 5pp            | m                     | Cellosolve Acetate  | <.02%   |
| Hg <200ppm Na < .5             | %                     | Styrene             | < .02%  |
| Se < .5ppm Zn < 1              | %                     | Benzene             | < .04 " |
| Ag < lppm                      |                       | Acetone             | <.02,   |

| BOD5          | <30000pr  | n  |
|---------------|-----------|----|
| COD           | < 5000ppr |    |
| TOC           | <30000pp  | m. |
| NH3-N         | < 100pp   | m  |
| Chlorides     | < 100pp   | m  |
| Fluorides     | < 10pp    | m  |
| Total Cyanide | < .5pp    | m  |
| Phenols       | < 5pp     | m  |

 Wt/gal
 8.4-9.9LB/gal.

 Flashpoint
 100->212°F

 7-11

Viscosity 100-3000CPS

DOT Shipping Name: Hazardous Waste, Liquid, NOS.

DOT Hazard Class: ORM-E
DOT Code: NA 9189

EPA Waste Codes: D001, D007, D008, D009.

C-1-T(-1)

# ATTACHMENT VI-B-20

Paint Plant Caustic Sludge (D005, D006, D007, D008)
Possibly D001

# General Description:

Sludge

Flash Point Possibly <140 F - >200 F

Heating Value >5,000 BTU/LB

Total Resin Solids 5 - 20%

Total Pigment Solids 10 - 30%

Solvents 1 - 5%

Water 50 - 70%

Weight/Gallon 9 - 11 LB/GAL

# Basis for hazardous designation:

Assumed TCLP Toxic characteristics based on knowledge of the waste and similar wastes from other PPG facilities. Tested for ignitability and corrosivity.

412-788-1080



## ANALYSIS REPORT LAB

CLIENT HAME:

PPG INDUSTRIES, INC.

ADDRESS: 260 KAPPA DRIVE

PITTSBURGH,

ATTENTION: HS. CHRIS BABKA

15238

REPORT DATE: 07/02/85

MUS CLIENT NO: MUS SAMPLE HO:

15040560

VENDOR NO: WORK ORDER HO:

01831710 55830

DATE RECEIVED: 04/07/85

SAMPLE IDENTIFICATION: OC-85-0070-03 - Caustic Sludge

| TEST         | DETERMINATION              |   | RESULTS           | UNITS                                 |      |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------|----------------------------|---|-------------------|---------------------------------------|------|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1270         | RCRA NETALS                |   | <del></del>       | **********                            |      |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| H030         | Arsenic (As)               |   | . 0.29            | <b>m</b> g/l                          |      |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 1040         | Barium (Ba)                |   | 33                | <b>s</b> •g/1                         |      |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| M090         | Cadmium (Cd)               |   | 0.73              | • • • • • • • • • • • • • • • • • • • |      |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 1140         | Chromium (Cr)              |   | 20                | <b>∌</b> g/1                          |      |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| H200         | Lead (Pb)                  |   | 37                | mg/l                                  |      |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 1250         | Mercury (Hg)               |   | 9.6               | mg/l                                  |      |                       | • .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| H290         | Selenium (Se)              |   | < 0.08            | mg/1                                  |      |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 1300         | Silver (Ag)                |   | 0.2               | mg/l                                  |      |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| H050         | Beryllium (Be)             |   | 0.03              | mg/l                                  |      |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 1110         | Calcium (Ca)               |   | 260               | <b>≥</b> g/l                          |      |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| H141         | Chromium, Hexavalent(Cr+6) |   | < 10              |                                       | Rev. |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 1150         | Cobalt (Co)                |   | 6.8               | mg/l                                  |      |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| M160         | Copper (Cu)                |   | 8.9               | mg/l                                  |      |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| ¥190         | Iron, total (Fe)           |   | 730               | mg/l                                  |      |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| H230         | Magnesium (Mg)             |   | 140               | mg/l                                  |      |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 1240         | Manganese (Mn.)            |   | 3.1               | mg/1                                  |      |                       | . ,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| N270         | Nickel (Ni)                |   | 5.3               | mg/1                                  | •    |                       | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>E</b> 310 | Sodium (Na)                |   | 34000             | mg/]                                  |      |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| N320         | Strontium (Sr)             |   | 17                | <b>1</b> /1                           | Į,   | =                     | <u> </u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 1390         | Zinc (Zn)                  |   | 83                | mg/1                                  |      | 5                     | \U \mathbb{\in \mi\}\\ \mi\nn \mi\nn \in \mi\nn |
| .0F05        | 2-butanone                 |   | < 400             | mg/l                                  | ζ    | 8 1985                | ENVIRONMENTAL ENGINEERING  & CONTROL DEPARTMENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| \$F08        | 4-methyl-2-pentanone       |   | < 400             | mg/l                                  |      | = 5                   | 口意意                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 0648         | Maleic Anhydride           | • | < 5000            | mg/1                                  |      | $\infty$ $\mathbb{F}$ | D E E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 1V06         | Carbon Tetrachloride       |   | < 200             | mg/l                                  | L    | 4 ,                   | D 독 교                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>0</b> V22 | Methylene Chloride         |   | < 200             | <b>≥</b> g/1                          |      |                       | LZ K Z                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1725         | Toluene                    |   | < 200             | mg/1                                  | - (  | 릭                     | DAR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 0V30         | Trichlorofluoromethane     |   | <b>&lt; 200</b> . | <b>≥</b> g/1                          | П    | 7                     | The S                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| \$010        | Ammonia, distillation (N)  |   | 26                | <b>m</b> g/l                          |      |                       | S S S S                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 5040         | British Thermal Units      |   | WHC               |                                       |      | $\equiv \equiv$       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| \$064        | Chlorine, Organic          |   | < 0.1             | Z                                     |      |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 5080         | Cyanide, Total (CH)        |   | < 0.1             | mg/l                                  |      |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

C-1-T(-2)

PACE NO: 1





Laboratory Services Division 5350 Campbells Run Road Pittsburgh, PA 15205 REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

# LAB ANALYSIS REFORT

CLIENT NAME:

PPG INDUSTRIES, INC.

ADDRESS:

ROSANNA DRIVE

ALLISON PARK,

PA 15101

1 \_

-REPORT DATE: 05/16/85 MUS CLIENT NO: MUS SAMPLE NO:

320245 15040560

VENDOR NO:

01831710

WORK ORDER NO: DATE RECEIVED: 55830 04/07/85

ATTENTION:

CHRIS BABKA

SAMPLE IDENTIFICATION: DC-85-0070-03 - Caustic Sludge

| TEST  | DETERMINATION                | RESULTS | UNITS           |   |
|-------|------------------------------|---------|-----------------|---|
| \$098 | Fluorine, Organic            | < 0.01  | 7               |   |
| \$125 | Hitrogen, Kjeldahl (H)       | < 50    | mg/1            |   |
| \$126 | Nitrogen, Organic (X)        | < 50    | ⊪g/1            |   |
| \$168 | Specific Weight              | 9.3     | lb/gal          | · |
| \$174 | Sulfide by H2 generation (S) |         | mg/1            |   |
| S195  | I Water (Karl Fisher)        | 68.3    | i - recheck 797 | 0 |
| \$210 | Viscosity                    | 28      | CP CP           |   |
| 5950  | Acid Digestion               |         |                 |   |
| \$971 | Ashing                       | •       |                 |   |
| 5980  | Oxygen Bomb Preparation      |         |                 |   |
| 1022  | Alkalinity, Total (CaCO3)    | 71000   |                 |   |
| ¥500  | Pheriolics                   | 32      | mg/l            |   |
| 1590  | Solids, dissolved at 180 C   | INT     |                 |   |
| W610  | Solids, suspended at 103 C   | TKI     |                 |   |
| 1625  | Solids, vol total at 550 C   | 180000  | <b>&gt;</b> g/l |   |



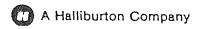
COMMENTS: INT for solids because sample would not filter. WNC indicates that the sample will not combust.

Chromium and hexavalent chromium results were rechecked. Sample matrix interference causes high Crt6 results. < means detection limit

Reviewed and Approved by: JMC

C-1-T(-3)

PAGE NO: 2





Laboratory Services Division 5350 Campbells Run Road Pittsburgh, PA 15205

REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

## LAE ANALYSIS REPORT

CLIENT NAME:

PPG INDUSTRIES, INC.

MUS CLIENT NO:

ADDRESS:

ROSANNA DRIVE

HUS SAMPLE HO:

15041481

ALLISON PARK,

PΑ 15101 YENDOR NO:

01831711

ATTENTION:

CHRIS BABKA

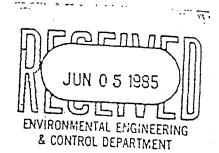
REPORT DATE: 05/31/85

WORK ORDER NO: DATE RECEIVED:

55830 04/19/85

SAMPLE IDENTIFICATION: OC-85-0070-03A - Caustic Sludge Extract

| TEST  | DETERMINATION  |   | •   | RESULTS | UNITS          |
|-------|----------------|---|-----|---------|----------------|
| 1270  | RCRA HETALS    |   | •   |         |                |
| M030  | Arsenic (As)   |   |     | 0.25    | mg/l           |
| 1040  | Barium (Ba)    |   |     | 14      | <b>≥</b> g/1   |
| H090  | Cadmium (Cd)   |   |     | < 0.05  | mg/l           |
| 1140  | Chromium (Cr)  | • |     | 0.5     | mg/1           |
| N200  | Lead (Pb)      |   |     | < 0.3   | 1kg/l          |
| 1250  | Hercury (Hg)   |   |     | 0.28    | • <b>∍</b> g/l |
| H290  | Selenium (Se)  |   |     | < 0.04  | mg/l           |
| 1300  | Silver (Ag)    | * | • • | < 0.1   | <b>≥</b> g/l   |
| 5950  | Acid Digestion |   |     |         | •              |
| \$971 | Ashing         |   |     |         |                |



COMMENTS: Linears detection lineit

C-1-T(-4)

Reviewed and Approved by: JMC



A Halliburton Company

CLIENT, ORIGINAL

PPG Industries, Inc. Rosanna Drive P.O. Box 9 Allison Park, Pennsylvania 15101 (412) 487-4500

Research Center Coatings and Resins Division

PPG ENVIRONMENTAL LAB REPORT

SAMPLE #:

00.0500 FP -30

LOCATION:

DATE REC'D:

3.8.95

DATE SAMPLED:

RESULTS **NALYSIS** 

SOLIDS

10 DiH20 100 INIT. DiH20 0ml

wash ACID SOLN. 440m INIT. PH 12.4 FINAL PH

PT.

% SOLIDS

3.0.D.

mg/l

THER:



PROCEDURES AND COMMENTS:

EPA SW-846 METHOD 1310 (TEP) HSTM D-93-TI (FLASH 70 INT) HCH METHOD (EPA ACCEPTED) MODEL 16500 (COD)

C-1-T(-5)

P.O. 4 24645

# CAUSTIC SLUDGE WASTE

\$250.00

# SPECIAL WASTE ANALYSIS REPORT

CWD A64309 N

| OFFICIAL MADIE WINELOID                |                  | CMD            | A64309 N         |
|----------------------------------------|------------------|----------------|------------------|
| LABORATORY:CONTROLLED WASTE DIVISION   | N                | WASTE PR       | OFILE SHEET CODE |
| PROFILE SHEET RECEIVED ON: 9/13/82     | REPRESENTATIVE S | Sample receive | DON: 9/13/82     |
| CERTIFICATE OF REP. SAMPLE RECEIVED: 9 | /13/82           | SAMPLE TAKEN.  | 6/23/82          |

PROPOSED TREATMENT/DISPOSAL FACILITY:

THE ANALYSES BELOW REPORTED WERE SELECTED BY ME. BASED UPON THE GENERATOR'S REFRESENTATIONS IN THE PROFILE SHEET AND ANY APPLICABLE WASTE ANALYSIS PLAN ESTABLISHED BY THE PROPOSED FACILITY FOR WASTE OF THIS TYPE, ANALYSES REQUIRED BY A WASTE ANALYSIS PLAN ARE INDICATED BY AN ASTERISK ( \* ).

DATE OF ANALYSIS. 1= /3 S= LAB MANAGER

|                                   | As               |                                         | Anaiyst                                 |                                       | As       |                                            | Anaiyst    |
|-----------------------------------|------------------|-----------------------------------------|-----------------------------------------|---------------------------------------|----------|--------------------------------------------|------------|
| Test                              | Received         | Leachate                                | linuals                                 | Test                                  | Received | Leachate                                   | Initials   |
| Specific Gravity                  | 7351             |                                         | is .                                    |                                       |          |                                            |            |
| У.Н                               | 1122             |                                         |                                         |                                       |          |                                            |            |
| Acidity % 35                      |                  |                                         | _                                       |                                       | ,<br>    |                                            |            |
| Alvanoity, is as                  | - te             |                                         | ٠                                       | Phenois may                           | 175      |                                            |            |
| 0 0 0, mg l                       |                  |                                         |                                         | Cyanides, as CN, Tatal man            |          |                                            |            |
| 5 :D (), m2 +                     | 1                |                                         |                                         | Cyanides, 15 CH Free, mail            | 75c.     |                                            |            |
| oral Sonds (# 105° C              | 37 7 9           | \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\  | 11                                      |                                       |          | * · ·                                      |            |
| Total Disselved Series and I      |                  |                                         |                                         | Mitoger, Aminonia in N. mai:          | 1        |                                            | †          |
| Total Suscender Solids Int. i     | †                |                                         | * * * * * * * * * * * * * * * * * * * * | Nitrogen Corring as N. mm             |          | !                                          | >-         |
| Residue un Europatica de 180°C    |                  |                                         |                                         | Foul Newton's National in the North   |          | ,:.                                        | 16 ×       |
|                                   |                  |                                         | ;-                                      |                                       | 1        | AGE.                                       | 5 7 2      |
| JIASH Point FE                    | 23.60            |                                         | 11000                                   | Total Alkalimity (P) a CaCO mg.t      |          |                                            | इंस्ट्रेंड |
| Ash Content, on ignitian          |                  |                                         |                                         | Foto: Atkaininty (for as CaCO), mg (  | j        | # 25                                       | 7-0-2      |
| Henting Valve, STU ID             |                  | )                                       |                                         | Total Harmess as 2200 ; m ; i         |          |                                            | 17.30      |
| 4 of Scrub, gNaOmia               |                  |                                         | -                                       | Calcium Histories is Calcio might     |          | FOR<br>15 TE                               | +          |
| 3 1 35100. 933007 0               | !                |                                         |                                         | Magness in Harrise is, as California  |          | 1 - 2 -                                    | ح ليا ج    |
| A15 1010 35 45 175 1              | 1 1 1 1 1        |                                         |                                         |                                       |          | 1 5 3 C                                    | 12-7-13    |
| Arsonic, as AS, mc !              | 337              | 1. p.                                   | 1-1                                     |                                       |          | EN PREPARED<br>NATE OF WAS<br>DOMESTICS DE | 6-8-       |
| doron as Br. mg/l                 | 1.73 6           | , a                                     | 1                                       | Or and Greese and i                   |          | 18江南                                       | +=         |
|                                   | K0:0.SJ          | i                                       | 1-1                                     |                                       |          | ¿= · · · · · ·                             | 4-5-       |
| Chinamium Total as Cr. ing/l      | 175000           |                                         | f;/                                     |                                       |          | 子を終われ                                      |            |
|                                   | 120.05           | <b>∱</b>                                | -(                                      | Aldrin, mg-l                          |          | (S-2-2-0                                   | 15.2 ·     |
| Trixavaient Chromium (d) Cr. mg/1 |                  | ļ                                       | 1 - 7                                   |                                       | ·        | 6-5                                        | 5          |
| Cupper, as Cu img/l               | 0.356            | ·                                       |                                         | Chiordane, ing-t                      |          | <del>. ტ. ≩</del>                          | + = -      |
| irun. Total as Folling 1          |                  |                                         |                                         | · · · · · · · · · · · · · · · · · · · |          | 335                                        |            |
| iron, dissolved, as he might      | - 1.7.77.017-    | .] ,                                    | .   ,                                   | Dieldrin mg f                         | ,        | 1 8                                        | 12         |
| ead is Ph. mg/l                   | 1745             | ₩: <u>-</u>                             | 1                                       | Entrin, mg (                          | ع ٤      | £1 ;;;                                     |            |
| Manganese al. Mn. mil t           |                  |                                         |                                         | Implication might                     | RFPO     | 当たれら                                       | - 8 H      |
| Mirghesium, as Mai mari           |                  |                                         | : -                                     | Lindane, mg i                         | 1 . &    | 169 TO                                     | .¥₽        |
| Chercury, as Hy, no.) 1           | 1174             |                                         | 1 /                                     | Methoxycolor intil                    | THIS     | ALENT OF NO REALY                          | REPORT     |
| Tarket as Ni ma I                 | K1:05            | 7                                       |                                         | Toxaphene mgd                         | 1 1      | MEN.<br>NO REAL                            | SE         |
| Bendam as no man                  | 50057            |                                         | \ \_                                    | Farithion, mail                       |          | エヺがだ                                       | 过三         |
| 100 27, 85 Ay 1734                | .⊀c_055          | ·                                       | 17                                      | 2.4.0 mgd                             |          | 1                                          |            |
| Corr. as Zo ma !                  | 1327             | · 'F                                    |                                         | 2, 4, 5, 1P (Sales) mg ( ).           |          |                                            |            |
|                                   |                  | }                                       |                                         | PCB's, mg 1                           | -        |                                            |            |
| Biggirbonates, is HOO, mg i       | -                |                                         | į · ·                                   | Layernd                               |          |                                            | 1.,        |
| Carrenates as CO mail             | - 1-             | · • • • • • • • • • • • • • • • • • • • |                                         |                                       |          | Ì                                          | ·  ``      |
| Convices as Compa                 |                  |                                         | - A                                     | Physical State                        | ·        |                                            |            |
| Prices as Films                   | •                |                                         |                                         |                                       |          | * -                                        | 1-         |
| North as NO mark                  | .                | 1                                       |                                         | Polor                                 | 1.       | 1 1                                        |            |
| number is NO mg !                 |                  |                                         | 1                                       |                                       |          |                                            |            |
| amagante, its Plants              |                  |                                         | 1                                       | 10302                                 |          | _}                                         |            |
| guitare las SiGu moli             | 1                |                                         |                                         |                                       |          |                                            |            |
| tires, as Simy!                   | •                | 1                                       | 1                                       | }                                     |          |                                            |            |
| VI 63. 31. 37. 11. 3              | in the second of |                                         |                                         | 1 .                                   | •        | i .                                        | ٠ ا ٠      |

Property of the School and Control and Con

C-1-T(-6)

### E-A ENVIRO-ANALYSTS, INC. 1300 S. Green Bay Rd.

Racine, Wisconsin 53406

LABORATORY REPORT WASTE WATER EXAMINATION

Report No. 3026

To Dan Scudder PPG Industries

Subject EP Toxicity Test: Caustic Sludge sample

Date 8/20/82

P.O. # Scudder

Sample 6/23/82

|          | ** .            |
|----------|-----------------|
|          | Caustic<br>mg/l |
| Arsenic  | < 0.01          |
| Barium   | 41.0            |
| Cadmium  | <0.01           |
| Chromium | 2.50            |
| Lead     | 10.08           |
| Mercury  | 0.41            |
| Selenium | < 0.01          |
| Silver   | 0.06            |
| Copper   | 0.21            |
| Zinc     | 2.68            |
| Nickel   | 0.10            |
|          |                 |

C-1-T(-7)

LAB MANAGER:



| LABORATORY NUMBER | 2ATE    | 24GE |
|-------------------|---------|------|
| 2920,2921         | 10/9/81 | 1.   |

2922

### LABORATORY REPORT

PPG INDUSTRIES
10800 South 13th Street
Oak Creek, Wisconsin 53154

| DATE RECEIVED | DAFE COLLECTES |
|---------------|----------------|
| 9/23/81       | 9/23/81        |
| = '           | u d a e        |
| ACCOUNT       | NUMBES         |
| # 7           | 71             |

ATTN: M. SCHEERBAUM

### REFERENCE METHOD:

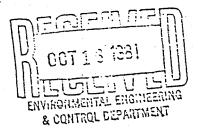
STANDARD METHODS, APHA, 14th EDITION, 1975.

METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTE, EPA, 1979.

TEST METHODS FOR THE EVALUATION OF SOLID WASTE, PHYSICAL, CHEMICAL METHODS, EPA, 1980.

| PARAMETER              | Caustic<br>Powder<br><u>SAMPLE</u> | Caustic<br>Rinse<br>SAMPLE | Caustic<br>Sludge<br>SAMPLE |
|------------------------|------------------------------------|----------------------------|-----------------------------|
| MERCURY                | -0.002                             | 0.091                      | 4.6                         |
| % NaOH<br>(Alkalinity) | 82.6%                              | 4%                         | 10.6%                       |

(-) means 'less than' value.



C-1-T (-8)

 UNITS ARE EXPRESSED IN MG/L UNLESS OTHERWISE STATED. 10-0-81

Pur E Whitm

LABORATORY SUPERVISOR



764-7005 321-7020

| FERNUM PROTARCEAL | 2479    |   |  |
|-------------------|---------|---|--|
| 2922              | 10/9/81 | 2 |  |
| INAV VAGEC        |         |   |  |
| PPG INDUS         | TRIES   |   |  |

| PARAMETER | EP TOXICITY | EP TOXI<br>LIMIT | CI-TY |   |
|-----------|-------------|------------------|-------|---|
| CADMIUM   | 0.039       | 1.0              |       | • |
| CHROMI UM | 1.2         | 5.0              |       | - |
| LEAD      | 1.6         | 5.0              |       |   |
| BARIUM    | 48          | 100              |       |   |
| SILVER    | 0.91        | 5.0              |       |   |
| ARSENIC   | -0.001      | 5.0              |       |   |
| SELENIUM  | -0.01       | 1.0              |       |   |
| MERCURY   | 0.33        | 0.2              |       |   |

(-) means 'less than' value.

· C-1-T(-9)

/Ü-a-8

FARUR VECTARGRAL

### E-A ENVIRG-ANALYSTS, INC.

1300 S. Green Bay Rd Racine, Wisconsin 53406

Martin Scheerbaum Subject

PPG Industries Oak Creek

LABORATORY REPORT WASTE WATER EXAMINATION

Report No 2221

Revised laboratory analysis of

caustic waste stream samples dated 4/11/81.

Date 9/1/81

P.O # pending

Sample Rec'd 5/15/81

|                                    | ·        |                |                                         |              |              |    |
|------------------------------------|----------|----------------|-----------------------------------------|--------------|--------------|----|
| Total Solids                       | 28.8%    |                |                                         |              |              | -  |
| % Ash                              | 22.7%    |                |                                         |              |              |    |
| % Volatile Solids (by calculation) | 6.1%     |                |                                         |              |              |    |
|                                    |          |                | •                                       |              |              |    |
| Metals (ppm)                       | (approx  | imately 6.0% i | dentified)                              |              |              |    |
|                                    |          |                | · • • • • • • • • • • • • • • • • • • • |              |              |    |
| Arsenic                            | <0.1     | Magnesium      | 137.3                                   | Iron         | 1823.8       |    |
| Barium                             | 670.0    | Manganese      | 50.1                                    |              |              |    |
| Cadmium                            | 1.0      | Mercury        | 150.0:                                  | the second   | •            |    |
| Chromium, total                    | 22.1     | Nickel         | 10.2                                    |              |              |    |
| Chromium +6                        | <1.0     | Silver         | 0.5                                     |              |              |    |
| Copper                             | 19.6     | Selenium       | <b>\10.0</b>                            | <b>.</b>     |              |    |
| Lead                               | 10.2     | Zinc           | 55.4                                    |              |              |    |
|                                    |          |                |                                         |              |              |    |
| Total Volatiles(calcul             | ated)    | 71.2%          |                                         |              |              |    |
| % water                            | <u> </u> | 69.5%          | •                                       |              |              |    |
| % Solvents(calculated)             |          | 1.7%           | 0.2%(identifie                          | ed)*         |              |    |
| Xylene                             |          | 0.060%         |                                         |              |              |    |
| Butyl Cellosolve                   |          | 0.014%         |                                         |              |              |    |
| Methyl isobutly ketone             | 2        | 0.012%         |                                         |              |              |    |
| u-butanol                          |          | 0.029%         |                                         |              |              | •  |
| toluene                            |          | 0.001%         |                                         |              | es may have  |    |
| cellosolve acetate                 |          | 0.021%         |                                         |              | ecovery. The | se |
| benzene                            |          | 0.052%         |                                         | re average v |              |    |
| methylethyl ketone                 |          | 0.017%         | three an                                | alytical ru  | ns.          |    |
| styrene                            |          | 0.001%         | •                                       |              |              |    |
| acetaone                           |          | 0.002%         |                                         | •            |              |    |
| isobutanol                         |          | 0.005%         |                                         |              |              |    |
|                                    |          |                |                                         |              |              |    |
| % NaOH                             |          | 3.3%           | ·                                       |              |              |    |
|                                    |          | C-1-T(-10)     | •                                       |              | •            |    |

C-1-U(-1)

ATTACHMENT VI-B-21

Floor Sweepings (D005, D006, D007, D008)

General Description:

Solid floor sweeping compound contaminated with dry raw material pigment and resin residues. This waste is usually collected with waste filters and used as an additional absorbent material as filters are added to the drum.

Basis for hazardous designation:

Assumed TCLP Toxic characteristics based on knowledge of the waste.



Laboratory Sarvices Division 5350 Campbells Run Road Pittsburgh, PA: 15205

REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

#### LAB ANALYSIS REFORT

CLIENT NAME:

PPG INDUSTRIES, INC.

ADDRESS:

ROSANNA DRIVE

ALLISON PARK,

15101

REPORT DATE: 05/15/85

HUS CLIENT NO: NUS SAMPLE NO: 320245 15040566

VENDOR NO:

01831710

WORK ORDER HO: 55830

ATTENTION:

CHRIS BARKA

DATE RECEIVED:

04/08/85

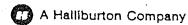
SAMPLE IDENTIFICATION: OC-85-0076-03 - Floor Sweepings

| TEST   | DETERMINATION              | RESULTS | UNITS   |
|--------|----------------------------|---------|---------|
| 1270   | RCRA METALS                | \       |         |
| H030   | Arsenic (As)               | 0.61    | ∌g/kg   |
| 1040   | Barium (Ba)                | 190     | æg/kg   |
| M090   | Cadmium (Cd)               | 0.5     | æg/kg   |
| 1140   | Chronium (Cr)              | 370     | ∎g/kg   |
| H200   | Lead (Pb)                  | 2300    | mg/kg   |
| 1250   | Mercury (Hg)               | 0.48    | mag/kg  |
| H290   | Selenium (Se)              | < 0.4   | ∌g/kg . |
| 1300   | Silver (Ag)                | < 1.0   | . ∎g/kg |
| X050   | Beryllium (Be)             | < 0.2   | ≥g/kg   |
| N110   | Calcium (Ca)               | 2200    | ng/kg   |
| H141   | Chromium, Hexavalent(Cr+6) | < 10    | - ∎g/kg |
| 1150   | Cobalt (Co)                | < 1.0   | ∎g/kg   |
| M160   | Copper (Cu)                | 1.0     | ng/kg   |
| 1190   | Iron, total (Fe)           | 33000   | ∌g/kg   |
| H230   | Magnesium (Mg)             | 330     | ≱g/kg   |
| 1240   | Manganese (Mn)             | 73      | ≱g/kg   |
| N270   | Nickel (Ni)                | < 3.0   | mg/kg   |
| ¥310   | Sodium (Na)                | 90      | mg/kg   |
| N320   | Strontium (Sr)             | 10      | æg/kg   |
| 1390   | Zinc (Zn)                  | . 27    | ∎g/kg   |
| S015   | I Ash 2 550 C              | 37      | 7       |
| \$0.40 | British Thermal Units      | 7600    | BTU/1b  |
| S120   | I Moisture (As received)   | 7.4     | Z.      |
| 3165   | I Solids, total at 103 C   | 92.8    | I       |
| S170   | Specific Gravity           | THI     | 4.74    |
| \$950  | Acid Digestion             |         |         |
| 5955   | Water Digestion            |         |         |
| 1490   | Hq                         | 6.9     |         |

eans detection imit COMMENTS:

C-1-U(-2)

Reviewed and Approved by: JHC





Laboratory Services Division 5350 Campbells Run Road Pittaburgh, PA 15205

REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

#### LAB ANALYSIS REPORT

CLIENT NAME:

PPG INDUSTRIES, INC.

ADDRESS:

ROSANNA DRIVE

ALLISON PARK,

PA 15101

MUS CLIENT NO:

320201

MUS SAMPLE NO:

15041484

VENDOR HO:

01831711 55830

REPORT DATE: 05/31/85

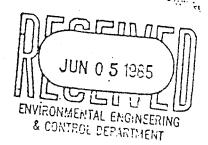
WORK ORDER NO: DATE RECEIVED:

04/19/85

ATTENTION: CHRIS BABKA

SAMPLE IDENTIFICATION: OC-85-6076-03A - Floor Sweepings Extract

| TEST  | DETERMINATION  | RESULTS                                | UNITS        |
|-------|----------------|----------------------------------------|--------------|
| 1270  | RCRA HETALS    | ###################################### | <del></del>  |
| H030  | Arsenic (As)   | 0.52                                   | <b>≥</b> g/l |
| 1040  | Barium (Ba)    | · 1                                    | æg/1         |
| H090  | Codmium (Cd)   | < 0.05                                 | mg/l         |
| ¥140  | Chromium (Cr)  | 1.0                                    | æg/l         |
| H200  | Lead (Pb)      | < 0.3                                  | mg/1         |
| 1250  | Mercury (Hg)   | 0.0003                                 | 16g/l        |
| H290  | Selenium (Se)  | < 0.04                                 | <b>≥</b> g/l |
| 1300  | Silver (Ag)    | < 0.1                                  | mg/1         |
| 5950  | Acid Digestion |                                        | •            |
| \$971 | Ashing         | •                                      |              |



COMMENTS: I means defeation limit

C-1-U(-3)

### C-1-V(-1)

#### ATTACHMENT VI-B-22

Floor Cleaning Solution (D005, D006, D008 and/or F003, F005) Possibly D001 if solvent solution

### General Description:

Liquid Usually a solvent mixture

Flash Point Possibly <140 F

Heating Value 1,000 - 16,000 BTU/LB

Total Resin Solids .5 - 1%

Total Pigment Solids <.5%

Solvents 95 - 99% if solvent solution

<5% if water solution

Water 1 - 5% if solvent solution

95 -99% if water solution

Weight/Gallon 7.3 - 8.5 LB/GAL

Solvent solution waste is added to Paint Plant Dirty Solvent waste to be recycled. Water solution waste is added to Paint Plant Washwater to be treated.

Basis for hazardous designation:

Assumed TCLP Toxic characteristics based on knowledge of the waste. If solvent solution, spent solvents are listed. Ignitability characteristic applies for solvents not listed.



Laboratory Services Division 5350 Campbells Run Road Pittsburgh, PA 15205

REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA. 15275

412-788-1080

#### REPORT ANALYSIS LAB

CLIENT NAME: PPG INDUSTRIES, INC.

ADDRESS: ROSANNA DRIVE

ALLISON PARK,

PA 15101

REPORT DATE: 05/15/85

NUS CLIENT NO: NUS SAMPLE NO:

15040563

VENDOR NO:

01831710

WORK ORDER NOT

55830 04/09/85

ENDITHATES CHRIS BARKA

DATE RECEIVED:

SAMPLE IDENTIFICATION: 00-85-0073-03 - Floor Cleaning Solution

| रहडर         | DETERMINATION              | • | RESULTS | UNITS             |                                         |
|--------------|----------------------------|---|---------|-------------------|-----------------------------------------|
| N270         | RCRA HETALS                |   |         |                   |                                         |
| 4030         | Arsenic (As)               |   | 0.065   | ng/l              |                                         |
| 1040         | Barium (Ba)                |   | 8       | mg/1              |                                         |
| H090         | Cadmium (Cd)               |   | < 0.05  | +g/1              | •                                       |
| N1.40        | Chromium (Cr)              |   | . 5.7   | <b>a</b> g/1      |                                         |
| H200         | Lead (Pb)                  |   | 14      | ±g/1              |                                         |
| 1250         | Mercury (Mg)               |   | 0.05    | ag/1              |                                         |
| X290         | Selenium (Se)              |   | < 0.04  | /sg/1             |                                         |
| 1300         | Silver (Ag)                |   | < 0.1   | <b>ag/1</b>       |                                         |
| <b>%050</b>  | Beryllium (Be)             |   | < 0.00  | <b>s</b> g/2      |                                         |
| *11 <u>^</u> | Calcium (Ca)               |   | 17      | #g/1              |                                         |
| X141         | Chromium, Hemovalent(Crt6) |   | INT     |                   |                                         |
| N150         | Cobalt (Co)                | • | < 0.1   | %g/l              | •                                       |
| X160         | Copper (Cu)                |   | 0.7     | mg/1              |                                         |
| 1190         | Iron,total (Fe)            |   | 150     | %g/l              |                                         |
| K230         | Magnesium (Mg)             |   | *       | <b>2</b> g/1      |                                         |
| X240         | Manganese (Mn.)            |   | • E     | <b>ag/1</b>       |                                         |
| ¥276         | Mickel (Mi)                |   | 4.6.7   | <b>∌</b> g/l      | r                                       |
| 1310         | Sodium (No)                |   | 35      | aς/λ              | ٥                                       |
| M320         | Stronting (Sr)             |   | ż       | ag/1              |                                         |
| #360         | Zinc (Zn)                  |   | F 0     | ag./1             | MAY 1 6, 1985  MELSTEIN TE              |
| 0501         | Xylenes                    |   | 77000   | ag/1              | 1985 1985 1985 1985 1985 1985 1985 1985 |
| 9504         | Acetore                    |   | < 9000  | mg/1              |                                         |
| 3535         | 2-butanone                 |   | 22000   | mg/1              | 2 = 1 0 L                               |
| <b>3</b> F68 | 4-methyl-2-pentanone       |   | 96000   | <b>¥</b> g/1      | FINAY 1 SONMENT                         |
| ರಿ∍೨ಕ        | Styrene                    |   | 4000    | #\$ <sup>22</sup> | 클릭식 등 민                                 |
| 0.K32        | Rutyl Cellosolve           |   | 28000   | ag/1              |                                         |
| 0,458        | i-Butanol                  |   | 290000  | <b>E</b> g/\(\)   |                                         |
| 3879         | Cellosolve Acetate         |   | < 1000  | ± <u>⊈</u> /1_ °  |                                         |
| 5003         | Berizene                   |   | < 4000  | mg/1              |                                         |
| 9V22         | Methylene Chloride         |   | < 4000  | Mg/1              |                                         |
| 5040         | British Thermal Units      |   | 14000   | ETU/16            |                                         |

C-1-V(-2)

PAGE NO: 1





Laboratory Services Division 5350 Campbells Run Road Pittsburgh, PA 15205

REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

#### LAB ANALYSIS REPORT

CLIENT MAKE:

PPG INDUSTRIES, INC.

ADDRESS:

260 KAPPA DRIVE

PITISBURGH.

PA

15238

REPORT DATE: 07/02/85

MUS SAMPLE NO: VENDOR NO:

HUS CLIENT NO:

15040563 01831710

320245

55830

WORK DRIDER NO: DATE RECEIVED: 04/08/85

ATTENTION: MS. CHRIS BABKA

SAMPLE IDENTIFICATION: 0C-85-0073-03 - Floor Cleaning Solution

| TEST         | DETERMINATION               | RESULTS | UNITS          |
|--------------|-----------------------------|---------|----------------|
| \$064        | Chlorine, Organic           | 0.7     | 7              |
| \$098        | Fluorine, Organic           | 0.01    | Z              |
| \$168        | Specific Weight             | 7.3     | lb/gal         |
| · \$190      | Sulfur, total               | < 0.05  | z              |
| \$195        | I Water (Karl Fisher)       | 1.4     | 7              |
| \$210        | Viscosity                   | 6.0     | CP C           |
| \$950        | Acid Digestion              |         |                |
| \$971        | Ashing                      |         |                |
| \$980        | Oxygen Bomb Preparation     |         |                |
| ₩022         | Alkalinity, Total (CaCO3)   | 100     | mg/l           |
| 1032         | Ammonia as M (distillation) | 1.4     | mg/1           |
| ¥050         | BOD, 5-day (O2)             | IHI     | •              |
| 1120         | COD (02)                    | TXI     |                |
| ¥270         | Cyanide, total (CX)         | 0.1     | <b>≥</b> g/1   |
| 1435         | Hitrogen, Kjeldohl (H)      | 120     | mg/1           |
| W440         | Mitrogen, Organic (N)       | 120     | . <b>≥</b> g/1 |
| #200         | Phenolics                   | 9.8     | <b>≥</b> g/1   |
| ¥590         | Solids, dissolved at 180 C  | 5190    | . mg/l         |
| 1610         | Solids, suspended at 103 C  | 900     | <b>≥</b> g/1   |
| <b>W</b> 625 | Solids, vol total at 550 C  | 0033    | mq/l           |



THMENTS: INT on analyses because sample was not water soluble. REVISED DISSOLVED AND SUSPENDED SOLIDS DATA. < means detection limit. Benzene and chlorinated compounds are much less than detection limits. C-1-V(-3)



Laboratory Services Division 5350 Campbells Run Road Pittsburgh, PA 15205

REMIT TO: Park West Two Cliff Mine Road Pittsburgh, PA 15275

412-788-1080

#### REFORT LAE ANALYSIS

CLIENT NAME: PPG INDUSTRIES, INC.

ADDRESS:

ROSANNA DRIVE

ALLISON PARK,

PA 15101

REPORT DATE: 05/31/85

HUS CLIENT NO: 'NUS SAMPLE NO: 15041217

320237

VENDOR NO:

01831710

WORK ORDER NO: DATE RECEIVED: 55830 04/17/85

ATTENTION: MS. C. BABKA

SAMPLE IDENTIFICATION: OC-85-0073-03A - Floor Cleaning Solution Extract

| TEST   | DETERMINATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | RESULTS         | UNITS          |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------|
|        | all the sain was with sometime street, and with with win all the sain all the sain all the sain and the sain all the sain |                 |                |
| 1270   | RCRA HETALS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | •               |                |
| H030   | Arsenic (As)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0.32            | <b>∌</b> g/l   |
| 1040   | Barium (Ba)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>&lt; 1</b>   | . <b>≥</b> g/1 |
| H090   | Cadmium (Cd)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | < 0.05          | mg/l           |
| 1140   | Chromium (Cr)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0.1             | <b>≥</b> g/l   |
| N200   | Lead (Pb)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | < 0.3           | <b>a</b> g/1   |
| 1250   | Mercury (Hg)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | ′ <b>0.</b> 009 | <b>≥</b> g/1   |
| N290   | Selenium (Se)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0.22            | mg/1           |
| . 1300 | Silver (Ag)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | < 0.1           | <b>≥</b> g/1   |
| 5950   | Acid Digestion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |                |
| \$971  | Ashing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                 |                |



¿means deterior limit

C-1-V(-4)

Reviewed and Approved by: JMC



A Halliburton Company

CLIENT ORIGINAL

PPG Industries, Inc. Rosanna Drive P.O. Box 9 Allison Park, Pennsylvania 15101 (412) 487-4500

Research Center Coatings and Resins Division

#### PPG ENVIRONMENTAL LAB REPORT

SAMPLE #:

LOCATION:

DATE REC'D:

DATE SAMPLED:

ANALYSIS RESULTS

SOLIDS

10 gr INIT. DiH20 1760m FINAL DiH20

ACID SOLN.

INIT. pH

F.PT.

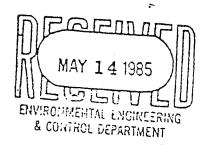
% SOLIDS

C.O.D.

mg/1

OTHER:

7.8



PROCEDURES AND COMMENTS:

5W-846 METHOD 1310 (TEP) ASTM D-93-TT (FLASH 70=NT) HACH METHOD (EPA ACCEPTED) MODEL 16500 (COD)

C-1-V(-5)

C-1-W(-1)

ATTACHMENT VI-B-23

Discarded or Spilled Raw Materials (P000 - U000 - D000 Codes)

General Description:

See attached Table for list of chemicals and their physical properties. These materials are only wastes if discarded or spilled.

Basis for hazardous designation:

Listed and/or characteristic if discarded or spilled. Physical properties can be obtained from Material Safety Data Sheets or Raw Material Suppler information.

C-1. Attachment W. Discarded or Spilled Raw Materials

|               |                                  |                        |           |              |           | •           |                   |          |            |                                       |
|---------------|----------------------------------|------------------------|-----------|--------------|-----------|-------------|-------------------|----------|------------|---------------------------------------|
| EPA           |                                  | -                      |           |              |           | PHYSICAL    | PROPERTIES        |          |            | · · · · · · · · · · · · · · · · · · · |
| Was t<br>Code |                                  | PPG<br>Code            | f.pt., op | wt/gal       | b.pt., or | V.P., ma Hy | Physical<br>State | 1 Solids | 1 Ash      | Other                                 |
| P092          | Phenylmercuric acetate           | AHC-207                | 240       | 10.40        |           |             | Liquid            | 30       | 12.1       | 181 Hg metal                          |
| U002          | Acetone                          | SKG-71                 | 0         | 6.61         | 134       | 186         | Liquid            | 1        | 1          | 1                                     |
| U007          | Acrylamide Acrylamide briquettes | 1040-1932<br>1040-1909 |           | 9.11<br>9.11 |           |             | Solid<br>Solid?   |          |            |                                       |
| U008          | Acrylic acid                     | MX-9393                | 130       | 8.79         | 287       | 4.0         | Liquid            | 1        |            |                                       |
| U031          | n-butyl alcohol                  | SAA-38                 | 84        | 6.75         | 243       | 5.5         | Liquid            | 1        |            |                                       |
| U056          | Cyclohexane                      | SLE-1509               | 0         | 6.52         | 179       | 78          | Liquid            | 1        |            |                                       |
| U057          | Cyclohexanone                    | SKP-905                | 111       | 7.91         | 313       | 3.4         | Liquid            | 1        |            |                                       |
| 0069          | di-n-butyl phthalate             | FOJ-3089               | 340       | 8.73         | 635       |             | Solid             | 1        |            |                                       |
| 0080          | Dichloromethane                  | 75-10                  | 1         | 1            | 1         | <del></del> | 1                 |          |            | paint strippe                         |
| U107          | di-n-octyl phthalate             | POE-158                | 125       | 8.21         |           |             | Solid             | 1        | .          |                                       |
| U112          | Ethyl acetate                    | SSE-255                | 24        | 7.51         | 171       | 76          | Liquid 4          |          | 1          |                                       |
| U113          | Ethyl acrylate                   | KM-285                 | 48        | 7.7          | 211       | 31          | Liquid            |          |            |                                       |
| U122          | Formaldehyde                     | KZL-1893               | 166       | 8.13         | 219       | 22          | Liquid            |          |            | 40% dissolved<br>in n-butanol         |
| U123          | Pomic acid                       | ЮВ-5274                | 122       | 10.1         | 213       | 33          | Liquid            | 1        | 1          |                                       |
| U140          | Isobutyl alcohol                 | SAM-49                 | 82        | 6.68         | 225       | 8           | Liquid            | 1        | 1          |                                       |
| U147          | Haleic anhydride                 | KIK-377                | 215       | 12.31        | 395       | 0.15        | Solid             | 1        | 1          |                                       |
| U154          | Hethanol .                       | SAE-95                 | 52        | 6.62         | 147       | 97          | Liquid            | 1        | }          |                                       |
| U159          | Hethyl ethyl ketone              | SKP-74                 | 16        | 6.71         | 176       | 71.2        | Liquid            | 1        | -          |                                       |
| U161          | Methyl isobutyl ketone           | SNI-8690               | 64        | 6.68         | 244       | 16          | Liquid            | ]        | 1          | <del></del>                           |
| U162          | Hethyl methacrylate              | KMJ-398                | 50        | 7.89         | 212       | 29          | solid             |          |            |                                       |
| U190          | Phthalic anhydride               | NIA-254                | 305       | 12.75        | 543       | <1          | Solid             |          | 1          |                                       |
| U197          | p-benzoquinone                   | KJV-953 J              | 1         | 11           |           | 0.1         | Solid             | 1        | 1          |                                       |
| U220          | Toluene                          | SRT-87                 | 40        | 7.21         | 231       | 22.4        | Liquid            | 1        | 1          |                                       |
| U223          | Toluene diisocyanate             | KQX-747                | 270       | 10.17        | 484       | 0.01        | Solid             | 1        | <u>-</u> - |                                       |
| U239          | Xylene                           | SDC-75                 | 81 (      | 7.16         | 281       | 6.3         | Liquid            | i        | i          |                                       |

C-1-X(-1)

ATTACHMENT VI-B-24

Off-site Wastes

General Description:

Off specification or obsolete products and/or wastes are occasionally returned to PPG Oak Creek from offsite PPG product distribution centers. The materials are returned in small containers, and consolidated with other PPG Oak Creek wastes. These materials may consist of the same categories of waste that PPG Oak Creek generates:

Solvent Base Paint Waste

Water Base Paint Waste

Dirty Solvent

Washwater

The majority of the wastes come from small quantity generators.

Basis for hazardous designation:

Assumed TCLP Toxic characteristics and/or ignitable based on knowledge of the wastes and similarity to other PPG wastes.

C-1-Z(-1)

ATTACHMENT VI-B-26

Laboratory Paint and Resin Wastes (Possibly D001, D002, D003, D004, D005, D006, D007, D008)

General Description:

Quality control samples taken from the production processes are discarded after analysis is complete and they are no longer needed. Samples are segregated by type, e.g. paint, resin, raw material, and by compatibility, e.g. corrosive versus flammable. These wastes are handled in the same manner as similar production wastes.

Basis for hazardous designation:

Assumed hazardous based on knowledge of products and raw materials.

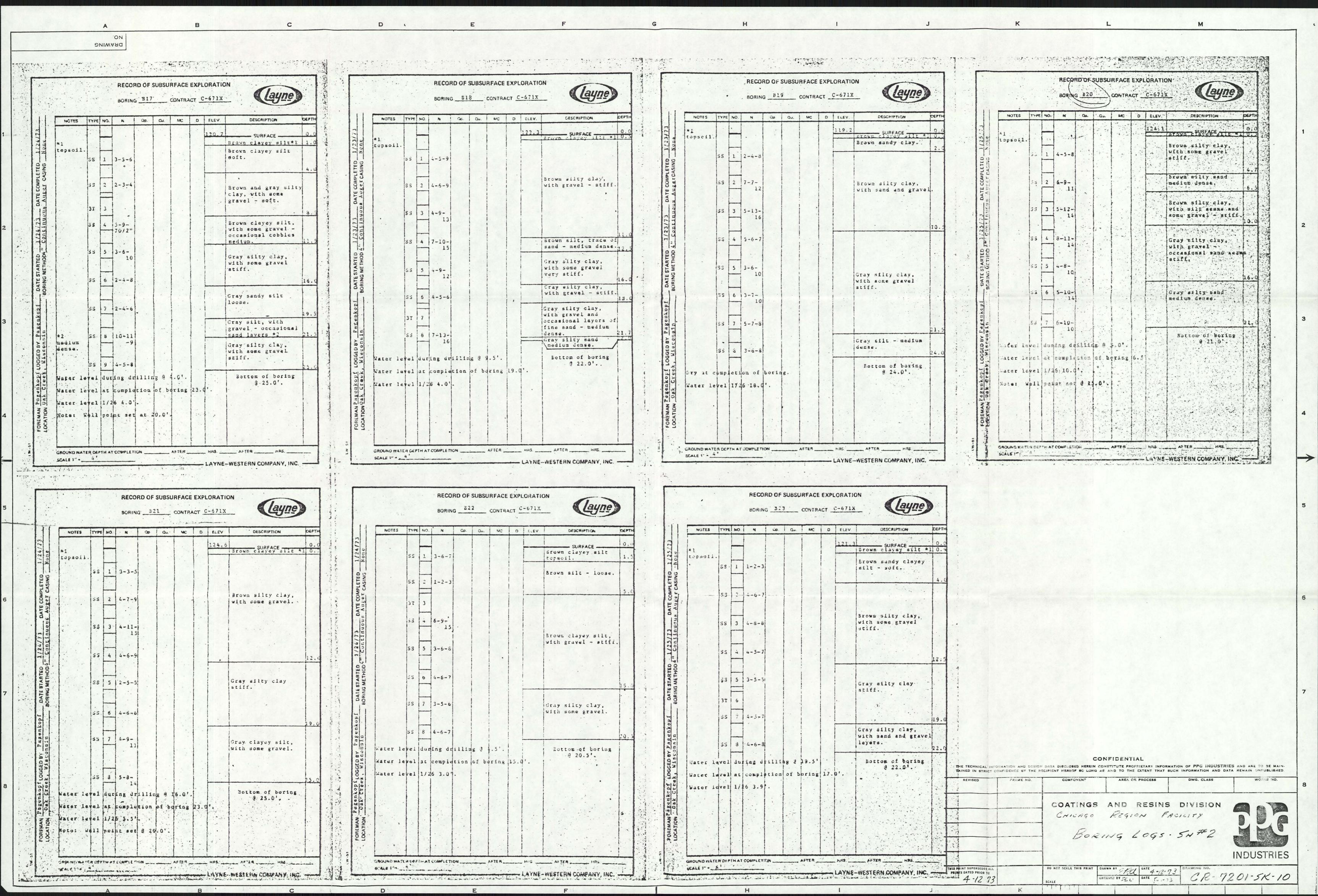
### C

## Soil Boring Logs

- C1 LAYNE-WESTERN COMPANY, INC., 1973
- C2 WARZYN ENGINEERING, INC., 1981
- C3 O.H. MATERIALS CORP., 1987
- C4 GERAGHTY & MILLER, 1987
- C5 WARZYN INC., 1992

C1

LAYNE - WESTERN COMPANY INC., 1973



DRAWING RECORD OF SUBSURFACE EXPLORATION BORING B25 CONTRACT C-671X BORING 824 CONTRACT C-671X BORING 326 CONTRACT C-671X BORING B27 CONTRACT C-6715 NOTES TYPE NO. N OD. OU. MC D ELEV NOTES TYPE NO. N | Qp. | Qu. MC D ELEV. NOTES TYPE NO. N OD OL MC D ELEV. NOTES TYPE NO. N. OD. DE MO DELEV! Brown clayey silt \*1 0. SURFACE 0. Brown clayey silt \*1 0. Brown clayey silt \*1 0.3 Brown clayey silt #1 0. topsoil. | 53 | 1 | 5-5-51 topsoil. Brown clayey silt topacil. topsoil. Brown silty clay, with some gravel Brown clayey silt, very stiff. with sand and gravel medium. Brown silty clay. 55 2 6-11with some gravel SS 3 3-6-9 Brown silty clay, very stiff. 38 3 16-14with some gravel Brown sandy slit very stiff. medium dense. Brown silty clay, SS 3 6-12-ISS 3 5-10with some gravel very stiff. 53 4 15-24 39 4 9-12-33 4 18-10-SS 5 7-8-SS 5 6-11-Gray silt - medium dense. Gray silty clay, Gray silty clay, 135 | 5 | 3-6-81 35 5 4-5-7 with some gravel \*2 hs Gray silty clay, with some gravel. Sand and gravel seam stiff. with gravel - etlff SS 6 5-8-35 | 6 | 6-6-6 Bottom of boring Gray fine sand \*2 16. 3 15.0'. medium Grav silty clay, with some gravel. Bottom of boring SS. 6 4-6-Dry at completion of boring. @ 16.0'. Bottom of boring Water lavel during drilling @ Water level 1/26 13.0' @ 16.5'. Mater level during drilling ! 11:5' Dry at completion of boring. Gray clayer silk later level at completion of boring 12.4' Water level 1/26 2.01 Water level 1/26 3.0" Gray fine stiry sand, with gravel - medium Bottom of boring € 25.01. Dry at chapletion of borlds. GROUND WATER DEPTH AT COMPLETION AFTER HPS. AFTER BROUND WATER DEPTH AT COMPLETION AFTER HAS AFTER HAS LAYNE-WESTERN COMPANY, INC. RECORD OF SUBSURFACE EXPLORATION RECORD OF SUBSURFACE EXPLORATION RECORD OF SUBSURFACE EXPLORATION Layne BORING B29 CONTRACT C-671X BORING B30 CONTRACT C-671X BORING B28 CONTRACT C-671X NOTES TYPE NO. | N | OD | On | " D | ELEV NOTES TYPE NO N CO. CO MC . D ELEV. DESCRIPTION NOTES TYPE NO. N OF OU MG D ELEY. DESCRIPTION . DESCRIPTION Brown clayer silt \*1 0. Brown clayey silt \*1 1 Dark brown clayey \*1 0. topsoil. topsoil. SS 1 6-6-4 Brown clayey silt. Lopsoil. stiff, 55 1 3-5-Brown stilty clay, brown sand and graves with some gravel medium dense. stiff. 55 2 7-5-7 Brewn ailty clay #2 5. 55 2 7-9-\$5 2 6-12-Brown silty clay Bottom of boring with some gravel. 3 3.0'. Brown silt with Water level during drilling 2 1.0'. sand, seams - medium SS 3 6-13-55 3 4-9dense. Water level at completion of boring 3.0" 155 4 12-4-6 SS 4 6-8-Water level during drilling @ 7.0' Grav silty clay, 88 5 3-6-6 with some gravel stiff. Gray silty clay Water level at completion of horing 25.d' with gravel - stiff. 59 6 4-8-8 135 6 A-5-7 Water level 1/26 7.5" 85 7 3-3-5 155 7 44-4-7 ray silt with .\* 2 sand seaks Bottom of boring Note: Well point set at 20.0' inosé. Gray clayey silt @ 21.0'. CONFIDENTIAL very stiff. 155 8 6-9-THE TECHNICAL INFORMATION AND DESIGN DATA DISCLOSED HERRIN CONSTITUTE PROPRIETARY INFORMATION OF PPG INDUSTRIES AND ARE TO BE MAIN. Water level during duilling 3 13.0' TAINED IN STRICT CONFIDENCE BY THE RECIPIENT MERSOF BO LONG AS AND TO THE EXTENT THAT SUCH INFORMATION AND DATA REMAIN UNPUBLISHED. Gray: sandy silt WORKS NO. DWG. CLASS Water level at completion of boring 16.0'. medium dense. 58 9 5-8-Water level 1/26 3.9 CHICAGO REGION FACILITY tota: Well point set at 17.0" Gray silty clay, with gravel - dense. 59 10 9-17-BORING LOGS SH. #3 Bertom of boring . 0 30.0". INDUSTRIES GACHNERWATER DEFTH AT COMPLETION ... AFTER HRS. AFTER HRS. GROUND WATER DEPTH AT COMPLETION AFTER HRS. AFTER HRS. GROUND WATER DEPTN AT COMPLETION AFTER HRS HRS HRS LAYNE-WESTERN COMPANY, INC. PHINT SUPERSEDES ALL DO NOT SCALE THIS PRINT DRAWN BY TO DATE 4-12-73 LAYNE- WESTERN COMPANY, INC. LAYNE-WESTERN COMPANY, INC. CR-7201-5K-11 K

C2

WARZYN ENGINEERING INC., 1981

# WARZYN SINEERING INC

## LOG OF TEST BORING

Project PPG Industries, Inc.

Location Oak Creek, Wisconsin

Boring No. TW-1
Surface Elevation ...115.2.
Job No. C 10021
Sheet 1 of 1

1409 EMIL STREET • P.O. BOX 9538, MADISON, WIS. 53715 • TEL. (608) 257 40 45

|                 | S                                            | AM        | PL                       | E    |                         | 7.6. 3338, MADISON, WIS. 53715 • TEL. (60                        | т        |                                         |     |               | =            |
|-----------------|----------------------------------------------|-----------|--------------------------|------|-------------------------|------------------------------------------------------------------|----------|-----------------------------------------|-----|---------------|--------------|
|                 | Reco                                         | very      | Mois                     | ture |                         | VISUAL CLASSIFICATION                                            | 130      | IL PF                                   | 70P | ERT           | IES \        |
| <b>Но.</b>      | Туре                                         | +         | +                        | Н    | Depth                   | and Remarks 3" Black Topsoil                                     | qu       | . <b>W</b>                              | LL  | PL            | 0            |
| , 1             | SS                                           | Х         |                          | 3.4  | -                       |                                                                  | -        |                                         | L   | <u> </u>      |              |
| <u> </u>        | 33                                           |           |                          | 14   |                         | Brown Clayey SILT (FILL) (ML)                                    | <u></u>  |                                         |     |               |              |
| 2               | SS                                           | - X       | . M                      | 9    | <br>5                   | 3 -3 (11L)                                                       | <u> </u> |                                         |     |               |              |
| 3               | SS                                           | X         | M                        | 22   |                         |                                                                  |          |                                         |     |               |              |
| Δ               |                                              | <u>-</u>  |                          |      | <u> </u>                |                                                                  |          |                                         |     |               |              |
|                 | _SS                                          | <u> </u>  | <u>M</u>                 | 14   | 10-                     | Brown Clayey SILT Little to<br>Some Sand Trace Gravel (ML)       |          |                                         |     |               |              |
| L               |                                              |           |                          |      | <u> </u>                | a. a.c. (III)                                                    |          |                                         |     |               | -            |
| 5               | ss.                                          | <u> X</u> | M                        | 29   | <br>15                  |                                                                  | -        |                                         |     |               |              |
| 3 <u>3</u>      |                                              | ·         | - · ·-                   |      |                         | Stiff Brown Silty CLAY Trace<br>to Little Sand Trace Gravel (CL) |          |                                         |     |               |              |
| 6               | SS                                           | <u>X</u>  | W                        | 39   | <br>20                  |                                                                  | -        |                                         |     | ·             |              |
|                 | -                                            |           |                          |      |                         | End Boring at 20'                                                |          |                                         |     |               |              |
|                 |                                              |           |                          |      | 25<br>                  |                                                                  |          |                                         | ·   |               |              |
|                 |                                              |           |                          |      |                         |                                                                  |          |                                         | ·   |               |              |
|                 |                                              |           |                          |      | - 30 -                  |                                                                  |          |                                         |     |               |              |
|                 |                                              |           |                          |      | -<br>-<br>- 35 -        |                                                                  |          |                                         |     |               |              |
|                 |                                              |           |                          |      | _ ·<br>_ ·              |                                                                  |          | •                                       |     |               | -            |
|                 |                                              |           |                          |      | - 10                    | • • • • • • • • • • • • • • • • • • • •                          | <u> </u> |                                         |     |               |              |
|                 | <u>                                     </u> |           | W                        | 'AT  | ER                      | LEVEL OBSERVATIONS                                               |          |                                         |     |               |              |
| Wh              | ile Di                                       | illing    |                          | •    |                         | ELVEL OBSERVATIONS                                               | GE       | NER                                     | AL  | NO-           | TES          |
| lp<br>Tin<br>De |                                              | ter C     | etion<br>Orilling<br>ter | g _1 | rilling<br>k hou<br>14' |                                                                  | Star     | <sub>t</sub> 7/1/8<br>v Chief<br>ng Met | JVS | nplete<br>Rig | 7/1/81<br>50 |
| <u>'</u>        | <del></del>                                  |           |                          |      |                         |                                                                  |          |                                         |     |               |              |

# WARZYN ENGINEERING INC

| L |  | G |  | F | T | E | 5 | T | B |  | R | H | V | C | 3 |
|---|--|---|--|---|---|---|---|---|---|--|---|---|---|---|---|
|---|--|---|--|---|---|---|---|---|---|--|---|---|---|---|---|

| Project  | PPG | Indust                          | ies, | Inc                                     | *************************************** |
|----------|-----|---------------------------------|------|-----------------------------------------|-----------------------------------------|
| Location |     | · · · · · · · · · · · · · · · · |      | • • • • • • • • • • • • • • • • • • • • |                                         |

| Boring No. | TW-2                      |
|------------|---------------------------|
| Surface E  | levation 114.5            |
| Job No     | levation 114.5<br>C 10021 |
| Sheet      | 1 of1                     |

1409 EMIL STREET • P.O. BOX 9538, MADISON, WIS. 53715 • TEL. (608) 257-4848.

|       | ς              | ΔλΛ             | PL       |          |                   |                                                      | T        |         |        |       |        |
|-------|----------------|-----------------|----------|----------|-------------------|------------------------------------------------------|----------|---------|--------|-------|--------|
|       |                | very            |          |          | <del></del>       | VISUAL CLASSIFICATION                                | SO       | IL PF   | 70P    | ERT   | TES    |
| No.   | Туре           |                 | 111013   | N        | Depth             | and Remarks                                          | qu       | W       | ll     | Pί    |        |
|       |                |                 |          |          | -                 |                                                      | ļ        | . "     | L.L.   | PL    | D      |
| 1     | SS             | Χ               | M        | 22       | _                 | Brown Clayey SILT (FILL) (ML)                        |          | -       |        |       |        |
| 2     |                | ~v              |          | 3.4      |                   |                                                      |          |         |        |       |        |
|       | 23             | _X              | M        | 14       | <u> </u>          |                                                      |          |         |        |       |        |
| _3_   | SS             | . X             | <u>M</u> | 42       |                   | Stiff Draw Cili Oliv -                               |          |         | ļ      |       |        |
| <br>4 | 22             |                 | - ·      |          |                   | Stiff Brown Silty CLAY Trace<br>Sand and Gravel (CL) |          |         |        |       |        |
| 4     | 22             | _X              | M        | 14       | 10-               |                                                      |          |         |        |       |        |
|       |                |                 | ,        |          |                   |                                                      |          |         |        |       |        |
|       |                |                 |          |          | E                 |                                                      | ļ        |         |        |       |        |
| 5     | _\$\$          | <u>X</u>        | <u>W</u> | 15       | 15-               |                                                      |          |         |        |       |        |
|       |                |                 |          |          |                   |                                                      |          |         |        |       |        |
|       |                |                 | -        |          |                   |                                                      |          |         |        |       |        |
| 6_    | SS             | <u>.x</u> .     | W        | ·23      | 20 –              |                                                      |          | -       |        |       |        |
|       |                |                 |          | 1        | E                 |                                                      |          |         |        |       |        |
|       |                |                 |          |          | E                 |                                                      |          |         |        |       |        |
| 7     | SS             | <u>X</u>        | M        | 44       | 25                |                                                      |          |         |        |       |        |
|       |                |                 |          |          | E                 | End Boring at 25'                                    |          |         |        | ,     |        |
|       |                |                 |          | <u> </u> | <u></u>           |                                                      |          |         |        |       |        |
|       |                |                 |          |          | 30 —              |                                                      |          |         |        |       |        |
|       | ,              |                 | -        |          | E                 |                                                      |          |         |        |       |        |
|       |                |                 |          |          | <u> </u>          |                                                      |          |         |        |       |        |
|       | -              |                 | -        |          | 35_               |                                                      |          |         |        |       |        |
|       |                |                 |          |          | E                 | ·-                                                   |          |         |        |       |        |
|       |                |                 |          |          | E                 |                                                      | <u> </u> |         |        |       |        |
|       |                |                 |          |          | 40-               |                                                      |          |         |        |       |        |
|       |                | • •             | W        | 'AT      | ER                | LEVEL OBSERVATIONS                                   | GF       | ENER    | ΔΙ     | NO-   | FEC    |
|       | ile Di         |                 |          | <u></u>  |                   |                                                      | Star     | 7/1/81  |        | 7     | 7/1/81 |
|       | on Co<br>ne Af |                 |          | of C     | Drilling<br>날 hoi | ur 12 hours 18 hours                                 | Crev     | v Chief | 772 E  | Rig5  | 50     |
| De    | pth to         | Wa              | ter '    |          | 19'               | 9' 9'                                                | Drilli   | ing Met | hod .  | FA O- | 25'    |
| De    | pth to         | Ca <sub>v</sub> | ve In    |          |                   |                                                      |          | ••••    | •••••• |       | •••••• |
|       |                |                 |          |          |                   |                                                      |          |         |        | • •   | /      |

# WARZYN EN JINEERING INC

| L | O | G | Ö | F | T | E | 5 | T | B |  | R | (percent) | N | C |
|---|---|---|---|---|---|---|---|---|---|--|---|-----------|---|---|
|---|---|---|---|---|---|---|---|---|---|--|---|-----------|---|---|

| Project  | PPG Industries, Inc. | Surface Elevation 115.4 |
|----------|----------------------|-------------------------|
|          |                      | JOB NO. C 10021         |
| Location | Oak Creek, Wisconsin | Sheet 1 of 1            |

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|     | S            | ΔM                   | PLI                 |        |          |      | VISUAL 0                  | CI ASSI              | FICAT               | ION        | S | :OI | _ PF                     | ROPI               | ERT                | IES              |           |
|-----|--------------|----------------------|---------------------|--------|----------|------|---------------------------|----------------------|---------------------|------------|---|-----|--------------------------|--------------------|--------------------|------------------|-----------|
|     | Reco         | very                 | Mois                | ture   |          |      |                           | d Rema               |                     |            |   | qu  | ₩                        | LL                 | PL                 | ۵                | ŀ         |
| No. | Type         | + -                  | +                   | н      | Depth    |      | 4" Crushed                | Rock                 |                     |            |   | -   |                          | 1                  |                    |                  | _         |
| _1  | SS           | <br>X_               | M                   | 14     | -        |      | Brown Claye               | y SILT (F            | FILL) (M            | IL)        |   |     |                          |                    |                    |                  |           |
| 2.  | SS           | X                    | M                   | 17.    | <br>5    |      |                           |                      | * .                 |            |   |     |                          |                    |                    |                  |           |
| 3   |              | ·                    |                     | 21     |          |      | Brown Silty<br>Sand Trace | /CLAY Li<br>Gravel ( | ttle to<br>CL,CL-MI | Some<br>L) |   |     |                          |                    |                    |                  |           |
| 5   |              | 5X                   | 1                   | 1 10   | 15       |      |                           |                      |                     |            | - |     | -                        |                    |                    |                  |           |
| 1   | <u>i   s</u> | s                    |                     | 1 12   | 20       |      | End                       | Boring               | a + 201             |            |   |     |                          |                    | -                  |                  |           |
|     |              |                      |                     |        |          | 5 -  | Liid                      | Botting              | u C 20              |            | • |     |                          |                    |                    |                  |           |
|     |              | -                    |                     |        |          | 35 — |                           |                      |                     |            |   |     |                          |                    |                    |                  |           |
|     |              | _                    |                     |        | <u> </u> | 40-  |                           |                      |                     |            |   | -   |                          |                    | <u> </u>           |                  |           |
|     |              | n Co<br>Aft<br>th to | mple<br>er D<br>Wal | tion o | of Dri   |      | 6 hours                   | ERVAT                |                     |            |   | S   | 7/2/<br>rew C<br>rilling | /81<br>. (<br>hief | Compl<br>VS<br>Ric | 7/<br>lete<br>55 | 2/81<br>0 |

# WARZYN ENGINEERING INC

## LOG OF TEST BORING

| Project                                 | PPG Industries, Inc. |
|-----------------------------------------|----------------------|
| • • • • • • • • • • • • • • • • • • • • |                      |
| Location                                | Oak Creek, Wisconsin |

| Boring No. TW-4         |
|-------------------------|
| Surface Elevation 114.9 |
| Job No. C 10021         |
| Sheet                   |

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|            | SAMPLE  Recovery   Moisture |             |            |              |          | VISUAL CLASSIFICATION                             | so           | IL PF    | 30P      | EDT                | -156         |
|------------|-----------------------------|-------------|------------|--------------|----------|---------------------------------------------------|--------------|----------|----------|--------------------|--------------|
|            | Reco                        | very        | Mais       | ture         |          | VISUAL CLASSIFICATION and Remarks                 | -            |          |          |                    | 155          |
| No.        | Type                        | +           | +          | Н            | Depth    | 6" Crushed Rock                                   | Qu           | ₩        | ll       | PL                 | 0            |
|            |                             |             |            |              | E        | o crasnea noch                                    |              | <u> </u> | <u> </u> |                    |              |
| _1_        | SS                          | <u>X</u>    | <u>M</u> . | _8_          | <u> </u> | Brown Clayey SILT (FILL) (ML)                     |              |          |          |                    |              |
|            |                             |             |            |              | -        |                                                   | ļ.—          |          |          |                    |              |
| 2          | SS                          | Х           | _M         | 22           | 5 –      |                                                   |              |          |          | -                  |              |
|            |                             |             |            |              | F        |                                                   |              |          |          |                    |              |
| 3_         | .33                         | X.          | _M_        | 42_          | E        | Stiff Prove Silty Clay -                          |              |          |          |                    |              |
| 4          | .ss                         | _X_         | M_         | 29           | -        | Stiff Brown Silty CLAY Trace Sand and Gravel (CL) |              |          | ļ        |                    |              |
|            |                             |             |            | <u> </u>     | 10-      |                                                   | <u> </u>     |          |          |                    |              |
|            |                             | :           |            |              |          |                                                   |              |          |          |                    |              |
|            |                             |             |            |              |          |                                                   |              |          |          |                    |              |
| _5_        | _SS                         | _X_         | _M_        | 12           | 15-      |                                                   |              |          |          |                    | -            |
|            |                             |             |            |              | F        |                                                   |              |          |          | ļ                  |              |
|            |                             |             |            |              | E        |                                                   |              |          |          |                    |              |
| 6          | _SS                         | <u>X</u>    | М          | 15           | F        |                                                   |              |          |          |                    | -            |
|            |                             |             |            |              | 20-      | End Boring at 20'                                 | <del> </del> |          |          |                    |              |
|            |                             |             |            |              |          | the borning at 20.                                |              |          |          | ٠.,                |              |
|            |                             |             |            |              |          |                                                   |              |          |          |                    |              |
|            |                             |             |            | <del> </del> | 25-      |                                                   |              |          |          |                    |              |
|            |                             |             |            |              | E        |                                                   |              |          |          |                    |              |
|            |                             |             |            |              | _        |                                                   |              |          |          |                    |              |
|            |                             |             |            |              |          |                                                   |              |          |          |                    |              |
|            |                             |             |            |              |          |                                                   | -            |          |          |                    |              |
|            |                             |             |            |              | F-       |                                                   | 1:           |          |          |                    |              |
| <b></b>    | •                           |             |            |              | E I      |                                                   |              |          |          |                    |              |
|            |                             |             |            |              | 35       |                                                   |              |          |          |                    |              |
| ·          |                             |             |            |              | E        |                                                   |              | }        |          |                    |              |
| <b> </b> - |                             |             |            |              |          |                                                   | l            |          |          | 1                  |              |
|            |                             |             |            |              | -40-     |                                                   | -            |          | <u> </u> |                    | <del> </del> |
|            |                             | <del></del> | W          | ΆT           | <u></u>  | LEVEL OBSERVATIONS                                | <u> </u>     | <u> </u> | <u> </u> | <u> </u>           | <u> </u>     |
| \\/h       | ile Dr                      |             |            |              |          | LLVLL OBSERVATIONS                                | GE           | ENER     | AL       | NO.                | TES          |
| 777 6      |                             | _           |            | of $\Gamma$  | Orilling |                                                   | Star         | [/2/81   | . Com    | plete              | 7/2/81       |
| Tim        | ne Af                       | ter C       | Prillin    |              |          |                                                   | Crev         | v Chief  | 942 L    | ۹ig . <sup>5</sup> | 50           |
| 3          | oth to                      |             |            |              |          |                                                   | Drilli       | ing Met  | hod .    | FA 0               | -20'         |
| Der        | oth to                      | Cav         | ve In      | <b></b>      |          |                                                   |              |          | ••••••   |                    | •••••••      |
|            |                             |             |            |              |          |                                                   |              |          | • ••     | • • • •            | ,            |

# WARZYN SINEERING INC

## LOG OF TEST BORING

Project PPG Industries, Inc.

Location Oak Creek, Wisconsin

| Boring No.        | TW-5  |
|-------------------|-------|
| Surface Elevation | 124.0 |
| JOB NO. C 10021   |       |
| Sheet of          | 1     |

1409 EMIL STREET . P.O. BOX 9538, MADISON, WIS. 53715 . TEL (608) 257 15

| SAMPLE    |                   |             |       |                       |           | ) (101111   C)   C   C   C   C   C   C   C   C                  | SOIL PROPERTIES |                |       |       |              |  |  |
|-----------|-------------------|-------------|-------|-----------------------|-----------|-----------------------------------------------------------------|-----------------|----------------|-------|-------|--------------|--|--|
|           | Recovery Moisture |             |       | VISUAL CLASSIFICATION | 130       | IL, Ph                                                          |                 | ERT            | IES \ |       |              |  |  |
| No.       | Type              | + :         | +     | н                     | Depth     | and Remarks<br>2" Topsoil                                       | ďπ              | ₩              | LL.   | PL    | D            |  |  |
| <u> 1</u> | _ <u>\$</u> \$    | _X_         | _M_   | 18_                   | E         |                                                                 |                 |                |       |       |              |  |  |
| . 2       | <br>SS            | X           | . M   | 29                    |           |                                                                 |                 |                |       |       |              |  |  |
|           | 22                | X.          | <br>M | .25                   |           | Ryon Cilt. Clay L.                                              |                 |                |       |       |              |  |  |
| ,         |                   |             |       |                       | -         | Brown Silty CLAY Little to<br>Some Sand Trace Gravel (CL,CL-ML) |                 |                |       |       |              |  |  |
| 1-4-      | \$\$              | _X          | _M_   | _36_                  | <u> </u>  |                                                                 |                 |                |       |       |              |  |  |
|           |                   |             |       |                       | E         |                                                                 |                 |                |       |       |              |  |  |
| }<br>5    | <br>\$\$          | Υ           |       | 10                    |           |                                                                 |                 |                |       |       | -            |  |  |
|           |                   |             |       | _10_                  | - 15<br>- |                                                                 |                 |                |       |       |              |  |  |
| ]<br>(1)  |                   |             |       |                       |           |                                                                 |                 |                |       |       |              |  |  |
| <u></u> 6 | _\$\$             | _X_         | _M_   | 21                    | -<br>20 - | •                                                               |                 | -              |       |       |              |  |  |
|           |                   |             |       |                       | E         | End Boring at 20'                                               |                 |                |       |       |              |  |  |
| <u> </u>  |                   |             |       |                       | _         |                                                                 |                 |                |       |       |              |  |  |
|           |                   |             |       |                       | 25        |                                                                 |                 |                |       |       |              |  |  |
|           |                   |             |       |                       |           | •                                                               |                 |                |       |       |              |  |  |
| -         |                   |             |       |                       | 30-       |                                                                 |                 |                |       |       |              |  |  |
|           |                   |             |       |                       | E 30      |                                                                 |                 |                |       |       |              |  |  |
| <u> </u>  |                   | <del></del> |       |                       | -<br>-    |                                                                 |                 |                |       |       |              |  |  |
|           |                   |             |       |                       | 35        |                                                                 |                 |                |       |       |              |  |  |
|           |                   | ·           |       |                       | E         |                                                                 |                 |                |       |       |              |  |  |
|           |                   | ·           |       |                       | -         |                                                                 |                 |                |       |       | <u> </u>     |  |  |
| · · ·     |                   |             | W     | /AT                   | ER        | LEVEL OBSERVATIONS                                              |                 |                |       | :     |              |  |  |
| Wh        | ile D             | rilling     |       |                       |           | ODSERVATIONS                                                    | GE              | NER<br>7/2/8   | AL    | NOT   |              |  |  |
|           | on Co<br>ne Af    |             |       |                       | Drilling  | Jr.                                                             | Star            | t '<br>v Chief | -Com  | plete | 7/2/81<br>50 |  |  |
| De        | oth to            | o Wa        | ter   |                       | 20 Dr     | <u>y</u>                                                        | Drilli          | ng Met         | hod . | A 0-  | 20'          |  |  |
| Dei       | oth to            | o Cay       | ve In |                       |           |                                                                 |                 | ••••••         | ····· |       |              |  |  |

| WARZYN          |
|-----------------|
|                 |
| ENGINEERING INC |

| *          | ~ |                | ~   | - | - | - |   | - | F | - | 1     | PA. | 1 | _          |
|------------|---|----------------|-----|---|---|---|---|---|---|---|-------|-----|---|------------|
|            |   | G              | 1 1 |   |   | - |   | 8 |   |   | Ł     | 1   | J | -          |
| - December | - | ALC: UNITED IN | -   |   |   | _ | - | - |   | - | <br>- |     | - | of Street, |

| Project | PPG Industries, Inc. | Sur |
|---------|----------------------|-----|
| • •     |                      | ,   |
|         | Oak Creek, Wisconsin | She |

|   | TW-6<br>Boring No.      |
|---|-------------------------|
|   | Surface Elevation 129.1 |
|   | Job No C. 10021         |
| İ | Shoot 1 of 1            |

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| SAMPLE                           |       |                   |            | =            |              | VISUAL CLASSIFICATION                                    | SOIL PROPERTIES |          |      |              |                     |            |  |  |
|----------------------------------|-------|-------------------|------------|--------------|--------------|----------------------------------------------------------|-----------------|----------|------|--------------|---------------------|------------|--|--|
|                                  | Reco  | Recovery Moisture |            |              |              | and Remarks                                              | Цu              | . W      |      | LL           | PL                  | D          |  |  |
| la.                              | Type  | : 🕴 📗             | +          | N            | Depth        | 3" Crushed Limestone                                     |                 |          |      |              | , ,                 |            |  |  |
|                                  |       |                   |            |              | <u> </u>     |                                                          |                 |          | -    |              |                     |            |  |  |
| 1                                | SS    | X                 | M          | 24           | E            | CLICS D. CITH CLAW T                                     |                 |          | -    |              |                     |            |  |  |
| 7                                |       |                   |            | . 0.0        | E            | Stiff Brown Silty CLAY Trace Sand and Gravel (CL)        |                 | <u> </u> |      |              |                     |            |  |  |
| 2_                               | _SS   | ÿ                 | m_         | _23          | <u> </u>     |                                                          |                 |          |      |              |                     |            |  |  |
| 3_                               | SS    | X_                | _M_        | 55           | E            |                                                          |                 | ļ        |      |              |                     |            |  |  |
|                                  |       |                   |            |              | E            |                                                          |                 | -        |      |              |                     |            |  |  |
| 4                                |       | _X_               | M          | 45           | 10-          |                                                          |                 |          |      | -            |                     |            |  |  |
|                                  |       |                   |            |              | E            |                                                          |                 |          |      |              |                     |            |  |  |
|                                  |       |                   |            |              | E            |                                                          |                 |          |      |              |                     |            |  |  |
| 5                                | SS    | Χ                 | W          | 16           | 15           |                                                          |                 |          |      |              |                     |            |  |  |
|                                  |       |                   |            | 1            | E            |                                                          | _               |          |      |              |                     |            |  |  |
| 6                                | SS    | X                 | W          | -            | - <u>E</u>   | Gray Silty Fine to Medium SAND Trace to Little Clay (SM) |                 |          |      |              |                     | -          |  |  |
| <br>7                            | SS    |                   | W          | 17           | <del>,</del> |                                                          | <del> </del>    |          |      |              |                     |            |  |  |
|                                  |       | 1-                | \ <u>'</u> | + ''         | 20           | Gray Silty CLAY Trace Sand and Gravel (CL)               |                 |          |      |              |                     |            |  |  |
| 8                                | SS    | $\int_{S} X$      | W          | 1            | , E          | draver (CL)                                              | .   .           |          |      |              | 1.                  |            |  |  |
|                                  | -     | <u></u>           |            | ļ.`          |              | End Boring at 23'                                        | †               |          |      | -            |                     |            |  |  |
|                                  | -     | -                 |            | <del> </del> | 25           |                                                          | -               |          |      | <del> </del> |                     |            |  |  |
|                                  |       |                   |            | '            | E            |                                                          |                 |          |      |              |                     |            |  |  |
|                                  |       |                   |            | <u> </u>     |              |                                                          |                 | _        |      |              |                     |            |  |  |
|                                  |       |                   |            |              | 上30          |                                                          |                 |          |      | _            |                     |            |  |  |
| ٠                                |       |                   |            |              | <u> </u>     |                                                          |                 |          |      |              |                     |            |  |  |
|                                  |       |                   |            |              | E            |                                                          |                 |          |      |              |                     |            |  |  |
|                                  | _     | 1                 |            | 1            |              |                                                          |                 |          |      |              |                     |            |  |  |
|                                  |       | -                 | -          | - -          | <u> </u>     | 5-                                                       |                 |          |      |              | -                   |            |  |  |
|                                  |       |                   |            |              |              |                                                          |                 |          |      |              |                     |            |  |  |
|                                  |       |                   |            | _            |              |                                                          |                 |          |      |              | _                   |            |  |  |
|                                  |       |                   |            | _            |              | 0-                                                       |                 |          |      |              |                     |            |  |  |
|                                  |       |                   |            | WA           | TEF          | R LEVEL OBSERVATIONS                                     | . (             |          |      |              | . NC                | TES        |  |  |
| V                                | Vhile | Drilli            | ng_        |              |              |                                                          | _ s             | tart .   | /6/  | C            | omple               | 8/6/<br>te |  |  |
| Upon Completion of Drilling      |       |                   |            |              |              |                                                          | _   c           | rew      | Chie | ef LS        | Rig                 | 55-2       |  |  |
| Time After Drilling ½ hour 21.8' |       |                   |            |              |              |                                                          |                 | rilling  | ) M  | ethod        | FA                  | )-23.      |  |  |
| 1                                |       | n to \<br>n to .( |            |              |              |                                                          | -               |          |      |              | • • • • • • • • • • |            |  |  |
| 1                                | المرت |                   |            | 11.1         |              | ·                                                        |                 |          |      |              |                     |            |  |  |

# WARZYN

SINEERING INC

## LOG OF TEST BORING

| Project | PPG Industries, Inc. |
|---------|----------------------|
|         | Oak Creek, Wisconsin |

| Boring No           | W-7 |
|---------------------|-----|
| Surface Elevation . |     |
| JOB NO. C 10021     |     |
| Sheet ] of          | 1   |

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| SAMPLE             |                                              |              |              | E    |                  |      | VISUAL CLASSIFICA                                           | SOIL PROPERTIES |          |       |         |       |  |  |  |
|--------------------|----------------------------------------------|--------------|--------------|------|------------------|------|-------------------------------------------------------------|-----------------|----------|-------|---------|-------|--|--|--|
|                    | Reco                                         | very         | Mois         | ture |                  |      | VISUAL CLASSIFICATION                                       |                 |          | T     | ERI     | IES   |  |  |  |
| No.                | Туре                                         | +            | +            | Н    | Depth            |      | and Remarks                                                 | Qu              | ₩        | LL    | PL      | D     |  |  |  |
| 1                  | - 55                                         | _ X          | М            | 21   | _                |      |                                                             |                 |          |       |         | [     |  |  |  |
| <u> </u>           |                                              |              | 111.         | 24   |                  |      |                                                             |                 | ·<br>    |       | ··· — . |       |  |  |  |
| 2                  | SS                                           | _X_          | . <u>M</u> . | _28  | <u> </u>         | ,    | Stiff Brown Silty CLAY Trace                                |                 |          |       |         |       |  |  |  |
| 3                  | SS                                           | X            | <u>М</u>     | 44   |                  |      | Sand and Gravel (CL)                                        |                 |          |       | ··· •   |       |  |  |  |
| <br>1              |                                              |              | _            |      | -                |      | Gray Color, More Moist                                      |                 |          |       |         |       |  |  |  |
| -4                 | .SS                                          | _ <u>X</u> _ | M            | 13   | -<br>10-         |      |                                                             |                 |          |       |         | ·     |  |  |  |
| ]                  |                                              |              |              |      |                  |      |                                                             |                 | 5,       |       |         |       |  |  |  |
| ├<br>5             |                                              | X            | W            | 14   | -                |      |                                                             | -               |          |       |         |       |  |  |  |
| 1                  |                                              |              | <u> </u>     | 14   | <u> </u>         |      | Gray Silty Fine to Medium SAND<br>Trace to Little Clay (SM) |                 |          |       |         |       |  |  |  |
| I.<br>≌F           | 55                                           | : X          | W            | 18   |                  |      |                                                             |                 |          |       |         |       |  |  |  |
|                    |                                              |              |              |      | 20-              | -    | End Boring at 18'                                           | <del> </del>    |          |       |         |       |  |  |  |
| l                  |                                              |              |              |      | - 20-            |      |                                                             |                 |          | · ·   |         |       |  |  |  |
|                    |                                              |              |              |      |                  |      |                                                             |                 |          |       |         |       |  |  |  |
|                    |                                              |              |              |      |                  |      |                                                             |                 |          |       |         |       |  |  |  |
|                    |                                              |              |              |      |                  |      |                                                             |                 |          |       |         |       |  |  |  |
|                    |                                              |              |              |      |                  |      |                                                             |                 |          |       |         |       |  |  |  |
| <del> </del>       |                                              |              |              |      | 30 -             |      |                                                             |                 |          |       |         |       |  |  |  |
|                    |                                              |              |              |      | _                |      | No.                                                         |                 |          |       |         |       |  |  |  |
|                    |                                              |              | ·            |      |                  |      | •                                                           |                 |          |       |         |       |  |  |  |
| -                  |                                              |              |              |      | — 35—<br>—       |      |                                                             |                 | •        |       | ·       | ·     |  |  |  |
|                    |                                              |              |              |      | <u></u>          |      |                                                             |                 | `        |       |         |       |  |  |  |
| <u> </u>           |                                              |              |              |      | 40-              |      |                                                             |                 |          |       |         |       |  |  |  |
|                    | <u>'                                    </u> |              | W            | 'AT  | <u>-</u>         | LEVI | EL OBSERVATIONS                                             | -               |          |       |         |       |  |  |  |
| <b>,</b><br>नहस्Vh |                                              | _            | ·            | ·    |                  |      | - DOLIVATIONS                                               | GE              | NER      | AL    | NO-     | ΓES   |  |  |  |
|                    | on Co<br>ne Af                               |              |              |      | rilling<br>k hou |      |                                                             | Star            | v Chief  | Com   | plete   | 8/6/8 |  |  |  |
| De                 | oth to                                       | ) Wa         | ter          | e    | 18'We            |      |                                                             | Drilli          | ng Met   | hod   | FA 0-   | -18'  |  |  |  |
| Der                | oth to                                       | Ca           | ve In        |      | 10 MG            | : L  |                                                             |                 | •••••••• | ••••• | ••• ••• |       |  |  |  |
|                    |                                              |              |              |      |                  |      |                                                             | ]               |          | . •   |         | ٠,    |  |  |  |

# WARZYN ENGINEERING INC

## LOG OF TEST BORING

| Project  | PPG Industries, Inc. |
|----------|----------------------|
|          |                      |
| Location | Oak Creek, Wisconsin |

| Boring No                        | TW-8  |
|----------------------------------|-------|
| Surface Elevation                | 113.8 |
| Surface Elevation Job No. C 1002 | ]     |
| Sheet ] of                       | . 1   |

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|                                         |                 | ^ ^ ^        | — <u> </u> |             |                   | 33713 1 121. (60                                  |          | .4848-            |                                         |       |                                         |
|-----------------------------------------|-----------------|--------------|------------|-------------|-------------------|---------------------------------------------------|----------|-------------------|-----------------------------------------|-------|-----------------------------------------|
|                                         |                 |              | IPL        |             |                   | VISUAL CLASSIFICATION                             | so       | IL PF             | 30P                                     | ERT   | IES                                     |
| No.                                     | Тура            | lvery        | Mois<br>↓  |             |                   | and Remarks                                       | Qu       |                   |                                         |       |                                         |
| INU.                                    | Type            | <del>-</del> | *          | Н           | Depth             |                                                   | da       | ₩                 | LI.                                     | PL    | D                                       |
| 1                                       | SS              | χ            | М          | 15          | _                 | Brown Clayey SILT (FILL) (ML)                     |          |                   |                                         |       |                                         |
|                                         |                 |              |            |             |                   | Stiff Brown Silty CLAY Trace Sand and Gravel (CL) | <u> </u> |                   |                                         | ļ     |                                         |
| _2.                                     | .SS             | <u>X</u>     | <u>M</u>   | 27          |                   | Mottled at 5'                                     |          |                   |                                         |       |                                         |
| 3                                       | SS              | χ            | <br>М-     | 34          |                   |                                                   |          |                   |                                         |       |                                         |
|                                         |                 | ::           |            |             | <u> </u>          |                                                   |          |                   |                                         |       |                                         |
| 4                                       | SS              | <u>X</u>     | М          | 27          | <br>10            | Gray Color at 9'                                  |          |                   |                                         |       |                                         |
|                                         |                 |              |            |             |                   |                                                   |          |                   |                                         |       |                                         |
| 5                                       | SS              | Х            | М          | 15          |                   |                                                   |          |                   |                                         |       |                                         |
|                                         |                 |              |            |             | _<br>15           | End Boring at 13'                                 | <b>-</b> |                   | <b> </b>                                |       |                                         |
| ~                                       |                 |              |            |             |                   |                                                   | <b> </b> |                   |                                         |       |                                         |
|                                         |                 |              | ,          |             |                   |                                                   |          |                   |                                         |       |                                         |
|                                         |                 |              |            |             |                   |                                                   |          |                   |                                         |       |                                         |
| *************************************** |                 |              |            |             | 20 <sup>-</sup> _ |                                                   |          |                   |                                         |       |                                         |
|                                         |                 |              | ·          |             |                   |                                                   |          |                   |                                         |       |                                         |
|                                         |                 |              |            |             |                   |                                                   |          |                   |                                         |       |                                         |
|                                         |                 |              |            |             | 25<br>            |                                                   |          |                   |                                         |       |                                         |
|                                         |                 |              |            |             | -                 |                                                   |          |                   |                                         |       |                                         |
|                                         |                 |              |            |             |                   |                                                   |          |                   |                                         |       |                                         |
|                                         | <b></b>         |              |            | <del></del> | - 30 -            |                                                   |          |                   |                                         |       |                                         |
|                                         |                 | ,            |            |             |                   |                                                   |          |                   |                                         |       |                                         |
|                                         |                 |              |            |             |                   |                                                   |          |                   |                                         |       |                                         |
|                                         |                 |              |            |             | 35-               |                                                   |          |                   |                                         |       |                                         |
|                                         |                 |              |            |             | E                 |                                                   |          |                   |                                         |       |                                         |
|                                         |                 |              |            |             |                   |                                                   |          |                   |                                         |       |                                         |
|                                         |                 |              | ,          |             | 40-               |                                                   |          |                   |                                         |       |                                         |
|                                         |                 |              | W          | 'AT         | ER                | LEVEL OBSERVATIONS                                |          | NICE              |                                         |       |                                         |
| -                                       | ile Di          |              |            |             | <u> </u>          |                                                   |          | ENER<br>8/6/91    |                                         |       |                                         |
|                                         | on Co<br>ne Af  |              |            |             | rilling<br>hour   |                                                   | Star     | 8/6/81<br>v Chief | . Com                                   | plete | 5/6/81<br>5-2                           |
|                                         | ne Ar<br>pth to |              |            |             | 2'0"              |                                                   | Drilli   | ng Met            | hod .                                   | FA 0- | -13'                                    |
|                                         | pth to          |              |            |             |                   |                                                   |          | ••••••            | ••••••                                  |       | • • • • • • • • • • • • • • • • • • • • |
|                                         | ٠               | •            |            |             |                   |                                                   | ] .      | ••••              | • • • • • • • • • • • • • • • • • • • • |       | - /                                     |

C3

O.H. MATERIALS CORP., 1987

| O | Δ | ٣ | 1 |
|---|---|---|---|

JOE HO. 4885



BORE HOLE NO. A-1

P. JECT COCATION Oak Creek, Wisconsin PPG DRILLING CONTRACTOR DRILLING EQUIPMENT CME-55 HYDROGEOLOGISTGreg Brown ORILLER Joe TOTAL DEPTH 12.0' DATE FINISHITIME SURFACE DAJE STARTITIME ELEVATION SCREEN TYPE WELL CASING LENGTH SLOT

|      | GROUN | O WATER                                |         |                  | CASING | CORE | SAMPLER | TUBE |
|------|-------|----------------------------------------|---------|------------------|--------|------|---------|------|
| DATE | TIME  | DEPTH                                  | WEATHER | TYPE             |        |      | S.S.    |      |
|      |       |                                        |         | DIAMETER         |        |      | 2"      |      |
| •    |       | \.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\. |         | HAMMER<br>WEIGHT | •      |      | 140 16. |      |
|      |       |                                        |         | FALL             |        |      | 30"     |      |

REMARKS

|       | AARK |   |          |               |            |       |              |                     |         |                  |                      |     |
|-------|------|---|----------|---------------|------------|-------|--------------|---------------------|---------|------------------|----------------------|-----|
| H     | J.   | 0 | <b>3</b> | 8             | ECOV-ERY   |       |              | вс                  | RE HOLE | LOG              |                      | SRA |
| DEPTH | SAMP | ~ | BLOW     | PER           | REC<br>-EI |       | LITHOLO      | GIC DESC            | RIPTION |                  | REMARKS              |     |
| 1 -   | 1    |   | 4 5      |               |            | SAND: |              | coarse,<br>slightly |         | compact-<br>(SW) | 1000<br>Moist        |     |
| 2 -   |      |   |          |               | -          |       |              |                     |         |                  |                      |     |
| 3 -   |      |   |          |               |            |       |              |                     |         |                  |                      |     |
| 5     |      | 2 | 7        | 5<br>16<br>28 |            | SAND: | Brown, silty | very gr             | avelly, | slightly<br>(SW) | Moist<br>Strong odor |     |
| 7     |      |   |          | 28            |            |       |              |                     | •       |                  |                      |     |
| 8     |      |   |          |               |            |       |              |                     |         |                  |                      |     |
| 10    |      | 3 | 7        | 2 4           | 4          | SAND: |              | very gr<br>slight   |         |                  | Strong odor<br>Wet   |     |

OHM

PAGE 1 2 0 .

| 108                                     | HO.                                    | 4885           |             |                |                                       |                          |                        |                                        | BORE            | HOLE NO.     | A-)         | 2           |
|-----------------------------------------|----------------------------------------|----------------|-------------|----------------|---------------------------------------|--------------------------|------------------------|----------------------------------------|-----------------|--------------|-------------|-------------|
|                                         | JECT                                   |                |             | L              | · · · · · · · · · · · · · · · · · · · |                          | LOCATION               | Oak Cree                               | k, Wise         | consin       | <del></del> |             |
|                                         |                                        | CONTR          | LACTO       | A STS          |                                       |                          | ORILLING E             | QUIPMENT                               | ME-55           |              |             | -           |
| HYD                                     | ROGE                                   | O LO GI        | ST G        | red Brow       |                                       |                          | DRILLER                |                                        |                 | <del>.</del> |             |             |
| DAII                                    | 5378                                   | AT/TI          |             |                |                                       | H/TIME<br>1220           | SURFACE<br>ELEVATION   |                                        | тот             | AL DEPTH     | 26.         | 5 1         |
|                                         | L CAS                                  |                |             |                | EEN TY                                |                          | LENGTH                 | ······································ | SLO             |              |             |             |
|                                         |                                        |                | GRO         | STAW OHU       |                                       |                          |                        | CASING                                 | CORE            | SAMPLER      | Tı          | JBE         |
| 0                                       | ATE                                    |                | TIME        |                | PTH                                   | WEATHER                  | TYPE                   |                                        |                 | s.s.         |             |             |
|                                         |                                        |                |             |                |                                       |                          | DIAMETER               |                                        |                 |              |             | <del></del> |
|                                         |                                        |                |             |                | ·                                     |                          | HAMMER                 |                                        |                 | 2"           |             |             |
|                                         | ······································ |                | <del></del> | <del>-  </del> |                                       |                          | W EIGHT<br>FALL        |                                        |                 | 140 1b.      |             |             |
| REM                                     | ARKS                                   |                |             |                |                                       | <u> </u>                 |                        |                                        |                 | 30           |             |             |
| I                                       |                                        | 12 F :         | ><br>0 >    |                |                                       |                          | 200                    |                                        |                 |              | =           |             |
| DEP TH                                  | SAMP.                                  | BLOW<br>COUNT  | ECO-ERY     |                | 1174                                  |                          | ORE HOLE LO            | ) G                                    | e e             | MARKS        | -           | HAKRE       |
| <u> </u>                                | 10                                     | 000            | <u> </u>    |                | LIIA                                  | OLOGIC DESC              | AIPTION                |                                        |                 |              | _           | ===         |
| 1 =                                     | 1                                      | 12<br>13<br>14 |             | GRAVEI         | L: S                                  | andy, medi               |                        | pebble<br>(C)                          | ; 1110<br>Dry ( | fill)        |             |             |
| 2 -                                     |                                        |                |             |                | ···.                                  |                          |                        |                                        |                 |              |             | 1 = .       |
| 3 = = = = = = = = = = = = = = = = = = = |                                        |                |             |                | ·                                     |                          |                        |                                        |                 |              |             |             |
| 5 -                                     | 2                                      | 14             |             | CLAY:          | Lig<br>fri                            | ht brown,<br>able, nonp  | very pebb<br>lastic (C | oly,<br>CL)                            | 1115<br>Dry     |              |             |             |
| 6 —<br>7 —                              |                                        | S              |             |                | _                                     |                          |                        |                                        |                 |              |             |             |
| 8 -                                     |                                        |                |             | -              |                                       |                          |                        |                                        |                 |              |             |             |
| 9 -                                     |                                        |                |             |                |                                       |                          | •                      |                                        |                 |              |             |             |
| 10-                                     | 3                                      | 2 2            |             | CLAY:          |                                       | ve green t<br>stic, some | pebbles                | very<br>CL)                            | Wet             |              |             |             |

PART 2

PAGE 2 BORE HOLE NO. A-2

4885

PPG

LOCATION Oak Creek, Wisconsin

| -     | 1 P L<br>5.  | BLOW | K 20          | 0 Y            |                                                                                                       |             | ЯАРН |
|-------|--------------|------|---------------|----------------|-------------------------------------------------------------------------------------------------------|-------------|------|
| DEPTH | SAMPI<br>NO. | 9    | COUNT         | RECOV<br>- ERY | LITHOLOGIC DESCRIPTION                                                                                | REMARKS     | LOG  |
| 111   |              |      |               |                |                                                                                                       |             | ·    |
| 3 -   |              |      |               |                |                                                                                                       |             |      |
| 4     |              |      |               |                |                                                                                                       |             |      |
|       |              |      |               |                |                                                                                                       |             |      |
| 5 -   |              | 9    |               |                | CLAY: Olive green, some large pebbles to 1", plastic                                                  | Wet         |      |
| ; -T  | 4            |      | 14<br>19      |                | (CL)                                                                                                  |             |      |
|       |              |      |               |                |                                                                                                       |             |      |
| 1111  | •            |      |               |                |                                                                                                       |             |      |
|       |              |      |               |                |                                                                                                       |             |      |
|       |              |      |               |                |                                                                                                       |             |      |
|       |              | 10   |               |                | CLAY: Olive green (CL)                                                                                | 1200        |      |
|       | 5            |      | 0<br>25<br>31 |                | SILT: Olive green, some large cobbles, clayey, very stiff                                             | Wet         |      |
|       |              |      |               |                | brittle (ML)                                                                                          |             |      |
|       |              |      |               |                |                                                                                                       | ·           |      |
|       |              |      |               |                |                                                                                                       |             |      |
|       |              |      |               |                |                                                                                                       |             |      |
| 1111  | -            |      |               |                | GTI m                                                                                                 |             |      |
|       | 6            | 20   |               |                | SILT: Clayey, olive green-gray, many pebbles throughout, stiff, very tight, brittle, non-plastic (ML) | 1210<br>Wet |      |
|       |              |      |               |                |                                                                                                       |             |      |
| _     |              |      |               |                |                                                                                                       |             |      |

PAGE \_\_\_ OF \_ 2

| 108 HO.             | 4885        |                      | <u> </u> | · · · · · · · · · · · · · · · · · · · |            | BORE   | HOLE HO. A | -3   |
|---------------------|-------------|----------------------|----------|---------------------------------------|------------|--------|------------|------|
| PROJECT             | PPG         |                      |          | LOCATION                              | oak Creek, |        |            |      |
| DRILLING C          | ONTRACTOR   | TS                   |          | DRILLING E                            | QUIPMENT   | ME-55  |            |      |
| HYDROGEO            | LOGIST Greg | Brown                |          | DRILLER                               | oe         |        |            |      |
| DATE STAR<br>6/5/87 | T/TIME 0910 | 0ATE FINIS<br>6/3/87 | 1015     | SURFACE                               |            | TOTA   | L DEPTH 2  | 6.5' |
| WELL CASIA          |             | SCREEN T             | YPE      | LENGTH                                |            | SLOT   |            |      |
|                     | GROUN       | O WATER              |          |                                       | CASING     | CORE . | SAMPLER    | TUBE |
| DATE                | TIME        | DEPTH                | WEATHER  | TYPE                                  |            |        | s.s.       |      |
|                     |             | e                    |          | DIAMETER                              |            |        | 2"         |      |
|                     | ·           |                      |          | HAMMER<br>WEIGHT                      | `          |        | 140 lb.    |      |
| ·                   |             |                      |          | FALL                                  |            |        | 30"        |      |
| REMARKS             |             |                      |          |                                       | •          |        |            |      |
| TH                  | N 0 0 ×     | X2                   | 8 (      | DAE HOLE LO                           |            | ,      |            |      |

|          | 10   |   | <b>×</b>      | 0   | 0 0 V       | BORE HOLE LOG                                                                                                          |                                                                         | SRAS |
|----------|------|---|---------------|-----|-------------|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|------|
| <u>.</u> | SAMP |   | COUNT         | PER | RECC<br>-ER | LITHOLOGIC DESCRIPTION                                                                                                 | REMARKS                                                                 | LO   |
|          | 1    |   | 20<br>14<br>1 |     |             | GRAVEL: Sand fill, medium brown, silt, some clayey lenses (GM)                                                         | 0910 Strong odor at sampl No high reading at borehole surface (0-5 ppm) | 8    |
|          |      |   |               |     | i<br>İ      |                                                                                                                        |                                                                         |      |
|          |      |   |               |     |             |                                                                                                                        |                                                                         |      |
|          | 2    |   | 16<br>4<br>6  | 9   |             | CLAY: Medium-light brown, large pieces of gravel, slightly plastic (CL)                                                | 0920<br>Dry                                                             |      |
|          |      |   |               |     | •           |                                                                                                                        |                                                                         |      |
|          |      |   |               |     |             |                                                                                                                        |                                                                         |      |
| -        | 3    | - | 4             | 5   |             | CLAY: Medium brown, many pebbles, slightly silty, slightly plastic, gravel and sand lenses approximately l' thick (CL) | 0935<br>Wet                                                             |      |

| £ | RT | 2 |
|---|----|---|

Tio8 4885



PAGE 2 OF 2

OJECT LOCATION PPG Oak Creek, Wisconsin MARKS RECOV -ERY BLOW COUNT PER 6 PAPHE DESCRIPTION LITHOLOGIC REMARKS LOG 3 CLAY: Medium brown, to light brown, very 0945 3 silty, plastic, few peobles up to Moist 7 (CL) 10 18 20 CLAY: Olive green, very silty, few small 5 0955 5 8 pebbles Moist 21 13 27 22 23 24 25 11 CLAY: Olive green, slightly silty, very 1005 13 plastic, (hit large rock thus only Moist 6 19 half a sample, but enough) (CL) 27



PAGE \_\_\_\_ OF \_\_ 2

| JOB NO.             | 4885             |                      |                  | RIVE                 |            |      | ORE  | HOLE HO.     | 4    |
|---------------------|------------------|----------------------|------------------|----------------------|------------|------|------|--------------|------|
| PROJECT             | PPG              |                      |                  | LOCATION             | Dak Creek, |      |      |              |      |
| DAILLING C          | ONTRACTOR<br>ST  | S                    |                  | DRILLING E           | QUIPMENT   | CME- | 55   |              | -    |
| HYDROGEO            | LOGIST<br>Greg B | rown                 |                  |                      | Joe        |      |      |              |      |
| DATE STAR<br>6/2/87 | T/TIME<br>1600   | 0ATE FINIS<br>6/2/87 | H/TIME<br>1720 - | SURFACE<br>ELEVATION |            |      | TOT  | AL DEPTH 26. | 51   |
| WELL CAST           |                  | SCREEN TY            | YPE              | LENGTH               |            |      | SLO  |              |      |
|                     | GROUN            | O WATER              |                  |                      | CASING     | C    | ) RE | SAMPLER      | TUBE |
| DATE                | TIME             | DEPTH                | WEATHER          | TYPE                 |            |      |      | S.S.         |      |
|                     |                  |                      |                  | DIAMETER             |            |      |      | 2''          |      |
|                     |                  |                      |                  | HAMMER<br>WEIGHT     |            |      |      | 140 15.      |      |
|                     |                  |                      |                  | FALL                 |            |      |      | 30"          |      |

REMARKS

| ام ا         | <b>3</b> × 8   | 0 >         | BORE HOLE LOG                                                            |                                                                           | SRAP |
|--------------|----------------|-------------|--------------------------------------------------------------------------|---------------------------------------------------------------------------|------|
| SAMPL<br>NO. | BLOW<br>COUNT  | RECC<br>-ER | LITHOLOGIC DESCRIPTION                                                   | REMARKS                                                                   | 100  |
| 1            | 20<br>33<br>22 |             | SAND: Gravel fill, gravel up to 1", coarse sand, silt, medium brown (GM) | Fill - 1600<br>Very hard material<br>Grabbed hand sample<br>Odor 0-50 ppm |      |
|              |                |             |                                                                          |                                                                           |      |
|              | 6 5            |             | GRAVEL FILL: Sandy, silty pebbles, up to {GM)                            | 1610<br>Dry                                                               |      |
| 2            | 5 7            |             | CLAY: Brown, slightly silty (CL)                                         | Odor 0-70 ppm                                                             |      |
|              |                |             |                                                                          |                                                                           |      |
|              |                |             |                                                                          |                                                                           |      |
| 3            | 9 7 2          |             | CLAY: Reddish brown, gravelly, very plastic few pebbles (CL)             | Not enough sample retrieved, will try again                               |      |

PAGE 2

BORE HOLE NO.

1.38 0 4885 ROJECT

PPC

LOCATION

Oak Creek, Wisconsin

| IT             | <del>y</del> 1 | <del>&gt;</del>         | T > .         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                  | - Constitution |
|----------------|----------------|-------------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|----------------|
| DEPTH          | NO.            | BLOW<br>COUNT<br>PER 8. | RECOV<br>-ERY | NATURAL O CASA DECENSARIAN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                  | PAPE           |
| 9              | 2              | 0 4                     | <u>«</u>      | LITHOLOGIC DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | REMARKS                          | rod            |
| =              |                | ,                       |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                  |                |
| 3-             |                |                         |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                  |                |
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| 4              | ,              | ·<br>·                  |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                  |                |
| 7              |                |                         |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                  |                |
| 5              |                | 5                       |               | CLAY: Reddish-brown, homogenous, few pebbles, stiff but plastic (CL)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1630<br>Moist                    |                |
| Ę              |                | 8                       |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 110 13 1                         |                |
| 7              | 4              | 11                      |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                  |                |
|                |                | 16                      |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                  |                |
| 1              |                | 16                      |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                  |                |
| 7              |                |                         |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                  |                |
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| <del>]</del> - |                | 11                      |               | CLAY: Reddish-brown, very plastic, very                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1640                             |                |
|                | 5              | 14                      |               | gravelly up to l", sl. sandy, sl. silty (CL)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Moist                            |                |
| 1              |                | 16                      |               | 3223)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Made 3 attempts before obtaining |                |
| 1              |                | 17                      |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | spoon                            |                |
| 7              |                |                         |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                  |                |
| 3              |                |                         |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                  |                |
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| 7              |                | 13                      |               | SILT - CLAY: Fine grained, very stiff,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Moist                            |                |
| 7              | 6              | 20                      |               | friable, fractures, few pebbles to !" (ML)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                  |                |
| =              |                | 25                      |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                  |                |
| 1              |                | 43                      |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                  |                |
|                |                |                         |               | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                  |                |
| #              |                |                         |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                  |                |



PAGE\_1 OF\_2

| A.S.  | HOLE HO.   | OREH        | 8     | Production and Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Contro |                      |                                                                    |         | 4885   |         |  |  |  |  |
|-------|------------|-------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------------------------------------------------------|---------|--------|---------|--|--|--|--|
|       | consin     | , Wisc      | reek  | Oak C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | LOCATION             |                                                                    | PROJECT |        |         |  |  |  |  |
|       |            | -55         | ,ChrE | QUIPMENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | DRILLING E           | DRILLING CONTRACTOR STS                                            |         |        |         |  |  |  |  |
|       |            |             |       | Crestler                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                      | HYDROGEOLOGIST Greg Brown                                          |         |        |         |  |  |  |  |
| 26.5' | L DEP.TH 2 | TOTA        |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | SURFACE<br>ELEVATION | DATE START/TIME   DATE FINISH/TIME   6-2-87   1345   6-2-87   1500 |         |        |         |  |  |  |  |
|       | •          | LENGTH SLOT |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | PE                   | SCREEN TY                                                          |         |        |         |  |  |  |  |
| TUBE  | SAMPLER    | RE'         | CC    | CASING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                                                                    | WATER   | GROUND |         |  |  |  |  |
|       | S.S.       |             |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | TYPE                 | WEATHER                                                            | DEPTH   | TIME . | DATE    |  |  |  |  |
|       | 2"         |             |       | ·                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | DIAMETER             |                                                                    |         |        |         |  |  |  |  |
|       | 140 16.    |             |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | HAMMER<br>WEIGHT     |                                                                    |         |        |         |  |  |  |  |
|       | 30"        |             |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | FALL                 |                                                                    | •       |        |         |  |  |  |  |
| -     | 140 16.    |             |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | HAMMER<br>WEIGHT     |                                                                    | •       |        | REMARKS |  |  |  |  |

| EP TH | 9.  | X C | z .       | 0 >           | BORE HOLE LOG                                                        | •                  | SAA |
|-------|-----|-----|-----------|---------------|----------------------------------------------------------------------|--------------------|-----|
| OEP   | M X | 81( | CO<br>PER | RECOV<br>-ERY | LITHOLOGIC DESCRIPTION                                               | REMARKS            | lic |
|       | 1   |     | 7<br>7    |               | SAND: Med. coarse, med. brown, very gravelly - up to !" pebbles (SW) | 1350<br>Dry (fill) |     |
|       |     |     |           |               |                                                                      |                    |     |
| -     |     |     |           |               |                                                                      |                    |     |
|       |     | 4   | 4         |               | SAND: Med - coarse, sl. clayey, pebbles up to l', brown (SW)         | 1400<br>Dry        |     |
| -     | 2   |     | 7<br>8    |               | CLAY: Olive green - gray, sl. plastic (CL)                           |                    |     |
| -     |     |     |           |               |                                                                      |                    |     |
|       |     |     |           |               |                                                                      |                    |     |
| 0_    | =   | 4   | 6         |               | CLAY: Mottled - brown - green - gray, sl. sandy, sl. silty (CL)      | 1415               |     |
| 1-    | 3   |     | . 7<br>8  |               | CLAY: - More plastic, less mottled, some pebbles (CL)                |                    |     |

4885



PAGE 2 BORE HOLE NO. 45

|        | i                                        | ECT           |      |                 | PP            | G     | · ·                                                    | LOCATION Oak                       | Creek, Wi         | sconsin                                | / |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------|------------------------------------------|---------------|------|-----------------|---------------|-------|--------------------------------------------------------|------------------------------------|-------------------|----------------------------------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|        | EMA                                      | RKS           |      | and Charles and |               |       |                                                        |                                    |                   |                                        |   | SAN TENENTS OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF |
| 1      | DEPTH                                    | SAMPLE<br>NO. | BLOW | COUNT<br>PER &  | AECOV<br>-ERY |       | LITHOLOGIC DESC                                        | RIPTION                            | 8                 | EMARKS.                                |   | AAPHK<br>LOG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| i      |                                          |               |      |                 |               |       |                                                        |                                    |                   |                                        |   | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| -      | 13                                       |               |      |                 |               |       |                                                        |                                    |                   | `````````````````````````````````````` |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| !      | 14 =                                     |               |      |                 | -             |       |                                                        |                                    |                   | •                                      |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| ,      | 15 =                                     |               | 2    |                 |               | CLAY: | Olive green to gray some pebbles throug                | , very plastic,<br>hout spoon (CL) | 1420<br>Moist     |                                        |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| •      | µ6 = = = = = = = = = = = = = = = = = = = | 4             |      | 3               |               |       |                                                        |                                    |                   |                                        |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1      |                                          |               |      |                 |               |       |                                                        |                                    |                   |                                        |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| ,      | 19 =                                     |               |      |                 |               |       |                                                        |                                    |                   |                                        |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| ;<br>1 | 20 -                                     | 5             | 3    | i               |               | CLAY: | Med. brown - gray, pebbles throughout iron oxides (CL) | sl. silty, plastí<br>sample, some  | Ic, 1430<br>Moist |                                        |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|        | 22 -                                     |               |      | 6               |               |       |                                                        | •.                                 |                   |                                        |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| i<br>! | 23 -                                     |               |      |                 |               |       |                                                        |                                    |                   |                                        |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|        | 24 -                                     |               |      |                 |               |       |                                                        |                                    |                   |                                        |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|        |                                          | 6             | 1    | 2               |               | CLAY: | Olive green - gray, silty, few pebbles                 | plastic, sl. (CL)                  | 1445<br>Moist     | - Wet                                  |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|        | 27 =                                     |               |      | 23              |               |       |                                                        |                                    |                   |                                        |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

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| JOB NO. 4   | 885         |             |                |                               | BORE   | BORE HOLE NO. A-6 |                                        |       |  |
|-------------|-------------|-------------|----------------|-------------------------------|--------|-------------------|----------------------------------------|-------|--|
| PROJECT     | PPG         |             |                | LOCATION Oak Creek, Wisconsin |        |                   |                                        |       |  |
| DRILLING CO | STS         |             | 3              | ORILLING EQUIPMENT CME-55     |        |                   |                                        |       |  |
| HYDROGEOU   | OGIST Greg  | Brown       |                | DRILLER                       | e .    |                   |                                        |       |  |
| 06/5/87A1   | 1/TIME 1350 | DATE FINISI | H/TIME<br>1450 | SURFACE<br>ELEVATION          |        | TOTA              | LDEPTH                                 | 26.5' |  |
| WELL CASIN  | a           | SCREEN TY   | PE             | LENGTH                        |        | SLO               | Т                                      |       |  |
|             | GROUN       | O WATER     |                |                               | CASING | CORE              | SAMPLER                                | TUBE  |  |
| DATE        | TIME        | DEPTH       | WEATHER        | TYPE                          |        |                   | \$,\$,                                 |       |  |
|             |             |             |                | DIAMETER                      |        |                   | 2"                                     |       |  |
|             |             |             | · ·            | HAMMER<br>WEIGHT              |        |                   | 140 15.                                |       |  |
|             |             |             |                | FALL                          |        |                   | 30"                                    |       |  |
| REMARKS     |             |             |                |                               |        |                   | ************************************** |       |  |

|        | <br>  |                  |                                       |                                                                                                              |                        |       |
|--------|-------|------------------|---------------------------------------|--------------------------------------------------------------------------------------------------------------|------------------------|-------|
| H      | PL.   | N N O            | > >                                   | BORE HOLE LOG                                                                                                |                        | DRAPH |
| DEP TH | SAMP. | BLOW<br>COUNT    | RECC<br>-ER                           | LITHOLOGIC DESCRIPTION                                                                                       | REMARKS                | Loa   |
| 1      | 1     | 12               |                                       | GRAVEL: Sand mixture, clayey, pebble up to 1", medium-dark brown, slightly silty, friable (GC)               | s 1350<br>Moist (fill) |       |
| 3      |       |                  |                                       |                                                                                                              |                        |       |
| 4      |       |                  |                                       |                                                                                                              | •                      | 1     |
| 6      | 2     | 3<br>3<br>7      |                                       | GRAVEL: Sand mixture as above (GC)  CLAY: Medium brown, slightly silty, very gravelly, slightly plastic (CL) | 1400<br>Moist          |       |
| 8      |       |                  | • • • • • • • • • • • • • • • • • • • |                                                                                                              |                        |       |
|        | 3     | 5<br>7<br>7<br>1 | 1                                     | CLAY: Tan brown, mottled with gray, very gravelly, slightly silty, slightly plastic (CL)                     | 1410<br>Moist          |       |

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| BORE | HOLE | но. д- | - 6 | , |

J' NO 4885

PPG

LOCATION Oak Creek, Wisconsin

PROJECT REMARKS

| DEP TH         | SAMPLE<br>NO. | BLOW | PER & | RECOV<br>- ERY |       |                                                            |               | DRA |
|----------------|---------------|------|-------|----------------|-------|------------------------------------------------------------|---------------|-----|
| O.E.           | SAA           | B (  | PEF   | RE (           |       | LITHOLOGIC DESCRIPTION                                     | REMARKS       | LC  |
| 1              |               |      |       |                |       |                                                            |               |     |
| . 3            |               |      |       | -              |       |                                                            |               |     |
| <u>-</u>       | •             |      |       |                |       |                                                            |               |     |
|                |               |      |       |                |       | •                                                          |               |     |
| 5              |               |      |       |                |       |                                                            |               |     |
| =              | ı             | 4    |       |                | CLAY: | Medium brown to gray, sand ver coarse, slightly silty, few | 1420          |     |
| 6-             | 4             | 5    | 8     |                | ·     | pebbles (CL)                                               |               |     |
| _=             |               |      |       |                | ė.    |                                                            |               |     |
| 7              |               |      |       |                |       |                                                            |               |     |
| 8              |               |      |       |                |       |                                                            |               |     |
|                | *             |      |       |                | ·     | •                                                          |               |     |
| 9              |               |      |       |                |       |                                                            |               |     |
|                | ·····         |      |       |                |       |                                                            |               |     |
|                |               | 8    |       |                | CLAY: | Gray-greenish, very pebbley, plastic, slightly silty       | 1435<br>Moist |     |
| 1              | 5             | 8    | 10    |                |       | (CL)                                                       | Not wet       |     |
| 2              | ,             |      |       |                |       |                                                            | -             |     |
| <u> </u>       |               |      |       |                |       |                                                            |               |     |
| 3-             |               |      |       |                |       |                                                            |               |     |
| , <del>-</del> |               |      |       |                |       |                                                            |               | -   |
| 4              |               |      |       |                |       |                                                            |               |     |
| 5_             |               |      |       |                | -     |                                                            |               |     |
| $\exists$      | _             | 4    |       |                | CLAY: | Gray-green (CL)                                            | 1450          |     |
| 6-             | 6             |      | 7     |                |       |                                                            |               |     |
| 7              |               |      |       |                |       |                                                            |               |     |
| =              |               |      |       |                |       |                                                            |               |     |
| 4              | -             |      | . }   |                |       |                                                            |               |     |

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| rani i   |  |
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| 10 = 4.0 |  |

BORE HOLE NO.

| JOB NO. 4885 |          |                      |         |                            |          |          |          | A-7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |
|--------------|----------|----------------------|---------|----------------------------|----------|----------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| PROJECT I    | PPG      |                      |         | LOCATION                   | Dak Cree | k, Wisco | onsin    | The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s |  |  |
| DRILLING CO  | HTRACTOR | ?S                   |         | DRILLING EQUIPMENT CME-55  |          |          |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| HYDROGEOL    | OGIST    | Brown                |         | DRILLER<br>Joe Wojnayowicz |          |          |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| 067/2984AT   |          | DATE FINIS<br>6/2/87 | HITIME  | SURFACE                    |          | TOT      | AL DEFTH |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| WELL CASIN   | G        | SCREEN TY            | PE      | LENGTH                     |          | \$LO     | T        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
|              | HUORD    | IO WATER             |         |                            | CASING   | CORE     | SAMPLER  | TUSE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |
| DATE         | TIME     | DEPTH                | WEATHER | TYPE                       |          |          | s,s.     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| e e          |          |                      |         | DIAMETER                   |          |          | 2**      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
|              |          | ·                    | ·       | HAMMÉR<br>WEIGHT           |          |          | 140 16.  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
|              |          | • •                  |         | FACL                       |          |          | 30"      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |

REMARKS

| E     |       | 3 ± · •                 | > >         | BORE HOLE LOG                                                                                                                   | BORE HOLE LOG                                   |     |  |  |  |
|-------|-------|-------------------------|-------------|---------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|-----|--|--|--|
| DEPTH | SAMP. | BLOW<br>COUNT<br>PER 6. | REC(<br>-ER | LITHOLOGIC DESCRIPTION                                                                                                          | REMARKS                                         | LOG |  |  |  |
| 1 -   | 1     | 15<br>8<br>9            |             | CLAY: Medium brown, very gravelly - gravel layer at surface, non- plastic, pebbles up to 1* (GC)                                | 0900<br>Dry                                     |     |  |  |  |
| 2 -   |       |                         |             |                                                                                                                                 | Delay 10-20 mins.<br>due to thunder-<br>showers |     |  |  |  |
| 3-    |       |                         |             |                                                                                                                                 |                                                 |     |  |  |  |
| 5 -   | 2     | 5<br>4<br>9<br>8        |             | GRAVELLY CLAY: Medium brown, pebbles up to in, non-plastic (GC) CLAY: Medium brown, slightly silty, slightly plastic, few small | 0935<br>Dry                                     |     |  |  |  |
| 7 -   |       |                         |             | pebbles (CL)                                                                                                                    |                                                 |     |  |  |  |
| 9 -   |       |                         |             |                                                                                                                                 |                                                 |     |  |  |  |
| 10    | 1 3   | 3 4 8                   |             | CLAY: Medium brown, slightly plastic slightly silty, slightly sandy CLAY: Mottled gray-brown, slightly plastic (fill) (CL)      | ,0955<br>Wet                                    |     |  |  |  |

| ART | -2 |      |  |
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| 101 | 0  | 4885 |  |



PAGE 2 OF 2 BORE HOLE NO. 3-7

ROJECT PPG

LOCATION Oak Creek, Wisconsin

HEMARKS

| I                                       | MPLE<br>NO. | BLOW            | .0 | 0 C K H H |                                                                                                                |         | DAYBH |
|-----------------------------------------|-------------|-----------------|----|-----------|----------------------------------------------------------------------------------------------------------------|---------|-------|
| 0.5.                                    | S A M       | 38.1            | PE | AEC.      | LITHOLOGIC DESCRIPTION                                                                                         | REMARKS | LOG   |
| 7                                       | •           |                 |    |           |                                                                                                                | ```     |       |
| 4                                       |             |                 |    |           |                                                                                                                | Wet     |       |
| 5                                       | 4           | 3<br>- 7<br>- 1 | 0  |           | CLAY: Slightly sandy, slightly silty reddish-brown, plastic (CL)                                               | •       |       |
| 6 1 7                                   | <del></del> |                 |    |           | SAND: Medium-coarse, slightly clay-<br>ey, slightly gravelly (SW)                                              |         |       |
| 1181                                    |             |                 |    |           |                                                                                                                |         |       |
| 9 = =                                   |             |                 |    | !         |                                                                                                                |         |       |
| 0 1                                     | 5           | 5<br>5          | 0  |           | CLAYEY GRAVEL: Many pebbles up to  if (GC)  CLAY: Gray, slightly plastic.                                      |         |       |
| 1-1                                     |             | _               | 1  | 2         | CLAY: Gray, slightly plastic, slightly silty (CL)                                                              | . · ·   |       |
| 2                                       |             |                 |    | ;         |                                                                                                                |         | ,     |
| 4                                       |             |                 |    | • .       |                                                                                                                |         |       |
| 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 | 6           | 6<br>6<br>13    | 5  |           | CLAY: Very plastic and elastic, reddish-brown, nearly homo-genous, small layer brown, slightly silty clay (CL) |         |       |
| 7                                       |             |                 |    |           |                                                                                                                |         |       |

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Moist 1505

| J (0 B | A885          |     |          |            |        |                        | BORE                          | E HOLE HO.                   | 8 1      | · ·      |             |        |         |
|--------|---------------|-----|----------|------------|--------|------------------------|-------------------------------|------------------------------|----------|----------|-------------|--------|---------|
| •      | JECT          | 1   | PG       |            |        |                        |                               | LOCATION                     | Oak Cree | k, Wisco | <del></del> |        |         |
| ORIL   | LING          | CO  | NTR      | ACTO       | A<br>S | TS                     | -                             | ORILLING EQUIPMENT  CME - 55 |          |          |             |        |         |
| HYD    | ROGE          | Oι  | O G1 S   | Gr         |        | rown                   |                               | DRILLER                      | Joe      |          |             |        |         |
| DAT    | E STA<br>6/4/ | 87  | /TIH     | 144        | 5      | DATE FINE              | SH/TIME<br>87 1515            | SURFACE<br>ELEVATION         |          | TO       | TAL DEPTH 1 | 12.0   | )'      |
| WEL    | L CAS         |     | G        |            |        | SCREEN                 |                               | LENGTH                       |          | SL       | от          |        |         |
|        |               |     |          | GRO        | סאט    | WATER                  |                               |                              | CASING   | CORE     | SAMPLER     | T      | UBE     |
| 0      | ATE           |     |          | TIME       |        | DEPTH                  | WEATHER                       | TYPE                         |          |          | s.s.        |        |         |
|        |               |     |          |            |        |                        | ·                             | DIAMETER                     |          |          | 2"          |        |         |
|        |               |     |          |            |        |                        |                               | HAMMER<br>WEIGHT             |          |          | 140 15.     |        |         |
|        |               |     |          |            |        |                        |                               | FALL                         |          |          | 30"         |        |         |
|        | ARKS          |     |          |            |        |                        |                               |                              |          |          |             |        |         |
| DEP TH | PLE           | MO. | N 0      | 30 V<br>RY |        |                        | 8 (                           | RE HOLE LO                   | og       |          |             |        | SRAPHIC |
| OE     | A V S         | 91  | C #      | RECON-ERY  |        | LITHOLOGIC DESCRIPTION |                               |                              |          | R        | EMARKS      |        | rog     |
| 1 1-   | 1             | 4   | 10       |            | CL     |                        | brown, sl. s.<br>pebbles (CL) | and, sl. pl                  | astic    | Dry 14   | 50          | e<br>V |         |
| 2-     |               |     |          |            |        |                        |                               | * .                          |          |          |             |        |         |
| 3-     |               |     |          |            |        |                        |                               |                              |          |          |             |        |         |
| 4-     |               |     |          |            |        |                        |                               |                              |          |          |             |        |         |
|        | 2             | 11  | . 4      |            | CL     |                        | brown, gray tic, few pebb     |                              |          | Hoist    | 1455        |        |         |
| 7-     | -             |     | 18<br>25 |            |        |                        |                               |                              |          |          |             |        |         |
| 8 -    |               |     |          |            | -      |                        |                               |                              |          |          | • • • .     |        |         |
| 9 -    | 7             |     |          |            |        |                        |                               |                              |          |          |             |        |         |

CLAY - med. brown, some iron oxide stains, plastic, few pebbles, (CL)

| LATI               |      |                           |
|--------------------|------|---------------------------|
| principal interest |      | The state of the state of |
| ,108 J.            | 4885 |                           |
| TOJECT             | DDC  |                           |



BORE HOLE NO. B2

|                  | 007                                                                           |       |                    |                  |                            |       |      |           | D 2  |
|------------------|-------------------------------------------------------------------------------|-------|--------------------|------------------|----------------------------|-------|------|-----------|------|
| 1 TOJECT P       | PG                                                                            |       |                    | LOCATION         | Oak Cree                   | k, Wi | scon | sin       |      |
| DRILLING CO      | ROTOARTHC                                                                     | STS   |                    | DRILLING E       | RILLING EQUIPMENT CHE - 55 |       |      |           |      |
| I PROGEOU        |                                                                               |       | ORILLER<br>SURFACE | Joe              |                            |       |      |           |      |
| DATE STAR 6/4/87 | ATE START/TIME DATE FINISH/TIME 6/4/87 1640 6/4/87 170 ELL CASING SCREEN TYPE |       |                    |                  |                            |       | TOTA | L DEPTH 1 | 2.0' |
| ELL CASIN        | ELL CASING                                                                    |       | PE                 | LENGTH SLOT      |                            |       |      |           |      |
|                  | GROUNG                                                                        | WATER |                    |                  | CASING                     | co    | ЯE   | SAMPLER   | TUBE |
| DATE             | TIME                                                                          | DEPTH | WEATHER            | TYPE             |                            |       |      | S.S.      |      |
|                  |                                                                               |       |                    | DIAMETER         | -                          |       |      | 2"        |      |
|                  |                                                                               |       |                    | HAMMER<br>WEIGHT |                            |       |      | 140 15    |      |
|                  |                                                                               |       |                    | FALL             |                            |       |      | 30"       |      |

EMARKS

| AMPLI<br>NO. | NO Y                    | BORE HOLE LOG                                                           |               | GRAPH |
|--------------|-------------------------|-------------------------------------------------------------------------|---------------|-------|
| SAMPI<br>NO. | COUNT<br>PER 6<br>RECOV | LITHOLOGIC DESCRIPTION                                                  | REMARKS       | rog   |
| 1 1          | 2                       | TOPSOIL - Clay, dk. brown-black, sl. sandy, gravelly (CL)               | 1640          |       |
|              | 6                       | CLAY - med. brown, stiff, non plastic gravelly (CL)                     | Dry           |       |
|              |                         |                                                                         | • * .         |       |
|              | -                       |                                                                         |               |       |
|              |                         |                                                                         |               |       |
| 2 7          | 8                       | CLAY - med. tan brown, much gravel, up to \frac{1}{1}" (CL)             | 1645          |       |
|              | 9                       | CLAY - med. brown, very plastic, sl. silty, sl. sandy (CL)              | Moist         |       |
|              |                         |                                                                         |               |       |
|              |                         |                                                                         |               |       |
|              | ,                       |                                                                         |               |       |
|              | 5                       | CLAY - brown and gray mottled sl. silty,<br>sl. sandy, few pebbles (CL) | 1655<br>Moist |       |

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BORE HOLE NO

| JOB NO. 4           | 885         |              |             |                             |             | BORE        | HOLE HO.    | B3   |
|---------------------|-------------|--------------|-------------|-----------------------------|-------------|-------------|-------------|------|
| PROJECT P           | PG          |              |             | LOCATION                    | Oak Creek   | c, Wiscon   |             | -    |
| DRILLING C          | ONTRACTOR   | STS          |             | ORILLING EQUIPMENT CHE - 55 |             |             |             |      |
| HYDROGEO            | LOGIST      | DRILLER      | Joe         |                             |             |             |             |      |
| DATE STAR<br>6/4/87 | T/TIME 1545 | SURFACE      |             | тот                         | TOTAL DEPTH |             |             |      |
| WELL CASI           |             | PE           | LENGTH SLOT |                             |             |             |             |      |
|                     | GROUNG      | WATER        |             |                             | CASING      | CORE        | SAMPLER     | TUBE |
| DATE                | TIME        | DEPTH        | WEATHER     | TYPE                        |             |             | s.s.        |      |
|                     |             |              |             | DIAMETER                    |             |             | 2"          |      |
|                     |             |              |             | HAMMER<br>WEIGHT            |             |             | 140 16.     |      |
|                     |             |              |             | FALL                        |             |             | 30"         |      |
| REMARKS             |             | <del> </del> | ·           | <u> </u>                    |             | <del></del> | <del></del> | **** |

| -           |               |                         | _            |                                                                                            |                                                 | <del></del> |
|-------------|---------------|-------------------------|--------------|--------------------------------------------------------------------------------------------|-------------------------------------------------|-------------|
| e<br>DEP TH | SAMPLI<br>NO. | 3 x 0                   | 000<br>R Y   | BORE HOLE LOG                                                                              |                                                 | GRAPH       |
| E. O.       | P A A         | BLOW<br>COUNT<br>PER 6. | RECC<br>-ER' | LITHOLOGIC DESCRIPTION                                                                     | REMARKS                                         | rog         |
| 1 -         | 1             |                         |              | CLAY - SAND - TOPSOIL, silty, med. brown, few pebbles (CL)                                 | 1545<br>Dry                                     |             |
| 2-          |               |                         |              |                                                                                            |                                                 |             |
| 3-          |               |                         |              |                                                                                            |                                                 |             |
| 5 -         | -             |                         |              |                                                                                            |                                                 |             |
| 6 —         | 2             | 9 11 13                 |              | CLAY - med. brown, very stiff, sl. silty, few pebbles, sl. plastic (CL)                    | Two split spoons needed to obtain enough sample |             |
| 7           |               |                         |              |                                                                                            | Dry                                             |             |
| 8 -         |               |                         |              |                                                                                            |                                                 |             |
| 9 -         |               |                         |              |                                                                                            |                                                 |             |
| 10-         | 3             | 10                      |              | CLAY - gray-brown mottled, very stiff, sl. plastic, sl. silty, few pebbles sl. sandy? (CL) | 1605                                            |             |

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|             | 7003     |                      |                |                      |           | 1        |          | D4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------|----------|----------------------|----------------|----------------------|-----------|----------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ROJECT      | PPG      |                      |                | LOCATION             | Oak Creek | , Wiscon | sin      | The Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Co |
| DRILLING CO | NTRACTOR | STS                  |                | ORILLING E           | QUIPMENT  | CH       | E-55     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| TOROGEOU    | OGIST G  | reg Brown            |                | DAILLEA              | Joe       |          |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| DATE START  |          | DATE FINIS<br>6-3-87 | H/TIME<br>1555 | SURFACE<br>ELEVATION |           | тот      | AL DEPTH | 12.0'                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| WELL CASIN  |          | SCREEN TY            | PE             | LENGTH               |           | sco      | т        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|             | GROUN    | O WATER              |                |                      | CASING    | CORE     | SAMPLER  | TUBE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| DATE        | TIME     | DEPTH                | WEATHER        | TYPE                 |           |          | S.S.     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|             |          |                      |                | DIAMETER             |           |          | 2"       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|             |          |                      |                | HAMMER<br>WEIGHT     |           |          | 140 16.  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|             | *        |                      |                | FALL                 |           |          | 30"      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

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| E    | PL.  | N N                  | 0 >       | . SORE HOLE LOG                                                             |             | SRAPHI |
|------|------|----------------------|-----------|-----------------------------------------------------------------------------|-------------|--------|
| 0 6. | SAMP | BLOW<br>COUNT        | RECO -ERY | LITHOLOGIC DESCRIPTION                                                      | REMARKS     | roa    |
|      | 1    | 4 4                  |           | TOPSOIL: Brown - sand, clay mixture few pebbles, organics (CL).             | 1530<br>Dry |        |
| 3    |      |                      |           |                                                                             |             |        |
| 4-   |      |                      |           |                                                                             | 1535        |        |
| 6 -  | 2    | 10<br>15<br>17<br>20 |           | CLAY: Reddish-brown, sl. plastic, sl. silty, few pebbles, iron oxides (CL). | Dry         |        |
| 7    |      |                      |           |                                                                             |             |        |
|      |      |                      |           |                                                                             |             |        |
| 10   | 3    | 6 7 8                |           | CLAY: Gray, mottled brown (iron stains) very plastic, few pebbles (CL).     | 1545<br>Wet |        |

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| JUB NO. 4           | 885         |                     |                  |                           | ·         | BORE      | BORE HOLE HO. |      |  |  |  |
|---------------------|-------------|---------------------|------------------|---------------------------|-----------|-----------|---------------|------|--|--|--|
| PROJECT P           | PG          |                     |                  | LOCATION                  | Oak Creel | k, Wiscon | sin           |      |  |  |  |
| DRILLING CO         | ONTRACTOR   | STS                 |                  | DRILLING EQUIPMENT CHE 55 |           |           |               |      |  |  |  |
| HYDROGEO            | LOGIST Gr   | eg Brown            |                  | DAILLER                   | Joe Wojna | avowicz   |               |      |  |  |  |
| DATE STAR<br>6/1/87 | T/TIME 1430 | OATE FINIS<br>6/1/8 | H/TIME<br>7 1500 | SURFACE TOTAL DEPTH 12.0" |           |           |               |      |  |  |  |
| WELL CASIN          | ł G         | SCREEN TY           | TPE              | LENGTH                    |           | \$LO1     |               | . ^  |  |  |  |
|                     | GROUP       | O WATER             |                  |                           | CASING    | CORE'.    | SAMPLER       | TUBE |  |  |  |
| DATE                | TIME        | DEPTH               | WEATHER          | TYPE                      |           |           | S.S.          |      |  |  |  |
|                     |             |                     |                  | DIAMETER                  |           |           | 2"            |      |  |  |  |
|                     |             |                     |                  | HAMMER<br>WEIGHT          |           |           | 140 15        |      |  |  |  |
|                     |             | •                   |                  | FALL                      | ·         |           | 30"           |      |  |  |  |
| REMARKS             |             |                     |                  |                           |           |           |               |      |  |  |  |

| POPERNAMENT | ARKS          |                         |             |                                                                                          |             |      |
|-------------|---------------|-------------------------|-------------|------------------------------------------------------------------------------------------|-------------|------|
| оер тн      | SAMPLI<br>NO. | OW<br>UNI               | 00 V<br>A Y | BORE HOLE LOG                                                                            |             | SR.A |
| 330         | 7 X           | BLOW<br>COUNT<br>PER 8' | RECC<br>-EA | LITHOLOGIC DESCRIPTION                                                                   | REMARKS     | (    |
| 1           | 1             | 10<br>9                 |             | CLAY - med. brown, very gravelly, non plastic, some organic material (CL)                | 1440<br>Dry |      |
| 2           |               |                         |             |                                                                                          |             |      |
| 3           |               |                         |             |                                                                                          |             |      |
| 5           | 1             | 8<br>7<br>12            |             | CLAY - Tan to med. brown, sl. silty, sl. plastic, friable, iron oxides, few pebbles (CL) | 1450<br>Dry |      |
| 7-          |               | 17                      |             |                                                                                          |             |      |
| 8-          |               |                         |             |                                                                                          |             |      |
| 10-         |               | 10                      |             | CLAY - tan brown grading into gray, sl. plastic grading into semiplastic,                | 1500<br>Dry |      |
| 11-         | 3             | 10                      |             | some pebbles (CL)                                                                        | Dry .       |      |

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| 1 |   |   |   |             |       |   |      |          |      |

BORE HOLE HO

6

| J. MO.      | 4885      |                    |         |                               |        | 100, |          | B6    |  |
|-------------|-----------|--------------------|---------|-------------------------------|--------|------|----------|-------|--|
| PROJECT     | PPG       |                    |         | LOCATION Oak Creek, Wisconsin |        |      |          |       |  |
| DRILLING CO |           | STS                |         | DRILLING EQUIPMENT CHE-55     |        |      |          |       |  |
| HYDROGEOL   | O GIST Gr | eg Brown           |         | ORILLER Joe                   |        |      |          |       |  |
| OATE START  | TIME      | DATE FINIS: 6/1/87 | HITIME  | SURFACE<br>ELEVATION          |        | 101, | AL DEPTH | 12.0' |  |
| WELL CASIN  |           | SCREEN TY          | PE      | LENGTH                        |        |      | SLOT     |       |  |
|             | GROUN     | O WATER            |         |                               | CASING | CORE | SAMPLER  | TUBE  |  |
| DATE        | TIME      | ОЕРТН              | WEATHER | TYPE                          |        |      | S.S.     |       |  |
|             |           |                    |         | DIAMETER                      |        |      | 2"       | ·     |  |
|             |           |                    |         | HAMMER<br>WEIGHT              |        |      | 140 15.  |       |  |
|             |           |                    |         | FALL                          |        |      | 30"      |       |  |

REMARKS

(

| I      | P.L. | 3 Z 8             | 0 V           | BORE HOLE LOG                                                                                       |             | SRAPHI |
|--------|------|-------------------|---------------|-----------------------------------------------------------------------------------------------------|-------------|--------|
| DEP TH | NO.  | BLOW<br>COUNT     | RECON<br>-ERY | LITHOLOGIC DESCRIPTION                                                                              | REMARKS     | rog    |
| 1      | 1    | <sup>3</sup> 58   |               | Clay - brown - medium, slightly silty, some organics, slightly gravelly, friable, non-plastic (CL). | 1540<br>Dry |        |
| 2 -    |      |                   |               |                                                                                                     |             |        |
| 3 -    |      |                   |               |                                                                                                     | * .         |        |
| 4 -    |      |                   |               |                                                                                                     |             |        |
| 5 -    | 2    | 46 <sub>104</sub> |               | Clay - med. brown, sl. silty, sl. plastic (CL).                                                     | 1550<br>Dry |        |
| 7 -    |      |                   |               |                                                                                                     |             |        |
| 8 ~    |      |                   |               |                                                                                                     |             |        |
|        |      |                   |               |                                                                                                     | 1600<br>Wet |        |
| 10     | 3    | 4<br>11<br>10     |               | Clay - med. brown, sl. silty, sl. gravelly, sl. plastic (CL).                                       |             |        |



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|                          |                                              |                                                           |                                                                                                                | ]                                                                                                                                                 | HOLE NO.                                                                                                                                                        | B - 7 *                                                                                                                                                                                               |
|--------------------------|----------------------------------------------|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                          |                                              | LOCATION                                                  | Oak Creek                                                                                                      | , Wisco                                                                                                                                           |                                                                                                                                                                 |                                                                                                                                                                                                       |
|                          |                                              | DRILLING E                                                | OUIPMENT                                                                                                       | CME 55                                                                                                                                            |                                                                                                                                                                 |                                                                                                                                                                                                       |
| own                      |                                              | ORILLER                                                   | Joe Wojnav                                                                                                     | vowicz                                                                                                                                            |                                                                                                                                                                 |                                                                                                                                                                                                       |
| TE FINISH/TIME<br>6/1/87 | 1045                                         | SURFACE<br>ELEVATION                                      |                                                                                                                | TO                                                                                                                                                | TAL DEPTH                                                                                                                                                       | 2,0'                                                                                                                                                                                                  |
| REEN TYPE                |                                              | LENGTH                                                    |                                                                                                                | SL                                                                                                                                                | 01                                                                                                                                                              |                                                                                                                                                                                                       |
| TER                      |                                              |                                                           | CASING                                                                                                         | CORE                                                                                                                                              | SAMPLER                                                                                                                                                         | TUBE                                                                                                                                                                                                  |
| EPTH WEA                 | THER                                         | TYPE                                                      |                                                                                                                |                                                                                                                                                   | S.S.                                                                                                                                                            |                                                                                                                                                                                                       |
|                          | ·                                            | DIAMETER                                                  |                                                                                                                |                                                                                                                                                   | 2"                                                                                                                                                              |                                                                                                                                                                                                       |
|                          |                                              | HAMMER<br>WEIGHT                                          |                                                                                                                |                                                                                                                                                   | 140 16                                                                                                                                                          |                                                                                                                                                                                                       |
| •                        |                                              | FALL                                                      |                                                                                                                | *                                                                                                                                                 | 30"                                                                                                                                                             | -                                                                                                                                                                                                     |
|                          | TE FINISH/TIME 6/1/87 REEN TYPE TER EPTH WEA | OWN TE FINISHITIME 6/1/87 1045 REEN TYPE TER EPTH WEATHER | ORILLING E  OWN  TE FINISHITIME 6/1/87 1045 REEN TYPE  LENGTH  TER  EPTH WEATHER TYPE  OIAMETER  HAMMER WEIGHT | Oak Creek  ORILLING EQUIPMENT  OWN  TE FINISHITIME 6/1/87 1045 ELEVATION  REEN TYPE LENGTH  TER CASING  EPTH WEATHER TYPE  DIAMETER HAMMER WEIGHT | Oak Creek, Wisco ORILLING EQUIPMENT CME 55  OWN TE FINISHITIME SURFACE ELEVATION REEN TYPE LENGTH SLI  TER CASING CORE EPTH WEATHER TYPE DIAMETER HAMMER WEIGHT | CME 55  ORILLING EQUIPMENT CME 55  OWN  TE FINISHITIME 6/1/87 1045 ELEVATION  REEN TYPE  LENGTH  CASING CORE, SAMPLER  EPTH WEATHER TYPE  CASING CORE, SAMPLER  S.S.  DIAMETER  HAMMER WEIGHT  140 1h |

| Ĭ        | 0   | X C | Z           | 0   | 70.7          | BORE HOLE LOG                                                                             |                                | SRAP |
|----------|-----|-----|-------------|-----|---------------|-------------------------------------------------------------------------------------------|--------------------------------|------|
| DEPTH    | M Z | В   | COL         | PEA | RECOV<br>-ERY | LITHOLOGIC DESCRIPTION                                                                    | REMARKS                        | roc  |
| 1-       | 1   |     | 6<br>5      |     |               | CLAY - Tan brown, stiff, organics, sl. plastic (CL)                                       | 10:15<br>Dry                   |      |
|          |     |     |             | 7   |               |                                                                                           |                                | 1    |
| 2—       |     |     |             |     |               |                                                                                           |                                |      |
| 3_       |     |     |             |     |               |                                                                                           |                                |      |
| 3 - 4    |     |     |             |     |               |                                                                                           |                                |      |
| 5        | 2   |     | 5 9         | 11  | -             | CLAY - Brown, tan, yellowish, sl. silty, sl. sandy, some organics, stiff, sl plastic (CL) | 10:30<br>Slightly moist        |      |
| 7—       |     |     |             | . 1 |               |                                                                                           |                                |      |
| <u> </u> |     |     |             |     | -             |                                                                                           |                                |      |
| -        |     |     |             | . • | -             |                                                                                           |                                |      |
| 9        |     |     |             |     |               |                                                                                           |                                |      |
| 10-      | 3   | 1   | 5<br>6<br>8 | 3   |               | CLAY - Reddish brown, sand lenses, coarse, gray, black, sl. plastic (CL)                  | 10:43<br>H <sub>2</sub> O @ 9' |      |
| 11-      |     |     |             | 9   |               |                                                                                           |                                | ,    |

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| - | 808E | HOLE | HO. | 8.8 |

| 8 HO. 48                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 385       |                                                                                                        |                                                                                      |                      | •         | BORE      | HOLE HO. | 88                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| PAOJECT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | PPG       | alatan paraman <mark>dibenta an</mark> antan <sub>kale</sub> ngan pengangan kanggan dan pentaban dan m | aki ya kata kata kata ya kata aki a kata a mara kata kata kata kata kata kata kata k | LOCATION             | Oak Creek | , Wiscons | in       | The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s |
| DRILLING CO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ONTRACTOR | STS                                                                                                    |                                                                                      | ORILLING E           | QUIPMENT  | CME-S     | 55       | ******                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| HYDROGEOL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | OGIST     | Grea Brown                                                                                             |                                                                                      | DRILLER              | Joe       |           |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| DATE START<br>6-1-87                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           | OATE FINIS<br>6-1-87                                                                                   |                                                                                      | SURFACE<br>ELEVATION |           | TOTA      | L DEPTH  | 12.0'                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| WELL CASIN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | IG        | SCREEN TY                                                                                              | (PE                                                                                  | LENGTH               |           | SLO       | T        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| and a finite from the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract | GROUP     | NO WATER                                                                                               |                                                                                      |                      | CASING    | CORE      | SAMPLER  | TUBE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| DATE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | TIME      | OEPTH                                                                                                  | WEATHER                                                                              | TYPE                 |           |           | s.s.     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |           |                                                                                                        |                                                                                      | DIAMETER             |           |           | 2"       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ·         |                                                                                                        |                                                                                      | HAMMER<br>WEIGHT     |           |           | 140 lb.  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 0.51/1.01/0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |                                                                                                        |                                                                                      | FALL                 |           |           | 30"      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

REMARKS

| N.C.M                                         | VVV 2        |                        |             |                                                                                                               |                          |       |
|-----------------------------------------------|--------------|------------------------|-------------|---------------------------------------------------------------------------------------------------------------|--------------------------|-------|
| EP TH                                         | 9.           | UNI                    | 0 V         | BORE HOLE LOG                                                                                                 |                          | _SR.A |
| a G                                           | SAMPL<br>NO. | BLOW<br>COUNT<br>PER 6 | REC(<br>-ER | LITHOLOGIC DESCRIPTION                                                                                        | REMARKS                  | L     |
|                                               |              |                        |             |                                                                                                               |                          |       |
| 1 -                                           | 1            | 7                      |             | Clay brown - yellowish, red streaks Brittle, sl. silty                                                        | 1135<br>Dry              | -     |
| 2_                                            |              |                        |             | organics, small pebbles (CL).                                                                                 |                          |       |
| -                                             |              | f                      |             |                                                                                                               | •<br>•                   |       |
|                                               |              |                        |             |                                                                                                               | *                        |       |
| 4 -                                           |              |                        |             |                                                                                                               |                          |       |
| 5 -                                           | 1            |                        |             |                                                                                                               | 1145                     |       |
| 3 - 4 - 5 - 6 - 6 - 6 - 6 - 6 - 6 - 6 - 6 - 6 | 2            | 6<br>8<br>11           |             | Clay greenish brown at top grading to a reddish brown sl. plastic, sl. silty, few organics, some pebbles (CL) | Dry                      |       |
| 7 -                                           |              | 13                     |             |                                                                                                               |                          |       |
|                                               |              |                        |             |                                                                                                               |                          |       |
| 8 -                                           |              |                        |             |                                                                                                               |                          |       |
| 9 -                                           |              |                        |             |                                                                                                               | • • •                    |       |
| 10                                            |              |                        |             |                                                                                                               | l150<br>Wet              |       |
|                                               |              | 4 7                    |             | Clay reddish brown, sl. silty, sl. plastic (CL)                                                               | Possibly hit obstruction |       |
| 11-                                           | 3            | 22                     |             | Gravel - clay - pebbles up to 3/4" sl.                                                                        |                          |       |

| P | Δ | а | Т | 1 |
|---|---|---|---|---|

JOB HO. /000



| 1 |      | _ |     | <br> | - |
|---|------|---|-----|------|---|
|   | PAGE |   | O F | <br> | _ |

BORE HOLE HO.

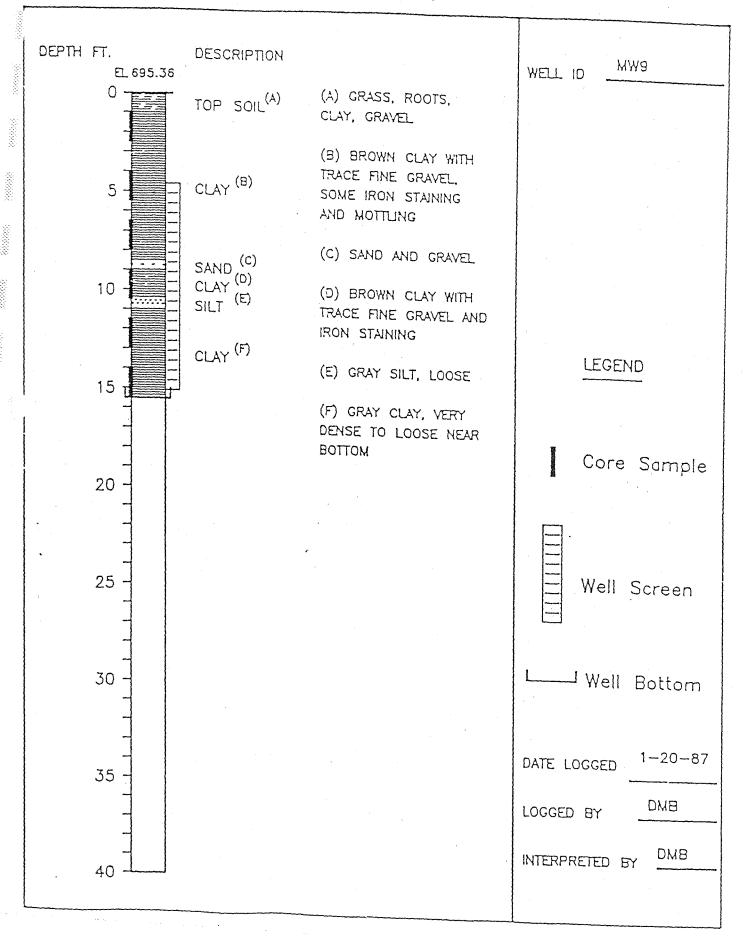
8-9

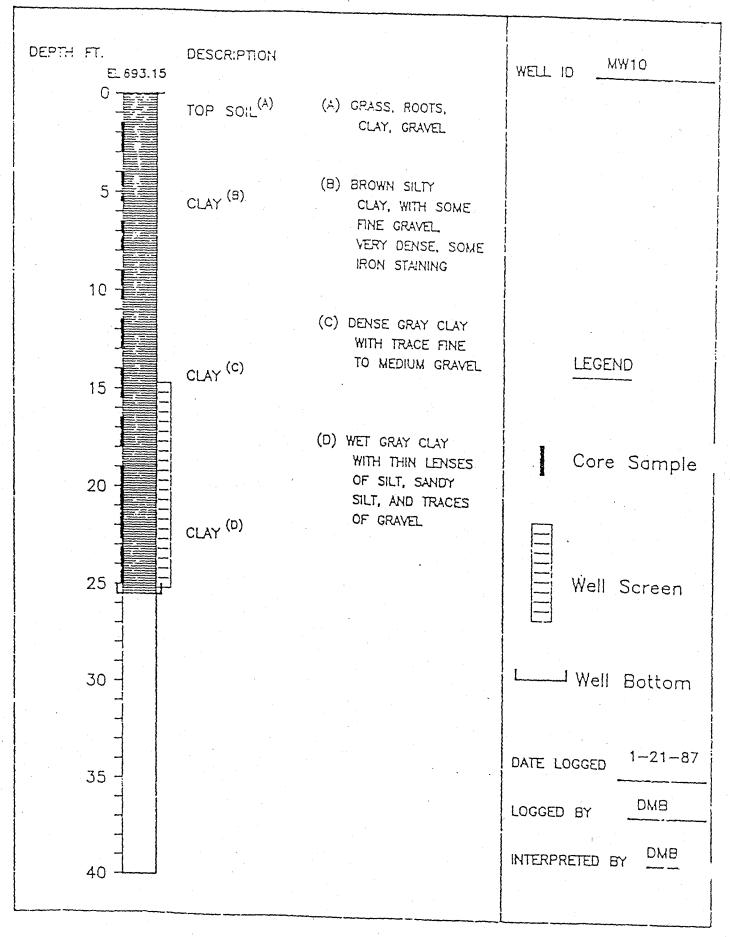
|                                         | 400)                                             |                                       |             |                                        |                               |                      |           | 1           |        |         | -           | •           |
|-----------------------------------------|--------------------------------------------------|---------------------------------------|-------------|----------------------------------------|-------------------------------|----------------------|-----------|-------------|--------|---------|-------------|-------------|
| PROJECT                                 | PPG                                              |                                       |             |                                        |                               | LOCATION             | Oak       | Creek       | , Wis  | consin  |             |             |
| DRILLING CO                             | ONTRA                                            | ACTO                                  | Ą           | STS                                    |                               | DRILLING E           | QUIPMENT  |             | CXE    | C-55    |             | _           |
| HYDROGEO                                | LOGIS                                            | T                                     | Gr          | eg Brown                               |                               | DRILLER              | Joe Wojna | vowic       |        |         |             | · · ·       |
| DATE STAR                               | T/TIMI<br>87                                     | E<br>133                              |             | DATE FINISH                            | 1430                          | SURFACE<br>ELEVATION |           |             |        | LOEPTH  | 1           | 2.0'        |
| WELL CASIN                              |                                                  |                                       |             | SCREEN TY                              |                               | LENGTH               |           |             | SLO    |         | -           |             |
|                                         |                                                  | GRO                                   | סאט         | WATER                                  |                               |                      | CASING    | CO          | R E    | SAMPLER | <del></del> | U8E         |
| DATE                                    | T                                                | IME                                   | <u> </u>    | DEPTH                                  | WEATHER                       | TYPE                 |           |             | ```    | S.S.    |             | ·           |
|                                         |                                                  |                                       |             |                                        |                               | DIAMETER             |           |             | :<br>  | 2"      |             |             |
|                                         | 1                                                | <del></del>                           |             | ·····                                  |                               | HAMMER<br>WEIGHT     |           |             |        | 140 16. |             |             |
|                                         | <del>                                     </del> |                                       |             | ************************************** |                               | FALL                 |           |             | ·      | 30"     | <del></del> |             |
| REMARKS                                 |                                                  | · · · · · · · · · · · · · · · · · · · |             |                                        | <u> </u>                      |                      |           | <u> </u>    |        | L       | <del></del> |             |
|                                         | Eil                                              | >                                     |             |                                        |                               | 200 4015 10          |           |             |        |         |             | <del></del> |
| DEPTH<br>SAMPLE<br>NO.<br>BLOW          | COUNT<br>PER 6.                                  | ERY                                   |             | 4 1 7 1 2 /                            | OLOGIC DESC                   | DRE HOLE LO          | 7.4       |             | D.F.L. | IARKS   |             | SRAPH-      |
| 0 3                                     | O a                                              | <u> </u>                              |             | Ulin                                   | OLOGIC DESC                   | MIFTION              |           |             |        |         |             |             |
| 3 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - | 5 7                                              |                                       | pla         |                                        | med. very doorganic roo       |                      |           | 1340<br>Dry |        |         |             |             |
| 6                                       | 6<br>12<br>17                                    |                                       | <b>5</b> 01 | me pebbles,                            | own, sl. sill trace organ     | nics (CL).           |           | 1350<br>Dry |        |         |             |             |
|                                         | 5<br>7<br>8                                      |                                       |             |                                        | own to redd:<br>ising plastic |                      | o grey    | Moi         |        |         |             |             |

Sand - charse grained, ironoxides - reddish

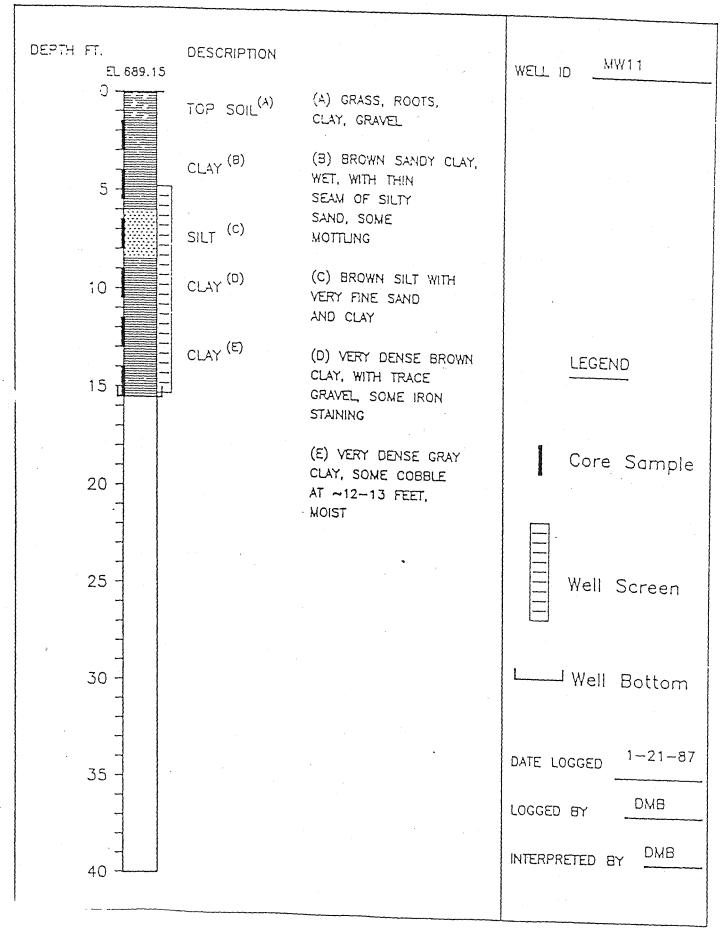
C4

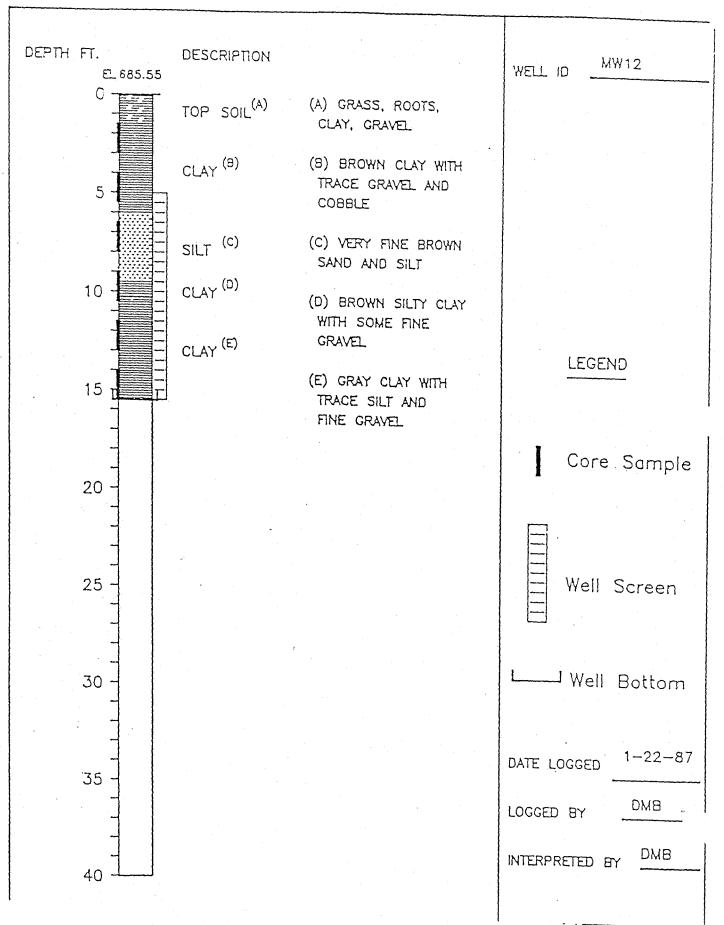
GERAGHTY & MILLER, 1987

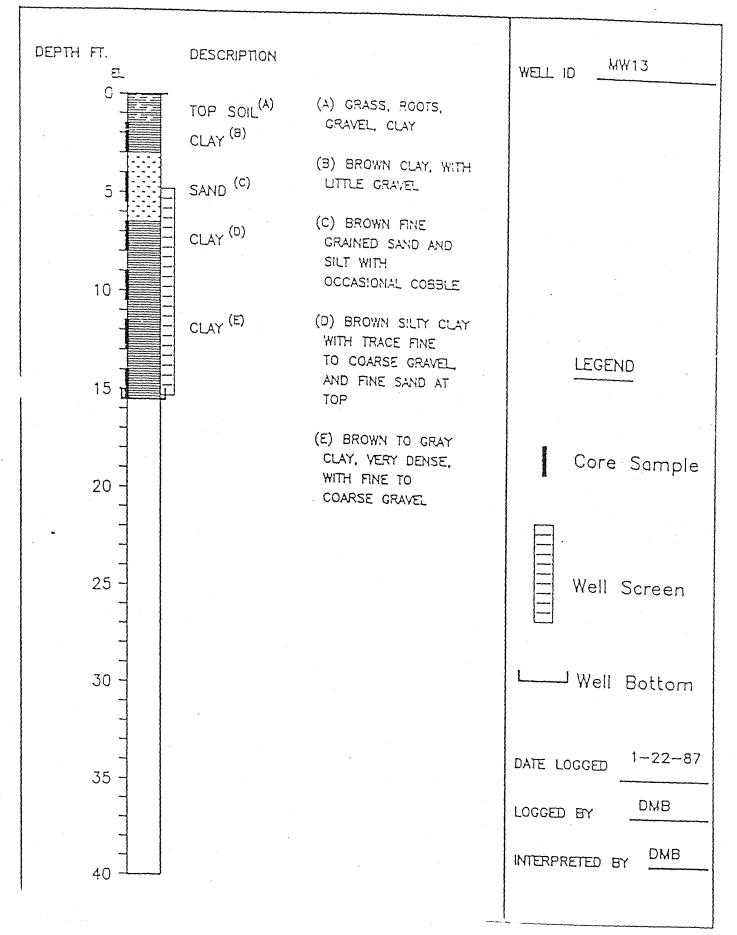


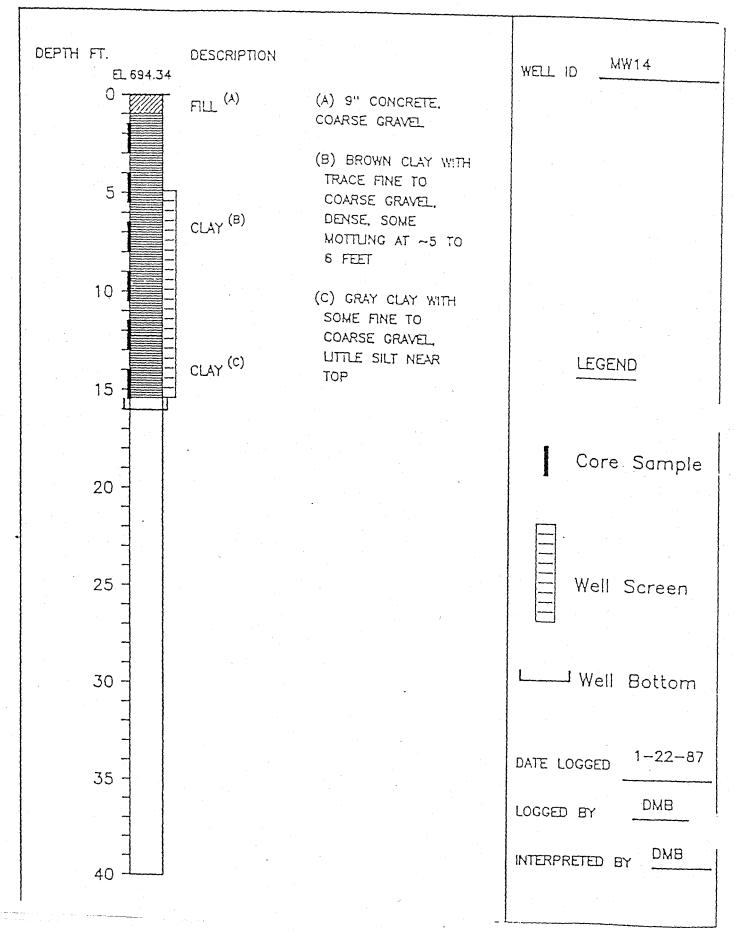


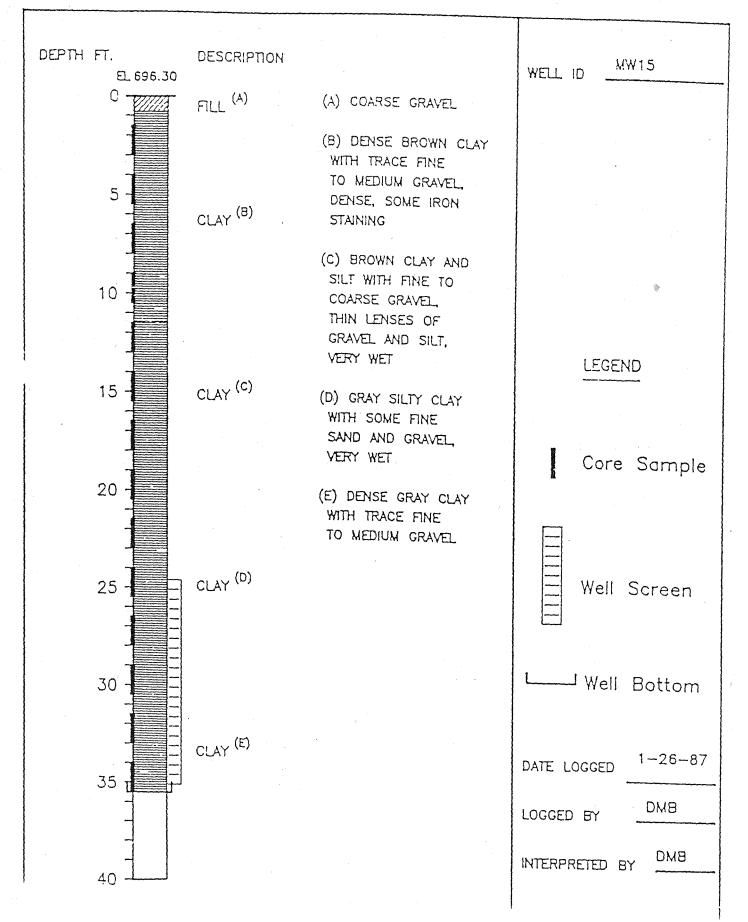
WELL LOG











C5

WARZYN INC., 1992

# MARZYN

### LOG OF TEST BORING

Project PPG INDUSTRIES INC.

Location Oak Creek, Wisconsin

Boring No. B1 Surface Elevation Job No. 27350.01 Sheet \_\_\_\_1 of \_\_\_2

| •    | SA           | MPL                       |       |              |                        | VISUAL CLASSIFICATION                                                                 | EN                  | /IRONN               |                       |                      | /                   |
|------|--------------|---------------------------|-------|--------------|------------------------|---------------------------------------------------------------------------------------|---------------------|----------------------|-----------------------|----------------------|---------------------|
| o. H | Rec<br>(in.) | Moist                     | И     | Depth        |                        | and Remarks                                                                           | qu<br>(qa)<br>(tsf) | Head<br>Space<br>pom | Field<br>pcm          | Meth-<br>ane<br>%LEL | Mono-<br>tox<br>pom |
|      |              |                           |       | _            | 明                      | FILL: 4-6 Inches Brown (7.5YR 5/4) Fine to                                            |                     |                      |                       | •                    |                     |
| 1    | 24           | M                         | 19    | <del> </del> | <b>//////</b>          | Medium Sand, Some Gravel.                                                             | <u> </u>            | -                    |                       |                      |                     |
| 1    | 24           |                           | 19    | _            |                        | Stiff Brown (7.5YR 4/3) Mottled Lean CLAY; Little Gravel; Trace Fine Sand (CL).       |                     | ND                   | ND                    | ·<br>                |                     |
|      |              |                           |       | 1            |                        |                                                                                       |                     | -                    |                       |                      |                     |
| 2    | 24           | M                         | 10    | -            |                        |                                                                                       |                     | ND                   | ND                    |                      |                     |
|      |              |                           |       | 5            |                        |                                                                                       | ·                   |                      |                       |                      |                     |
|      |              |                           |       | I,           |                        | NOTE: Becoming Soft and Plastic at                                                    |                     |                      |                       |                      |                     |
| 3    | 24           | M                         | 4     | -            |                        | Approximately 6 ft.                                                                   |                     |                      |                       |                      |                     |
|      |              |                           |       | -            |                        |                                                                                       |                     | ND                   | ND                    |                      |                     |
|      |              |                           |       | I            |                        |                                                                                       |                     |                      |                       |                      |                     |
|      | 24           | M                         | 5     | <u> </u>     |                        |                                                                                       |                     |                      |                       |                      |                     |
| •    |              |                           |       |              | 0-                     |                                                                                       | ,                   | ND                   | NI                    |                      |                     |
|      |              | 1                         | 1     | +            |                        |                                                                                       |                     |                      | 1.                    | <del> </del>         | +                   |
| · 5  | 24           | M                         | 10    | 5            |                        |                                                                                       |                     |                      |                       |                      |                     |
|      |              |                           |       |              |                        | Light Brownish Gray (10YR 6/2) Lean CLAY; Trace Gravel (CL). Note: Thin Sand          |                     | ND                   | NI                    |                      |                     |
|      |              |                           |       | <u> </u>     | · \///                 | and Gravel Seam at Approximately 13 ft.                                               |                     |                      |                       |                      |                     |
| *6   | 181 2        | 4 M-                      | W 1   | 1            |                        | 7 (7 57 7 5 (4) 7)                                                                    |                     | -                    |                       | <del>-   `</del>     |                     |
| . 0  | 2            | 4 171-                    | W 1   | -            |                        | Brown (7.5YR 5/4) Fine to Medium SAND;<br>Trace Gravel (SP).                          |                     | NIT.                 | N                     |                      |                     |
|      |              | •   •                     | ·     |              | 15-                    | Light Brownish Gray (10YR 6/2) Mottled                                                |                     | NI                   | N                     |                      |                     |
|      |              |                           |       | <b>-</b>     | . 1//                  | Lean CLAY; Trace Gravel (CL).                                                         |                     | <del></del>          | 1                     |                      |                     |
| . 7  | 2            | .4 N                      | 1     | )            |                        | NOTE: Mottling not observed from 16.5 to                                              |                     |                      | -                     |                      |                     |
| :    |              |                           | -     |              |                        | 22.5 ft. Clay Becoming Soft and Plastic at Approximately 18.5 ft. Thin Fine to Medium |                     | NI                   | O   C                 | .3                   |                     |
|      |              |                           |       |              |                        | Sand Seams Observed From 18.5 to 22.5 ft.                                             |                     |                      |                       | ·                    |                     |
| 8    |              | 24 M·                     | -W    | 8            |                        |                                                                                       |                     |                      |                       |                      |                     |
|      |              |                           |       | -            | 20                     |                                                                                       |                     | N                    | $D \mid \cdot \mid D$ | ID.                  |                     |
|      |              |                           | 1. }  | NAT          | ERI                    | EVEL OBSERVATIONS                                                                     | GEI                 | NERA                 | L NC                  | TES                  | )                   |
| T    | ime A        | Drillin<br>After<br>to Wa | Drill |              | 0 U<br>25 hrs<br>7.85' | pon Completion of Drilling Start Driller Logger                                       | MY                  | 21 End<br>Chie       | 7/30                  | /91<br>L R           | ig CMI              |
|      | epth         | to Ca                     | ve in |              | 27'                    | Drill M                                                                               |                     | HSA 2                |                       |                      |                     |
|      | The s        | tratif                    | icati | on line      | s repr                 | esent the approximate boundary between soil be gradual.                               |                     | •                    |                       |                      |                     |

| W | Α | R | Z | Υ | N |   |
|---|---|---|---|---|---|---|
| V |   |   |   |   |   | - |

## LOG OF TEST BORING

Project PPG INDUSTRIES INC.

Location Oak Creek, Wisconsin

Boring No. B1
Surface Elevation
Job No. 27350.01
Sheet 2 of 2

11925 WEST LAKE PARK DRIVE SUITE 200, MILWAUKEE, WIS. 53224 TEL.(414)359-1144-

| . ·     | ·                                            | MPI   | E     |                                                   |       |             | VISUAL CLASSIFICATION                       |              | IRON         | MENT  | AL D        | ATA                                              |
|---------|----------------------------------------------|-------|-------|---------------------------------------------------|-------|-------------|---------------------------------------------|--------------|--------------|-------|-------------|--------------------------------------------------|
| No.     | Rec                                          | Moist | N     | Dep                                               | oth   |             | and Remarks                                 | qu           | Head         | 7F10  | Meth-       | T                                                |
|         | (in.)                                        |       |       |                                                   | - : ! |             | and itemative                               | (qa)         | Space        | Field | ane         | Mono-                                            |
| ]       |                                              |       |       |                                                   |       | 1///        |                                             | (tsf)        | pom          | ppm   | XLEL.       | ppm                                              |
|         |                                              |       |       | T.                                                |       |             |                                             |              |              |       | ,           |                                                  |
| 9       | 24                                           | M     | 54    | <u> </u>                                          |       |             |                                             |              |              |       |             | <del>                                     </del> |
| Ī       | <b>3</b> .                                   | 1,1   | J-7   | H                                                 |       |             |                                             |              | 1            |       |             | <del> </del>                                     |
|         |                                              |       |       |                                                   | ·     |             |                                             |              |              |       |             | }                                                |
| į       | ä                                            |       |       | L                                                 |       |             |                                             |              | 3.77         |       |             |                                                  |
|         |                                              |       |       | L                                                 | .     |             | Light Brownish Gray (10VD (10) are          |              | ND           | ND    |             |                                                  |
| \       | 1                                            | ·     |       | 1                                                 |       |             | Light Brownish Gray (10YR 6/2) SILT; Little |              |              |       |             |                                                  |
| 10      | 24                                           | M     | 32    | T                                                 |       |             | Fine Sand (ML).                             |              |              |       |             |                                                  |
| l       |                                              |       |       | -                                                 | ]     |             |                                             |              |              |       |             | 1                                                |
|         |                                              | -     |       | -                                                 |       |             |                                             |              |              |       |             |                                                  |
|         | 9                                            |       |       | <u> </u>                                          | 25-   | <i>////</i> |                                             |              | ND           | 7.77  |             | 1                                                |
| i       | <b></b>                                      | · ·   |       | L                                                 | 7.    |             | Light Brownish Gray (10YR 6/2) Lean         |              | תאדו         | ND    | -           |                                                  |
|         |                                              |       |       |                                                   | . 1   |             | . CLAY, Little Fine to Medium Sand Trace    | <b></b>      |              |       |             | 1.                                               |
| 11      | 24                                           | . M   | 16    | Γ                                                 | . }   |             | Gravel (CL).                                |              |              |       |             |                                                  |
| · · · · |                                              |       |       | ۲.                                                |       |             |                                             |              |              |       |             | <del>                                     </del> |
|         |                                              | .     |       | <u> </u>                                          | .     |             |                                             |              |              |       | -           |                                                  |
|         |                                              |       |       | -                                                 |       |             |                                             |              | מזא          | 717   |             |                                                  |
|         |                                              |       |       |                                                   |       |             |                                             |              | ND           | ND    |             |                                                  |
|         |                                              |       |       | 1                                                 |       |             | NOTE: Thin Silt Seams From Approximately    |              | 1            |       | ·           |                                                  |
| 12      | 24                                           | M     | 16    | Γ.                                                |       |             | 28.5 to 33 ft. Less Fine to Medium Sand     |              |              |       |             |                                                  |
|         | , .                                          | ,     |       | <u> </u>                                          |       |             | Observed From 26 to 32.5 ft.                |              | 1            |       | · · · · · · | t                                                |
|         | 3                                            |       |       | Η.                                                |       |             | 2 3 3 3 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7   |              |              |       |             | 1                                                |
|         |                                              |       |       | <u> -</u> :                                       | 30-   |             |                                             |              | ND           | 277   | ••          |                                                  |
| F       | 4                                            |       | - :   | <u> </u>                                          | *     |             |                                             |              | תאדו         | ND    | •           | 1                                                |
|         | <u>                                     </u> |       |       | Ŀ                                                 |       |             |                                             | <del></del>  |              |       |             | <u> </u>                                         |
| 13      | 24                                           | M-W   | 30.   | -                                                 | ٠, ا  |             |                                             | <u> </u>     |              |       |             | 1                                                |
| ,       |                                              |       | ٠.    | Γ                                                 |       |             |                                             |              | 1            |       | ·           | 1                                                |
|         |                                              |       |       | <u> </u>                                          |       |             |                                             |              |              |       |             | ļ.                                               |
|         |                                              |       |       | F                                                 |       | 444         |                                             |              | ND           | ND    |             | 1                                                |
|         | 4                                            | · · · |       | _                                                 |       | - -         | Light Brownish Gray (10YR 6/2) SILT; Little |              | 1.11         | עא    |             |                                                  |
|         |                                              |       |       | L.                                                | .     |             | Fine Sand (ML).                             |              | <del> </del> | ļl    |             |                                                  |
| 14      | 24                                           | M     | 23    |                                                   |       |             | Chiff Want D 1/0 CZ                         | ļ            | <u> </u>     |       |             | 1                                                |
|         |                                              |       |       |                                                   |       |             | Stiff Weak Red (2.5YR 4/2) Lean CLAY;       |              | 1            |       | ,           |                                                  |
|         |                                              |       |       | 1                                                 |       |             | Trace Gravel (CL)                           |              | 1            |       |             |                                                  |
|         |                                              |       |       | <del> -                                    </del> | 35    |             |                                             |              | ND           | ND    | •           |                                                  |
| F       | -                                            |       |       | +                                                 |       | 1//4        |                                             |              |              | التنا |             |                                                  |
| · ·     |                                              |       |       | <u> </u>                                          |       |             |                                             | <del> </del> | <del> </del> |       |             | <u> </u>                                         |
|         |                                              |       |       | L                                                 |       |             | End of Boring at 35.5 ft                    |              |              |       |             |                                                  |
| -       | 1                                            |       |       | 1 ,                                               | ٠. ا  |             | ND=Non Detected                             | •            |              |       | 1 1 2 2     | 1                                                |
|         |                                              |       |       |                                                   |       |             | * = Laboratory Analysis                     |              | 1            |       |             |                                                  |
|         |                                              |       |       |                                                   |       |             |                                             |              | 1            |       |             |                                                  |
|         |                                              | .     |       | -                                                 | 0     |             |                                             | ٠ .          |              | ] .   |             |                                                  |
|         | 1 . `                                        |       |       | -                                                 | ٠ - ا |             |                                             | ٠,           |              |       |             | 1                                                |
|         | 1                                            |       |       | _                                                 |       |             |                                             |              |              |       | :           |                                                  |
|         |                                              | ,     |       | L                                                 | 77    |             |                                             |              |              |       | ٠.          | 1                                                |
| · `     |                                              |       |       | Γ                                                 | .     | ,           |                                             |              |              |       |             |                                                  |
|         | 1                                            |       |       |                                                   | 40-   | .           |                                             |              |              |       |             |                                                  |
|         |                                              |       | • • • | H                                                 | - '   |             |                                             |              |              |       |             | -                                                |
| .:      | 1                                            |       |       | -                                                 | .     |             |                                             |              | .            |       |             | 1                                                |
| ٠ ١     |                                              |       | 131   | L .                                               |       | ١.,         |                                             |              |              |       |             |                                                  |
| - H     |                                              |       |       | L:                                                | . !   | ,           |                                             |              |              |       |             | . "                                              |
|         | 1                                            |       |       | <u> </u>                                          |       |             |                                             |              |              |       |             |                                                  |
|         | 1.                                           | 1 2 . |       | T .                                               |       |             |                                             | 1            |              |       |             |                                                  |
|         | 1                                            |       |       |                                                   |       |             |                                             |              |              |       |             |                                                  |
|         |                                              |       | *:    | 1                                                 |       |             |                                             | ſ.           | 1            |       |             | }                                                |
|         |                                              |       |       |                                                   |       |             |                                             |              |              |       |             |                                                  |



### LOG OF TEST BORING

Project PPG INDUSTRIES INC. Location Oak Creek, Wisconsin

B2 Boring No. Surface Elevation Job No. 27350.01 Sheet 1 of 2

| SAMPLE     |              |                          |              |                   | 1                           | VISUAL CLASSIFICATION                                                                                             | ENVIRONME PID/FID     |                |              | 0 1 0                                            |                     |  |
|------------|--------------|--------------------------|--------------|-------------------|-----------------------------|-------------------------------------------------------------------------------------------------------------------|-----------------------|----------------|--------------|--------------------------------------------------|---------------------|--|
|            | in.)         | loist                    | И            | Depth             |                             | and Remarks                                                                                                       | qu<br>(qa) (<br>(tsf) |                | Field<br>pom | ane<br>%LEL                                      | Mono-<br>tox<br>ccm |  |
|            |              |                          |              | _                 | 朏                           | FILL: 4-6 Inches Coarse Gravel.                                                                                   |                       |                |              |                                                  |                     |  |
| 1 20       | 18           | M                        | 16           |                   |                             | Brown (7.5YR 5/4) Lean Clay, Some Medium to Coarse Sand and Gravel.                                               |                       | 50.0           | 50.0         | ·                                                |                     |  |
|            | -            |                          | · ·          | <u></u>           |                             | Stiff Brown (7.5YR 4/3) Lean CLAY; Little                                                                         |                       |                |              |                                                  | -                   |  |
| 2          | 14           | M                        | 12           | +                 |                             | Gravel; Trace Fine Sand (CL).                                                                                     | <b></b>               | -              |              |                                                  |                     |  |
| 2          | 14           | 171                      | 12           |                   | j(//                        |                                                                                                                   |                       | 1.0            | ND           |                                                  |                     |  |
|            | :            | ,                        |              | +                 |                             |                                                                                                                   |                       |                |              | <del>                                     </del> | +                   |  |
| 3          | 24           | М                        | 22           |                   |                             |                                                                                                                   |                       | ND             | ND           |                                                  |                     |  |
|            |              | <del> </del>             | -            |                   |                             | NOTE: Mottling Observed From                                                                                      | <del> </del>          | <del> </del>   | <del> </del> |                                                  |                     |  |
|            | 24           | M                        | 18           | + .               |                             | Approximately 8 to 9 ft.                                                                                          |                       | <del>-  </del> | · ·          | <del> </del>                                     | +                   |  |
|            |              |                          |              | - 1               | 0-1                         | Stiff Light Brownish Gray (10YR 6/2) Lean CLAY; Trace Gravel (CL).                                                |                       | ND             | NI           |                                                  |                     |  |
|            |              | 1                        |              |                   | . ///                       |                                                                                                                   |                       |                |              |                                                  |                     |  |
| , 5        | 24           | M                        | 10           | )  -              |                             |                                                                                                                   | -                     | ND             | N            | D .                                              | -                   |  |
|            |              | <u> </u>                 | <u> </u>     |                   | - //                        |                                                                                                                   | 1                     |                | -            |                                                  |                     |  |
| *6         | 24           | M                        | 1            | 8                 | - 1/                        | NOTE: Solvent or Sweet Odor Noted From                                                                            | -                     |                | -            |                                                  |                     |  |
|            |              |                          |              |                   | 15-                         | 13.5 to 15.5 ft. Thin Sand and Gravel Seam at 15.5 ft. Fine Sand and Silt Seam (0.5 ft) at Approximately 17.5 ft. | -                     | 70.0           | 0 . 4.       | .0                                               |                     |  |
|            |              |                          | -            | -                 |                             |                                                                                                                   | -                     |                | ·            | -                                                |                     |  |
| 7          | 2            | 4 N                      | 1 1          | 9                 |                             |                                                                                                                   |                       |                |              |                                                  |                     |  |
|            | (C)          |                          |              | _<br>             |                             |                                                                                                                   |                       | 0.5            | 5 1          | .0                                               |                     |  |
|            |              |                          |              | <u>.</u> .        |                             |                                                                                                                   | _                     |                | _            |                                                  |                     |  |
| 8          | 2            | 4 N                      | 1 1          | 12                | 20-                         | Light Brownish Gray (10YR 6/2) Fine SAND; Trace Silt (SP).                                                        |                       | 1.             | 0 (          | ).5                                              | -                   |  |
| <u> </u>   | بلن          |                          | 1            | NAT               | ER                          | LEVEL OBSERVATIONS                                                                                                | GEN                   | VERA           | LNC          | TES                                              | <u></u>             |  |
| Tim<br>Der | ne' A<br>oth | Drillin<br>fter<br>to Wa | Drill<br>ter | ing _<br>-<br>1 _ | 5 (<br>22 h:<br>8.5'<br>18' | Jpon Completion of Drilling Start Driller Logger                                                                  | 7/30/9<br>MW<br>KRK   | 1 End          | 7/30<br>E    | )/91<br>L R                                      | ig CMI<br>45        |  |

### LOG OF TEST BORING

| Project  | BBC DIDIECTOR        | Boring No.        | B2       |        |  |  |  |  |
|----------|----------------------|-------------------|----------|--------|--|--|--|--|
| 1 iolect | PPG INDUSTRIES INC.  | Surface Elevation |          |        |  |  |  |  |
| Location | Oak Carl No          | Job No.           | 27350.01 | •      |  |  |  |  |
| 20041011 | Oak Creek, Wisconsin | Sheet 2           | of 2     | •••••• |  |  |  |  |

11925 WEST LAKE PARK DRIVE SUITE 200, MILWAUKEE, WIS. 53224 TEL. (414)359-1144-SAMPLE VISUAL CLASSIFICATION ENVIRONMENTAL DATA (in.) Moist PID/FID and Remarks No. Depth Head Space Meth-Mono-(qa) Field ane tox Light Brownish Gray (10YR 6/2) SILT; Little (tsf) XLEL. com Fine Sand (ML). ¥9 19 M 139 Brown (7.5YR 5/4) Fine to Medium Sand; Trace Gravel (SP). ND ND 10 24 M· 90 ND ND Light Brownish Gray (10YR 6/2) SILT; Little Fine Sand (ML). 11 24 49 M Light Brownish Gray (10YR 6/2) Lean CLAY; Trace Fine Sand and Gravel (CL). 0.5 ND Light Brownish Gray (10YR 6/2) SILT; Little Clay and Fine Sand (ML). Weak Red (2.5YR 4/2) Lean CLAY; Trace \*12 24 21 Gravel (CL). 0.5 ND End of Boring at 35 ft ND=Non Detected \* = Laboratory Analysis

# 1 A R Z Y N

### LOG OF TEST BORING

Project PPG INDUSTRIES INC.

Location Oak Creek, Wisconsin

B3 Boring No. Surface Elevation Job No. 27350.01 Sheet 1 of 2

| 11925 W                 | EST LAKE PARK DRIVE SUITE 200, MILWAUKEE, WIS. 53224 TEL.(4                   | 14)359-             | 1144                           |              |                      |              |
|-------------------------|-------------------------------------------------------------------------------|---------------------|--------------------------------|--------------|----------------------|--------------|
| SAMPLE                  | VISUAL CLASSIFICATION                                                         | ENV                 | IRONN                          |              | AL DA                | TA           |
| No. P (in.)             | and Remarks                                                                   | qu<br>(qa)<br>(tsf) | PID/i<br>Head<br>Space<br>pon: | Field        | Meth-<br>ane<br>XLEL | Mono-<br>tox |
|                         | 8 Inches CONCRETE.                                                            | (1317)              |                                |              | ACLC                 | DDA          |
| <u> </u>                | NOTE: 2 Inches Brown (7.5YR 5/4) Fine to                                      |                     | · .                            |              |                      | -            |
| 1 24 M 12               | Medium Sand and Gravel Fill.                                                  |                     |                                |              | •                    |              |
|                         | Stiff Brown (7.5YR 4/3) Mottled Lean                                          |                     |                                |              |                      |              |
|                         | CLAY; Little Gravel; Trace Fine Sand (CL).                                    |                     | ND                             | ND           |                      |              |
| <u> </u>                |                                                                               |                     |                                | · · · · · ·  |                      | ļ            |
| 2 20 M 9                |                                                                               | <u> </u>            |                                | <del></del>  |                      | 1            |
| 20 111 9                |                                                                               |                     |                                |              |                      |              |
|                         | NOTE: Becoming Soft and Plastic at                                            |                     | ND                             | ND           |                      |              |
| 5-                      | Approximately 4.5 ft. No Mottling Observed                                    |                     | 1.12                           | 1110         |                      |              |
|                         | From Approximately 6 to 9 ft.                                                 |                     | 1                              |              | <del> </del>         | 1            |
| 3 24 M 11               |                                                                               |                     | 1                              |              | <u> </u>             | <u> </u>     |
|                         |                                                                               |                     |                                |              |                      |              |
|                         |                                                                               |                     | ND                             | ND           |                      |              |
|                         |                                                                               |                     |                                |              | <u> </u>             |              |
|                         |                                                                               |                     | <u> </u>                       |              |                      |              |
| 24 M 7.                 |                                                                               | _                   | -                              |              |                      | 1 .          |
|                         | Light Brownish Gray (10YR 6/2) Lean                                           |                     | AID.                           | NIT.         |                      |              |
| - 10                    | CLAY; Trace Gravel (CL).                                                      |                     | ND                             | NI           | '                    |              |
|                         |                                                                               |                     | -                              | -            | -                    | -            |
| 5 24 M 12               | NOTE: Thin Fine Sand Seams Observed                                           | -                   |                                | -            |                      |              |
|                         | From 11 to 13 ft and one 3 Inch Sand Seam                                     | 1                   |                                |              |                      |              |
|                         | at Approximately 15 ft.                                                       | -                   | ND                             | NI           |                      |              |
|                         |                                                                               |                     |                                |              |                      |              |
|                         |                                                                               |                     |                                |              |                      |              |
| *6 24 M-W 14            |                                                                               |                     |                                |              | . ]                  |              |
|                         |                                                                               |                     |                                |              | _ \                  |              |
|                         | 5                                                                             |                     | NE                             | ) N          | D                    |              |
|                         |                                                                               | -                   |                                |              |                      |              |
| 7 24 M-W 12             |                                                                               | -                   |                                | <del></del>  |                      | _            |
|                         |                                                                               |                     | <i>:</i>                       | : }          | ľ                    |              |
|                         | Light Brownish Gray (10YR 6/2) SILT; Little                                   | ;                   | NI                             | O   N        | D                    |              |
|                         | Fine Sand (ML).                                                               |                     |                                |              |                      |              |
|                         | NOTE: Additional Fine Sand Observed From                                      |                     |                                |              | ·                    |              |
| 8 24 M-W 19             | NOTE: Additional Fine Sand Observed From         Approximately 18.5 to 22 ft. | 1                   |                                |              |                      |              |
|                         | Approximately 10.5 to 22 ft.                                                  |                     |                                | _   .        | _                    |              |
|                         | 20                                                                            |                     | N.                             | D J          | ID .                 |              |
| WAT                     | ER LEVEL OBSERVATIONS                                                         | GEN                 | <b>IERA</b>                    | LNC          | TES                  |              |
| While Drilling V. 13 (  | Upon Completion of Drilling Start                                             | 7/31/0              | 1 End                          | . 7/31       | /91                  | <u> </u>     |
| Time After Drilling 4.  |                                                                               | MW                  | Chie                           | f E          | L R                  | ig CME       |
|                         | 14.1' Logger                                                                  |                     |                                |              |                      | 45           |
| Depth to Cave in        | 19.8' Drill M                                                                 |                     |                                |              |                      |              |
| The stratification line | represent the approximate boundary between soil                               |                     |                                | ************ |                      |              |
|                         |                                                                               |                     |                                |              |                      |              |

### LOG OF TEST BORING

Project PPG INDUSTRIES INC.

Location Oak Creek, Wisconsin She

Boring No. B3
Surface Elevation
Job No. 27350.01
Sheet 2 of 2

11925 WEST LAKE PARK DRIVE SUITE 200, MILWAUKEE, WIS. 53224 TEL.(414)359-1144-SAMPLE VISUAL CLASSIFICATION ENVIRONMENTAL DATA p (in.) Moist PID/FID No. and Remarks Depth Meth-Head Hono-(qa) Space Field ane tox (tsf) pom XLEL pcm Stiff Brownish Gray (10YR 6/2) Lean CLAY; Trace Fine Sand And Gravel (CL). 24 M 23 ND ND NOTE: Thin Silt and Fine Sand Seams From 23 to 29 ft. 10 24 M 18 Light Brownish Gray (10YR 6/2) SILT; Little ND ND Fine Sand (ML). Weak Red (2.5YR 4/2) Lean CLAY; Trace Gravel (CL). NOTE: Thin Fine Sand Seams Observed. 24 M 18 ND ND End of Boring at 35 ft ND= Non Detected \* = Laboratory Analysis



#### LOG OF TEST BORING

Project PPG INDUSTRIES INC.

Boring No. B4 Surface Elevation

Job No. 27350.01

Location Oak Creek, Wisconsin

Sheet 1 of 2

- 11925 WEST LAKE PARK DRIVE SUITE 200, MILWAUKEE, WIS. 53224 TEL.(414)359-1144 SAMPLE ENVIRONMENTAL DATA VISUAL CLASSIFICATION Heth-Head Monoand Remarks Rec Moist Field Depth (qa) ane Space (tsf) ppm %LEL ppm 8 Inches CONCRETE FILL: 2 Inches Brown (7.5YR 5/4) Fine To 20 Medium Sand and Gravel Stiff Yellowish Brown (10YR 5/6) ND ND Mottled Lean Clay; Some Fine Sand; Little Gravel M 0 16 NOTE: Black Plastic Fibers Observed. ND ND Stiff Brown (7.5YR 4/3) Mottled Lean 24 M 0 CLAY; Little Gravel; Trace Fine Sand (CL). ND ND 13 NOTE: Thin Fine to Medium Sand Seams 24 M From Approximately 8.5 to 11.5 ft. ND ND 24 M Light Brownish Gray (10YR 6/2) Lean ND ND CLAY: Trace Gravel (CL). 24 M-W 12 NOTE: Medium to Coarse Sand and Gravel ND ND Seam (3 Inches) at Approximately 14.5 ft. Trace Fine Sand From Approximately 16 to 20 ft. Clay Becoming Soft and Plastic at 24 M 13 Approximately 18.5 ft. ND ND 24 11 M ND ND WATER LEVEL OBSERVATIONS GENERAL NOTES Start 7/31/91 End 7/31/91

Driller MW Chief EL Rig CME

Logger KRK Editor KRK 45 Time After Drilling 2 HRS 12.4' Depth to Water Drill Method HSA 2 1/4 ID Depth to Cave in The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

### LOG OF TEST BORING

Boring No. B4 Project PPG INDUSTRIES INC. Surface Elevation Job No. 27350.01 Location Oak Creek, Wisconsin Sheet 2 of 2

|          | SA              | MPI      | E    |                | 1031 | LAKE PARK DRIVE SUITE 200, MILWAUKEE, WIS. 53224 TEL.                         | 414)359  | -1144        |          |             |              |
|----------|-----------------|----------|------|----------------|------|-------------------------------------------------------------------------------|----------|--------------|----------|-------------|--------------|
|          | TTT             |          | - L- | ,              |      | VISUAL CLASSIFICATION                                                         |          | IRON         | MENT     | AL D        | ATA          |
| No.      | Y Rec<br>E(in.) | Moist    | и    | Depth          |      | and Remarks                                                                   | qu       | Head         | 7FID     | Meth-       | 1            |
| ·        | E(1n.)          |          |      |                |      |                                                                               | (qa)     | Space        | Field    | ane         | Mono-<br>tox |
|          |                 |          |      | _              |      |                                                                               | (tsf)    | pom          | ppm      | XLEL        | DCm          |
|          |                 |          |      | <u></u>        |      |                                                                               | <b> </b> | <del> </del> | <u> </u> | <del></del> | ļ            |
| •        |                 |          |      | -              |      |                                                                               |          |              |          |             |              |
| •        |                 |          |      | }_             |      |                                                                               |          |              | •        |             | }            |
|          |                 |          |      | -              |      |                                                                               |          |              |          |             |              |
| 9        | 24              | M-W      | 12   | -              |      |                                                                               |          |              |          |             |              |
|          |                 |          |      | _              |      |                                                                               |          |              |          |             |              |
|          |                 |          |      |                |      |                                                                               |          |              |          |             |              |
|          |                 | <u> </u> |      | 25-            |      |                                                                               |          | ND           | ND       |             |              |
|          |                 |          | ,    |                |      |                                                                               | ļ        | ļ            |          |             |              |
|          |                 |          |      | _              |      |                                                                               |          |              |          |             |              |
|          |                 |          |      | -              |      |                                                                               |          |              |          |             | 1.           |
|          |                 |          |      | -              |      |                                                                               |          | · ·          |          |             | ļ            |
|          |                 |          |      | -              |      |                                                                               |          |              |          |             |              |
| 10 -     | 24              | M-W      | 8    | <u> </u>       |      |                                                                               |          |              |          |             |              |
|          |                 |          |      | -              | K    | Light Drawnish C. (1977)                                                      |          |              |          |             |              |
| •        |                 |          |      |                |      | Light Brownish Gray (10YR 6/2) SILT; Little Fine Sand (ML).                   |          |              | -        |             |              |
| <u> </u> |                 |          |      | - 30-          |      | Light Brownish Contraction                                                    |          | ЙD           | ND       |             |              |
| •        |                 |          |      |                |      | Light Brownish Gray (10YR 6/2) Lean                                           | <u> </u> |              |          | -           |              |
|          |                 |          |      |                |      | CLAY; Trace Gravel (CL). NOTE: Silt Observed in Clay from Approximately 33 to |          |              |          | -           |              |
| , ,      |                 |          |      | _              |      | 34 ft.                                                                        | · .      |              | -        | , .         |              |
|          |                 |          |      | <u> </u>       |      |                                                                               |          |              |          |             |              |
|          |                 |          |      | _              |      |                                                                               |          |              |          | •           |              |
| 11       | 24              | M        | 19   |                |      |                                                                               |          |              |          |             |              |
|          | Š               |          |      | -              |      |                                                                               |          |              |          |             | <u> </u>     |
|          |                 |          | •    | _              |      |                                                                               |          |              |          |             |              |
|          |                 |          |      | 35             |      |                                                                               | }        | ND           | ND       |             |              |
|          | •               |          |      | ـــرر          |      | Talen                                                                         | ļ        |              |          |             |              |
|          |                 |          |      |                | .    | End of Boring at 35 ft ND=Non Detected                                        |          |              |          |             |              |
|          |                 |          |      | <b>-</b> .     |      | * = Laboratory Analysis                                                       |          |              |          |             |              |
|          |                 |          |      | -              | •    |                                                                               |          |              |          |             | 1            |
| *.       |                 |          |      | -              |      |                                                                               |          |              |          |             |              |
|          |                 |          |      | -              |      |                                                                               |          |              | ,        |             |              |
|          |                 |          |      | <b>~</b>       |      |                                                                               |          |              |          |             |              |
|          |                 |          | ,    |                |      |                                                                               | {        |              |          |             |              |
|          |                 |          |      | 40-            | ]    |                                                                               |          |              | ,        |             |              |
| •        |                 |          |      | _ ,,           |      |                                                                               |          |              |          |             |              |
|          |                 |          |      | _              |      |                                                                               |          |              |          |             |              |
|          |                 |          |      | -              |      |                                                                               |          |              |          |             |              |
|          |                 |          |      | <del> </del> - |      |                                                                               |          |              |          |             |              |
|          |                 |          |      | -              |      |                                                                               |          |              | -        |             |              |
| · · · ·  |                 |          |      | ·              | .    |                                                                               |          |              | · -      | }           |              |
|          | Ш               |          |      |                |      |                                                                               | ļ        | 1 .          | }        | 1           | 1            |



## LOG OF TEST BORING

Project PPG INDUSTRIES INC.

Location Oak Creek, Wisconsin

Boring No. B5
Surface Elevation
Job No. 27350.01
Sheet 1 of 1

|      | SA       | MPI         |          | 11925        | JEST I | LAKE PARK DRIVE SUITE 200, MILWAUKEE, WIS. 53224 TEL.(                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 414)359     | -1144            |          |              |       |
|------|----------|-------------|----------|--------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------|----------|--------------|-------|
|      | NO.      | 1416.1      |          |              |        | VISUAL CLASSIFICATION and Remarks    Semantic Survey   Color   Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately 4.5 ft.   Color Changing to Gray at Approximately |             |                  |          |              |       |
| No.  | Rec      | Moist       | N        | Depth        | 1      | and Person ICA HON                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1           | L. PID           | 7FID     |              | AIA   |
|      | (in.)    | 110136      |          | Depth        |        | and Kemarks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1           | Head             |          |              | . 1   |
| j    |          |             |          |              | 加      | FILL: 4 to 6 Inches Coarse Gravel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             | 1 ' 1            |          |              |       |
| }    |          |             |          | }-           | 開      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                  |          |              |       |
|      |          |             |          |              |        | Yellowish Brown (10YR 5/4) Fine to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |                  |          |              |       |
| 1    | 24       | M           | 27       |              |        | Medium Sand, Some Gravel.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ļ           |                  |          |              |       |
|      |          |             |          | -            |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | -           |                  |          |              |       |
|      |          |             |          | _            | HH     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ļ           |                  |          |              |       |
|      |          |             |          |              | EHE    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1           | 120              |          |              |       |
|      |          |             |          | <u> </u>     |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             | 12.0             | ND       |              |       |
|      |          |             |          |              | 出出     | and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s |             |                  |          |              |       |
|      |          |             |          |              | 井井     | NOTE: Color Changing to Gray at                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b></b>     |                  |          |              | · .   |
| . 2  | 24       | M           | 16       |              |        | Approximately 4.5 ft.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |                  |          |              |       |
|      |          |             |          | <del> </del> | 田田     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                  |          |              |       |
|      |          |             |          |              | 朏      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             | ·                |          |              |       |
|      |          |             |          | <u> </u>     | 出出     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                  |          |              |       |
| ·    |          |             |          | 5            | 冊      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             | 6.0              | ND       |              |       |
|      | d        |             |          | _            | 田      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                  |          |              |       |
|      | 1        |             |          |              | Ш      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                  |          |              |       |
| 3    | 24.      | M           | 4        |              | Щ      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                  |          |              |       |
| ٠.   |          |             |          | _ `          | 曲      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                  |          |              | -     |
|      |          |             |          |              | 田田     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                  |          |              |       |
|      |          |             |          | <br>         | Ш      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                  |          |              |       |
|      |          | . •         |          | -            | 堋      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             | 12.0             | ND       | •            |       |
|      |          |             | ;        |              |        | Stiff Light Brownish Gray (1977)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |                  |          |              |       |
|      |          | • -         |          |              |        | Mottled Lean CLAY: Trace Grovel (CL)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |             |                  |          |              |       |
| *4   | 24       | M           | 10       | <b>-</b> .   |        | . Trace Graver (CL).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |             |                  |          |              |       |
|      |          |             | 1        |              |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                  |          |              | · ,   |
|      |          |             |          |              |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ·           |                  |          |              |       |
|      | 2017     |             |          | -            |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                  | <i>'</i> |              |       |
|      |          |             |          | 10-          |        | NOTE: Martin N.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             | 0.5              | ND       |              |       |
|      |          | ,           | <u> </u> |              |        | 10.5 fr.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |             |                  |          |              |       |
|      |          |             |          |              | 1      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                  |          |              |       |
|      |          |             |          | <b>—</b>     |        | End of D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |             |                  |          |              |       |
|      |          |             |          | L            |        | End of Boring at 10.5 ft                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |             |                  |          |              |       |
|      |          |             |          |              |        | ND=Non Detected                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                  |          |              |       |
| ` `  |          |             |          |              | -      | * = Laboratory Analysis                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                  |          |              |       |
|      |          | -           |          | <b>-</b>     |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                  | -        |              |       |
|      |          |             |          | L            |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                  |          |              |       |
|      | ٠        | <u> </u>    | WA       | TED          | 1-1-   | Will company and a second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second seco |             |                  |          |              |       |
|      |          | <del></del> |          | 1111         | LE     | VEL OBSERVATIONS G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ENE         | RAT              | NOT      | F C          | L     |
| Whil | e Dril   | ling        | <u>¥</u> |              | Upoi   | n Completion of Driving                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <del></del> |                  |          | <u> </u>     |       |
| Lime | Afte     | r Dri       | lling    |              | ·      | John Start                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1/91 I      | nd {             | 3/1/91   |              |       |
| Dept | h to the | Water       | :_       | `            |        | Driller N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | IW (        | Chief            | EL       | Rig <u>C</u> | ME    |
| The  | strat    | ificat      | ion I    | ines ro-     | 200    | Logger K Drill Meth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 77. T       | caitor<br>A 7 17 | KRK      | . 4          | 5     |
| TX   | es and   | the t       | ransi    | tion may     | / be   | nt the approximate boundary between soil  Drill Meth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | od 112      | Ġ★Ŧ\;            | 4 11)    | •••••        | ••••• |
|      |          |             |          |              |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | •••••       | ••••••••         |          |              | /     |

### LOG OF TEST BORING

Project PPG INDUSTRIES INC. Location Oak Creek, Wisconsin

Boring No. B6 Surface Elevation Job No. 27350.01 Sheet 1 of 1

|     |                             |                          |                                    | 11925 W    | EST L | AKE PARK DRIVE SUITE 200, HILWAUKEE, WIS. 53224 TEL.                                                                                               | (414)359            | -1144          |            |                       |              |
|-----|-----------------------------|--------------------------|------------------------------------|------------|-------|----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------------|------------|-----------------------|--------------|
|     | SAI                         | MPL                      | E                                  |            |       | VISUAL CLASSIFICATION                                                                                                                              | EN                  | VIRONN         |            | AL D                  | ATA          |
| No. | Rec<br>P(in.)               | loist                    | и                                  | Depth      |       | and Remarks                                                                                                                                        | qu<br>(qa)<br>(tsf) | Head<br>Space  | Field      | Meth-<br>'ane<br>%LEL | Mono-<br>tox |
|     |                             |                          |                                    |            | 開     | FILL: 4 to 6 Inches Coarse Gravel.                                                                                                                 | 1,121,              |                |            | 70222                 | -            |
| 1   | 18                          | M ,                      | 14                                 |            |       | Yellowish Brown (10YR 5/4) Fine to<br>Medium Sand, Some Gravel.                                                                                    |                     | 20.0           | 1.5        |                       |              |
| 2   | 24                          | М                        | 16                                 | <br><br>5- |       | NOTE: Color Grading To Gray at<br>Approximately 3.5 ft. Strong Solvent Odor<br>Noted Including Black Staining Observed at<br>Approximately 3.5 ft. |                     | 200.0          | 190.0      |                       |              |
| *3  | 24                          | М                        | 16                                 |            |       |                                                                                                                                                    | -                   | 230.0          | 200.       |                       |              |
| 4   | 24                          | M·                       | 22                                 | 10         |       | Stiff Light Brownish Gray (10YR 6/2)                                                                                                               |                     | 200.0          | 180.       | C                     |              |
| 5   | 24                          | М                        | 14                                 |            |       | Mottled Lean CLAY; Trace Gravel (CL).  NOTE: Mottling Not Observed From 11 to 19.5 ft. Silt Observed Within Clay From 18.5                         |                     | 110.0          | 13.        | O                     |              |
| 6   | 24                          | М                        | 13                                 | 1:         | 5-    | to 19.5 ft.                                                                                                                                        |                     | 1.0            | 2.0        | )                     |              |
| 7.  | 24                          | M .                      | 11                                 |            |       |                                                                                                                                                    |                     | NE             | N          | )                     |              |
| *8  | 24                          | M                        | 18                                 | F          | 20    | Light Brownish Gray (10YR 6/2) SILT; Litt                                                                                                          | e                   | 0.5            | N          | D                     |              |
|     |                             |                          |                                    |            |       | Fine Sand (ML).  End of Boring at 20.5 ft.  ND=Non Detected  * = Laboratory Analysis                                                               |                     |                |            |                       |              |
| , — |                             |                          | N                                  | iΑΠ        | ER    | LEVEL OBSERVATIONS                                                                                                                                 | GFI                 | VERA           | MO         | TES                   | 1            |
| T   | Thile Dime A lepth to types | fter I<br>o Wat<br>o Cav | g <u>¥</u><br>Drilli<br>er<br>e in | ng         |       | pon Completion of Drilling Start Driller Logger                                                                                                    | 8/1/9<br>MW<br>KRK  | 1 End<br>Chief | 8/1/<br>El | '91<br>_ R<br>K       | ig CM1<br>45 |



#### LOG OF TEST BORING

Project PPG INDUSTRIES INC.

Boring No. B7 Surface Elevation Job No. 27350.01 Sheet 1 of 1

Location Oak Creek, Wisconsin - 11925 WEST LAKE PARK DRIVE SUITE 200, MILWAUKEE, WIS. 53224 TEL.(414)359-1144 ----SAMPLE ENVIRONMENTAL DATA VISUAL CLASSIFICATION PIO/FIO Heth-Mono-Head Rec Moist and Remarks Depth (qa) Space ane tox **%LEL** (tsf) pom com FILL: 4 to 6 Inches Coarse Gravel. 24 18 Inches Brown (7.5YR 4/3) Mottled Lean Clay, Trace Sand and Gravel. 1.0 ND 6 Inches Yellowish Brown (10YR 5/4) Fine to Medium Sand, Trace Gravel. 24 12 Inches Brown (7.5YR 4/3) Mottled Lean Clay, Trace Gravel and Sand. 140.0 130.d Yellowish Brown (10YR 5/4) Fine to 24 M 17 Medium Sand, Trace Gravel. 170.0 110.d NOTE: Color Grading into Gray with Black \*4 24 M 12 Staining Observed at Approximately 8.5 ft. 200.0 150.d Solvent Odor Noted. 24 M 190.0 170.d NOTE: 8 Inch Thin Clay Lens at Approximately 12.5 ft. 24 M 210.0 200.d 24 M 17 70.0 20.0 24 M 24 12.0 5.0 Light Brownish Gray (10YR 6/2) SILT: Little Fine Sand (ML). End of Boring at 20.5 ft. ND=Non Detected \* = Laboratory Analysis WATER LEVEL OBSERVATIONS GENERAL NOTES Start 8/1/91 End 8/1/91
Driller MW Chief EL Rig CME
Logger KRK Editor KRK 45 While Drilling 모 Upon Completion of Drilling Time After Drilling Depth to Water. Depth to Cave in Drill Method HSA 2 1/4 ID

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

#### LOG OF TEST BORING

Project PPG INDUSTRIES INC.

Location Oak Creek, Wisconsin

Boring No. B8
Surface Elevation
Job No. 27350.01
Sheet 1 of 1

11925 WEST LAKE PARK DRIVE SUITE 200, MILWAUKEE, WIS. 53224 TEL.(414)359-1144 SAMPLE ENVIRONMENTAL DATA VISUAL CLASSIFICATION Meth-Rec Moist and Remarks Head Field Depth (qa) No. Space ane tox (tsf) pom **XLEL** FILL: 4 to 6 Inches Coarse Gravel. 24 M Brown (7.5YR 4/3) Mottled Lean Clay, Some Fine to Medium Sand, Trace 250.0 40.0 Gravel. 225.0 17.0 24 M 8.0 24 M 4 NOTE: Color Grading Into Gray at 5.0 6.0 Approximately 8.5 ft. Thin Sand Seam at Approximately 10 ft. 24 M 4 0.5 0.5 NOTE: Thin Sand and Gravel Seams From 24 13.5 to 15.5 ft. . 0.5 0.5 24 13 M Light Brownish Gray (10YR 6/2) SILT; Little Fine Sand (ML). 0.5 0.5 Weak Red (2.5YR 4/2) Lean CLAY, Trace Gravel (CL). 24 M 11 ND ND End of Boring at 20.5 ft ND=Non Detected \* = Laboratory Analysis WATER LEVEL OBSERVATIONS GENERAL NOTES Start 8/1/91 End 8/1/91
Driller MW Chief EL Rig CMY
Logger KRK Editor KRK 45 While Drilling 

☐ Upon Completion of Drilling Time After Drilling Depth to Water Drill Method HSA 2 1/4" ID Depth to Cave in The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

### LOG OF TEST BORING

| Project  | PPG INDUSTRIES INC.  | Boring No. B9     |
|----------|----------------------|-------------------|
|          | 119 HADOSTRIES INC.  | Surface Elevation |
| Location | Oak Creek, Wisconsin | Job No. 27350.01  |
|          |                      | Sheet 1 -C        |

Location Oak Creek, Wisconsin Job No. 27350.01

Sheet 1 of 1

11925 WEST LAKE PARK DRIVE SUITE 200, MILWAUKEE, WIS. 53224 TEL.(414)359-1144

| <i>'</i> . | SA       | MPI    | .E       |                  | 7                        | VISUAL CLASSIFICATION                    |          | ENIX          | TDOX    | (7)   |          |          |
|------------|----------|--------|----------|------------------|--------------------------|------------------------------------------|----------|---------------|---------|-------|----------|----------|
|            | Rec      |        |          | T                |                          | VISUAL CLASSIFICATION                    | -        | EIAA          | IRONI   | MENT  | AL DA    | ATA      |
| No.        | (in.)    | Moist  | И        | Depth            |                          | and Remarks                              |          | qu            | Head    | r10   | Meth-    | Mono.    |
|            | -        |        |          |                  | ।<br>सन् <del>तन</del> न |                                          |          | (qa)<br>(tsf) | Space   | Field | ane      | tox      |
|            |          |        |          | _                |                          | FILL: 4 to 6 Inches Coarse Gravel.       |          | ((31)         | pom     | DOM   | ≭LEL     | COM      |
| *)         | 2        |        |          |                  |                          | Vellowich Provin (1037) -                |          |               |         |       |          |          |
| 1          | 24       | M      | 8        | }                | 世世                       | Yellowish Brown (10YR 5/4) Fine to       | }-       |               |         |       |          |          |
|            |          |        |          |                  | 比比出                      | Medium Sand, Some Gravel.                |          |               | 1       | Ì     |          |          |
|            |          |        |          |                  | 世出                       |                                          | •        |               | }       |       |          |          |
|            |          |        |          | -, .             |                          |                                          |          |               | 140.0   | 60.0  |          |          |
| <b>*</b>   | <b>-</b> |        |          | -                |                          |                                          | .        |               |         |       |          |          |
| 2          | 24       | 7.4    | 1.4      | -                |                          |                                          | -        |               |         |       |          |          |
|            | 24       | M      | 14       |                  |                          |                                          | -        |               |         |       |          |          |
|            |          |        | i        |                  |                          |                                          |          |               | į       |       |          | ļ        |
|            |          |        |          |                  |                          |                                          |          |               |         |       | İ        |          |
|            |          |        |          | 5-               |                          |                                          |          | ,             | 80.0    | 20.0  |          |          |
|            |          |        |          | <b>†</b>         |                          |                                          | }        |               |         |       |          | l        |
| 3          | 24       | M      | 16       | -                |                          |                                          | Γ        |               |         |       |          |          |
|            |          |        |          | - '-             |                          |                                          |          |               |         |       |          |          |
|            |          |        |          |                  |                          |                                          | 1        |               |         |       | .        |          |
|            |          |        |          | L··              | 世出                       |                                          |          |               |         |       |          |          |
|            |          |        |          |                  |                          |                                          | 1        |               | 120.0   | 30.0  |          | Ì        |
|            |          |        |          |                  |                          |                                          | L        |               |         |       |          | İ        |
| . 4        | 24       | M      | 11       | <u> </u>         | 井井                       |                                          |          |               |         | . 1   |          |          |
|            |          |        |          | <u> </u>         |                          |                                          | [        |               |         |       |          |          |
|            |          |        |          | -                |                          |                                          |          | ļ             |         |       |          | {        |
| , 80       |          |        |          | 10-              | 註                        |                                          |          |               | 180.0   | 80.0  |          |          |
|            | <b></b>  |        |          | _                | 世出                       | NOTE: Color Grading to Gray at           |          |               | 100.0   | 00.0  |          |          |
|            |          |        |          |                  | HH                       | Approximately 12 ft Very Strong Solvens  | -        |               |         |       |          |          |
| 5 .        | 24       | M      | 16       |                  |                          | Oddi Noted. White Mist Observed Emitting | a ·      |               |         |       |          |          |
| Š          |          |        |          |                  |                          | From Borehole.                           | 5 .      |               | ļ       |       |          |          |
|            |          |        |          |                  |                          |                                          |          |               | .       |       |          |          |
|            |          |        |          | - 1              |                          |                                          |          |               | 200.0   | 200.d |          |          |
|            | -        |        |          |                  |                          |                                          | · .      |               |         | 200.0 |          |          |
| *6         | 24       | 11     | 12       |                  | 出出                       | NOTE C.                                  | <b> </b> |               |         |       |          |          |
|            | 24       | M      | 13       | _                | 田田                       | NOTE: Sand and Gravel Seam Observed at   | t H      |               |         |       |          |          |
|            |          |        |          |                  | HH                       | 13.3 It. Brown to Grav Clay Observed at  |          |               | -       |       |          |          |
|            |          |        |          |                  | FFFR                     | Approximately 15 It. Black Staining and  |          |               |         |       |          |          |
|            |          |        |          | 15-              | FFFR                     | Strong Solvent Odor Noted.               |          |               | 225.0   |       |          |          |
|            |          |        |          | T                | 777                      |                                          |          |               |         |       |          |          |
|            |          |        |          | -                |                          | End of Boring at 15.5 ft                 |          |               |         |       |          |          |
|            | -        |        |          | -                |                          | ND=Non Detected                          | Ì        |               | }       |       |          |          |
|            |          | ,      |          |                  |                          | * = Laboratory Analysis                  |          |               |         | 1     |          |          |
|            |          | ٠.     |          | ļ .              |                          | / / 513                                  |          | •             |         | :     |          |          |
|            |          |        |          |                  |                          |                                          |          |               |         |       |          |          |
| <u> </u>   | L        | L      | W        | <del>(TE</del> D |                          |                                          | -        |               |         |       |          |          |
| · · ·      |          |        | AAY      | LICK             | LL                       | VEL OBSERVATIONS                         | . (      | ENE           | RAT     | m     |          |          |
| While      | e Dril   | ling   | $\nabla$ |                  | Uno                      | n Completion C. D. :                     | <u> </u> |               | NAL I   | NOT   | E 2      |          |
| Time       | Afte     | r Dri  | lling    |                  | O PO                     | Otali                                    | 8/1      | /91 E         | nd 8    | /1/91 | •        |          |
| Dept       | h'to '   | Water  |          |                  |                          | Drille                                   | er M     | W C           | Chief   | EL    | <br>RigC | MF       |
| Dept       | h to (   | Cave : | in '     |                  |                          |                                          | er KF    | ₹K F          | ditor   | KRK   |          | <u> </u> |
| The        | strat    | ificat | ion (    | iņes res         | rese                     | nt the approximate boundary between soil | Metho    | d HS          | A 2 1/4 | t" ID | ·        |          |
| - t XB     | es and   | the t  | ransi    | tion may         | / be                     | gradual. Doundary between soil           | *        |               |         | ····· |          | •••••    |

### LOG OF TEST BORING

Project PPG INDUSTRIES INC.

Surface Elevation Job No. 27350.01 Sheet 1 of 1

Boring No. B10

Location Oak Creek, Wisconsin

|          |                      |                                       |                                      | 11925 k | EST LA  | KE PARK DRIVE SUITE 200, MILWAUKEE, WIS. 53224                                                                                                      | TEL_(4                                  | 14)359-             | 1144                          |                    |                      |               |
|----------|----------------------|---------------------------------------|--------------------------------------|---------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|---------------------|-------------------------------|--------------------|----------------------|---------------|
|          | SA                   | MPL                                   | E                                    |         |         | VISUAL CLASSIFICATION                                                                                                                               | ENVIRONMENTAL DATA                      |                     |                               |                    |                      |               |
| No.      | Rec<br>(in.)         | Moist                                 | N.                                   | Depth   |         | and Remarks                                                                                                                                         |                                         | qu<br>(qa)<br>(tsf) | PID/I<br>Head<br>Space<br>pom | Field pom          | Meth-<br>ane<br>%LEL | Mono-<br>tox  |
|          |                      |                                       |                                      |         | HEED TO | FILL: 4 to 6 Inches Coarse Gravel.                                                                                                                  |                                         | ((3))               | <u> </u>                      |                    | ACCC                 |               |
| 1        | 24                   | М                                     | 19                                   |         |         | Yellowish Brown (10YR 5/4) Fine to<br>Medium Sand, Some Gravel.                                                                                     | 0                                       |                     | 120.0                         | 110.0              |                      |               |
|          | 10                   | 7.4                                   |                                      | <u></u> |         |                                                                                                                                                     |                                         |                     |                               |                    |                      |               |
| 2        | 10                   | M                                     | 9                                    | 5-      |         |                                                                                                                                                     |                                         |                     | 105.0                         | 22.0               |                      |               |
| ·*3      | 24                   | M                                     | 10                                   |         |         | NOTE: Color Grading to Gray at<br>Approximately 6.5 ft. Strong Solvent Od-<br>Noted. Some Black Staining and Clay No<br>Observed From 8.5 to 10 ft. |                                         |                     | 150.0                         | 140.6              |                      |               |
| 4        | 24                   | M                                     | 4                                    | 10      |         | Observed From 6.5 to 10 ft.                                                                                                                         |                                         |                     | 150.0                         | 150.               | q                    |               |
| 5        | 24                   | M                                     | 15                                   |         |         | NOTE: This Casual Section New York                                                                                                                  | <b>C.</b>                               |                     | 130.0                         | 140                | .0                   |               |
| *6       | 24                   | M                                     | 7                                    | 1       | 5-1-1-  | NOTE: Thin Gravel Seam Noted at 13 f<br>Additional Clay Observed at Approxima<br>14 ft.                                                             |                                         |                     | 160.                          | 0 150              | .d                   |               |
|          |                      |                                       |                                      |         |         | End of Boring at 15.5 ft ND=Non Detected * = Laboratory Analysis                                                                                    |                                         |                     |                               |                    | •                    |               |
| •        |                      |                                       |                                      |         | 20—     |                                                                                                                                                     |                                         |                     |                               |                    |                      |               |
| -        |                      |                                       | · 1                                  | VAT     | ER L    | EVEL OBSERVATIONS                                                                                                                                   |                                         | GEN                 | ERAI                          | NO                 | TES                  |               |
| Ti<br>De | me A<br>epth<br>epth | Orillin<br>Ifter I<br>to Wa<br>to Cav | g <u>\square</u><br>Drilliter<br>ter | ing     |         | oon Completion of DrillingSt                                                                                                                        | tart 8<br>Driller<br>Logger<br>Drill Me | /2/91<br>MW<br>KRK  | End<br>Chief<br>Edito         | 8/2/<br>EI<br>r KR | 91<br>, R<br>K       | ig <u>CME</u> |



### LOG OF TEST BORING

| Project                               | PPG INDUSTRÌES INC.   |
|---------------------------------------|-----------------------|
|                                       |                       |
| · · · · · · · · · · · · · · · · · · · | O.L. Carala Wissensia |

| Boring No | B11      |  |
|-----------|----------|--|
| Surface E | levation |  |
| Job No.   | 27350.01 |  |
| Sheet     | 1 of 1   |  |

| SAMPLE                                     |              | VISUAL CLASSIFICATION                                                                                                                       | ENV                 | IRONA                |               | L DA                 | ATA                 |
|--------------------------------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------------------|---------------|----------------------|---------------------|
| o. P(in.)                                  | Depth        | and Remarks                                                                                                                                 | qu<br>(qa)<br>(tsf) | Head<br>Space<br>ppm | Field<br>ppm  | Meth-<br>ane<br>%LEL | Mono-<br>tox<br>pcm |
|                                            | -            | FILL: 4 to 6 Inches Coarse Gravel.                                                                                                          |                     |                      |               |                      |                     |
| 1 24 M 1                                   |              | 12 to 14 Inches Yellowish Brown (10YR 5/4) Fine to Medium Sand, Some Gravel. 4 Inches Light Brownish Gray (10YR 6/2) Silt, Trace Fine Sand. |                     | 1.0                  | ND            |                      |                     |
| *2 24 M                                    | 7 - 5-       | Brown (7.5YR 4/3) Mottled Lean Clay, Little Gravel.                                                                                         |                     | 140.0                | 20.0          |                      |                     |
| 3 24 M                                     | 6            | NOTE: Black Staining Noted From Approximately 3.5 to 10 ft.                                                                                 |                     |                      |               |                      |                     |
|                                            |              |                                                                                                                                             | -                   | 3.5                  | 5.0           |                      |                     |
| 1 24 M                                     | 8            |                                                                                                                                             |                     |                      | -             |                      |                     |
| 1000                                       | 10           | Yellowish Brown (10YR 5/4) Fine to Medium Sand, Some Gravel From 10 to 11 ft.                                                               |                     | 80.0                 | 20.0          |                      |                     |
| *5 24 M                                    | 2            | Brown to Light Brownish Gray (10YR 6/2) Clay, Some Fine to Medium Sand, Little Gravel. NOTE: Strong Solvent Odor Noted and Black            |                     | 150.                 | 0 150         | q                    |                     |
| 6 24 M-W                                   | -            | Staining Observed From 11 to 13 ft.                                                                                                         |                     |                      |               |                      |                     |
|                                            | □            |                                                                                                                                             |                     | 1.0                  | 1.0           |                      | -                   |
| 7 <b>2</b> 4 M                             | 11           | Yellowish Brown (10YR 5/4) Fine to Medium SAND; Trace Gravel (SP).                                                                          |                     |                      |               |                      | •                   |
|                                            | -            | Light Brownish Gray (10YR 6/2) Lean CLAY; Trace Gravel (CL).                                                                                |                     | 1.0                  | N             | D                    |                     |
|                                            |              | End of Boring at 18 ft  ND=Non Detected  * = Laboratory Analysis                                                                            |                     |                      |               |                      | -                   |
|                                            |              | R LEVEL OBSERVATIONS                                                                                                                        | GEI                 | VERA                 | ΓΝO           | TES                  | )                   |
| Time After Dr Depth to Water Depth to Cave | illing<br>in | Driller                                                                                                                                     | MW<br>KRK           |                      | f EI<br>or KR | K R                  | ig CME<br>45        |

### LOG OF TEST BORING

Project PPG INDUSTRIES INC.

Location Oak Creek, Wisconsin

Boring No. B12
Surface Elevation
Job No. 27350.01
Sheet 1 of 2

| SAMPLE            |             |       |                                      |                    | VISUAL CLASSIFICATION |                                                                                                                       |                  | ENVIRONMENTAL DATA |                      |           |                      |                     |  |  |
|-------------------|-------------|-------|--------------------------------------|--------------------|-----------------------|-----------------------------------------------------------------------------------------------------------------------|------------------|--------------------|----------------------|-----------|----------------------|---------------------|--|--|
| ווו סוג           | Rec<br>in.) | loist | И                                    | Depth              |                       | and Remarks                                                                                                           | qu<br>(qa<br>(ts | )                  | Head<br>Space<br>pom | Field     | Meth-<br>ane<br>%LEL | Mono-<br>tox<br>ppm |  |  |
|                   | ••          |       |                                      | <u>举</u> .         |                       | 6 Inches CONCRETE                                                                                                     |                  |                    | .                    |           |                      |                     |  |  |
| *1 8              | 24          | 1     | 1 1                                  |                    | 777                   | FILL: 6 Inches Sand and Gravel                                                                                        |                  |                    |                      |           |                      | 1                   |  |  |
| 1                 | 24          | M     | 11                                   | <del>-</del>       |                       | Stiff Brown (7.5YR 4/3) Mottled Lean / CLAY; Little Gravel, Trace Fine Sand (CL)  NOTE: Thin Silt and Fine Sand Seams |                  |                    | 250.0                | 80.0      |                      |                     |  |  |
|                   |             |       | 1.5                                  | _                  |                       | Observed From 2 ft to 5 ft.                                                                                           | . \              |                    |                      |           |                      | .                   |  |  |
| 2                 | 24          | M     | 15                                   | -<br>-<br>-<br>5-  |                       |                                                                                                                       |                  |                    | 2.0                  | 3.0       |                      |                     |  |  |
|                   |             |       | <del> </del>                         | -                  |                       | Light Brownish Gray (10YR 6/2) SILT; Lit                                                                              | tle              |                    |                      |           | ļ                    |                     |  |  |
| 3 .               | 24          | M     | 13                                   | <del>  -</del>     |                       | Fine Sand (ML).                                                                                                       |                  |                    |                      | <u> </u>  | <del> </del>         |                     |  |  |
|                   | 27          | 1 141 | 13                                   |                    |                       | Light Brownish Gray (10YR 6/2) Lean CLAY; Trace Fine Sand and Gravel (CL).                                            |                  |                    | 2.0                  | 3.0       |                      |                     |  |  |
| 4                 | 24          | M     | 8                                    | 10                 | <u>-</u>              | NOTE: Thin Sand and Silt seams Observed From 6 to 8 ft. Gravel seam Observed at 7 ft.                                 |                  |                    | 1.5                  | 1.0       |                      |                     |  |  |
|                   | \           |       |                                      | +                  |                       |                                                                                                                       | -                |                    | <del> </del>         | -         | +                    |                     |  |  |
| 5                 | 24          | М     | 16                                   |                    |                       | NOTE: Clay Becoming Soft and Plastic at Approximately 11.5 ft.                                                        |                  |                    | 0.5                  |           | ,                    |                     |  |  |
| . 6               | 24          | M     | 12                                   |                    |                       |                                                                                                                       |                  |                    |                      |           |                      | -                   |  |  |
|                   |             |       |                                      | 1                  | 15-                   | Light Brownish Gray (10YR 6/2) SILT; L                                                                                | ittle _          |                    | 0.5                  | N         | D                    |                     |  |  |
| 7                 | 24          | М     | 1:                                   | -                  |                       | Fine Sand (ML).  NOTE: Trace Clay Observed From 16 to 1 ft.  Stiff Light Brownish Gray (10YR 6/2) Le                  |                  |                    | NI                   | И         | D                    |                     |  |  |
|                   |             |       | <u> </u>                             | +                  |                       | CLAY; Some Fine to Coarse Sand; Trace                                                                                 |                  |                    |                      | <u> </u>  |                      |                     |  |  |
| 8                 | 2           | 4   M | [ 2                                  | F                  | 20                    | Gravel (CL).  NOTE: Thin Gravel Seam Observed at                                                                      |                  |                    | 1.                   | 0 1       | ח                    |                     |  |  |
| <b></b>           |             |       | _ \V                                 | VATI               | ER I                  | EVEL OBSERVATIONS                                                                                                     | G                | ΞN                 | ERA                  |           | TES                  | <u> </u>            |  |  |
| Tim<br>Dep<br>Dep | th toth t   | o Wat | g <u>¥</u><br>Drilli<br>ter<br>ve in | 0.2<br>ng <u>1</u> | 0 min<br>2 "<br>33 '  | pon'Completion of Drilling Start Dril Log                                                                             | t 8/5,           | /91<br>W<br>RK     | End<br>Chief         | 8/5/<br>E | '91<br>L R           | ig CME<br>45        |  |  |



### LOG OF TEST BORING

| Project  | PPG INDUSTRIES INC.  |                                         |
|----------|----------------------|-----------------------------------------|
| Location | Oak Creek, Wisconsin | *************************************** |

| Boring No.  | B12      |
|-------------|----------|
| Surface Ele | vation   |
| Job No.     | 27350.01 |
| Sheet 2     | of 7     |

| $\overline{}$ |     | CA           | AADI  |              | 11925         | WEST  | LAKE PARK DRIVE SUITE 200, MILWAUKEE, WIS. 53224 TEL. | '<br>414)359        | - 1144        |       | <u>2</u>     | ······································ |  |
|---------------|-----|--------------|-------|--------------|---------------|-------|-------------------------------------------------------|---------------------|---------------|-------|--------------|----------------------------------------|--|
| -             |     |              |       |              |               |       | VISUAL CLASSIFICATION                                 | ENVIRONMENTAL DATA  |               |       |              |                                        |  |
| No.           | ·   | Rec<br>(in.) | Moist | N            | Depth         | 7777  | and Remarks                                           | qu<br>(qa)<br>(tsf) | Head<br>Space | Field | Meth-<br>ane | Hono<br>tox                            |  |
|               |     |              |       | <del> </del> | +             |       | Approximately 19 ft. Thin Silt Seams                  | (LST)               | pom           | pom   | XLEL         | com                                    |  |
| 9             | )   | 24           | M     | 29           | -             |       | Observed From 21 to 23 ft.                            |                     |               |       | ·····        |                                        |  |
|               |     |              |       |              |               |       |                                                       |                     |               |       |              |                                        |  |
|               |     |              |       |              | -             |       |                                                       |                     | 0.5           | 3.77  |              | }                                      |  |
|               |     |              |       |              | -             |       |                                                       |                     | د.0           | ND    |              |                                        |  |
| *1            | 0   | 24           | M     | 11           | +             |       |                                                       |                     |               |       |              |                                        |  |
|               |     |              |       |              |               |       |                                                       |                     |               |       |              |                                        |  |
|               |     |              |       |              | - 25-         |       |                                                       |                     | ND            | N.TY  |              | }                                      |  |
|               |     |              |       | <del> </del> | +             |       |                                                       |                     | IND           | ND    |              |                                        |  |
|               |     |              |       | -            | <b>-</b>      |       |                                                       |                     |               |       |              | -                                      |  |
|               |     |              |       |              | <u> </u>      |       |                                                       |                     |               |       | ,            |                                        |  |
|               |     |              |       |              | ļ . ···       |       |                                                       |                     |               |       |              |                                        |  |
| 1             | 1   | 24           | M     | 19           | -             |       |                                                       |                     |               |       |              |                                        |  |
|               |     |              |       |              | <b> </b>      |       |                                                       |                     |               |       |              |                                        |  |
|               |     |              |       |              |               |       |                                                       |                     | 3             |       |              |                                        |  |
|               |     | <b>-</b>     |       | <u> </u>     | 30-           | - 1// |                                                       |                     | ND            | ND    |              |                                        |  |
|               |     | 1:           |       |              | <b>-</b> .    |       |                                                       |                     | · ·           |       | ·            | -                                      |  |
|               |     |              |       |              |               |       |                                                       | ,                   | -             |       |              |                                        |  |
|               |     |              |       |              | _             |       |                                                       | •                   |               |       |              |                                        |  |
|               |     |              |       |              | F             |       |                                                       |                     |               |       |              |                                        |  |
| 1:            | 2   | 24           | M     | 22 ·         | <del> -</del> |       |                                                       |                     |               |       |              |                                        |  |
|               |     |              |       |              |               |       |                                                       | ,                   |               |       |              |                                        |  |
| , .           |     |              |       |              | -             |       |                                                       | ,                   | ND            | ND    |              |                                        |  |
|               |     |              |       | -            | - 35-         | 1//   |                                                       |                     | IND           | ND    |              |                                        |  |
|               |     | -            |       | ,            |               |       | End of Boring at 35 ft                                | ٠.                  |               |       |              | -                                      |  |
|               | · . |              |       |              |               |       | ND=Non Detected  * = Laboratory Analysis              |                     |               |       |              |                                        |  |
|               |     |              |       |              | <u> -</u>     |       | Timiyala                                              |                     |               |       |              |                                        |  |
| • '           |     |              |       | -            |               |       |                                                       | ٠.                  |               |       |              |                                        |  |
|               |     |              |       |              | F             |       |                                                       |                     |               |       |              |                                        |  |
|               |     |              | ·     |              | -             |       |                                                       |                     |               |       |              |                                        |  |
|               |     |              |       |              | -             |       |                                                       |                     |               |       |              |                                        |  |
| •             |     |              |       |              | 40-           | 1     |                                                       |                     |               |       |              |                                        |  |
|               |     |              |       |              | _             |       |                                                       |                     |               |       | -            |                                        |  |
| ď.            |     |              |       |              | -             |       |                                                       |                     |               | ,     |              |                                        |  |
|               |     |              |       |              |               |       |                                                       |                     |               |       |              |                                        |  |
|               |     |              |       |              |               |       |                                                       |                     | -             | }     |              |                                        |  |
| \             |     |              |       |              | ::            |       |                                                       |                     |               |       |              |                                        |  |

### LOG OF TEST BORING

Project PPG INDUSTRIES INC. Location Oak Creek, Wisconsin

Boring No. B13 Surface Elevation Job No. 27350.01 Sheet 1 of 2

| 11925 WE                 | EST LAKE PARK DRIVE SUITE 200, HILWAUKEE, WIS. 53224 TEL.(                 | 14)359        | 1144         |               |                 |        |
|--------------------------|----------------------------------------------------------------------------|---------------|--------------|---------------|-----------------|--------|
| SAMPLE                   | VISUAL CLASSIFICATION                                                      | ENV           | IRON         |               | AL D            | ATA    |
| Ŭ Rec                    | and Remarks                                                                | qu            | PID/<br>Head |               | Meth-           | Hono-  |
| No. project No. Depth    | and Nemarks                                                                | (qa)<br>(tsf) | Space        | Field<br>·pom | ane<br>%LEL     | tox    |
|                          | 4 Inches Top Soil and Sod                                                  | ((3))         | 92.11        | 4411          | المالية المالية | DOM    |
|                          | <del>                                      </del>                          |               |              | ,             |                 |        |
| 1 24 M 14                | <del>                                      </del>                          |               |              |               |                 | i i    |
|                          | FILL: Very Dark Grayish Brown (10YR 3/2)                                   |               |              |               |                 | }      |
|                          | Lean Clay, Some Fine Sand and Silt,                                        |               | ND           | ND            | }               |        |
|                          | Trace Gravel from 0.5 to 3 ft.                                             |               |              |               |                 |        |
|                          | H+H-I                                                                      |               |              |               | -               | ļ      |
| *2 24 M 13               | Stiff Brown (7.5YR 4/3) Mottled Lean                                       |               |              |               |                 |        |
|                          | Clay, Little Fine Sand, Trace Gravel                                       |               | 1.0          | ND            |                 |        |
| 5 5                      | From 3 to 7 ft.                                                            |               | 1.0          | ואו           |                 |        |
|                          |                                                                            | -             | <del> </del> | <del></del>   |                 | -      |
| 3 24 M 17                |                                                                            |               | <del> </del> | <del> </del>  | <del> </del>    |        |
|                          | H <del>1</del> 1                                                           |               | 1            |               |                 |        |
|                          | .Stiff Brown (7.5YR 4/3) Mottled Lean                                      | 1             | ND           | ND            |                 |        |
|                          | CLAY; Little Fine Sand, Trace Gravel (CL).                                 |               |              |               |                 |        |
|                          | (02).                                                                      |               |              |               |                 |        |
| 4 24 M 15                |                                                                            |               |              |               |                 |        |
|                          |                                                                            |               |              |               |                 |        |
| 10-                      | NOTE: Two Inch Silt Seam and Thin Sand                                     |               | ND           | NI            |                 |        |
|                          | Seam Observed at Approximately 10 ft.                                      | <u> </u>      |              |               |                 |        |
| 5 24 M 25 7              | beam observed at repproximately 10 ft.                                     | <u> </u>      | <del></del>  | 1             |                 |        |
| 3 24 M 23 ¥              | Light Brownigh Crow (10VB, 6/2) Long                                       | -             |              |               |                 |        |
|                          | Light Brownish Gray (10YR 6/2) Lean CLAY; Trace Fine Sand and Gravel (CL). |               | ND           | . NI          |                 |        |
|                          | CLAT, Trace Time Saind and Graver (CL).                                    |               | 1,2          | ' ' ' '       |                 |        |
|                          |                                                                            |               |              | <del></del>   |                 |        |
| 6 24 M 14                |                                                                            |               |              |               |                 |        |
|                          |                                                                            |               |              |               |                 |        |
| 15                       | NOTE: Three Inch Sand Seam Noted at                                        | 1             | NE           | N             |                 |        |
|                          | Approximately 12.5 ft. Thin Silt Seams From                                |               |              | 1             |                 |        |
|                          | 13.5 to 16 ft. Clay Becoming Soft and Plastic                              |               |              |               |                 | _   `  |
| 7 24 M 14                | at Approximately 13.5 ft.                                                  | ,             |              |               |                 |        |
|                          |                                                                            |               | 2.17         |               |                 |        |
|                          |                                                                            |               | NI           | N             | וט              |        |
|                          |                                                                            |               |              | _             |                 |        |
| 8 24 M 19                |                                                                            | -             |              | _             |                 |        |
|                          |                                                                            |               |              | *   1         |                 | •      |
|                          | 0.1111                                                                     |               | N            | D N           | D               |        |
| <u> </u>                 | R LEVEL OBSERVATIONS                                                       | TEX           | I DAI        | KIN           | 415             |        |
| WATE                     | IR LEVEL OBSERVATIONS                                                      | GE1           | IERA         | LINU          | TES             |        |
| While Drilling   □ 11.5  | Upon Completion of Drilling Start                                          | 8/5/91        | End          | 8/5/          | 91              |        |
| Time After Drilling 28   | B hrs Driller                                                              | MW            | Chief        | E)            | R               | ig CMF |
| Depth to Water           | 7.4'                                                                       |               | Edito        | r KR          | K               | 45     |
|                          | .9.9' Drill M                                                              | ethod.        | HSA 2        | 1/4" I        | D               |        |
| The stratification lines | represent the approximate boundary between soil may be gradual.            |               |              | •             |                 |        |



### LOG OF TEST BORING

| Project  | PPG INDUSTRIES INC.  |  |
|----------|----------------------|--|
| Location | Oak Creek, Wisconsin |  |

Boring No. B13 Surface Elevation Job No. 27350.01 Sheet 2 of 2

|     | SA           | MPL           | F        | 11925              | NEST                  | LAKE PARK DRIVE SUITE 200, MILWAUKEE, WIS. 53224 TEL.                           | 414)359 | -1144         |               |              |      |
|-----|--------------|---------------|----------|--------------------|-----------------------|---------------------------------------------------------------------------------|---------|---------------|---------------|--------------|------|
|     |              | : <del></del> | y        | 1 :                | VISUAL CLASSIFICATION | ENT                                                                             | /IRON   | MENT          | AL D          | ATA          |      |
| No. | Rec<br>(in.) | Moist         | н.       | Depth              |                       | and Remarks                                                                     | (qa)    | Head<br>Space | /FID<br>Field | Meth-<br>ane | Mono |
|     |              |               | <u> </u> | _                  |                       | Light Brownish Gray (10YR 6/2) SILT; Little Fine Sand (ML).                     | (tsf)   | pcm           | pcm           | XLEL         | pem  |
|     |              |               |          | _                  |                       |                                                                                 |         |               |               | • 4          |      |
| *9  | 24           | М             | 70       | -                  |                       | NOTE: Thin Fine Sand Seams Observed From                                        |         |               |               |              | -    |
|     |              |               |          |                    |                       | 23 to 25 ft.                                                                    |         |               |               |              |      |
|     |              |               |          | 25—                |                       |                                                                                 |         | 0,5           | ND            |              |      |
|     |              |               |          |                    |                       | Stiff Light Brownish Gray (10YR 6/2) Lean CLAY; Some Fine to Coarse Sand; Trace | -       |               |               |              |      |
|     |              |               |          | _                  |                       | Gravel (CL).                                                                    |         |               |               | ,            |      |
| 10  | 24           | М             | 19       | _                  |                       |                                                                                 |         |               |               |              |      |
|     |              |               | :        | -<br>-<br>-<br>30- |                       | NOTE: Thin Gravel Seam Observed at Approximately 29 ft. Thin Silt and Fine Sand |         | ND            | ND            |              |      |
| . ] | -            |               |          |                    |                       | Seams Observed From Approximately 33 to 35 ft.                                  |         |               |               |              |      |
|     |              |               |          |                    |                       |                                                                                 |         |               | ,             |              |      |
| 11  | 24           | M             | 16       |                    |                       |                                                                                 |         |               |               |              |      |
| -   |              |               |          | - :                |                       |                                                                                 |         | ND            | ND            |              |      |
|     |              |               |          | 35—                |                       | End of Boring at 35 ft. ND=Non Detected                                         |         |               |               | •            |      |
| .   |              |               |          | -                  |                       | * = Laboratory Analysis                                                         |         |               |               |              |      |
|     |              |               | .*       | -                  |                       |                                                                                 |         |               |               |              |      |
|     |              |               |          | _                  |                       |                                                                                 |         |               |               |              |      |
|     |              |               |          | 40-                |                       |                                                                                 |         |               |               |              |      |
|     |              |               |          |                    |                       |                                                                                 |         |               |               |              |      |
|     |              |               |          | -                  |                       |                                                                                 |         |               |               |              |      |
|     |              |               |          |                    |                       |                                                                                 |         |               |               |              |      |

### LOG OF TEST BORING

Project PPG INDUSTRIES INC.

Location Oak Creek, Wisconsin

Boring No. B14
Surface Elevation
Job No. 27350.01
Sheet 1 of 1

| ·                                                           | 11925                    | WEST LA                 | KE PARK DRIVE SUITE 200, MILWAUKEE, WIS. 53224 TEL.                                                                                                                    | (414)359                      | -1144                        |             |                      |                     |
|-------------------------------------------------------------|--------------------------|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------|-------------|----------------------|---------------------|
| SAMPL                                                       | E ·                      |                         | VISUAL CLASSIFICATION                                                                                                                                                  | ENV                           | IRONI                        |             | AL DA                | ATA                 |
| No. Rec Moist                                               | N Depth                  |                         | and Remarks                                                                                                                                                            | qu<br>(qa)<br>(tsf)           | PID/<br>Head<br>Space<br>com | Field       | Meth-<br>ane<br>XLEL | Mono-<br>tox        |
|                                                             |                          | 脯                       | FILL: 3 to 6 Inches Coarse Gravel.                                                                                                                                     | , ,,,,                        | PP                           |             |                      |                     |
| 1 24 M                                                      | 20 _                     |                         | Yellowish Brown (10YR 5/4) Fine to<br>Medium Sand, Some Gravel.                                                                                                        |                               | 350.0                        | 300.0       |                      |                     |
| *2 24 M                                                     | 9                        |                         | Stiff Brown (7.5YR 4/3) Mottled Lean CLAY; Little Fine Sand; Trace Gravel (CL).  Note: Slight Solvent Odor Detected From                                               |                               | 300.0                        | 150.0       |                      |                     |
| 3 · 5 24 M                                                  | 13 _                     |                         | Stiff Light Brownish Gray (10YR 6/2) Lean CLAY; Little Fine Sand; Trace Gravel (CL).                                                                                   |                               | 250.0                        | 170.0       |                      |                     |
| 4 24 M                                                      | 14                       |                         | NOTE: Three Inch Silt Seam Observed at                                                                                                                                 |                               | 12.0                         | 13.0        |                      |                     |
| 5 24 M                                                      | 19                       |                         | Approximately 8 ft. Thin Fine Sand, Silt and Gravel Seams Observed From Approximately 8.5 to 14.5 ft. Additional Coarse Gravel Observed Within Clay From Approximately |                               | 3.0                          | 3.0         |                      |                     |
| 6 24 M                                                      | •                        | 5                       | 11 to 14 ft.  Light Brownish Gray (10YR 6/2) Fine SAND; Some Silt (SP).                                                                                                |                               | 3.5                          | 2.0         |                      |                     |
| 7 24 M                                                      | 20                       |                         | Light Brownish Gray (10YR 6/2) SILT; Littl<br>Fine Sand (ML).<br>NOTE: Thin Fine Sand Seams Observed From                                                              |                               | 0.5                          | NE          |                      |                     |
| *8 24 M                                                     | -                        | 20                      | Approximately 16.5 to 18 ft.  Light Brownish Gray (10YR 6/2) Very Stiff SILT; Some Fine to Medium Sand; Trace                                                          |                               | 0.5                          | 5 0.5       | 5                    |                     |
|                                                             |                          |                         | Gravel (ML).  End of Boring at 20.5 ft  ND=Non Detected                                                                                                                |                               |                              |             |                      |                     |
|                                                             |                          | 25-                     | * = Laboratory Analysis                                                                                                                                                |                               |                              |             |                      |                     |
|                                                             | TAW                      | ERI                     | EVEL OBSERVATIONS                                                                                                                                                      | GEN                           | IERA                         | ГИО         | TES                  |                     |
| While Drillin<br>Time After I<br>Depth to Wa<br>Depth to Ca | Orilling<br>ter<br>ve in | 23 hrs<br>5.1'<br>10.9' |                                                                                                                                                                        | 8/5/93<br>MW<br>KRK<br>Iethod | Edito                        | EL<br>or KR | Ri<br>K              | g <u>CM</u> F<br>45 |
| types and the                                               | ne transitio             | n may t                 | e gradual.                                                                                                                                                             |                               |                              |             |                      |                     |



### LOG OF TEST BORING

| Project  | PPG INDUSTRIES INC.  |
|----------|----------------------|
| Location | Oak Creek, Wisconsin |

| Boring No.    | B15      |
|---------------|----------|
| Surface Eleva | ation    |
| Job No.       | 27350.01 |
| Sheet 1       | of 2     |

|      | _      | SΔ        | MPI           | F        | 11925 W            | EST       | LAKE PARK DRIVE SUITE 200, MILWAUKEE, WIS. 53224 TEL.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | (414)359      | -1144                                   |        |              |              |
|------|--------|-----------|---------------|----------|--------------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------------------------------|--------|--------------|--------------|
|      | TT     |           | 1411. [       | - L.     | -                  |           | VISUAL CLASSIFICATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |               | IRON                                    | MENT   | AL D         | ATA          |
| No.  | Ž,     | Rec       | Moist         | н        | Depth              |           | and Remarks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | qu            | PID.<br>Head                            | FID    | Heth-        | Hono-        |
|      | -      |           |               |          |                    | <br>      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | (qa)<br>(tsf) | Space                                   | Field  | ane          | tox          |
|      | 1      |           |               |          | _ ′                |           | FILL: 3 to 4 Inches Coarse Gravel.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | (CSI)         | pom                                     | pon    | XLEL         | pcm          |
|      |        |           |               |          |                    | H##       | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |               |                                         |        |              |              |
| 1    |        | 24        | M             | 10       |                    | 田田        | 14 to 15 Inches Yellowish Brown (10YR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |               | ]                                       |        | }            |              |
|      |        |           |               |          | -                  |           | 7 3/4) Fine to Medium Sand, Some                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | _             |                                         |        |              |              |
|      |        |           | ;             |          |                    |           | \ Gravel.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |               |                                         |        |              |              |
|      |        |           |               |          | _                  |           | Stiff Brown (7.5YR 4/3) Mottled Lean                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |               | 180.0                                   | 5.0    | ļ            |              |
|      |        |           |               |          |                    |           | CLAY; Little Fine Sand; Trace Gravel (CL).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               |                                         |        |              |              |
|      | L      |           |               |          |                    |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |                                         |        |              |              |
| 2    | 100    | 24        | M             | 21       | _                  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |                                         |        |              |              |
| ·    |        |           |               |          |                    |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |                                         |        |              |              |
|      |        | 1         | ·             |          | _                  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |                                         |        |              |              |
|      |        |           |               |          | 5-                 |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               | 30.0                                    | 1.0    |              |              |
|      |        | • •       |               |          |                    |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               | 30.0                                    | 1.0    |              |              |
|      | }      |           |               |          |                    |           | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |               |                                         |        |              |              |
| *3   |        | 24        | M             | 19       | -                  |           | Note: Slight Solvers O                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |               |                                         |        |              | İ            |
|      | H      | ,         |               |          | -                  |           | Note: Slight Solvent Odor Detected From Surface to Approximately 8.0 ft.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |               |                                         |        |              |              |
|      |        |           |               |          |                    |           | to Approximately 8.0 It.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |               |                                         |        |              |              |
| ,    | 200    |           |               |          |                    |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               | 90.0                                    | 2.0    |              |              |
|      | 1      |           |               | (        |                    |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               | 30.0                                    | 3.0    |              |              |
| - ]  | 1      |           |               |          |                    |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |                                         |        |              |              |
| 4    |        | 24        | M             | 13 .     | -                  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |                                         |        |              |              |
|      |        |           |               |          |                    |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |                                         |        |              | <del> </del> |
|      |        |           | •             |          | _ '                |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |                                         | -      |              |              |
|      |        |           |               |          | 10                 |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               | ND                                      | NIÒ    |              |              |
|      | 1      |           |               |          | - 10-              |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | -             | עאו                                     | ND     |              |              |
|      | Ī      |           |               |          | _                  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |                                         |        |              |              |
| 5    |        | 24        | M             | .24      | _                  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |                                         | ·      |              |              |
|      |        |           |               |          | 屋                  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |                                         |        |              |              |
|      |        |           |               |          |                    |           | Stiff Light Brownish Gray (10YR 6/2) Lean                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1             |                                         |        |              |              |
|      |        |           |               |          |                    |           | CLAY; Little Fine Sand; Trace Gravel (CL).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               | 900                                     | 20.0   | }            |              |
|      | N. ST  |           |               |          |                    |           | ,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |               | 80.0                                    | 20.0   |              |              |
|      |        |           |               | ·        |                    |           | NOTE: Thin Gravel Seam Observed at                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |               |                                         |        |              |              |
| 6    |        | 0         |               | 7        | -                  |           | Approximately 12 ft. Fine Sand Seams                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |               |                                         |        |              |              |
|      |        |           |               |          | -                  |           | Observed From 11 to 13 ft Thin Silt Samuel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               |                                         |        | <del> </del> |              |
|      |        |           |               | ·.       |                    |           | Observed From 12.5 to 18 ft.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |               |                                         |        |              |              |
|      |        |           | •             |          | 15                 |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |                                         | }      |              |              |
|      |        |           | -             | WA       | TED                | , , ,     | THE CONCERNATION OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY O |               |                                         |        |              |              |
|      |        | <u> </u>  |               |          |                    |           | EVEL OBSERVATIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | GENE          | RAI                                     | MOT    | FC           | <u></u>      |
| Whil | е      | Dril      | ling          | <u> </u> | 1.5                | Upo       | On Completion of Deilie - 11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |               |                                         | - 101  | <u> </u>     |              |
|      | •      | 2 x x c C |               | lling    | <u>/ (1)</u>       | <u>rs</u> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 6/91 I        | end :                                   | 8/6/91 |              |              |
| Dept | n<br>h | to 1      | Water<br>Cave |          | $\frac{7.5}{12.6}$ |           | Driller J                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ( <u>)</u>    | Chief                                   | EL     | Rig <u>(</u> |              |
| The  | .11    | strat     | ificat        | ion J    | 13.3               | J'        | Logger I Drill Meti                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 2H bor        | COMPANION A 7 1 7                       | KRK    | 4            | 5            |
| ty   | œ      | s and     | the t         | ransi    | tion may           | y be      | ont the approximate boundary between soil                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |               | ··                                      | 3ID    | ••••••       | ••••••       |
|      |        |           |               |          | - 1 - 1 1 may      |           | Ai anna(*                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |               | ••••••••••••••••••••••••••••••••••••••• | •      | •••••••      | ·······      |

#### LOG OF TEST BORING

Project PPG INDUSTRIES INC.

Location Oak Creek, Wisconsin

 Boring No.
 B16

 Surface Elevation

 Job No.
 27350.01

 Sheet
 1 of
 1

11925 WEST LAKE PARK DRIVE SUITE 200, MILWAUKEE, WIS. 53224 TEL.(414)359-1144 ---SAMPLE ENVIRONMENTAL DATA VISUAL CLASSIFICATION PIO/FIO Meth-Hano-Rec Moist. and Remarks Head Depth No. Field (qa) Space ane tox (tsf) **XLEL** FILL: 3 to 4 Inches Coarse Gravel 8 to 9 Inches Yellowish Brown (10YR 24 M 11 5/4) Fine to Medium Sand, Some Gravel. ND .ND Stiff Brown (7.5YR 4/3) Mottled Lean CLAY; Little Fine Sand; Trace Gravel (CL). 18 24 M 0.5 ND 18 ND ND 24 M 11 ND ND Stiff Light Brownish Gray (10YR 6/2) Lean CLAY; Little Fine Sand; Trace Gravel (CL). 24 13 ND ND NOTE: Silt Observed Within Clay at 12 Approximately 13.5 ft. Thin Silt Seams 3.0 0.5 Observed From 16 to 19 ft. 24 ND ND 24 24 Light Brownish Gray (10YR 6/2) SILT; Little ND ND Fine Sand (ML). Light Brownish Gray (10YR 6/2) SAND; Some Silt (SP). End of Boring at 20.5 ft ND=Non Detected \* = Laboratory Analysis WATER LEVEL OBSERVATIONS GENERAL NOTES Start 8/6/91 End 8/6/91

Driller MW Chief EL Rig CML

Logger KRK Editor KRK 45 While Drilling 
☐ Upon Completion of Drilling Time After Drilling Depth to Water Depth to Cave in Drill Method HSA 2 1/4" ID The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

### 'VARZYN



### LOG OF TEST BORING

Project PPG INDUSTRIES INC.

Location Oak Creek, Wisconsin

Boring No. B17
Surface Elevation
Job No. 27350.01
Sheet 1 of 1

| _           |                       | C A      | LOL                                              |                          | 11925 N  | EST LA                                | KE PARK DRIVE SUITE 200, MILWAUKEE, WIS. 53224 TI                                   |         |             | 1144 —<br>IRONN | (ENT      | AI. D        | ATA        |
|-------------|-----------------------|----------|--------------------------------------------------|--------------------------|----------|---------------------------------------|-------------------------------------------------------------------------------------|---------|-------------|-----------------|-----------|--------------|------------|
|             | SAMPLE  Rec Moist N C |          |                                                  |                          | <u> </u> |                                       | VISUAL CLASSIFICATION and Remarks                                                   | ,       | qu          | PID/<br>Nead    | F10       | Meth.        | Mono-      |
| No.         | E                     | (        | Moist                                            | И                        | Depth    |                                       |                                                                                     | 1 .     | qa)<br>:sf) | Space           | Field pom | ane<br>%LEL  | tox<br>ppm |
|             | $\dagger \dagger$     |          |                                                  |                          |          |                                       | 8 Inches CONCRETE.                                                                  |         |             |                 |           |              |            |
| * 1         |                       | 24       | M                                                | 8                        | +- "     |                                       | FILL: Yellowish Brown (10YR 5/4) Fine to                                            | -       |             |                 |           |              | 1          |
| 1           |                       | 24       | 141                                              | 0.                       | L        |                                       | Medium Sand, Some Gravel.                                                           |         |             |                 |           |              |            |
|             |                       |          | , .                                              |                          | -        |                                       | Stiff Brown (7.5YR 4/3) Mottled Lean                                                |         |             | 160.0           | 13.0      |              |            |
| <del></del> | _ 3                   | ·        |                                                  | -                        | +-       |                                       | CLAY; Little Fine Sand; Trace Gravel (CL)                                           | ).      |             |                 |           |              |            |
| 2           |                       | 24       | M                                                | 14                       | T        |                                       |                                                                                     |         |             |                 |           |              |            |
|             | 2                     |          | . '                                              |                          | <u> </u> |                                       |                                                                                     |         |             | 4.0             | 3.0       |              |            |
| •           |                       |          |                                                  |                          | 5-       |                                       | NOTE: Marilian Not Observed at 5.5 ft                                               |         |             |                 |           |              |            |
|             |                       | -        | 7.6                                              | 122                      |          |                                       | NOTE: Mottling Not Observed at 5.5 ft.<br>Slight Solvent Odor Noted From Surface to |         |             |                 | <u> </u>  |              |            |
| 3           | 2                     | 24       | M                                                | 23                       | -        |                                       | Approximately 5.0 ft.                                                               | ,       |             |                 |           |              |            |
|             | P                     |          |                                                  |                          | E        |                                       | Approximately 5.0 Tu                                                                |         |             | 0.5             | ND        |              |            |
|             |                       | -        | <del>                                     </del> |                          |          |                                       | Stiff Light Brownish Gray (10YR 6/2) Lea                                            |         |             | -               | , a       | <del> </del> |            |
| *4          |                       | 24       | M                                                | 10                       | 一        |                                       | CLAY; Little Fine Sand; Trace Gravel (CL                                            |         |             |                 |           |              |            |
|             |                       |          |                                                  |                          | ·  -     |                                       | CLAI, Little I me band, 17400 Otaver (CD                                            | ).      |             | ND              | NE        |              |            |
|             |                       |          | -                                                |                          | 10       | 9 <del>-</del> ///                    |                                                                                     |         |             | ND              | INE       | ·            |            |
| -           |                       |          |                                                  |                          |          |                                       | NOTE: Thin Silt Seams Observed From                                                 |         |             |                 |           |              |            |
| ر           |                       | -24      | M                                                | 6                        | -        |                                       | Approximately 8.5 to 11 ft. Sand and Grav                                           | vel     |             |                 |           |              | _          |
| •           | . !                   | Y I      |                                                  |                          |          |                                       | Lens at 10 ft.                                                                      |         |             | ND              | NI        |              |            |
|             |                       | <b>A</b> |                                                  |                          |          |                                       |                                                                                     | -       | <del></del> |                 | -         | -            |            |
| 6           |                       | 2        | 4 M                                              | $1 + \epsilon$           | 5 .      |                                       |                                                                                     | t       |             |                 | <u> </u>  | -i           |            |
|             |                       |          |                                                  |                          | , [      |                                       |                                                                                     |         |             | NIT             |           |              |            |
| ٠.          | •                     |          |                                                  |                          | 1        | 15                                    |                                                                                     |         |             | ND              | NI (c     | 7            |            |
|             | ·                     |          | `;                                               |                          |          |                                       |                                                                                     | , .     |             |                 |           |              |            |
| 7           | 1                     | 2        | 4   N                                            | 1   1                    | 7        | . \                                   | NOTE: Thin Silt Seams Observed From 16                                              | 6.5     |             |                 |           |              |            |
| • •         |                       |          | -                                                |                          |          |                                       | to 18.5 ft. Thin Sand Seams Observed at 1                                           | 1       |             | NI              | ) N       | D            |            |
|             |                       |          |                                                  |                          |          |                                       | and 17.5 ft.                                                                        |         |             | _               |           |              |            |
|             | 8                     | 13 7     | 4 N                                              | $\frac{1}{\sqrt{1-x^2}}$ | 9        | III                                   | Light Brownish Gray (10YR 6/2) SILT; I                                              | ittla   |             |                 |           |              |            |
| ٔ ا         | Ů.                    | 1        | . 1                                              | ' ·                      | 1        |                                       | Fine Sand (ML).                                                                     | Little  |             |                 |           |              |            |
|             | ٠.                    |          |                                                  |                          |          | 20-                                   | NOTE: Thin Sand Seams Observed From                                                 | 18.5    |             | NI NI           | DN        | D            |            |
|             |                       |          | _                                                |                          |          | μ.                                    | \to 20.5 ft.                                                                        | ./      |             |                 |           |              |            |
|             |                       |          |                                                  | . :   -                  |          |                                       | End of Boring at 20.5 ft.                                                           |         |             |                 |           | 1            | •          |
|             |                       |          |                                                  | . [.                     |          |                                       | ND=Non Detected                                                                     |         |             |                 |           |              |            |
|             |                       |          |                                                  |                          |          |                                       | * = Laboratory Analysis                                                             |         |             |                 |           |              |            |
|             |                       |          |                                                  | .                        |          |                                       |                                                                                     | •       | \ 7         |                 |           |              |            |
|             |                       |          | $\cdot \mid$                                     |                          |          |                                       |                                                                                     | ,       |             |                 |           |              |            |
|             |                       | . ]]     |                                                  | }                        |          | 25-                                   |                                                                                     |         |             | -   '           |           |              |            |
| -           |                       |          |                                                  | l,                       | WAT      | ER                                    | LEVEL OBSERVATIONS                                                                  |         | GEN         | IERA            | INC       | TES          | 3          |
| -           |                       | ,        | D                                                |                          |          | · · · · · · · · · · · · · · · · · · · | and Completion of Deilling                                                          | _+ 0    | 16.10       | 1 7-2           | 0.17      | /01          |            |
|             |                       |          | Drilli<br>After                                  |                          |          |                                       | pon Completion of DrillingStar                                                      |         | MIV         | I End<br>Chie   | 8/6<br>F  | /91<br>L F   | Rig CM     |
| 1           |                       |          | to W                                             |                          |          | 4 hrs                                 |                                                                                     | gger    |             |                 |           |              | 45         |
| 1.          |                       |          | to C                                             |                          |          | 18.2                                  |                                                                                     | ill Met | hod         | HSA 2           | 1/4"      | ID           |            |
| -           |                       |          |                                                  |                          |          |                                       | esent the approximate boundary between soil                                         |         | •           |                 |           |              |            |

### LOG OF TEST BORING

Project PPG INDUSTRIES INC.

Location Oak Creek, Wisconsin

Boring No. B18
Surface Elevation
Job No. 27350.01
Sheet 1 of 2

| \ <u></u> | <del></del> |                  |          | 11925 L  | EST LAKE PARK DRIVE SUITE 200, MILWAUKEE, WIS. 53224 TEL.(4     | 14)359    | 1144         |        |             |              |
|-----------|-------------|------------------|----------|----------|-----------------------------------------------------------------|-----------|--------------|--------|-------------|--------------|
|           | S           | AMPI             | LE       |          | VISUAL CLASSIFICATION                                           | ENV       | TRON         | MENT   | AL D        | ATA          |
|           |             | <u> </u>         |          | T        |                                                                 | · qu      | PID/<br>Head | FID    | Meth-       | Mono-        |
| No.       | PCio        | Moist            | И        | Depth    | and Remarks                                                     | (qa)      | Space        | Field  | ane         | tox          |
|           | EC          | 4                |          | -        | 9 Inches CONCRETE.                                              | (tsf)     | pom          | pom    | %LEL        | ppm          |
|           |             | }                |          | -        | FILL: Yellowish Brown (10YR 5/4) Sand and                       | ,         |              |        |             |              |
|           |             |                  | <u> </u> |          | Gravel.                                                         |           |              |        |             |              |
| 1         | 2           | M                | 7        |          |                                                                 | :         |              |        |             | .            |
|           | H           |                  | 1:       |          | Stiff Brown (7.5YR 4/3) Mottled Lean                            |           |              |        |             |              |
| 1         |             |                  |          |          | CLAY; Little Fine Sand; Trace Gravel (CL).                      | -         | ND           | ND     |             | ].           |
|           |             |                  |          | -        |                                                                 |           |              |        |             |              |
|           | _           |                  | <u> </u> |          |                                                                 |           |              |        |             |              |
|           |             |                  |          |          |                                                                 |           |              |        |             |              |
| *2        | 2           | 4 M              | 10       | T        | Stiff Light Brownish Gray (10YR 6/2) Lean                       |           |              |        |             |              |
|           |             | .                |          |          | CLAY; Little Fine Sand; Trace Gravel (CL).                      |           |              |        |             |              |
|           |             |                  |          | -        |                                                                 |           | ND           | ND     |             |              |
|           |             |                  |          | - 5      |                                                                 | 1         |              |        |             |              |
| ·         |             | `                | · [      |          |                                                                 | <u> </u>  |              |        | 1           |              |
|           |             | }                |          |          | NOTE: Sand Lens Observed at                                     |           |              |        |             |              |
| 3         | 2           | 4 M              | 9        |          | Approximately 5 ft.                                             |           |              |        |             |              |
|           |             | •                |          | <b>-</b> | Approximately 5 ft.                                             |           |              |        |             |              |
|           |             |                  |          | -        |                                                                 |           | ND           | NI     |             |              |
| 1         |             |                  |          | -        |                                                                 |           | IND          | 111    |             |              |
|           |             |                  |          |          |                                                                 |           |              |        |             |              |
|           |             |                  | .        |          |                                                                 |           |              |        |             |              |
| 4         |             | 24 M             | 12       | 2        | · · · · · · · · · · · · · · · · · · ·                           |           |              |        |             |              |
|           |             |                  |          | -        |                                                                 |           |              |        |             |              |
|           |             |                  |          | -        |                                                                 |           | ND           | NI     |             |              |
|           |             |                  |          | 1        | ) <del>-</del>                                                  |           | IND          | 147    | 7           |              |
| <u> </u>  |             | ·                |          |          |                                                                 |           |              |        |             |              |
|           |             |                  |          |          |                                                                 |           |              |        |             |              |
| 5         |             | 24 N             | 1 1      | 0        |                                                                 |           |              |        | _           |              |
|           |             | }                |          | -        |                                                                 | .   .     |              |        |             |              |
| '         |             | 1                |          |          |                                                                 |           | NIT          | N      |             |              |
|           |             |                  |          | -        |                                                                 |           | NI           |        | וט          |              |
|           |             |                  |          |          |                                                                 | l         |              | 1      | .           |              |
|           |             |                  | . [-     |          |                                                                 |           |              |        |             |              |
| 6         |             | 24 N             | <u>1</u> | 3        | NOTE: Thin Fine Sand Seams Observed From                        | 1         |              |        |             |              |
|           |             | 1                |          | <u> </u> | 13.5 to 17 ft.                                                  |           | . •          |        |             |              |
|           |             | .                |          | +        |                                                                 |           | N            |        |             |              |
|           |             |                  | •        |          | 15—                                                             |           | 141          |        | D           |              |
| <u> </u>  |             |                  | 7        | VATI     | R LEVEL OBSERVATIONS                                            | GEN       | IERA         |        | TES         |              |
|           |             | 77 4111          |          | 7        |                                                                 |           |              |        | <del></del> |              |
|           |             | Drillin<br>After |          |          | Upon Completion of Drilling Start<br>! hrs Driller              | 8/6/91    | End          | 8/6/   | AT D        | ia CNIE      |
|           |             | Arter<br>to Wa   |          |          | ONE Driller Logger                                              | MW<br>KRK | Chief        | r KR   | L K         | ig CME<br>45 |
|           |             | to Ca            |          |          | 17.7' Drill Me                                                  |           | HSA 2        | 1/4" I | D           | 33           |
|           |             |                  |          |          | represent the approximate boundary between soil may be gradual. |           |              |        |             |              |
| _ `       | ~~Xbx       | s and t          | ne tr    | ansition | may be graduat.                                                 |           |              |        |             |              |



### LOG OF TEST BORING

Project PPG INDUSTRIES INC.

Location Oak Creek, Wisconsin

Boring No. B18
Surface Elevation
Job No. 27350.01
Sheet 2 of 2

11925 WEST LAKE PARK DRIVE SUITE 200, HILWAUKEE, WIS. 53224 TEL (/1/2750 11/1

| 1        | S       | AMP | LE                                               |           | 14041        | SUITE 200, HILWAUKEE, WIS. 53224 TEL. |              |              |       |         |       |
|----------|---------|-----|--------------------------------------------------|-----------|--------------|---------------------------------------|--------------|--------------|-------|---------|-------|
|          | Y Rec   |     | Т —                                              | T         | VISUA        | L CLASSIFICATION                      | ENT          | VIRON        | MENT  | AL D    | ATA   |
| No.      | E (in.  |     | И                                                | Depth     | •            | and Remarks                           | qu           | PID,<br>Head | /FID  | Meth-   | T     |
| <b> </b> | EK In.  | 1   | <u> </u>                                         | 1.        | <u> </u>     | Tional KS                             | (qa)         | Space        | Field | ane ch- | Hono- |
| ļ        |         |     |                                                  |           |              |                                       | (tsf)        | pom          | pom   | %LEL    | mag   |
|          |         | 1   | <del>                                     </del> | +         |              |                                       |              |              |       |         |       |
| 7        |         |     |                                                  | <u> </u>  |              |                                       |              |              |       |         | -     |
| 1        | 24      | M   | 25                                               |           |              |                                       |              |              |       |         |       |
| •        |         |     |                                                  | <u></u>   |              |                                       |              |              |       |         |       |
| i        |         |     |                                                  | -         | /A           |                                       |              |              |       |         |       |
| Ì        |         |     |                                                  |           | Light Brown  | ish Gray (10YR 6/2) SILT; Some        | +            | ND           | >170  |         |       |
|          |         |     | }                                                |           | Fine Sand (N | (I.)                                  |              | מאז          | ND    |         |       |
|          |         | +   | <del> </del>                                     | +         | NOTE: Thin   | Fine Sand Seams from 17 to            |              |              |       | ,       |       |
| -        |         |     |                                                  |           | 18.5 ft.     | The Sand Seams from 17 to             |              | <del> </del> |       |         |       |
| 8        | 24      | M   | 19                                               |           |              |                                       | <del> </del> | -            |       |         |       |
|          |         |     |                                                  | <u> </u>  | CIAN IN      | rownish Gray (10YR 6/2) Lean          |              |              |       |         |       |
| 1        | H       |     | '                                                | -         | CLA I, LIUI  | Fine Sand; Trace Gravel (CL).         |              |              |       |         |       |
|          |         |     |                                                  | . 30      | Light Brown  | ish Gray (10YR 6/2) SILT; Some        | } .          | NID.         | 3.7-  |         |       |
|          |         |     |                                                  | 20-       | Fine to Med  | ium Sand (ML).                        |              | ND           | ND    |         |       |
|          |         | +   | <del> </del>                                     | +         |              | Jana (IVIL).                          |              |              |       |         |       |
|          |         | 1   |                                                  | _         | Er           | nd of Boring at 20.5 ft.              | T            |              | ·     |         | -     |
|          |         |     |                                                  |           | t .          |                                       |              | 1            |       | ;<br>,  |       |
| }        |         | 1   |                                                  | [         | ND=Non De    | tected                                |              | 1            |       |         |       |
|          |         | {   |                                                  | <u> -</u> | * = Laborato | rv Analysis                           |              |              |       |         |       |
|          |         | . [ |                                                  |           |              | · ·                                   |              | 1            | 1 .   |         |       |
|          | 11.     |     |                                                  |           |              | •                                     |              |              |       |         | }     |
|          | 11      |     |                                                  | <u> </u>  |              |                                       |              | }            |       |         |       |
|          |         | }   |                                                  | _         |              |                                       |              |              |       |         | ļ.    |
| 1. '     |         | -   |                                                  | 1         |              |                                       | 1            |              | •     |         |       |
|          | -     . |     | } :                                              |           |              |                                       |              |              |       |         |       |
|          |         |     |                                                  | -         |              |                                       | ľ            | 1            |       |         |       |
| 1        | - 11 .  | 1 . |                                                  | 25-       |              |                                       | · ·          |              |       |         |       |
|          | -       |     | }                                                | [ 23-     |              |                                       | ,            |              |       |         |       |
| }        |         |     |                                                  | <b>-</b>  |              |                                       |              |              |       | i<br>i  |       |
|          |         | -   | 1                                                | _         |              |                                       | }            | 1            |       |         |       |
|          |         |     |                                                  |           |              | •                                     |              |              |       |         |       |
| 1        | 11.     |     |                                                  | <u></u>   | 1            |                                       | -            |              |       | ,       |       |
|          |         |     |                                                  | <u></u>   | ·            |                                       |              |              |       |         |       |
|          |         | 1   |                                                  | L         |              | 1                                     |              | 1            |       |         |       |
|          |         | \   |                                                  |           |              | •                                     |              |              |       |         |       |
| 1        |         |     |                                                  | <b>-</b>  |              |                                       | 1            |              |       |         |       |
|          |         | .{  | 1                                                | -         |              |                                       |              |              |       |         |       |
|          | 11.     | ·.  |                                                  | 1         |              |                                       |              | 1            |       |         | 1     |
|          |         | 1.  |                                                  |           |              |                                       |              |              |       |         |       |
|          |         |     | ٠.                                               | -         |              |                                       |              |              |       |         |       |
| 1        |         | 1   |                                                  | 30_       |              |                                       |              |              |       |         |       |
| 1        |         |     | ·                                                | 1 . 30-   |              |                                       |              |              |       |         |       |
|          |         |     |                                                  | Γ.        |              |                                       |              |              |       |         |       |
|          | 11.     |     | 1                                                |           |              |                                       |              | ,            |       |         |       |
| 1        |         |     | 1                                                |           | ;            |                                       |              |              |       |         | -     |
|          |         |     |                                                  | Γ         |              |                                       |              |              |       |         |       |
|          |         |     | 1                                                |           |              |                                       |              |              |       |         |       |
|          | 11      | 1   | 1                                                | 1         |              |                                       |              |              | 1     |         |       |
| / .      | } }     |     |                                                  |           |              |                                       | 1            |              |       | 1       |       |

### LOG OF TEST BORING

Project PPG INDUSTRIES INC.

Boring No. B19 Surface Elevation Job No. 27350.01 Sheet 1 of 1

Location Oak Creek, Wisconsin

|                 | SA                   | MPL                         |                                  |                 |                     | AKE PARK DRIVE SUITE 200, MILWAUKEE, WIS. 53224 TEL.C  VISUAL CLASSIFICATION                                                                                      |                     | IRONA        |           | AL DA                | ATA          |
|-----------------|----------------------|-----------------------------|----------------------------------|-----------------|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------------|-----------|----------------------|--------------|
| lo. P           | Rec                  | Hoist                       | Ŋ                                | Depth           |                     | and Remarks                                                                                                                                                       | qu<br>(qa)<br>(tsf) | Head         | Field     | Meth-<br>ane<br>%LEL | Mono:<br>tox |
| 1 progress      | 10                   | М                           | 5                                |                 |                     | 8 Inches CONCRETE.  FILL: Yellowish Brown (10YR 5/4) Sand and Gravel.  Stiff Brown (7.5YR 4/3) Mottled Lean CLAY; Little Fine Sand; Trace Gravel (CL).            |                     | 1.0          | ND        |                      |              |
| 2               | 24                   | М                           | 8 .                              |                 |                     | , , , , , , , , , , , , , , , , , , , ,                                                                                                                           |                     | ND           | ND        |                      |              |
| *3              | 24                   | M                           | 7                                |                 |                     | Stiff Light Brownish Gray (10YR 6/2) Lean CLAY; Little Fine Sand, Trace Gravel (CL).  NOTE: Six Inch Black Sand And Gravel Seam Observed at Approximately 7.0 ft. |                     | 150.0        | 3.0       |                      |              |
| 4               | 24                   | M                           | 12                               | 10              | 0-                  | Strong Sweet Solvent Odor Detected.  NOTE: Thin Fine Sand Seam Observed at Approximately 10 ft. Thin Fine Silt Seams                                              |                     | 4.0          | 12.0      |                      |              |
| 5               | 24                   | M                           | 13                               |                 |                     | Observed From 11 to 13.5 ft.                                                                                                                                      |                     | 2.0          | 3.0       |                      |              |
| 6               | 24                   | М                           | 18                               |                 | 15-                 |                                                                                                                                                                   |                     | ND           | NI        |                      |              |
| 7               | 24                   | М                           | 10                               |                 |                     | Light Brownish Gray (10YR 6/2) SILT; Some Fine Sand (ML). NOTE: Thin Fine Sand Seams Observed From                                                                | Н                   | 0.5          | 0.        | 5                    |              |
| *8              | 2                    | 4 M                         | 6                                |                 | 20-                 | \langle 16.5 to 17.5 ft. Stiff Brownish Gray (10YR 6/2) Lean CLAY; Little Fine Sand; Trace Gravel (ML).                                                           |                     | 0.5          | N         | D                    |              |
|                 |                      |                             |                                  | VAT             | ·25—                | NOTE: Thin Silt Seams Observed From 18 to 20.5 ft.  End of Boring at 20.5 ft ND=Non Detected * = Laboratory Analysis                                              |                     | JERA         |           |                      |              |
| Tir<br>De<br>De | me A<br>epth<br>epth | After I<br>to War<br>to Cay | g \subsection  grill  ter  ve in | 7 8.0<br>ing _1 | 10 mi<br>6'<br>17.3 | John Completion of Drilling Start Driller Logger                                                                                                                  | 8/6/9<br>MW<br>KRK  | End<br>Chief | 8/6,<br>E | ′91<br>L R           | Lig CMY      |

|                                                                           | of Wisco  |                   | l D.                  |                   | · Route To:                            |                           |           |           |           |           | 9        | COIL              | ROPI                 | NG I               | 0 C T              | ,          |          |              |
|---------------------------------------------------------------------------|-----------|-------------------|-----------------------|-------------------|----------------------------------------|---------------------------|-----------|-----------|-----------|-----------|----------|-------------------|----------------------|--------------------|--------------------|------------|----------|--------------|
| Department of Natural Resources  Solid Waste  Emergency Respo  Wastewater |           |                   |                       |                   |                                        |                           |           | az. Wa    |           |           | Ī        | Form 4            | BORI<br>400-122      | 110 1              | .00 1              | NFOR       | .MAT     |              |
|                                                                           |           |                   |                       |                   |                                        |                           | . 🗀 w     | ater R    | ound T    | anks<br>S |          |                   |                      |                    | •                  |            |          | 7-91         |
| Fo                                                                        | v/Proje   | · > 1             |                       |                   |                                        |                           | 0         | ther_     |           |           |          |                   |                      |                    | Π                  | . 1        |          | 4            |
|                                                                           | G IN      | DUS.              | me<br>TRIES           | INC.              |                                        | . 27                      | 350.03    | Licen     | se/Perr   | nit/Mo    | nitoring | g Numi            | er                   | Borin              | Pag<br>ig Num      | ber 1      | _o( _    |              |
| Borin                                                                     | g Drille  | d By (            | Firm na               | ime and name      | of crew chief)                         | ا مد                      | 330.03    |           | Drilling  |           |          |                   |                      | . I                | LWI                |            |          |              |
|                                                                           |           |                   |                       | ene Lehmai        |                                        |                           |           |           |           |           | ū        | Date              | Drilling             | g Com              | leted              | Drillin    | ig Meth  | 10d          |
|                                                                           |           |                   |                       | WI Unique We      |                                        |                           |           |           |           | 6/91      | •        | 1                 | /12/                 | 6/91 -             |                    | 1/         | 4" ID    | ESA          |
|                                                                           |           |                   |                       |                   | n no. 4 40 C                           | ommon Well<br>LW1         | Name      | Final     | Static    | Water I   | Level    | Surfa             | ice Elev             | ation              |                    | Borch      | ole Dia  | meter        |
| <ul> <li>Borin</li> </ul>                                                 | g Locati  | on                |                       |                   |                                        |                           |           |           |           | Feet N    | 1SL      | <u> </u>          |                      | _Feet              | MSL                | 1 8        | 3.2 ;    | inches       |
|                                                                           | Plane_    | · ·               |                       | N,                |                                        | E                         | S/C/N     | 4 ] ]     | Lat       |           |          | Loca              | l Grid I             |                    |                    | plicable   | )        |              |
| Coun                                                                      | <u> </u>  | of                | 1/4                   | of Section        | ,T                                     | N, R                      | E/        | W Lo      | ng        |           |          |                   | ī                    | }<br>Feet {        | N C                |            | r        | OE           |
|                                                                           | ilwau!    |                   |                       |                   | •                                      | •                         | DNR       | Count     | y Code    |           | Town/0   | City/or           | Village              |                    |                    |            | Feet     | <u> </u>     |
| Sam                                                                       | ple       | ψī                | +                     |                   |                                        |                           |           | 41        | 1         | , 0       | ak Cr    | eek               |                      |                    |                    |            |          |              |
|                                                                           | ba.       | un+               | L.                    |                   | Soil /Book                             | Description               | ,         |           |           |           |          |                   |                      | Soil               | Proper             | ties       |          |              |
| ۲                                                                         | th<br>ver | CO                | -                     |                   |                                        | ic Origin F               |           |           |           | U         | E        | 0                 | D 1.                 | •                  |                    |            | j        | 20           |
| Number                                                                    | 000       | 3                 | p + h                 |                   |                                        | ajor Unit                 | J1        |           | n         | - Ha      |          | IO/FID            | da                   | tur                | P +                | t   c      | . 0      | t<br>c       |
|                                                                           | 282       | . B               | 0.8                   |                   |                                        | -,01 -01.11               |           |           | USC       | E 0       | 9 '      | ID/               | tan<br>ene           | ols<br>ont         | 2 E                | # —<br># E | 200      | 70           |
|                                                                           |           |                   | -                     | 10° Concre        | te                                     |                           |           |           |           | 9 _       | 30       | Д.                | A P +                | 0 U                | 77                 | P          | ۵        | ROD,<br>Comi |
|                                                                           |           |                   |                       | Blind Drill       | ed LM1 to 15                           | Ft.                       |           |           |           | -         |          |                   |                      |                    | -                  |            |          |              |
|                                                                           |           |                   | <u> </u>              | See LW1 L         | og for Boring                          | Lithology.                | •         |           |           |           |          |                   |                      |                    |                    |            |          |              |
|                                                                           |           |                   |                       |                   |                                        |                           | -         |           |           |           |          |                   |                      |                    |                    |            |          |              |
| ÿ                                                                         |           |                   | L                     |                   |                                        |                           |           |           | -         |           |          |                   |                      |                    |                    |            |          |              |
|                                                                           |           |                   | F-                    |                   |                                        |                           |           |           |           |           |          | ND                |                      |                    |                    |            | j .      | ,            |
|                                                                           |           |                   | 5                     |                   |                                        |                           |           |           |           |           |          | שיו               |                      |                    |                    |            |          |              |
|                                                                           |           |                   | -                     |                   |                                        |                           |           |           |           |           |          |                   |                      |                    |                    |            |          |              |
|                                                                           |           |                   | _                     |                   |                                        |                           |           |           |           |           |          |                   |                      |                    |                    |            | , ,      |              |
| * . • •                                                                   |           |                   |                       |                   | •                                      |                           |           |           |           |           |          | <br>              |                      |                    |                    |            |          |              |
|                                                                           |           |                   | <b>-</b> .            |                   |                                        |                           | :         |           |           |           |          |                   |                      |                    |                    |            | ,        |              |
|                                                                           |           |                   | F                     |                   |                                        |                           |           |           |           |           |          | NT.               |                      | ŧ                  |                    |            |          |              |
|                                                                           |           |                   | 10                    |                   | * ************************************ | ,                         |           |           |           |           |          | ND                |                      |                    |                    |            |          |              |
| ,                                                                         |           |                   | -                     |                   |                                        |                           |           |           |           |           |          |                   |                      |                    |                    |            |          |              |
|                                                                           |           |                   | _                     |                   |                                        |                           | •         | :         |           |           | -        | i                 |                      |                    |                    |            |          |              |
|                                                                           |           |                   | L                     |                   |                                        |                           |           |           |           | ,         |          |                   |                      |                    |                    |            |          | l            |
|                                                                           |           |                   | -                     |                   | •                                      |                           |           |           |           |           | ,        |                   |                      |                    |                    |            |          |              |
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|                                                                           |           |                   | 15                    |                   | ) (D ) (                               |                           |           |           |           |           |          | ND                |                      | `                  |                    |            |          |              |
|                                                                           |           | •                 | <b>-</b>              | Note: PID         | Readings Rec                           | on Detect<br>orded From A | uger      |           |           |           |          |                   |                      |                    |                    |            |          |              |
|                                                                           |           | 7                 | <u></u>               | Cuttings.         | . •                                    |                           |           |           |           |           |          |                   |                      | -                  |                    |            |          |              |
| •                                                                         |           |                   | -                     |                   |                                        | •                         | •         |           | ,         |           |          |                   | .                    |                    |                    |            | į        |              |
|                                                                           | ,         |                   | F                     |                   |                                        |                           |           |           |           |           |          |                   | }                    | ,                  |                    |            |          |              |
|                                                                           |           |                   | _                     |                   | ,                                      |                           |           | •         |           | * .       |          |                   |                      |                    |                    |            |          |              |
| The                                                                       | tritica.  | io- !!            | <u></u>               |                   | -                                      |                           |           |           |           |           |          |                   |                      |                    |                    |            | ,        |              |
| Ihere                                                                     | by con:   | fv +ba            | nes repr              | resent the appr   | oximate bound                          | dary between s            | oil types | and th    | ne trans  | ition m   | ay be g  | radual            |                      | <u> </u>           | i                  | 1          |          | <u> </u>     |
| Signa                                                                     |           | y mat             | ine ini               | ormation on th    | lis form is true                       | and correct to            | the bes   | t of m    | y knowl   | edge.     | <u>-</u> |                   | ,                    |                    |                    |            |          |              |
|                                                                           |           |                   | Son                   |                   | uff                                    | JEG /                     | JEG       | Firm      | . 10      | VARZ      | YNTI     | NC                |                      |                    |                    |            |          |              |
| This f                                                                    | orm is a  | Whor              | ized by               | Chapters 144.1    | 47 and 162, W                          | is. Stats. Comp           | oletion c | of this r |           |           |          |                   | <u> </u>             | <u> </u>           |                    |            |          |              |
| _violat                                                                   | ion is a  | n viol:<br>separa | ation. F<br>ite offer | ined not less the | ian \$10 or mor                        | te than \$100 or          | impriso   | oned no   | ot less t | han 30    | days, o  | chaitic<br>r both | s: rorfe<br>for each | cit not<br>violati | less tha<br>on Fac | n \$10 n   | or mon   | e than       |
|                                                                           |           |                   |                       | ,,                | םחב על.דרו                             | 102.00, WIS. S            | tats.     |           |           | , .       |          |                   |                      |                    |                    | day o      | i contin | 1000<br>     |

State of Wisconsin

| ate of Wisconsin epartment of Natural Resources                         | Route To: Solid Waste Haz                                                                       | z. Waste                             |                                       |                 | OIL BO    |                              | G LO           | G INI          | FORM                 |          | )N<br>-91        |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|--------------------------------------|---------------------------------------|-----------------|-----------|------------------------------|----------------|----------------|----------------------|----------|------------------|
| epartment of tratoral resources                                         | Emergency Response Und                                                                          | iderground T<br>iter Resource<br>her |                                       |                 |           | :                            |                | Page           | 1 .                  |          |                  |
| acility/Project Name                                                    | 4                                                                                               | License/Per                          | mit/Mon                               | itoring         | Number    | -                            | Boring.i       | Numbe          |                      |          | <u> </u>         |
| PPG INDUSTRIES INC. oring Drilled By (Firm name and nam                 | 27350.03                                                                                        | Date Drillin                         | g Started                             |                 | Date D    | rilling                      | LV<br>Comple   |                | Orilling             | Methos   | 1                |
| &J Soil Testing-Eugene Lehm                                             |                                                                                                 |                                      | /6/91                                 |                 |           | 12/6                         | - ,            |                | 4 1/4"               |          |                  |
| NR Pacinty Well No.: WI Unique                                          | Well No. — Common Well Name LW2                                                                 | Final Statio                         | Water L<br>_Feet M                    |                 | Surface   | e Elevai                     | tion<br>Feet M | l              | Borehol<br>8.2       | e Diam   |                  |
|                                                                         | E S/C/N                                                                                         |                                      | · ·                                   |                 |           |                              |                | N              | licable)             |          | ΠE               |
| 1/4 of 1/4 of Section                                                   | ,TN,RE/                                                                                         | W 'Long<br>County Cod                |                                       | Town/(          | City/or \ |                              | ect [          | 8              |                      | Feet     |                  |
| Milwaukee                                                               |                                                                                                 | 41                                   |                                       | ak Ćr           |           |                              |                |                |                      |          |                  |
| Sample w +                                                              |                                                                                                 |                                      | .                                     |                 |           |                              | Soil F         | ropert         | ies                  |          |                  |
| Number<br>Length<br>Recovered<br>(In.)<br>Blow Count                    | Soil/Rock Description And Geologic Origin For Each Major Unit                                   | <i>V</i>                             | 1 LO                                  | Well<br>Diagram | PID/FID   | Standard<br>Ponetra-<br>tlon | Molature       | Limit<br>Limit | Plast 1 c            | P 200    | RQD/<br>Comments |
|                                                                         | shed Stone Fill                                                                                 |                                      | <u> </u>                              | #               |           |                              |                |                |                      |          |                  |
| 1 20 16 Probat<br>Little S                                              | ole FILL: Brown (7.5 Yr 5/4) Lean Clay<br>Sand and Gravel, Occasional Sand Pock                 | cets.                                |                                       |                 | ND        |                              |                |                |                      |          | SS               |
|                                                                         |                                                                                                 |                                      |                                       | =               |           |                              |                |                |                      |          | 1                |
| 2 15 8 5                                                                |                                                                                                 | 1.                                   | 75                                    |                 | ND        |                              |                |                |                      |          | SS               |
|                                                                         |                                                                                                 |                                      |                                       | $\exists$       |           | -                            | <u> </u>       |                | ļ                    |          | l SS             |
| 3 6 9 -                                                                 |                                                                                                 | 0.                                   | 75                                    |                 | ND        |                              |                |                |                      |          | 22               |
| 4 8 2 =                                                                 |                                                                                                 |                                      |                                       |                 | ND        |                              |                |                |                      |          | SS               |
| 10                                                                      |                                                                                                 | 0                                    | .25                                   |                 |           | 1:                           |                |                |                      | <u> </u> |                  |
| CLA                                                                     | Stiff, Brownish Gray (10 YR 6/2) Lean<br>Y; Little Sand and Gravel, Occasional T<br>Seams (CL). | n<br>Thin                            |                                       |                 |           |                              |                |                |                      | ,        |                  |
| 5 12 6                                                                  |                                                                                                 |                                      | 2.25                                  |                 | NI        | )                            |                |                |                      |          | SS               |
|                                                                         | End of Boring at 15.5 Ft.  ND = Non Detect                                                      |                                      |                                       |                 |           |                              |                |                |                      |          | -                |
|                                                                         |                                                                                                 |                                      |                                       |                 |           |                              |                |                |                      |          |                  |
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| The stratification lines represent t                                    | he approximate boundary between soil                                                            | types and the                        | transitio                             | on may          | be grad   | ual.                         |                |                | !                    |          | <u> </u>         |
|                                                                         | on on this form is true and correct to th                                                       | ne best of my                        |                                       |                 |           |                              |                |                |                      |          |                  |
| Signature Julian E.                                                     | Luff JEG / JE                                                                                   | <u> </u>                             | · · · · · · · · · · · · · · · · · · · |                 | א ואכ     |                              |                |                |                      |          |                  |
| This form is authorized by Chapter \$5,000 for each violation. Fined no |                                                                                                 | EG Firm tion of this r               | WA<br>eport is n                      | RZY             | ory. Pen  | alties: ]                    | Forfeit i      | not less       | s than \$1<br>Each d | 10 nor   | more<br>ontinu   |

| Department of Natural Resources Solid Waste                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ☐ Har       | z. Waste                |        |               | 3            | OIL      | BORI             | NG L         | OG II    | YFOR     | MAT     | KOľ              |
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| ☐ Emergency Respons                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | c 🗍 Und     | dergroun                | id Ta  | nks           | F            | form 4   | 400-122          |              |          |          |         | 7-91             |
| ☐ Wastewater                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ☐ Wa        | ter Resou               | urces  |               |              |          |                  |              | •        |          | -       |                  |
| Facility/Project Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Oth         |                         |        |               |              |          |                  |              | Page     | : 1      | _of_    | 1                |
| G INDUSTRIES INC.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 7350.03     | License/1               | Perm   | it/Mo         | nitoring     | , Numt   | er               |              | g Num    |          |         |                  |
| Boring Drilled By (Firm name and name of crew chief)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |             | Date Dri                | lling  | Starte        | d ·          | Date     | Drilling         |              | .YY3     | 1-       |         |                  |
| J&J Soil Testing-Eugene Lehman                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             |                         |        |               | -,           | Date     |                  |              | leted    | Drillin  | ig Mett | 1001<br>425      |
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| DINK Facility Well No. Will Unique Well No. 1 Common Well No. 1 LW3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |             | Final Sta               |        |               |              | Surfa    | ce Elev          | ation *      |          | Borch    | ole Dia | meter            |
| Boring Location                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                         |        | Feet N        | ISL          |          |                  | _Feet        | MSL      | 1        | 3.2     | nches            |
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| County<br>Milwaukee                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | DNRC        | County Co               | ode    | Civil         | Town/(       | lity/or  | Village          | ect (        | 72 -     |          | _ Feet  | : 🗆 W            |
| Sample                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |             | 41                      |        | 0             | ak Ćr        | eek      |                  |              |          |          |         |                  |
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| 9° Concrete, 2° Brown Silty Sand and Coarse.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Gravel Bas  | ie                      | 1.     |               |              |          |                  |              | 7        | 요그       | ۵.      | 80               |
| Blind Drilled to 15.0 Ft. See Boring L                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | n=1 D2 f    |                         |        | -             |              |          |                  |              |          |          |         |                  |
| Lithologic Descriptions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | og Lrs (or  |                         |        |               |              | -        |                  |              |          |          |         |                  |
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| I hereby certify that the information on this form is true and correct Signature                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | to the best | of my kn                | iowle  | dge,          | - 6          |          |                  |              |          |          |         |                  |
| _ Cliffon E. Styll JEG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | /JEG        | Firm .                  | 137    | 'A D 7        | YN II        | <u>-</u> |                  |              |          |          |         |                  |
| This form & authorized by Chapters 144 147 A-4 1/2 W. C.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |             |                         |        |               |              |          |                  |              |          |          |         |                  |
| This form & authorized by Chapters 144.147 and 162, Wis. Stats. Con 55,000 for each violation. Fined not less than \$10 or more than \$100 or violation is a senarate offense. Purposet to 144.147 and 162, Wis. Stats.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | or imprisor | inis repo<br>ned not le | ort is | manda<br>an W | atory. P     | cnaltic  | s: Fort          | eit not      | less tha | n \$10 n | or mor  | e than           |

State of Wisconsin

|         | Wiscons              |          | l Resou  | rces           | Route To:                         |                                 |                | z. Waste                   |                |                |                 | OIL BC<br>rm 4400 |                      | G LO                | G INI        | FORM          |        | ON<br>7-91     |
|---------|----------------------|----------|----------|----------------|-----------------------------------|---------------------------------|----------------|----------------------------|----------------|----------------|-----------------|-------------------|----------------------|---------------------|--------------|---------------|--------|----------------|
|         |                      |          |          |                | ☐ Emerge<br>☐ Wastew              | ncy Response                    |                | dergrou<br>ter Reso<br>her |                | ະ ະ            |                 |                   |                      |                     | Page         | 1             | of .   | 1              |
| cility/ | Project              | Name     |          |                |                                   |                                 |                | License                    | /Permit        | /Moni          | toring l        | Number            | 1                    | Boring              | Numbe        |               |        |                |
|         |                      |          | MES I    |                | of crew chief)                    |                                 | 7350.03        | Date D                     | rilling S      | tarted         | T               | Date D            | rilling (            |                     | V4A<br>ted I | Orilling      | Metho  | <u>d</u>       |
| _       |                      |          |          | e Lehman       |                                   |                                 |                |                            | 12/3,          |                |                 |                   | 12/3,                | _                   |              | 4 1/4"        |        |                |
| NR F    | acibty Y             | veii No  | i.   iyo | Unique We      | il No. 4 = 1                      | Common Well                     |                | Final S                    | tatic W        |                |                 | Surface           |                      |                     |              | Borchol<br>82 | ,      |                |
| loring  | Locatio              | n        |          |                |                                   |                                 |                | L                          |                | eet M.         |                 | Local             |                      | Feet M<br>ocation   |              | licable)      | in in  | ches           |
| tate P  | lane                 |          |          |                |                                   | )                               |                | 1                          | at             |                |                 |                   | ,                    |                     | N            |               | Feet   | □ E<br>□ W     |
| County  | _ 1/4 of             |          | 1/4 o    | Section _      | , 1                               | N, R                            | DNR            | County                     | Code           | Civil 7        | Town/C          | City/or \         |                      | eet L               | 3            |               | . 1001 |                |
|         | lwauk                | ee       | T        |                |                                   |                                 |                | 41                         |                | O:             | ak Cre          | eek               |                      | Soil F              | ropert       | ies           | - 1    | <del></del>    |
| Samp    | g                    | unts     | т<br>Т   |                | Soil/Rock                         | k Descriptio                    | on             |                            |                |                | -               |                   | 91                   | 1                   |              |               |        | <b>5</b> 3     |
| Number  | ngth<br>cover<br>n.) | 0 0 0    | pth i    |                |                                   | gic Origin<br>Major Unit        | For            |                            | CS             | Graphlo<br>Log | Well<br>Dlagram | IO/FID            | andar<br>netra<br>on | Molsture<br>Content | quld<br>mlt  | astic<br>mit  | 200    | 0D/<br>.omment |
| Z<br>Z  | Ω Re.<br>∴ e.        | <u>m</u> | De       |                | ·                                 |                                 |                |                            | USC            | 0 7            | O E             | PI                | + P C +              | υ C<br>C            |              |               | ۵.     | 0.00           |
|         |                      |          | -        | 10" Conci      | rete                              |                                 |                |                            |                |                |                 |                   |                      |                     |              |               |        |                |
| 1       | 10                   | 16       |          |                | ght Brownish<br>me Gravel.        | -Gray (10 YR                    | 6/2) Silt      | y '                        |                |                |                 |                   | <br>                 |                     |              |               |        | SS             |
|         |                      |          |          |                |                                   | •                               |                | •                          | ٠.             |                |                 |                   | ·                    |                     |              |               |        |                |
|         |                      |          |          |                |                                   |                                 |                |                            |                |                |                 | 3.0               |                      |                     |              |               |        |                |
|         |                      |          | +        |                |                                   |                                 |                |                            |                |                |                 |                   |                      |                     |              |               |        | <u> </u>       |
| 2       | 14                   | 8        | 1        | Stiff to Y     | Very Stiff, Bro<br>Little Sand an | own (7.5 YR 4<br>ad Gravel (CL  | /3) Lean<br>). | •                          |                |                |                 |                   |                      |                     |              |               |        | SS             |
|         |                      |          | -        |                |                                   | •                               |                |                            |                |                |                 | 15.0              |                      |                     |              |               |        |                |
|         |                      |          | - :      | 5              | ٠.                                |                                 | •              |                            | 1.5            |                |                 |                   |                      |                     |              |               |        |                |
|         |                      | 1        | +        |                | •                                 |                                 |                |                            |                |                |                 |                   | 1.                   |                     | 1            |               | .      |                |
| 3       | 24                   | 11       |          |                | •                                 | •                               | * "            |                            |                |                |                 |                   |                      |                     |              |               |        | SS             |
|         |                      |          |          |                |                                   |                                 |                |                            |                |                |                 |                   |                      |                     |              |               |        |                |
|         |                      |          | -        | Slight         | Chemical Odo                      | or in 6 - 8 Ft Sa               | ample.         |                            | 2.5            |                |                 | 300               | .0                   | -                   |              |               |        |                |
|         |                      |          |          |                | <u> </u>                          | 6D                              | ) E.           |                            |                | _{///          |                 | ·   -             |                      | -                   |              | _             | -      | -              |
|         |                      |          | -        | Note:<br>Readi | Boring Aban                       | f Boring at 8.0<br>doned Due to | Elevated       | PID                        |                | -              |                 |                   |                      |                     |              |               |        |                |
|         |                      |          |          |                |                                   |                                 |                |                            |                |                |                 |                   |                      |                     | •            |               |        |                |
|         |                      |          |          |                |                                   |                                 |                | ·                          |                | ·   .          |                 |                   |                      |                     |              | •             |        |                |
|         |                      |          |          |                |                                   | boundary bet                    |                |                            |                |                |                 | be grad           | ual.                 |                     |              |               |        |                |
|         | gnature              |          | that the |                | on this form                      | is true and co                  | JEG / JI       | F                          | f my kn<br>irm |                |                 | N INC             | ).                   |                     |              |               |        | -              |
| T       | his form             | is aut   | horized  | by Chapters    | 144.147 and                       | 162, Wis. Stats<br>or more than | s. Comple      | tion of t                  | his repo       | ort is n       | nandato         | ory. Pen          | alties:              | Forfeit             | not les      | s than \$     | 10 nor | more th        |
|         |                      |          |          |                |                                   | .99 and 162.06                  |                |                            | -2 1101 1      | ب رباط         | ., 50 04        | ,, 0, 0, 0        | 101                  |                     |              |               | ٠٠٠ ر  | VOH4           |

| te of Wisconsin partment of Natural Resources                      | Route To:  Solid Waste                                                   | Haz         | z. Waste        |                  |                    |                 | OIL B(<br>rm 4400 |                              | G LO           | G IN   | FORM               |                | ON<br>7-91       |
|--------------------------------------------------------------------|--------------------------------------------------------------------------|-------------|-----------------|------------------|--------------------|-----------------|-------------------|------------------------------|----------------|--------|--------------------|----------------|------------------|
| partment of Natural Resources                                      | <ul><li>☐ Emergency Response</li><li>☐ Wastewater</li></ul>              | ☐ Wa        | iter Resc       |                  | cs.                | . •             |                   |                              |                |        |                    |                |                  |
| 11. 17. XI                                                         |                                                                          | Ot1         | her<br>License, | /Permit          | /Moni              | toring          | Number            |                              | Boring         |        |                    | of             | <u></u>          |
| cility/Project Name PPG INDUSTRIES INC.                            |                                                                          | 350.03      |                 |                  |                    | -               |                   |                              | LÌ             | Y4B    |                    |                |                  |
| oring Drilled By (Firm name and name                               | me of crew chief)                                                        |             | Date D          | rilling S        | tarted             |                 | Date D            | rilling                      | Comple         | cted   | Drilling<br>4 1/4" |                |                  |
| &J Soil Testing-Eugene Lehn                                        | nan                                                                      |             |                 | 12/3             | /91                |                 |                   | 12/3                         | /91            |        |                    |                |                  |
| NR Facility Well No.   WI Unique                                   | Well No. Common Well N<br>LW4B                                           | Vame        | Final S         |                  | ater Le<br>Teet Mi |                 | Surface           | Elevai                       | tion<br>Feet N |        | Boreho<br>8.       | le Diar<br>2in |                  |
| oring Location<br>ate Plane                                        | N E                                                                      | S/C/N       | v   1:          | at               |                    |                 |                   |                              |                |        | plicable)          |                |                  |
| ate Plane 1/4 of Section                                           | T N.R                                                                    | ε/          | W Lon           | g.               |                    |                 |                   | F                            | eet [          | J S    |                    | Feet           |                  |
| ounty Milwaukee                                                    | 1.3                                                                      | DNR         | County<br>41    | Code             | CIVII              | fown/Cak Cr     | Tith/or           | Village                      |                |        |                    |                |                  |
| Sample v +                                                         |                                                                          |             |                 |                  |                    |                 |                   |                              | Soil           | Proper | ties               |                |                  |
| Number<br>Length<br>Recovered<br>(in.)<br>Blow Count<br>Depth in F | Soil/Rock Description<br>And Geologic Origin F<br>Each Major Unit        |             | -               | uscs             | Graphic<br>Log     | Well<br>Diagram | PIO/FID           | Standard<br>Penetra-<br>tlon | Moisture       |        | P   as+ i c        | P 200          | ROD/<br>Comments |
|                                                                    | oncrete                                                                  | C 1 (       | <u> </u>        |                  | 777                |                 |                   |                              |                |        |                    | <u> </u>       |                  |
| Grave                                                              | <u> </u>                                                                 | •           | Some            |                  |                    |                 | ND                |                              |                |        |                    |                | SS               |
|                                                                    | to Very Stiff, Brown (7.5 YR 4/3)<br>Y; Little Sand and Gravel (CL).     | ) Lean      |                 |                  |                    |                 | ND                |                              |                |        |                    |                | SS               |
|                                                                    |                                                                          |             |                 | 1.75             |                    |                 |                   |                              |                | 1      | 1                  | 1              | 1                |
| 3 8 6                                                              |                                                                          |             | •               | 2.25             |                    |                 | ND.               |                              |                |        |                    |                | SS               |
| 4 8 5                                                              |                                                                          | •           | •               | 3.0              |                    |                 | ND                | ,                            |                |        |                    |                | SS               |
|                                                                    |                                                                          |             |                 |                  |                    |                 |                   |                              |                |        |                    |                |                  |
|                                                                    | dium Dense, Brownish-Gray (10                                            | YR 6/2      | l) Silty        |                  |                    |                 |                   |                              |                |        |                    |                | SS               |
| 15                                                                 | ND; Little Gravel (SM).                                                  |             |                 |                  |                    |                 | _20.              |                              |                |        |                    |                |                  |
|                                                                    | emical Odor.                                                             |             |                 |                  |                    |                 |                   | -                            |                |        |                    |                |                  |
|                                                                    | ry Stiff, Gray (10 YR 6/2) SILT; nd, Little Gravel (ML).                 | Some I      | rine .          |                  |                    |                 |                   |                              |                |        |                    |                |                  |
| 6 14 19                                                            | nemical Odor.                                                            |             |                 | 3.               | 5                  |                 | 20                | 0.0                          |                |        |                    |                | SS               |
|                                                                    | End of Boring at 20.5<br>ND = Non Detect                                 |             |                 |                  |                    |                 |                   |                              |                | .      | .                  |                |                  |
|                                                                    |                                                                          |             |                 |                  |                    |                 |                   |                              |                |        |                    |                |                  |
|                                                                    |                                                                          | <del></del> | -               |                  |                    |                 |                   |                              |                |        |                    |                |                  |
|                                                                    | t the approximate boundary betw                                          |             |                 |                  |                    |                 | be grad           | iual.                        |                |        |                    |                |                  |
| I hereby certify that the informa                                  | ation on this form is true and corr                                      |             |                 | of my k<br>Firm: |                    |                 |                   |                              |                |        |                    | · .            |                  |
| John E.                                                            | July 1                                                                   | IEG / J     | EG              |                  | WA                 | ARZ)            | M IN              | C.                           |                |        |                    |                |                  |
|                                                                    | pters 144.147 and 162, Wis. Stats.<br>not less than \$10 or more than \$ |             |                 |                  |                    |                 |                   |                              |                |        |                    |                |                  |

| State of Wisconsin Department of Natural Resources                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                          | _              | . Waste        |                |                                                                                             |                    | OIL BC               |                        | G LO                | G INF               | ORM                                   |         | )N<br>-91                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|----------------|----------------|----------------|---------------------------------------------------------------------------------------------|--------------------|----------------------|------------------------|---------------------|---------------------|---------------------------------------|---------|---------------------------------------|
| Department of Natural Resources                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                          | ] Wat          | er Reso        |                | 23                                                                                          |                    |                      |                        |                     |                     | -                                     |         |                                       |
| Facility/Project Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | · · · · · · · · · · · · · · · · · · ·                                                                    | Oth            | er<br>License/ | Permit         | /Moni                                                                                       | toring l           | Number               | 1                      | Boring              | Numbe               | 1(<br>r                               | of      | 1                                     |
| PPG INDUSTRIES INC. Boring Drilled By (Firm name and name)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | of grow chip)                                                                                            |                | Date Dr        | illing S       | tarted                                                                                      | •                  | Date D               | rilling (              |                     | V4C                 | rilling                               | Metho   |                                       |
| J&J Soil Testing-Eugene Lehman                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | •                                                                                                        |                |                | 12/3           |                                                                                             |                    | J J                  | 12/3,                  |                     |                     | 4 1/4"                                |         |                                       |
| DNR Facility Well No. W. Unique We                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                          | ıme            | Final S        |                |                                                                                             | vel                | Surface              |                        |                     | I                   | Borehol                               | e Dian  | ieter                                 |
| The Proof of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the S |                                                                                                          |                | <u> </u>       |                | eet M                                                                                       |                    |                      |                        | Feet M              | SL                  | 8_                                    | ,       | ches                                  |
| Boring Location State PlaneN,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | E :                                                                                                      | S/C/N          | ı d. La        | t              |                                                                                             |                    |                      |                        |                     | IN                  | icable)                               |         | □E                                    |
| 1/4 of 1/4 of Section<br>County                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ,TN,R                                                                                                    | _ E/\          | V Lon          | <u> </u>       | · · · · ·                                                                                   |                    |                      | F                      | eet 🗆               | S                   |                                       | Feet    | <u> </u>                              |
| County<br>Milwaukee                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                          | DNR            | County<br>41   | Code           | Civil 1                                                                                     | ik Cri             | ity/or \             | /illage                |                     |                     |                                       |         |                                       |
| Sample v + + L                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ,                                                                                                        |                |                |                |                                                                                             |                    |                      | · ·                    | Soil F              | Properti            | es                                    |         |                                       |
| uno u                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Soil/Rock Description                                                                                    |                |                |                | υ                                                                                           | ٤                  | 0                    | פום                    | r +                 | _                   | 0                                     |         | . #                                   |
| 0 0 0 1 + 1 C C C C C C C C C C C C C C C C C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | And Geologic Origin Fo<br>Each Major Unit                                                                | • [            |                | CS             | aphl<br>8                                                                                   | Well<br>Diagram    | IO/FID               | andard<br>netra-<br>on | Molsture<br>Content | 9419                | # # # # # # # # # # # # # # # # # # # | 200     | 00/                                   |
| N C N C N C N C N C N C N C N C N C N C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Edon Major O Mi                                                                                          |                |                | USC            | 6r<br>Lo                                                                                    | D E                | PIC                  | Per<br>+               | Ho<br>Co            | L   6               | g                                     | ۵.      | ROC                                   |
| - 10" Conc                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | rete<br>ray to Brown (10 YR 6/2) Silty                                                                   | Sand           |                |                |                                                                                             |                    |                      |                        |                     |                     |                                       |         | l ss                                  |
| 1 12 12 FILL: G Some to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | and Gravel.                                                                                              | . Jana,        |                |                | H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H |                    | 3.0                  |                        |                     |                     |                                       |         | 33                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                          |                |                | ,              |                                                                                             |                    |                      |                        |                     |                     |                                       |         | SS                                    |
| 2   14   9   -   5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                          |                |                |                |                                                                                             |                    | 10.0                 |                        |                     |                     |                                       |         | 33                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | GENERAL CLAVA                                                                                            | T lasts        | ,<br>C         |                | H-1-1                                                                                       |                    |                      |                        |                     |                     |                                       |         | l SS                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | own (7.5 YR 4/3) Lean CLAY;<br>vel (CL).                                                                 | Little         | Sand           | 1.5            |                                                                                             |                    | 1.0                  |                        |                     |                     |                                       |         |                                       |
| 4 12 9 Stiff to Lean CI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Very Stiff, Brownish-Gray (10 \\ LAY; Little Sand and Gravel (C                                          | YR 6/2<br>CL). | 2)             | 1.5            |                                                                                             |                    | 1.0                  |                        |                     |                     |                                       |         | SS                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                          |                | . •            |                |                                                                                             |                    |                      |                        |                     |                     |                                       |         | T                                     |
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| 5 16 11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ·<br>•• •                                                                                                |                |                |                |                                                                                             |                    |                      |                        |                     | -                   | 1                                     | -       | SS .                                  |
| 15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                          |                |                | 2.25           |                                                                                             |                    | NE                   | )                      |                     |                     |                                       |         |                                       |
| Very S                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | tiff, Brownish-Gray (10 YR 6/2                                                                           | 2) SILT        | Γ;             |                |                                                                                             | Ħ                  |                      |                        |                     |                     | ,                                     |         |                                       |
| Some                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Fine Sand (ML).                                                                                          |                |                |                |                                                                                             |                    |                      |                        |                     |                     | •                                     |         |                                       |
| 6 10 29                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                          |                |                |                |                                                                                             |                    |                      | 7                      |                     |                     |                                       |         | SS                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 7                                                                                                        |                |                | 3.             | Щ                                                                                           | Щ                  | N                    | D-                     |                     |                     | -                                     |         |                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | End of Boring at 20.5 F<br>ND = Non Detect                                                               | . '            |                |                |                                                                                             |                    |                      | :                      |                     |                     |                                       |         |                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                          |                |                |                |                                                                                             |                    |                      | .   .                  |                     |                     |                                       |         |                                       |
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| The stratification lines represent the                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                          |                |                |                |                                                                                             |                    | be grad              | ual.                   |                     |                     |                                       |         | · · · · · · · · · · · · · · · · · · · |
| I hereby certify that the information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0/ /                                                                                                     |                | ·   F          | f my.kr<br>irm |                                                                                             |                    | •                    |                        | ·                   |                     | <u> </u>                              |         |                                       |
| C/LIN C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | oury.                                                                                                    | G / JE         | EG ·           |                |                                                                                             |                    | <u>й</u> INC         | · ·                    |                     |                     |                                       |         |                                       |
| This form is authorized by Chapter \$5,000 for each violation. Fined not                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | s 144.147 and 162, Wis. Stats. C<br>less than \$10 or more than \$10<br>swant to ss 144.99 and 162:06. W | 00 or in       | nprisone       | d not l        | ort is n<br>ess tha                                                                         | nandato<br>n 30 da | ory. Pen<br>ys, or b | oth for                | rorteit<br>each vi  | not less<br>olation | s than \$<br>Each d                   | ay of o | more that<br>continued                |

|             | Viscons      |             | _        |              | Route To:                       | 'aa           | _                 | 7 H22            | . Waste    |                |                         |          |         | ORIN               | G LC                                    | )G I       | IFOI           | RIMS   |                |              |
|-------------|--------------|-------------|----------|--------------|---------------------------------|---------------|-------------------|------------------|------------|----------------|-------------------------|----------|---------|--------------------|-----------------------------------------|------------|----------------|--------|----------------|--------------|
| partmo      | ent of N     | latural     | Resou    | rces         | Solid W                         |               |                   |                  |            |                | ks                      | Fo       | rm 4400 | ≻122               |                                         |            |                |        | 7-             | 91           |
|             |              |             |          |              | ☐ Wastew                        |               |                   |                  | ter Reso   | ources         |                         |          |         |                    |                                         | _          | 4              |        |                | •            |
| elibell     | Project      | Name        |          | 1            |                                 | <u> </u>      | <u> </u>          |                  | License,   | /Permi         | /Mon                    | itoring  | Numbe   | -                  | Boring                                  |            | 1              | of     |                | <u></u>      |
|             | INDU         |             |          | NC.          |                                 |               | 2735              | 0.03             |            | -              |                         |          |         |                    |                                         | Y4D        | JC1            |        |                |              |
| oring E     | rilled I     | By (Fir     | m nam    | e and name o | of crew chief)                  |               |                   |                  | Date D     | rilling S      | tinted                  |          | Date I  | rilling            | Compl                                   | eted       |                |        | ethod<br>D ES  |              |
|             |              | _           |          | e Lehman     |                                 |               |                   |                  | -          | 12/6           |                         |          |         | 12/6               |                                         |            |                |        |                |              |
| NR Fa       | eility W     | ell No      |          | I Unique We  | ll No. 3.4 (                    |               | Vell Na<br>V4D    | me               | Final S    |                | ater L<br>Feet M        |          | Surfac  | e Elevai           | tion<br>Feet N                          | 121        | Bore           | 0.3    | Diame<br>_ inc |              |
| oring I     | ocatio       | 1           | <u> </u> | · \          |                                 |               |                   | S IC IN          | 1 1.       | nt             |                         |          | Local   | Grid L             | ocation                                 | (if ap     | plicat         |        |                | 103          |
| ate Pla     | 1/4 of       |             | 1/4 0    |              | ,т_                             | N. R          | ,                 | _ ΕΛ             | V Lon      | ı              |                         | -        |         | F                  | cet [                                   | N C<br>S C |                | F      | cet            | □ E<br>□ W   |
| ounty       |              |             | _ 1/ / 0 |              | , -                             |               |                   | DNR              | County     | Code           | Civil 7                 | Town/0   | City/or | Village            |                                         | -          |                |        |                |              |
| Mil<br>Samp | wauke        | • 1         | 1        |              |                                 |               |                   |                  | 41         |                | - 0                     | ak Cr    | eek     |                    | Soil                                    | Prope      | rties          |        |                |              |
| Carrip      | 9            | -<br>t<br>s | 4        |              | Soil/Roc                        | k Docaria     | otion             |                  |            |                |                         |          |         |                    |                                         | 1          | T              | $\neg$ |                |              |
| . \         | E            | Count       | _        |              | And Geold                       |               |                   | r .              |            |                | <u>u</u> -              | E        | ۵       | ard<br>rar         | 11.0                                    | ۳          | O              |        |                | # .          |
| Do L        | 600          | 0 70        | 4+4      |              |                                 | Major Ur      |                   | •                |            | Ø              | _                       | - at L O | /FI     | anda<br>natr<br>on | * + t                                   | 13 ±       | # -            | 1      | 00             | > €          |
|             | R80          | B 10        | Dep      |              |                                 | major or      |                   |                  |            | usc            | Grap                    | He I     | PID     | S + 2<br>P 8 D     | Hol                                     | 7 7<br>2 E | # a.           | - 1    | P 2            | ROD/<br>Comm |
|             |              |             | -        | 10" Concr    | rete                            |               |                   |                  |            |                |                         |          |         |                    |                                         |            |                |        |                |              |
| 1           | 16           | 18          | _        | FILL: Br     | rown to Gray                    | (10 YR 6/2    | 2) Silty          | Sand,            |            |                |                         | 1 .      | -       | <u> </u>           |                                         | +          | $\dashv$       |        |                | SS           |
|             |              |             |          | Some Gr      | avei.                           |               | •                 |                  | •          |                |                         | 1        | 45.0    |                    | ,                                       |            |                |        |                |              |
|             |              |             | <u> </u> |              |                                 |               |                   | •                |            | ,              |                         |          | 45.5    |                    |                                         |            | -              |        |                |              |
| 2           | · 20         | 15          | <u> </u> | Possible     | FILL: Brown                     | 1 (7.5 YR 4   | /3) Le:           | an Cla           | у;         |                | <u>H-1-1-</u><br>H-1-1- |          |         |                    |                                         | +-         | -              | +      |                | SS           |
|             |              |             | -        |              | nd and Grave<br>FILL: Brown     |               | 10 YR             | 6/2)             |            |                |                         |          | 160.0   |                    |                                         |            |                |        |                |              |
|             |              |             | <u> </u> | Medium       | Grained San                     | d, Little Sil | t.                |                  |            | <u> </u>       | 圳                       |          |         | -                  | ,                                       | -          | -              | _      |                |              |
| 3           | 16           | 7           | +        | CLAY; 1      | Hard, Brownis<br>Little Sand an | id Gravel C   | OYR 6,<br>Occasio | /2) Le<br>nal Th | an<br>in   |                |                         |          |         |                    |                                         | +-         | -              |        |                | SS           |
| -           |              |             | -        | Silty Sail   | id Seams (CL                    | · <i>)</i> -  |                   |                  |            | 4.5+           |                         |          | 15.0    |                    |                                         | -          | -              |        |                |              |
|             |              | -           | +        | :            | •                               |               |                   |                  |            |                |                         |          | -       | -                  | -                                       |            | +              |        |                |              |
| . 4         | 10           | 4           | 1        |              | •                               |               |                   |                  |            |                |                         |          |         |                    |                                         |            |                |        |                | SS           |
|             |              |             | 1        | 0            |                                 |               |                   |                  |            | 1.2            |                         |          | 6.0     |                    |                                         |            |                |        |                |              |
|             | <del> </del> | -           | + $$     | ,            |                                 |               | ,                 |                  |            |                |                         |          | -       | -                  | -                                       | -          | -              | .      |                | -            |
|             |              |             | · F      |              |                                 |               |                   |                  |            | -              |                         |          |         |                    |                                         |            |                |        |                |              |
| ,           |              |             |          |              |                                 |               |                   |                  |            |                |                         |          |         |                    |                                         |            |                |        |                |              |
|             |              |             | -        |              |                                 |               |                   |                  |            |                |                         |          |         |                    |                                         |            |                |        | ļ              |              |
| - 5         | 6            | 17          |          |              | m'Dense, Bro                    |               |                   |                  |            | 1              |                         |          |         | 1                  |                                         |            | $\neg \dagger$ |        |                | 22           |
|             |              |             | -        | Clayey       | SAND; Som                       | e Gravel, L   | ittle Si          | It (SC)          | ).         |                |                         |          | . 12:   | 5.0                |                                         |            |                |        |                |              |
|             |              |             |          | 15           | End o                           | f Boring at   | 15.0 F            | t.               | ********** | 1              |                         | 224      |         |                    |                                         |            |                |        | ļ              |              |
|             |              |             | -        |              |                                 |               |                   |                  |            |                |                         |          |         |                    |                                         |            |                |        |                |              |
| -           | 1            |             |          |              |                                 |               |                   |                  | · · ·      |                |                         |          | ·       | ·                  |                                         | .          |                |        |                |              |
| ,           |              |             |          |              | approximate                     |               |                   |                  |            |                |                         |          | be grad | ual.               |                                         |            |                |        |                |              |
|             | nature       |             | •        | 0            | on this form                    | is true and   |                   |                  | I F        | f my kr<br>irm |                         |          | \       | `                  | *************************************** |            |                |        |                |              |
|             |              | (   A       | yn       | ) [          | The H                           |               | JE(               | 5 / JE           | U          |                |                         | LKZY     | N INC   |                    |                                         |            |                |        |                | nore th      |

|         | Wiscons<br>ent of N          |            | Resou         | ırces               | Route To:  Solid Was  Emergence Wastewat         | y Response                   | Un         | L Waste<br>dergrou<br>ter Resc        | nd Tan       | ks                 |             | OIL B<br>orm 4400 |                              | G LC                | OG IN           | FORN        |         | ON<br>7-91       |
|---------|------------------------------|------------|---------------|---------------------|--------------------------------------------------|------------------------------|------------|---------------------------------------|--------------|--------------------|-------------|-------------------|------------------------------|---------------------|-----------------|-------------|---------|------------------|
|         |                              |            |               | •                   |                                                  |                              | 011        |                                       | /D:          | /) (:              |             | N .               | <del>-</del> - 1 .           |                     |                 | 11          | of      | 1                |
|         | Project<br>INDU              |            | IES I         | NC.                 |                                                  | 273                          | 350.03     | License,                              |              |                    |             | Numbe             | r                            |                     | Numb<br>P1      | er          |         |                  |
| oring I | Orilled I                    | 3y (Fin    | m nam         | e and name o        | of crew chief)                                   | •                            |            | Date Di                               | rilling S    | tarted             |             | Date I            | rilling                      | Compl               | cted .          | Drilling    |         |                  |
| &J S    | oil Tes                      | ting-I     | Luger         | ie Lehman           |                                                  |                              |            |                                       | 12/5         | /91                | -           | ·                 | 12/5                         | /91                 |                 | 1 177       | 10 11   | ALA.             |
| NRE     | citiv y                      | ell No     |               | I-Unique Wê         | INO TO CO                                        | mmon Well i                  | Name .     | Final S                               |              | ater Le<br>Feet MS |             | Surfac            | e Elevai                     | tion<br>Feet N      | 1SL             | Boreho      | 2       | neter            |
| oring l | Location                     | n          |               | N, _                |                                                  | E                            | S/C/N      | I La                                  | at           |                    | -           | Local             | Grid La                      |                     | i (if app       | olicable)   |         |                  |
|         |                              |            |               |                     | ,T                                               |                              |            | Į                                     | g            | -                  |             | <u></u>           | F                            |                     |                 | -           | _ Feet  | □ W              |
| ounty   |                              |            |               | •                   | ٠                                                |                              | DNR        | County<br>41                          | Code         | Civil T            | Cown/Cak Cr | City/or           | Village                      | ,                   |                 |             |         |                  |
| Samp    | le                           | ×          | +-            |                     |                                                  |                              |            |                                       | Í            |                    |             |                   |                              | Soil                | Proper          | ties        |         |                  |
| dmb     | Lengin<br>Recovered<br>(In.) | Blou Count | Depth In F    |                     |                                                  | •                            |            |                                       | nscs         | Graphic            | Well        | PID/FID           | Standard<br>Penetra:<br>+lon | Molsturs<br>Content | L1qu1d<br>L1m1t | P ==+ c<br> | P 200   | ROD/<br>Comments |
| 1       | 10                           | 13         |               |                     | ete<br>own (7.5 YR 5/                            | 4) Silty Sand,               | , Some     |                                       | ;            |                    |             | ND                | ·                            |                     |                 |             |         | SS               |
| 2       | 1                            | 14         |               | Gravel. Stiff to Vo | ry Stiff, Brown                                  | (7.5 YR 4/3)                 | ) Slightly | · · · · · · · · · · · · · · · · · · · |              |                    |             |                   |                              |                     |                 | 1           |         | SS               |
| 3       | 8                            | 11         |               | Mottled L           | ean CLAY; Li                                     | tle Sand and                 | Gravel (   | (CL).                                 | -            |                    |             | ND                |                              |                     | -               |             | -       | SS               |
| 4       | 20                           | 4          |               |                     |                                                  |                              |            |                                       | 2.5          |                    |             | ND                |                              |                     |                 |             |         | SS               |
|         |                              |            | —10<br>—      |                     |                                                  |                              | . (a) x    |                                       | 2.0          |                    |             | ND                |                              |                     | 1               |             |         | 1                |
| ····    |                              |            | <u>E</u>      | CLAY; L             | ard, Brownish<br>ittle to Some S<br>Wet Sand Lay | and, Little Gi               | ravel (CI  | ـ).                                   |              |                    |             |                   |                              |                     |                 |             |         |                  |
| <br>    | 24                           | 14         | <u></u> 15    | Auger Ci            |                                                  |                              |            | ,                                     | 2.0          |                    |             | ND                | }                            | -                   |                 |             |         | SS               |
|         |                              |            |               |                     |                                                  |                              |            |                                       |              |                    |             |                   |                              |                     |                 |             |         |                  |
| 6       | 20                           | 25         | 20            |                     |                                                  | •                            | · ·        | •                                     | 4.5+         |                    |             | ND                |                              |                     |                 |             |         | SS               |
|         |                              |            | E             |                     |                                                  |                              |            |                                       |              |                    |             | -                 |                              |                     |                 |             |         |                  |
| 7       | 24                           | 25         |               | 5                   |                                                  |                              |            |                                       | 4.5+         |                    |             | NE                |                              |                     |                 |             |         | SS               |
| (       |                              |            | E             | VenySti             | lf, Brownish G                                   | my SII T (10                 | YR 6/2     | r Little                              | -            |                    |             |                   |                              |                     |                 |             |         |                  |
| 8       | 24                           | 28         | E             |                     | Fine Sand (M                                     |                              | 11.0/2/    | , 2                                   | 2.5          |                    |             | N                 | <u> </u>                     |                     | ·               |             | -       | SS               |
|         |                              |            | E             |                     | · ·                                              |                              |            |                                       |              |                    |             |                   |                              |                     |                 |             |         |                  |
| 9       | 20                           | 36         | E             | 35                  |                                                  |                              | •          |                                       | 2.5          |                    |             | . N               |                              |                     |                 |             |         | SS               |
|         |                              |            |               |                     |                                                  | oring at 35.5.<br>Non Detect | Ft.        |                                       |              |                    |             |                   |                              |                     |                 |             |         |                  |
| The     | stratifi                     | cation l   | lines r       | present the a       | approximate bo                                   | undary betwe                 | en soil t  | ypes and                              | i the tr     | ansition           | n may t     | oe gradi          | ıal.                         | 1                   | 1               | <u>. l</u>  |         |                  |
|         | reby ce                      | rtify th   | at the        | information o       | on this form is t                                |                              | ct to the  | Fi                                    | my kno<br>rm |                    |             | N INC             | 7.                           |                     |                 |             |         |                  |
| Thi     | s form                       | isautho    | yrX<br>orized | by Chapters         | 144.147 and 162                                  |                              |            |                                       | is repo      |                    |             |                   |                              | orfeit              | not less        | than \$1    | 0 nor r | more the         |
| \$5,    | 000 for                      | each vi    | olation       | . Fined not le      | ess than \$10 or<br>ant to ss 144.99             | more than \$10               | 00 or im   | prisoned                              |              |                    |             |                   |                              |                     |                 |             |         |                  |

| of Wisconsin Route To:    Solid Waste   Haz Waste                                                                                                                                                   | SOIL BORING LOG INFORMATION                                                                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| artment of Natural Resources Solid Waste Haz. Waste  Emergency Response Underground Tanks                                                                                                           | Form 4400-122 7-91                                                                              |
| ☐ Wastewater ☐ Water Resources                                                                                                                                                                      | n 1 . 1                                                                                         |
| Other                                                                                                                                                                                               | Page 1 of 1  toring Number Boring Number                                                        |
| lity/Project Name License/Permit/Monitory Indianate 27350.03                                                                                                                                        | LP3                                                                                             |
| Date Drilling Started                                                                                                                                                                               | Date Drilling Completed Drilling Method                                                         |
| J Soil Testing-Eugene Lehman 12/4/91                                                                                                                                                                | 12/4/91                                                                                         |
| R Facility Well No. WI Unique Well No. Common Well Name Final Static Water Level LP3 Feet MS                                                                                                        | 0.2                                                                                             |
| ring Location te PlaneN,E S/C/N Lat                                                                                                                                                                 | Local Grid Location (if applicable)  N  E                                                       |
| 1/4 of 1/4 of Section, T N, R E/W Long                                                                                                                                                              | Feet S Feet W                                                                                   |
| unty Milwaukee  DNR County Code   Civil To                                                                                                                                                          | own/City/or Village<br>ak Creek                                                                 |
| ample # +                                                                                                                                                                                           | Soil Properties                                                                                 |
| Soil/Rock Description  And Geologic Origin For  Each Major Unit                                                                                                                                     | Hell Dirgram PID/FID Standard Poisture Content Content Ciauld Cialt Cialt Cialt Communt Communt |
| 2 Java a a gravel Base 9° Concrete, 2° Brown Sand and Gravel Base                                                                                                                                   |                                                                                                 |
| 1 22 11 Coarse. Very Stiff, Brown (7.5 YR 4/3) Lean CLAY; Little 3.5                                                                                                                                | ND SS                                                                                           |
| 2 3 7 Sand and Gravel (CL).                                                                                                                                                                         | ND SS                                                                                           |
| 3 20 11 Very Stiff to Stiff, Brownish-Gray (10 YR 6/2) Lean CLAY; Little Sand and Gravel (CL). 2.75                                                                                                 | ND SS                                                                                           |
| 4 24 8 10 Lean CLAT, Entite Sand and Gravet (CB).                                                                                                                                                   | ND SS                                                                                           |
|                                                                                                                                                                                                     |                                                                                                 |
|                                                                                                                                                                                                     |                                                                                                 |
| 5 24 8 = 15 2* Wet Silty Sand Layer at 14.5 Ft. 1.5                                                                                                                                                 | ND SS                                                                                           |
| Hard, Brownish-Gray (10 YR 6/2) SILT; Little to Some Fine Sand (ML).                                                                                                                                |                                                                                                 |
| 6 24 21 - 20 Some Time Said (192).                                                                                                                                                                  | ND SS                                                                                           |
| Brownish-Gray (10 YR 6/2) Lean CLAY; Trace to                                                                                                                                                       |                                                                                                 |
| 7 2 21 Little Sand and Gravel (CL). Pushed Rock with Split-Spoon; Ribbon for Sample.                                                                                                                | ND SS                                                                                           |
|                                                                                                                                                                                                     |                                                                                                 |
| 8 22 9 Very Stiff, Light Brownish-Gray (10 YR 6/2) SILT;                                                                                                                                            | <u> </u>                                                                                        |
| Very Stiff, Light Brownish-Oldy (10 TR 0/2) SIET, Little to Some Fine Sand (ML).  Very Stiff to Hard, Weak Red (2.5 YR 4/2) Lean  2.25                                                              | ND                                                                                              |
| CLAY; Little Sand and Gravel (CL).                                                                                                                                                                  |                                                                                                 |
| 9 22 24 35                                                                                                                                                                                          | ND !                                                                                            |
| End of Boring at 35.0 Ft.  ND = Non Detect                                                                                                                                                          |                                                                                                 |
|                                                                                                                                                                                                     |                                                                                                 |
| The stratification lines represent the approximate boundary between soil types and the transition                                                                                                   | on may be gradual.                                                                              |
| I hereby certify that the information on this form is true and correct to the best of my knowledg                                                                                                   |                                                                                                 |
| Signature Oalm E- Suff JEG / JEG   Firm WA                                                                                                                                                          | ARZYN INC.                                                                                      |
| This form is authorized by Chapters 144.147 and 162, Wis. Stats. Completion of this report is m \$5,000 for each violation. Fined not less than \$10 or more than \$100 or imprisoned not less than |                                                                                                 |
| violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.                                                                                                                      | NO-R                                                                                            |

|       | GEO    | TEAU     | NOTO     | יוגו ער | ٦.               | rod of boulder                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ווויטם   | iu no    | GIBI      |
|-------|--------|----------|----------|---------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|-----------|
|       |        | OX 51    |          |         | •                | PROJECT D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ELEV     | HOITA    | 118,6     |
| 1     |        |          | in, wi   | 521 51  |                  | PROJECT Proposed Tank Farm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |          |          |           |
|       |        | 21 -1 28 |          |         | ·                | PPG Industries, Inc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | DA       | ATE      | 02FEB92   |
| -     |        |          | INI      |         |                  | Oak Creek, Wisconsin                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | PROJ     |          | 12007     |
| Smol  |        |          | Mois.    |         | Depth            | USCS AND                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | PR       | OPER     | RTIES     |
| No.   | Туре   | 1        | 141015.  | יאי     | (ft)             | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | · qu     | Moist.   | Other     |
|       | 1,00   | 7,1,1    |          | 11      | (11)             | 101 Cnubal Ch                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | (tsf)    | (°°)     |           |
| 1     | Sa     | 18       | М        | .12     |                  | 10' Crushed Stone                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |          |          |           |
| '     | 05     | , ,      | 141      | .,14    | <u>:::::::::</u> | Very Stiff - Hard Mottled Brown Lean CLAY;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 4.5+*    | 16.0     |           |
|       | :      |          |          |         |                  | Trace Sand & Gravel (CL)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |          |          |           |
| 2     | Ss     | 18       | М        | 23      | 5                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 4.5+*    |          |           |
| _     |        |          | 141      | 20      |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 7.34     | 21.3     | DD=108pcf |
| 3     | Ss     | 18       | ·M       | 17      |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |          |           |
|       |        | , 0      | 171      | . 17    |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 4.4*     | 23.5     |           |
|       |        |          |          |         |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |          | _         |
| 4     | Ss     | 7        | м        | 28      | 10               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3,8*     |          | .         |
|       |        | ,        | ""       | 20      | 11111771         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 4.4*     |          |           |
|       |        |          |          | · · ·   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |          |           |
|       |        |          |          |         |                  | Stiff - Very Stiff Gray Lean CLAY;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |          |          | .         |
|       |        |          |          |         |                  | Trace Sand & Gravel (CL)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |          |          |           |
| 5     | Ss     | 18       | М        | 15      | 15               | THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE S |          | .*       |           |
|       |        |          |          | ,,      |                  | Occasional Silt Seams & Layers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2.5*     | 14.9     |           |
|       |        |          |          |         | • •              | o sousion at coatris & Fayers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |          | ٠        |           |
|       | .      |          | •        |         |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          | <i>-</i> |           |
|       | ļ      |          |          |         |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          | ·        |           |
| 6     | Ss     | 18       | М        | 11      | 20.              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | . نم د   |          |           |
|       |        |          |          |         |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1.6      | 13.8     |           |
|       |        |          |          |         |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |          |           |
|       |        |          |          | ŕ       |                  | Hard Brown/Gray Lean CLAY;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |          |          |           |
|       |        |          | <b>\</b> |         |                  | Some fine Sand, Trace Gravel (CL)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ·        | •        |           |
| 7     | Ss     | 18       | M        | 52      | 25               | Few Cobbles & Boulders                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |          |          |           |
|       |        |          | . ,      |         |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |          |           |
|       |        |          |          |         |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |          | 51        |
| '     |        |          |          |         |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          | -        |           |
|       |        |          |          | •       |                  | Medium Dense Gray SILT;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |          |           |
| 8     | Ss     | 18       | W        | 29      | 30:              | Trace Sand & Gravel (ML)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |          |          |           |
|       |        |          |          | -       |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |          |           |
|       | ,**    |          |          |         |                  | End of Boring — 30.0 feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |          |          |           |
|       |        |          |          |         |                  | Backfilled with Bentonite Chips                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |          |           |
|       |        |          |          |         | 2=               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |          |           |
|       |        |          |          |         | 35               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ·        |          |           |
|       |        |          |          |         |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |          |           |
|       |        |          |          | .,      |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |          |           |
|       |        |          |          | • •     |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |          |           |
|       | ٠.     |          |          |         | 40               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |          |           |
| WATE  | RLEV   | /EL DI   | JRING    | DRII    | LING, F          | T. 12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |          |          |           |
|       |        |          |          |         | PLETIC           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |          | METHOD    |
|       | TIME   | AFTER    | COM      | PLET    | ON:              | 0.25 Hours                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | CME 4    |          |           |
| 1     | DEPT   | нто      | CAVE-    | IN, FT  |                  | 28.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 2.25 }   | 15A      |           |
| Note: | Soil s | tratific | atlon li | nes ar  | e appro          | oximate & transitions may be gradual.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <u> </u> |          |           |
|       |        |          |          |         |                  | 1 no Attornar                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |          |          |           |

. . . .

|       | GEO    | TEAU:    | NOTO(        | מנו עם      | o .           | 200 01 0011111                          |         | . ~    | ~ . ~ . |
|-------|--------|----------|--------------|-------------|---------------|-----------------------------------------|---------|--------|---------|
|       |        | OX 51    |              | 31 11Y      | <b>~</b>      | BBO IFOT D                              | ELEY    | MOITA  | 118.8   |
|       |        |          | ю.<br>In, WI | ,<br>531.51 |               | PROJECT Proposed Tank Farm              |         |        |         |
|       |        | 21-128   |              | 55101       | •             | PPG Industries, Inc.                    | 1       | ATE    | 02FEB92 |
|       |        |          | IN           | FΩ          |               | Oak Creek, Wisconsin                    | PROJ    |        | 12007   |
| Smpl  |        |          | Mols.        |             | Depth         | USSCS AND                               | PR      |        | RTIES   |
|       | Тура   |          | 1710101      | יאי         | (ft)          | DESCRIPTION                             | dn      | Moist. | Other   |
| 1     | G      | 6        | М            |             | 1             | FILL: Dark Browm Clayey Topsoil         | (tsf)   | (%)    |         |
| 2     | Sa     | 12       | М            | 10          |               | The Dark Brown Clayby Topsoli           | 1.8*    |        |         |
|       |        |          |              |             |               | FILL: Brown Lean Clay; Trace Sand &     | 25*     | 25.0   |         |
|       |        |          |              |             |               | Gravel                                  |         |        |         |
| 3     | Ss     | 18.      | . M          | 8           | 5.            |                                         |         |        |         |
|       |        |          |              |             | <u> </u>      |                                         | 11.5*   | 23.2   |         |
| 4     | Ss     | 18       | M            | 15          |               | Hard Mottled Brown Lean CLAY;           | ٠, ٠, ١ |        |         |
|       |        |          |              |             |               | Trace Sand & Gravel (CL)                | 4.5+*   | 15.6   |         |
|       |        |          |              |             |               | 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 |         |        |         |
| 5     | Ss     | 18       | М            | 24          | 10            |                                         | 1 =     | CO =   | ,       |
|       |        |          |              |             |               |                                         | 4.5+*   | 22.8   |         |
|       |        |          |              | · . · ·     |               |                                         |         |        |         |
|       |        |          |              | -           |               | Stiff - Very Stiff Gray Slity CLAY;     |         |        | •       |
|       |        |          |              |             |               | Little Sand & Trace Gravel (CL)         |         |        |         |
| 8     | Ss     | 18.      | M/W          | 10          | 15            | 3.4.5.7                                 | 0.01    |        |         |
|       |        |          |              |             |               | Occasional Silt and Sand Seams & Layers | 23*     | 17.9   | *       |
|       |        |          |              |             |               | Talle demin d Layers                    |         |        |         |
| • .   |        |          |              |             |               |                                         |         |        |         |
|       |        |          |              |             |               |                                         |         |        |         |
| ·7    | Ss     | 18       | - M          | 8           | 20:           | -                                       | 1.31    | 140    |         |
| ٠.    |        |          |              |             |               |                                         | 1,0     | 14.8   |         |
|       | ٠.     |          |              |             | :             |                                         |         |        |         |
|       |        |          |              |             |               |                                         |         |        |         |
|       | `      |          |              |             |               |                                         |         | ' '    |         |
| 8     | Ss     | 18       | М            | 11          | 25            |                                         | 1.8*    | '      |         |
|       |        |          |              |             |               |                                         |         |        |         |
|       |        |          |              |             |               |                                         |         |        |         |
|       |        | ,        | ·            |             | ļ             |                                         |         |        |         |
| g     |        | 4.0      |              |             | 11111222      |                                         |         |        |         |
| 9     | Ss     | 18       | М            | 10          | 30:           |                                         | 1.3*    | 15.8   | <br>  • |
|       |        |          |              |             | <del> </del>  |                                         |         | _      |         |
|       | , ,    |          |              |             | }- <u>-</u> - | End of Boring - 30.0 feet               |         |        | , ,     |
|       | : .    |          |              |             |               | Backfilled with Bentonite Chips         |         |        |         |
|       |        |          |              |             | 35            |                                         |         |        |         |
|       | : '    |          |              |             |               |                                         |         |        |         |
| . •   |        |          |              |             | 1             |                                         |         |        |         |
|       |        |          |              |             | <b> </b>      |                                         |         |        |         |
| -     |        |          |              | -:          | · ·           |                                         |         |        |         |
|       |        |          |              |             | 40            |                                         |         |        |         |
| WATE  | RLE    | /EL D    | URING        | DRIL        | LING, I       | T. 13                                   |         |        |         |
| [WA   | TER L  | EVEL.    | AFTER        | COM         | PLETIC        | ON: 25.0                                |         |        | METHOD  |
|       | TIME   | AFTE     | NOO F        | PLET        | ION:          | 0.25 Hours                              | CME 4   |        |         |
|       | DEPT   | OT HT    | CAVE         | IN. FI      |               | 200                                     | 2.25] } | 15A    |         |
| Note: | Soil 8 | tratific | ation il     | ក្នុង ខេត   | s appro       | oximate & transitions may be gradual.   | <u></u> |        |         |
|       | •      |          |              |             |               | As Manage                               | -       |        |         |
|       |        |          |              |             |               |                                         | •       |        | •       |

|     |                                                                               | GEO.     | TENU   | NOLOG      | ~V 1311 | <b>`</b>    | ב מוויים ביים ביים ביים                    | 1-0111  | ,,    | ,           |
|-----|-------------------------------------------------------------------------------|----------|--------|------------|---------|-------------|--------------------------------------------|---------|-------|-------------|
|     |                                                                               |          | OX 51  |            | 21 114V |             | DROJECT Promounds / F                      | ELEVA   | NOITA | 114.8       |
| Ì   |                                                                               |          |        | in, wi     | 531.51  | • •         | PROJECT Proposed Tank Farm                 |         |       |             |
|     |                                                                               |          | 21-128 |            | 30131   |             | PPG Industries, Inc.                       | 1       | YTE   | 02FEE92     |
| }   |                                                                               |          |        | INI        | FO      |             | Oak Creek, Wisconsin USCS AND              | PROJ    |       | 12007       |
| Ì   | Smpl                                                                          |          | ~      |            |         | Depth       | DESCRIPTION                                | 1       |       | RTIES       |
|     |                                                                               | Тура     |        | .,,,,,,    | *N*     | (ft)        | DESCRIPTION                                | qu      | Moist | , Other     |
| Î   | =====                                                                         |          |        |            |         | 1           | FILL: Brown Mottled Lean Clay;             | (tsf)   | (%)   |             |
|     | 1.                                                                            | Sa       | 12     | М          | 8       |             | Trace Sand & Gravel                        |         | 455   |             |
| 1   |                                                                               |          | -      |            |         | <del></del> |                                            | 23*     | 15.6  |             |
|     |                                                                               |          |        |            |         |             | Very Stiff - Hard Mottled Brown Lean CLAY; |         |       |             |
|     | 2                                                                             | Ss       | 18     | М          | - 31    | 5           | Trace Sand & Gravel (CL)                   | 4.5+*   | 15.6  |             |
| - } |                                                                               |          |        |            |         |             | 1-4                                        | 4.3*    | 10.0  |             |
|     | 3                                                                             | Ss       | 18     | М          | -15     |             |                                            | 4.43    | 28 N  | DD=99 pcf   |
|     |                                                                               |          |        | ·          |         |             |                                            | 1. 10   | 20.0  | DO - 99 DO! |
|     |                                                                               |          |        |            |         |             | Medium Dense Brown SAND; with Gravel (SW)  |         |       |             |
|     | 4                                                                             | Ss       | - 12   | M/W        | 12      | ::::10:     | (Strong Solvent Odor)                      |         |       |             |
|     |                                                                               |          |        |            |         |             | Medium - Stiff Gray Lean CLAY;             | 1.3*    |       |             |
|     |                                                                               | ,        |        |            |         |             | Trace Sand & Gravel (CL)                   |         |       |             |
|     |                                                                               |          |        |            |         |             | ·—··                                       |         | • *.  |             |
|     | 5                                                                             | C.       |        | <b>3.1</b> | ^       | 1000241     |                                            |         |       |             |
|     | 3                                                                             | Ss       | 8      | M          | 9       | £5          | 0                                          | 1.0*    |       |             |
|     |                                                                               |          |        |            |         |             | Occasional Slit Seams & Layers             |         |       |             |
|     |                                                                               |          |        |            |         |             |                                            |         |       | }           |
|     |                                                                               |          |        |            | ,       | ·           |                                            |         |       |             |
|     | 6                                                                             | Ss       | 18     | М          | 12      | 20:         |                                            |         |       |             |
| -   |                                                                               |          |        |            | , -     |             |                                            | 1.5*    | •     |             |
|     |                                                                               |          | -      |            |         |             |                                            |         |       |             |
| 1   |                                                                               |          |        |            |         |             | Dense Gray SILT; Trace Sand & Gravel (ML)  |         |       |             |
|     |                                                                               |          |        |            | . 3     |             | - J - LTT Trado darid & Grayer (MC)        |         |       |             |
| ٠   | 7                                                                             | Ss       | 18     | М          | 32      | 25          |                                            |         |       |             |
|     |                                                                               |          |        |            |         |             |                                            |         |       | <b> </b>    |
| 1   |                                                                               | •        |        |            |         |             |                                            |         |       |             |
|     |                                                                               |          |        |            | •       |             |                                            |         | ٠,    |             |
|     |                                                                               |          |        |            | _       | <u> </u>    | Some Gray Clay Seams & Layers              |         |       |             |
| 1   | 8                                                                             | Ss       | 18     | W          | 30      | 30          |                                            |         |       |             |
|     |                                                                               |          |        |            |         | <u> </u>    |                                            |         |       |             |
|     |                                                                               |          |        | : .        |         |             | End of Boring - 20.0 feet                  |         |       |             |
| -   |                                                                               | :<br>:   |        |            |         |             | Backfilled with Bentonite Chips            |         |       |             |
|     |                                                                               |          |        |            |         | 35          |                                            |         |       |             |
|     |                                                                               |          |        | ·          |         |             |                                            |         |       | ,           |
|     |                                                                               |          |        |            |         |             |                                            |         |       | ·           |
|     | -                                                                             | ·        |        |            |         |             |                                            |         |       |             |
|     | , ,                                                                           |          |        |            |         |             |                                            |         |       |             |
| Į   |                                                                               | <u> </u> |        |            |         | 40          |                                            |         |       |             |
|     | WATE                                                                          | HLE      | /EL D  | URING      | DRIL    | LING, I     | т. 8                                       | - 001   | HINC  | METHOD      |
|     |                                                                               |          |        |            |         | PLETIC      |                                            | CME 4   |       | MEINOD      |
| .   |                                                                               |          |        | RODE       |         |             | 0.25 Hours                                 | 2.25' H |       |             |
| . [ | Not-                                                                          | · DEPT   | H TO   | CAVE       | IN, FT  | •           | 27.5                                       |         |       |             |
| Į   | Note: Soil stratification lines are approximate & transitions may be gradual. |          |        |            |         |             |                                            |         |       |             |

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| 1   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 250        | · ·      |           |        |                                        | LOG OF BORING                                 | BORII      | 4G HO  | OTD.      |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------|-----------|--------|----------------------------------------|-----------------------------------------------|------------|--------|-----------|
| 3   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |            |          | NOTO(     | gy inc | 2                                      |                                               | 3          | ATION  | GTB4 :    |
|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |            | OX 51    |           |        | ,                                      | PROJECT Proposed Tank Farm                    |            |        | 114,4     |
|     | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |            |          | in, Wi    | 53151  |                                        | PPG Industries, Inc.                          | גם ו       | \TE    | 02FEB92   |
| 1   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |            | 21-128   |           |        |                                        | Oak Creek, Wisconsin                          | PROJ       |        | 12007     |
| 1   | · ·                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |          | INI       |        |                                        | USCS AND                                      |            |        | RTIES     |
|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Smpl       |          | Mois.     |        | Depth                                  | DESCRIPTION                                   | qц         | Moist. |           |
| į   | No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |          |           | ,H,    | (ft)                                   |                                               | (tst)      | (%)    | Other     |
|     | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | G          | 6        | М         |        | ************************************** | Dark Brown Clayey Topsoil                     |            | (,,,   |           |
|     | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Ss         | 18       | , M       | 11     |                                        | and a significant Olay.                       | 23*        | 22.4   |           |
|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |            |          |           | ,      |                                        | Trace Sand & Gravel                           |            |        | į.        |
|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>C</b> . | 4.0      | .,        |        |                                        | Very Stiff - Hard Mottled Brown Lean CLAY;    | 3.5        |        |           |
| -   | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Ss         | . 18     | M         | 19     | 5                                      | rrace Sand & Gravel (CL)                      | 4.01       | 16.2   |           |
| ٠   | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | C-         | 40       |           | ~~     |                                        | Occasional Brown Fine-Medium Sand Seams       |            |        |           |
|     | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Ss         | 18       | М         | 22     |                                        |                                               | 4.5÷*      | 16.0   |           |
|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |            |          |           |        |                                        | · · · · · · · · · · · · · · · · · · ·         |            | ,      |           |
|     | ٠ -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | C.         | 4.0      | 1141      | ~~     |                                        |                                               |            |        | <u>.</u>  |
| Ì   | 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Ss         | 18       | MW        | 23     | 10                                     |                                               | 3.8*       |        |           |
| 1   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |            | •        |           |        |                                        |                                               |            |        |           |
|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |            | -        |           |        |                                        |                                               |            |        |           |
| -   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |            | · .      |           |        | -                                      | Stiff - Very Stiff Gray Lean CLAY;            |            |        |           |
| ļ   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |            | 40       | 3.1.4.3.1 |        | 1010112                                | Trace Sand & Grayel (CL)                      |            | i      |           |
| ļ   | . 6<br>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Ss         | 18       | ММ        | 10     | 15                                     |                                               | 1.5*       | 131    |           |
| 1   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |            |          | ·         |        |                                        | Occasional Silt Seams & Layers                |            |        |           |
|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |            |          |           |        |                                        |                                               |            |        |           |
|     | ·                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |            |          |           |        | ,                                      |                                               |            |        |           |
|     | 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Ca         | 40       |           |        |                                        |                                               | 3.7*       |        |           |
|     | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Ss         | 18       | М.        | 14     | 20:                                    |                                               | 4.3*       |        |           |
|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |            | •        |           |        |                                        |                                               |            |        | i i       |
|     | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ,          |          |           |        |                                        |                                               |            |        | -         |
| 1   | ,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | · .        | ÷        |           |        |                                        |                                               |            |        |           |
| -   | 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Ss         | 18       | М         | 19     | 25                                     |                                               |            |        |           |
|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |            | 10       | IYI       | 13     | :::::23:3                              |                                               | 4.5*       | 131    |           |
|     | - 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ,          |          |           |        |                                        |                                               |            |        |           |
| ļ   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |            |          |           |        |                                        |                                               |            |        |           |
| . [ |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |            |          |           |        | <u> </u>                               |                                               | ,          | _      |           |
|     | 9.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Ss         | 18       | М         | 15     | 30:                                    |                                               | 2.51       |        |           |
|     | '                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |            | "        | '''       | , ,    |                                        |                                               | 2.79       | 20.4   | DD=110pcf |
| }   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |            |          |           |        |                                        | End of Podes on a f                           |            |        |           |
| •   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |            |          |           |        |                                        | End of Boring — 30,0 feet                     |            |        |           |
|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |            | }        |           | `. •   |                                        | Backfilled with Bentonite Chips               |            |        | ľ         |
|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |            |          |           |        | 35                                     |                                               |            |        | :         |
|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |            | ,        | ٠.        |        |                                        |                                               |            |        |           |
|     | . ;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |          |           |        |                                        |                                               |            | '      |           |
|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |            |          |           |        |                                        |                                               |            |        |           |
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|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |            |          | <u> </u>  |        | 40                                     |                                               | 1.         |        |           |
| - 1 | WATE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | RLE        | /EL D    | URING     | DRIL   | LING, F                                | T. 9.5                                        | DE         | 111110 | 1         |
|     | WA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | TER L      | EVEL.    | AFTER     | COM    | PLETIC                                 | DN: 25.0                                      |            |        | METHOD    |
|     | ٠٠.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | TIME       | AFTE     | HOOM      | PLET   | ION:                                   | 0.25 Hours                                    | 225" H     | -      |           |
|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | DEPT       | OT HT    | CAVE-     | IN, FI | •                                      | .77 6                                         | 1 C. 2.3 F | ., Moi |           |
| Į   | Note:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Soil s     | tratific | ation li  | nes ar | e appro                                | 27.5<br>Eximate & transitions may be gradual. | <u></u>    |        |           |
| Z.F | The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s |            |          |           |        |                                        |                                               |            |        |           |

|        |          | GEO-  | TECHI   | NOLO           | GY IN( | 2                                       |                                                | SI OV   | t TIOU |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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|        |          | PO B  | OX 51   | 881            |        |                                         | PROJECT Proposed Tank Farm                     | CLEAN   | NOITA  | 114.9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|        |          | NEW   | BERL    | IN, WI         | 53151  |                                         | PPG Industries, Inc.                           |         | 4 T.C  | 40555                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|        |          |       | 21-128  |                |        |                                         | Oak Creek, Wisconsin                           | Į.      | ATE    | 02FEB92                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|        |          | SAM   | PLE     | I N            | FO     |                                         | USCS AND                                       | PROJ    |        | 12007                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| S      | mpl      |       |         | Mois.          |        | Dapth                                   |                                                |         |        | RTIES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 1      | ło.      | Тура  |         |                | 3 N 3  | (ft)                                    | DEGGNIFITON                                    | qu      | Moist  | Other                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| F      |          |       |         | <del></del>    |        | 1 (-7                                   | FILL: Brown Lean Clay; Trace Sand & Gravel     | (tsf)   | (2%)   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1      | 1        | Sa    | 18      | М              | 11     |                                         | Trace Topsoll                                  | •       |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|        |          |       | ·       |                |        | ,                                       | *                                              | 4.3*    | 18.1   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|        |          |       |         |                |        |                                         |                                                |         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|        | 2        | Ss    | 18      | М              | 10     | 5                                       |                                                |         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|        | ۲        | 23    | 10      | (A)            | 10     | ::::::9::                               |                                                | 3.3*    | 18.0   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|        | ,        | Ca    | 10      | 11             | ~      | -:-:-:-:-:-                             | M. Olle                                        |         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|        | 3        | Ss    | 18      | M.             | 20     | :::::::::                               | Very Stiff - Hard Brown Lean CLAY;             | 4.5÷*   | 15.6   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|        | .        |       |         |                |        |                                         | Trace Sand & Gravel (CL)                       |         |        | A marine                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 4      |          | _     |         |                |        |                                         |                                                | 4.5+*   |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|        | 4        | Ss    | 18      | М              | 21     | 10:                                     |                                                | 6.55    | 21.1   | DO=107                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|        |          | -     |         |                |        |                                         |                                                | ۵.      | L.1.1  | 00-107                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| . ]    |          |       |         | ,              |        |                                         |                                                |         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|        |          |       |         |                |        |                                         | Gray Lean CLAY; Trace Sand & Gravel (CL)       |         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1      | ٠. [     |       | ,       |                |        |                                         | , and transfer and a distal (OC)               |         |        | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|        | 5        | Ss    | 1       | М              | 16     | 15                                      |                                                |         |        | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|        |          |       | 7. *    |                | , -    |                                         |                                                | -       |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1      |          |       |         | • .            |        |                                         |                                                |         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|        | }        |       |         | ٠.             |        |                                         | Madhim Danas D                                 | ŧ       |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|        |          |       |         |                |        |                                         | Medium Dense - Dense Gray SiLT;                |         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|        | 6        | Ss    | 18      | М              | . 04   | ::::::::::::::::::::::::::::::::::::::: | Little Sand, Trace Gravel (ML)                 |         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1      | ١        | 23    | 10      | M              | 21     | 20:                                     |                                                |         |        | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| ١.     | ·        |       |         |                |        | <u> </u>                                |                                                |         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1      |          |       |         |                |        |                                         |                                                | -       |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| .      |          |       | •       |                |        |                                         |                                                |         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|        | _        |       |         |                |        |                                         |                                                |         |        | . ∭.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|        | 7        | Ss    | 18      | М              | 42     | 25                                      | Some Gray Clay Seams & Layers                  |         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|        | 1        | • •   |         |                |        |                                         |                                                |         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1      | .        |       |         |                |        |                                         |                                                |         | ŕ      | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|        | .        |       |         |                |        |                                         | Stiff Gray Lean CLAY; Trace Sand & Gravel (CL) | 4.      |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|        |          |       |         |                | • .    |                                         | , , , , , , , , , , , , , , , , , , ,          | 1.2*    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|        | 8        | Ss    | 18      | М              | 15     | 30                                      |                                                | - 1     | 100    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1      | . [      |       |         |                |        |                                         |                                                | 2.0*    | 15.3   | es de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la const |
|        | .        |       |         |                | :      |                                         | End of Boring — 30.0 feet                      |         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|        |          |       |         |                |        |                                         | Backfilled with Bentonite Chips                |         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| . ]    |          | . /   |         |                |        | ·                                       | Sections of Authornity Culibs                  |         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|        |          | -     |         | -:             |        | 35                                      |                                                |         |        | • .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| 1      | ·        |       |         |                |        | <b></b>                                 |                                                |         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| ١.     | :        | ٠.    |         | 1 7            |        | 40                                      |                                                |         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| W      | ΔTF      | BIE   | /FI D   | IJBING         | וומח : | LING, F                                 | T .                                            |         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|        |          |       |         |                |        | PLETIC                                  |                                                | DR      | ILLING | METHOD .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 1.     |          |       |         | AFIER<br>R COM |        |                                         |                                                | CME 4   |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|        |          |       |         |                |        |                                         | 0.25 Hours                                     | 2.25° F | HSA -  | .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| -      | <u>.</u> | וייבט | 11 10   | CAVE-          | ın, Fi |                                         | 27.0 oximate & transitions may be gradual      |         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| . 114: | ULD.     | 301 2 | uatific | auon li        | 1183 8 | B ADDIC                                 | XITTATE & transitions much                     |         |        | !                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

Note: Soil stratification lines are approximate & transitions may be gradual.

#### D

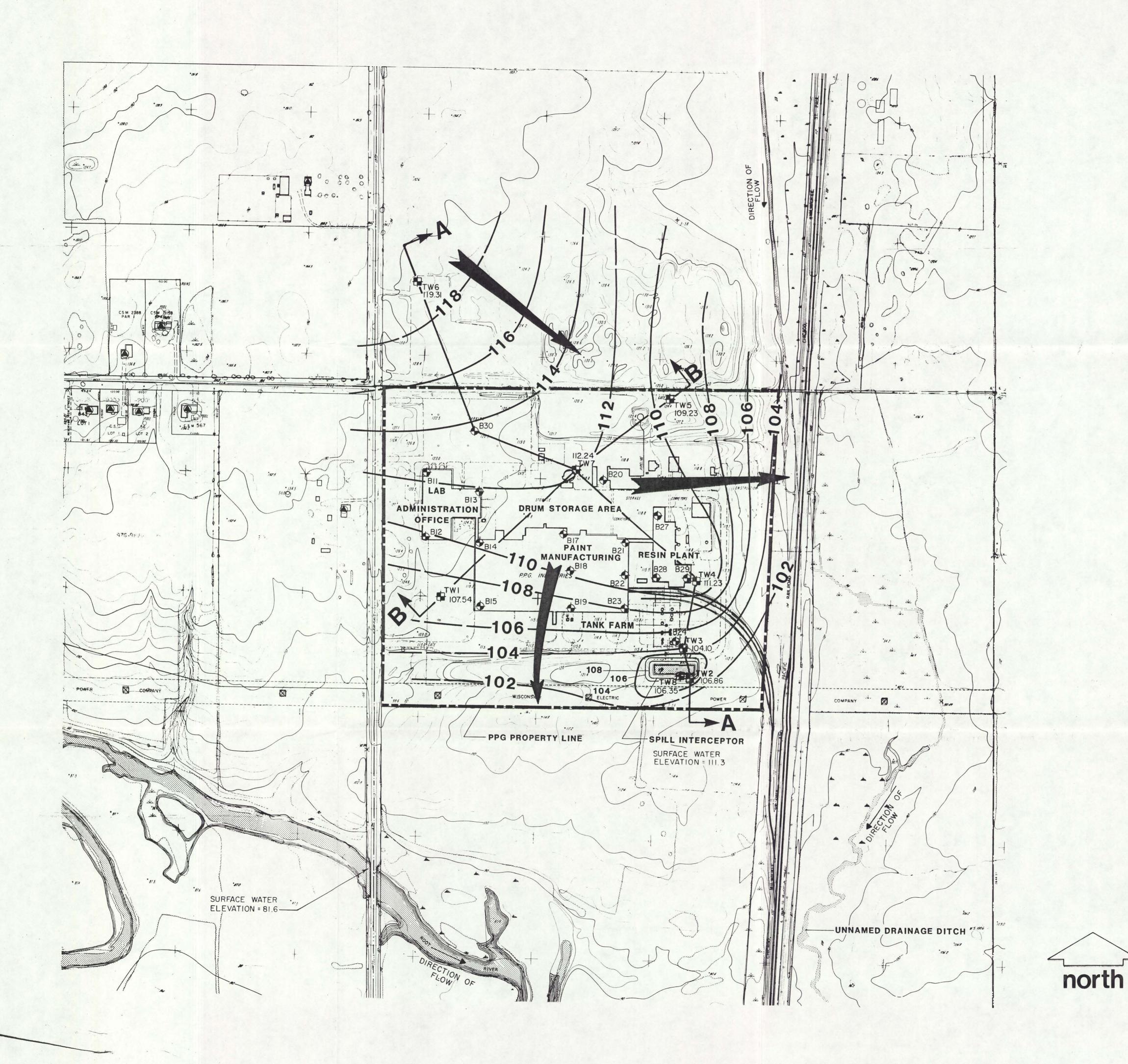
### GEOLOGIC CROSS SECTIONS

D1 - WARZYN ENGINEERING, INC., 1981

D2 - WARZYN INC., 1992

D1

WARZYN ENGINEERING, INC., 1981



### LEGEND

GROUNDWATER MONITORING WELL, NUMBER AND GROUNDWATER ELEVATION

SOIL BORING AND NUMBER

EXISTING GROUND CONTOUR

WATER TABLE CONTOUR

PPG PROPERTY LINE

SURFACE WATER

PRIVATE WATER SUPPLY WELLS

DIRECTION OF GROUNDWATER FLOW

A GEOLOGIC CROSS-SECTION LOCATION

DIRECTION OF SURFACE WATER FLOW

### NOTES

- 1) GROUNDWATER MONITORING WELLS TW-1 THROUGH TW-5 INSTALLED BY WARZYN ENGINEERING INC., DURING JULY, 1981, AND TW-5 THROUGH TW-8 DURING AUGUST, 1981.
- 2) LOCATION AND ELEVATION SURVEYS PERFORMED ON GROUNDWATER MONITORING WELLS BY WARZYN ENGINEERING, JULY 13, 1981 (WELLS TW1 TW5) AND AUGUST 17, 1981 (WELLS TW6 TW8).
- 3) SOIL BORINGS 1 THROUGH 30 PERFORMED BY ACKENHEIL AND ASSOCIATES GEO SYSTEMS, PITTSBURGH, PENNSYLVANIA DURING 19/3. REFERENCE REPORT, FOUNDATION EXPLORATION, GEOLZER FARM AND THE A.J. KERBER PORTION OF JOHN KERBER, SR. EARM, OAK CREEK, WISCONSIN, PROJECT CR 7201.
- 4) WATER TABLE MAP REFLECTS MEASUREMENTS COLLECTED ON SEPTEMBER
- 5) BASE MAP COMPILED FROM TOPOGRAPHIC MAPS PROVIDED BY THE CITY OF OAK CREEK PLANNING DEPARTMENT; SW 1/4, SECTION 32, NW 1/4, SECTION 32, SE 1/4, SECTION 31; AND NE 1/4, SECTION 31.
- 6; TO CONVERT EXISTING GROUND ELEVATIONS AND WATER TABLE ELEVATIONS TO USGS DATUM, ADD 580.56 FLET.
- 7) SURFACE WATER ELEVATIONS OF ROOT RIVER AND SPILL INTERCEPTOR MEASURED ON 7-13-81

NO. BY DATE REVISION

WATER TABLE MAP (9-3-81)

PRELIMINARY HYDROGEOLOGIC INVESTIGATION PPG INDUSTRIES, INC.

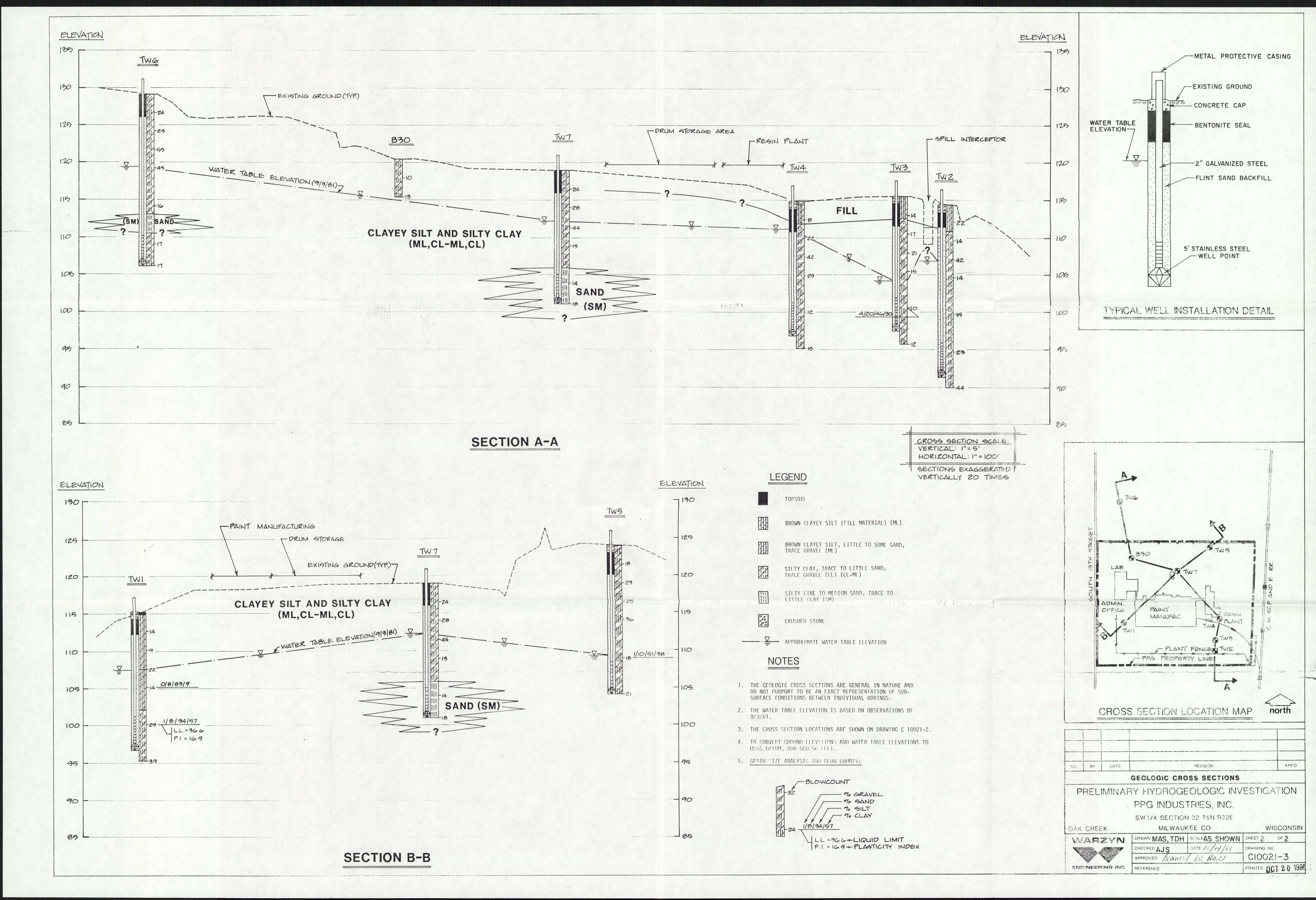
SW1/4 SECTION 32 T5N R22E

OAK CREEK

WARZYN
CHI
APP

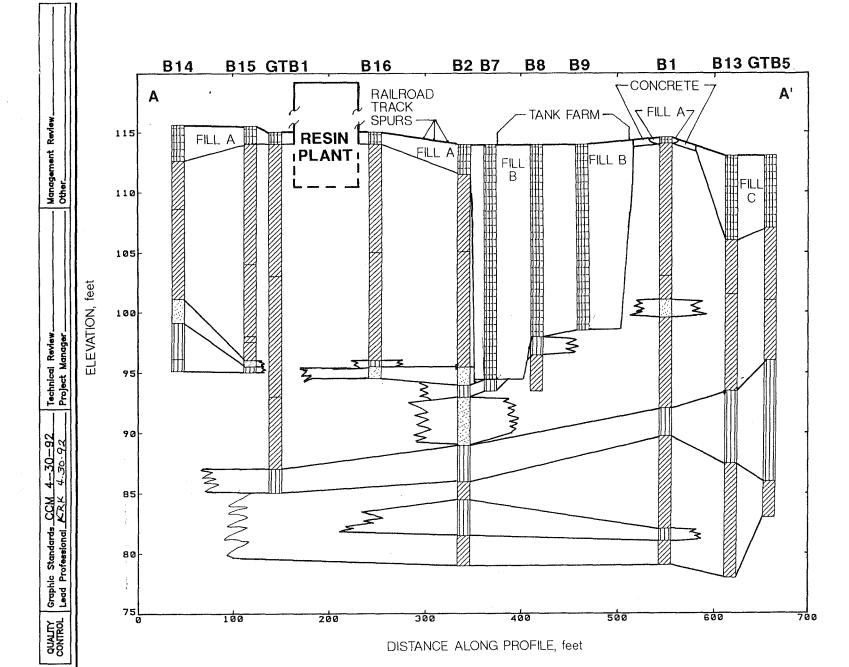
| MILWAU             | KEE CO.          | WISCONS      |
|--------------------|------------------|--------------|
| <br>DRAWN MAS, TDH | SCALE  "=200"    | SHEET   OF 2 |
| CHECKED AJS        | DRAWING NO.      |              |
| APPROVED Daniel    | C10021 - 2       |              |
| REFERENCE          | PRINTEDOCT 2 0 1 |              |

APP'D



D2

WARZYN INC., 1992



HORIZONTAL SCALE 1" = 100' VERTICAL SCALE 1" = 8' VERTICAL EXAGGERATION = 1.25x LEGEND

FILL A: 3 TO 6 INCHES COARSE GRAVEL
OVERLYING FINE TO MEDIUM SAND
WITH SOME GRAVEL

FILL B: 4 TO 6 INCHES COARSE GRAVEL OVERLYING SAND AND CLAY

FILL C: 4 INCHES TOPSOIL AND SOD OVERLYING CLAY, SAND AND GRAVEL

LEAN CLAY

FINE SAND

SILT

<u>NOTES</u>

- 1. CROSS—SECTION IS GENERAL IN NATURE AND DOES NOT PURPORT TO BE AN EXACT REPRESENTATION OF SUBSURFACE CONDITIONS.
- 2. ELEVATIONS ARE RELATIVE TO SITE BENCHMARK DATUM IN FEET AS SURVEYED BY NATIONAL SURVEY ON APRIL 24, 1992. REFER TO FIGURE 2 (DRAWING # 27350-D1) FOR BENCHMARK LOCATION.
- 3. ALL HORIZONTAL DISTANCES ARE MEASURED WITH RESPECT TO THE CENTER OF EACH SOIL BORING. REFER TO FIGURE 2 (DRAWING #27350-D1) "BORING AND MONITORING WELL LOCATION PLAN" FOR LOCATION OF CROSS-SECTION. BORINGS INFERRED PERPENDICULAR TO CROSS-SECTION LINE A A' AS BEST FIT.

Developed By: KRK Drawn By: CCM
Approved By: Date:
Reference:
Revisions:

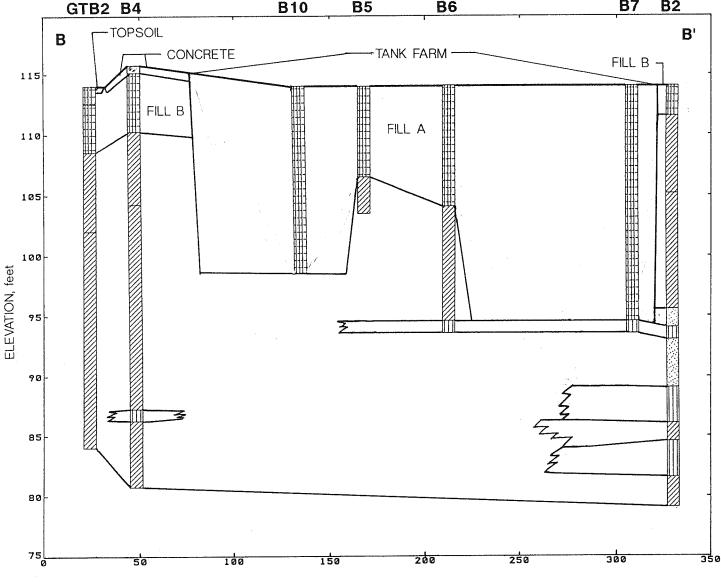
EOLOGIC CROSS-SECTION A - A

OIL AND GROUNDWATER ASSESSI
PG INDUSTRIES INC.

AK CREEK, WISCONSIN FACILITY

Drawing Number





**B**5

**B6** 

**B10** 

DISTANCE ALONG PROFILE, feet

HORIZONTAL SCALE 1" = 50' VERTICAL SCALE 1" = 8' VERTICAL EXAGGERATION = 6.25x

#### LEGEND



B7 B2

FILL A: 4 TO 6 INCHES COARSE GRAVEL OVERLYING FINE TO MEDIUM SAND AND GRAVEL

FILL B: 4 TO 6 INCHES COARSE GRAVEL OVERLYING CLAY, SAND AND GRAVEL

LEAN CLAY

FINE SAND

SILT

|  | H |  |
|--|---|--|
|  | Н |  |
|  | П |  |
|  | П |  |
|  | П |  |
|  | Н |  |

CCM

#### NOTES

- 1. CROSS-SECTION IS GENERAL IN NATURE AND DOES NOT PURPORT TO BE AN EXACT REPRESENTATION OF SUBSURFACE CONDITIONS.
- 2. ELEVATIONS ARE RELATIVE TO SITE BENCHMARK DATUM IN FEET AS SURVEYED BY NATIONAL SURVEY ON APRIL 24, 1992. REFER TO FIGURE 2 (DRAWING # 27350-D1) FOR BENCHMARK LOCATION.
- 3. ALL HORIZONTAL DISTANCES ARE MEASURED WITH RESPECT TO THE CENTER OF EACH SOIL BORING. REFER TO FIGURE 2 (DRAWING #27350-D1) "BORING AND MONITORING WELL LOCATION PLAN" FOR LOCATION OF CROSS-SECTION. BORINGS INFERRED PERPENDICULAR TO CROSS-SECTION LINE A - A' AS BEST FIT.

# AND GROUNDWATER ASSESSMENT INDUSTRIES INC. CREEK, WISCONSIN FACILITY GEOLOGIC CROSS-SECTION B - B' Drawing Number 27350

FIGURE 4

## E

# MONITORING WELL CONSTRUCTION DETAILS

E1 - WARZYN ENGINEERING, INC., 1981

E2 - GERAGHTY & MILLER, 1987

E3 - WARZYN INC., 1992



E1

WARZYN ENGINEERING, INC., 1981

## WELL DETAIL INFORMATION SHEET

|                                         | JOB NO. C 10021                                                                                   |                  |
|-----------------------------------------|---------------------------------------------------------------------------------------------------|------------------|
|                                         | BORING NO. TW-2                                                                                   |                  |
|                                         | DATE 7/1/81                                                                                       |                  |
| 千                                       |                                                                                                   |                  |
| 9)                                      | OCATION PPG Industries, Inc., Oak Creek, Wisconsin                                                |                  |
| 8 Elev. 7                               | All donth margunaments of wall detail assume                                                      | ed .             |
|                                         | DEPTH TO BOTTOM OF WELL POINT OR SLOTTED PIPE 23 FEET.                                            |                  |
|                                         | 2 DEPTH OF BOTTOM OF SEAL (if installed) 3 FEET.                                                  |                  |
| 5                                       | 3 DEPTH TO TOP OF SEAL (if installed) 1 FEET.                                                     |                  |
|                                         | LENGTH OF WELL POINT, PVC WELL SCREEN, OR SLOTTED PIPE 4'6" FEET. (Circ                           | le One)          |
|                                         | 5 TOTAL LENGTH OF PIPE 20.5 FEET @ 2 IN. DIAMETER.                                                |                  |
|                                         | 6 TYPE OF FILTER MATERIAL AROUND WELL POINT OR SLOTTED PIPE Flint Sand                            |                  |
| $\frac{1}{3}$                           | 7 CONCRETE CAP, YES NO (Cir.                                                                      | cle One)         |
| 2                                       | 8 HEIGHT OF WELL CASING ABOVE GROUND 2 FEET.                                                      |                  |
| 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | 9 PROTECTIVE CASING? YES NO (Cir<br>HEIGHT ABOVE GROUND 2<br>LOCKING CAP? YES NO (Circle          | cle One)<br>One) |
|                                         | 10 TYPE OF BACKFILL: Flint Sand                                                                   |                  |
| 1                                       | WATER LEVEL CHECKS                                                                                | -                |
|                                         | *From top of casing, if protective casing higher, take measurement from top of protective casing. |                  |
|                                         | BORING #   DATE   TIME   DEPTH TO WATER   RE                                                      | MARKS_           |
|                                         | 2 7/1/81 ½ hour 19'                                                                               |                  |
|                                         | 7/2/81 12 hours 9'                                                                                | •                |
|                                         |                                                                                                   |                  |
|                                         |                                                                                                   | ARZYN            |

#### MELL DETAIL INFORMATION SHELL

|                                       | 008 NO. C 10021                                                                                     |
|---------------------------------------|-----------------------------------------------------------------------------------------------------|
|                                       | BORING NO. TW-1                                                                                     |
|                                       | DATE 7/1/81                                                                                         |
| Elev. 117.30                          | CHIEF JS                                                                                            |
| LOCATION                              | PPG Industries, Inc., Oak Creek, Wisconsin                                                          |
| Elev. 115.2                           | All depth measurements of well detail assumed to be from ground surface unless otherwise indicated. |
|                                       | DEPTH TO BOTTOM OF WELL POINT OR SLOTTED PIPE 18.5 FEET.                                            |
|                                       | DEPTH OF BOTTOM OF SEAL (if installed)  FEET.                                                       |
| 5                                     | 3 DEPTH TO TOP OF SEAL (if installed) FEET.                                                         |
| 10                                    | 4 LENGTH OF WELL POINT PVC WELL SCREEN, OR SLOTTED PIPE 4'6" FEET. (Circle One)                     |
|                                       | 5 TOTAL LENGTH OF PIPE 16 FEET 0 2 IN. DIAMETER.                                                    |
|                                       | 6. TYPE OF FILTER MATERIAL AROUND WELL POINT OR SLOTTED PIPE Flint Sand                             |
|                                       | 7) CONCRETE CAP, YES NO (Circle One)                                                                |
| 2                                     | (8) HEIGHT OF WELL CASING ABOVE GROUND FEET.                                                        |
| 4 6                                   | 9 PROTECTIVE CASING? YES NO (Circle One) HEIGHT ABOVE GROUND 2 LOCKING CAP? YES NO (Circle One)     |
|                                       | 10) TYPE OF BACKFILL: Flint Sand                                                                    |
| <b>X</b>                              | WATER LEVEL CHECKS                                                                                  |
| *From take m                          | top of casing, if protective casing higher, measurement from top of protective casing.              |
| BORING #                              | 1 DATE 1 THE 1 DESCRIPTION                                                                          |
| TW-3                                  | DATE TIME DEPTH TO WATER REMARKS 7/1/81 3 hours 4'                                                  |
|                                       | 7/2/81 12 hours 10'                                                                                 |
|                                       |                                                                                                     |
|                                       | WARZYN                                                                                              |
| • • • • • • • • • • • • • • • • • • • |                                                                                                     |

#### WELL DETAIL INFORMATION SHEET

|               | JOB NO. <u>C 10021</u>                                                                              |
|---------------|-----------------------------------------------------------------------------------------------------|
|               | BORING NO. TW-3                                                                                     |
|               | DATE 7/2/81                                                                                         |
| Elev. 117.46  | CHIEF JS                                                                                            |
| LOCATION      | PPG Industries, Inc., Oak Creek, Wisconsin                                                          |
| 8 Elev. 115.4 | All depth measurements of well detail assumed to be from ground surface unless otherwise indicated. |
|               | DEPTH TO BOTTOM OF WELL POINT OR SLOTTED PIPE 18 FEET.                                              |
|               | 2 DEPTH OF BOTTOM OF SEAL (if installed)  4 FEET.                                                   |
| 5             | 3 DEPTH TO TOP OF SEAL (if installed)  TEET.                                                        |
| 10            | 4 LENGTH OF WELL POINT, PVC WELL SCREEN, OR SLOTTED PIPE 4'6" FEET. (Circle Or                      |
|               | 5 TOTAL LENGTH OF PIPE 15'6" FEET 0 2 IN. DIAMETER.                                                 |
|               | 6 TYPE OF FILTER MATERIAL AROUND WELL POINT OR SLOTTED PIPE Flint Sand                              |
|               | 7 CONCRETE CAP, YES NO (Circle Or                                                                   |
| 2             | 8 HEIGHT OF WELL CASING ABOVE GROUND 2 FEET.                                                        |
| 4 0 6         | 9 PROTECTIVE CASING? YES NO (Circle Or LOCKING CAP? YES) NO (Circle One)                            |
|               | 10 TYPE OF BACKFILL: Flint Sand                                                                     |
|               | WATER LEVEL CHECKS                                                                                  |
| *From take    | top of casing, if protective casing higher, measurement from top of protective casing.              |
| BORING #      | DATE TIME DEPTH TO WATER REMARKS                                                                    |
|               |                                                                                                     |
|               |                                                                                                     |
|               | WARZY                                                                                               |

|                            | THE THEOREM SHELT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                            | JOB NO. <u>C 10021</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                            | BORING NO. TW-4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| A TA (1-5) P) Elev. 116.86 | DATE7/2/81                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 9                          | CHIEFJS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| LOCATION                   | PPG Industries, Inc., Oak Creek, Wisconsin                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Elev. 114 9                | All depth measurements of <u>well</u> detail assumed to be from ground surface unless otherwise indicated.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                            | 1) DEPTH TO BOTTOM OF WELL POINT OR SLOTTED PIPE 18 FEET.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 5                          | 2 DEPTH OF BOTTOM OF SEAL (if installed)  4 FEET.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                            | DEPTH TO TOP OF SEAL (if installed)  The search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the sea |
| -   -   10                 | 4 LENGTH OF WELL POINT PVC WELL SCREEN, OR SLOTTED PIPE 4'6" FEET. (Circle One)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                            | 5 TOTAL LENGTH OF PIPE 15'6" FEET @ 2 IN. DIAMETER.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 3                          | TYPE OF FILTER MATERIAL AROUND WELL POINT OR SLOTTED PIPE Flint Sand                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                            | 7 CONCRETE CAP, YES NO (Circle One)  8 HEIGHT OF WELL CASING ABOVE GROUND                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                            | FEET.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 4                          | PROTECTIVE CASING? YES NO (Circle One) HEIGHT ABOVE GROUND 2' LOCKING CAP? YES NO (Circle One)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                            | 10) TYPE OF BACKFILL: Flint Sand                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                            | WATER LEVEL CHECKS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| *From take                 | top of casing, if protective casing higher, measurement from top of <u>protective</u> casing.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| BORING #                   | DATE TIME DEPTH TO WATER REMARKS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                            | MARZYN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

E2

GERAGHTY & MILLER, 1987

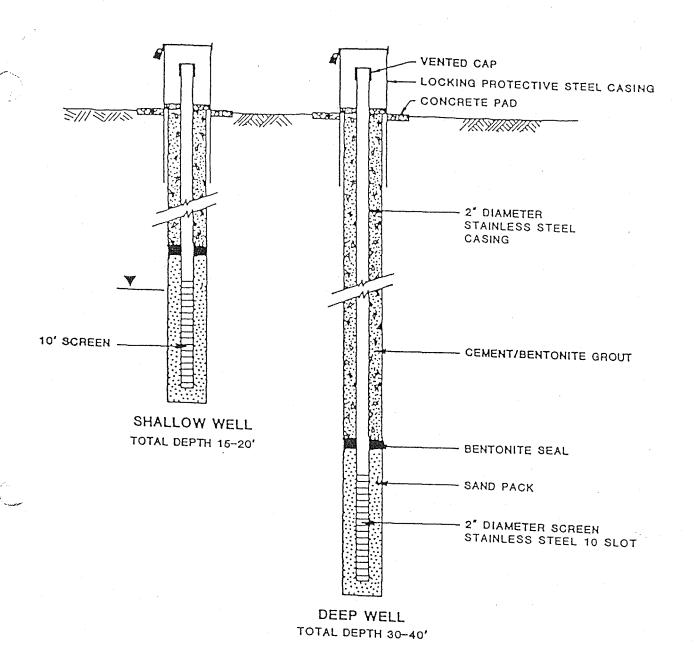


FIGURE 3
MONITORING WELL
CONSTRUCTION DETAILS MW-9
GROUND-WATER ASSESSMENT THRU
PPG INDUSTRIES
OAK CREEK, WISCONSIN MW-16



E3

WARZYN INC., 1992

| Bercheck   Concern   O. Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr   Chr    |                                        | & Repair 🗆 Underzo                                |                             |                  | Form 4400-113A                                    | Ray, 4-90           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|---------------------------------------------------|-----------------------------|------------------|---------------------------------------------------|---------------------|
| Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location   Cot Origin Location    | ility/Project Name                     |                                                   |                             | , ms. N          | Yell Name                                         |                     |
| Describe   Describing fluid uses   Describing fluid uses   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Describe   Descr   | G Industries                           |                                                   | i.,                         |                  | LW-1                                              |                     |
| Peanneter   12   Section   Description of Winer/Source   14   1/4 of Sect.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N.   1. N. N. N.   1. N. N. N.   1. N. N. N.   1. N. N. N.   1. N. N. N.   1. N. N. N.   1. N. N. N.   1. N. N. N.   1. N. N. N.   1. N. N. N.   1. N. N. N. N. N. N. N. N. N. N. N. N. N.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | inty blocked this end and the same     | _                                                 | _ Long                      | F.               | жилене жей улшрет» DVX                            | Well number         |
| Well A Point of Extoresment Not. Application   Ye   No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Piezometer 12                          | - 111                                             |                             |                  | <u> </u>                                          | 1/91                |
| Well A Potent of Enfectement Sid. Applications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ft.                                    |                                                   | ec,T N,                     | R                | Well Installed By: (Person's Nam<br>Eugene Lehman | e and Furn)         |
| A Well casing, top elevation  f. MSL  Land surface selvation  f. MSL  Selvation  f. MSL  Selvation  f. MSL  Selvation  Selvation  f. MSL  Selvation  Selvation  f. MSL  Selvation  Selvation  f. Msl  Selvation  f. Msl  Selvation  f. Msl  Selvation  f. Msl  Selvation  f. Msl  Selvation  f |                                        | n 🗆 Abarger                                       | s 🗌 Sidegrad<br>n 🗎 Not Kno | ien<br>Iwn       |                                                   |                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Protective gipe, top elevation         | ft. MSL                                           |                             |                  |                                                   | 1 Y≃ □ 16           |
| D. Surface scale bottom                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                        | • \                                               | H D                         | r price ginu     | ver pipe: Flush Mount                             | 85:-                |
| 12 USCS classification of soil near screen:   GP   GM   GC   GW   SW   SP   SP   SM   SC   ML   MH   Cl. SC   H   SC   ML   MH   Cl. SC   H   SC   ML   MH   Cl. SC   H   SC   ML   SC   ML   MH   Cl. SC   ML   SC   ML   MH   Cl. SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   ML   SC   M   |                                        |                                                   | 200255                      | c. Material:     |                                                   | Steel 🗀 04          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                        | <u>-1.2 " \                                  </u> | 震変:[                        |                  | ***************************************           |                     |
| 3. Surface scall:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | GP GM GC GW GSW G                      | SP []                                             |                             |                  | •                                                 | <br>                |
| E. Bentonite seal, top ft. MSL or 1 . 5 ft.  E. Bentonite seal, top ft. MSL or 3 . 5 ft.  F. Fine sand, top ft. MSL or 3 . 5 ft.  G. Filter pack, top ft. MSL or 4 . 0 ft.  H. Screen joint, top ft. MSL or 5 . 0 ft.  I. Well bottom ft. MSL or 15 . 0 ft.  I. Filter pack, bottom ft. MSL or 15 . 0 ft.  E. Bentonite seal: a Bentonite granule X b. 0.14 in. 0.3/3 in. 0.1/2 in. Bentonite pellets 0 . 0.25 ft.  7. Fine sand material: Manufacture, product name & meh in Red Flint Filter Sends & Gravels #45 - #55 b. Volume added 0.17 ft.  8. Filter pack material: Manufacture, product name and meh in Red Flint Filter Sends & Gravels #30 b. Volume added 3.66 ft.  9. Well casing: Finth threaded PVC schedule 40 & Finth threaded PVC schedule 40 & Finth threaded PVC schedule 40 & Finth threaded PVC schedule 80 C. Continuous slot C. Continuous slot C. Continuous slot C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in | Beccack []                             | CHU                                               |                             | 3. Surface scal: | · · · · · · · · · · · · · · · · · · ·             |                     |
| E. Bentonite seal, top ft. MSL or 1 . 5 ft.  E. Bentonite seal, top ft. MSL or 3 . 5 ft.  F. Fine sand, top ft. MSL or 3 . 5 ft.  G. Filter pack, top ft. MSL or 4 . 0 ft.  H. Screen joint, top ft. MSL or 5 . 0 ft.  I. Well bottom ft. MSL or 15 . 0 ft.  I. Filter pack, bottom ft. MSL or 15 . 0 ft.  E. Bentonite seal: a Bentonite granule X b. 0.14 in. 0.3/3 in. 0.1/2 in. Bentonite pellets 0 . 0.25 ft.  7. Fine sand material: Manufacture, product name & meh in Red Flint Filter Sends & Gravels #45 - #55 b. Volume added 0.17 ft.  8. Filter pack material: Manufacture, product name and meh in Red Flint Filter Sends & Gravels #30 b. Volume added 3.66 ft.  9. Well casing: Finth threaded PVC schedule 40 & Finth threaded PVC schedule 40 & Finth threaded PVC schedule 40 & Finth threaded PVC schedule 80 C. Continuous slot C. Continuous slot C. Continuous slot C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in | •                                      | 2 %                                               |                             |                  |                                                   |                     |
| E. Bentonite seal, top ft. MSL or 1 . 5 ft.  E. Bentonite seal, top ft. MSL or 3 . 5 ft.  F. Fine sand, top ft. MSL or 3 . 5 ft.  G. Filter pack, top ft. MSL or 4 . 0 ft.  H. Screen joint, top ft. MSL or 5 . 0 ft.  I. Well bottom ft. MSL or 15 . 0 ft.  I. Filter pack, bottom ft. MSL or 15 . 0 ft.  E. Bentonite seal: a Bentonite granule X b. 0.14 in. 0.3/3 in. 0.1/2 in. Bentonite pellets 0 . 0.25 ft.  7. Fine sand material: Manufacture, product name & meh in Red Flint Filter Sends & Gravels #45 - #55 b. Volume added 0.17 ft.  8. Filter pack material: Manufacture, product name and meh in Red Flint Filter Sends & Gravels #30 b. Volume added 3.66 ft.  9. Well casing: Finth threaded PVC schedule 40 & Finth threaded PVC schedule 40 & Finth threaded PVC schedule 40 & Finth threaded PVC schedule 80 C. Continuous slot C. Continuous slot C. Continuous slot C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in |                                        | □ 50                                              |                             | 4. Mucial bes    |                                                   |                     |
| E. Bentonite seal, top ft. MSL or 1 . 5 ft.  E. Bentonite seal, top ft. MSL or 3 . 5 ft.  F. Fine sand, top ft. MSL or 3 . 5 ft.  G. Filter pack, top ft. MSL or 4 . 0 ft.  H. Screen joint, top ft. MSL or 5 . 0 ft.  I. Well bottom ft. MSL or 15 . 0 ft.  I. Filter pack, bottom ft. MSL or 15 . 0 ft.  E. Bentonite seal: a Bentonite granule X b. 0.14 in. 0.3/3 in. 0.1/2 in. Bentonite pellets 0 . 0.25 ft.  7. Fine sand material: Manufacture, product name & meh in Red Flint Filter Sends & Gravels #45 - #55 b. Volume added 0.17 ft.  8. Filter pack material: Manufacture, product name and meh in Red Flint Filter Sends & Gravels #30 b. Volume added 3.66 ft.  9. Well casing: Finth threaded PVC schedule 40 & Finth threaded PVC schedule 40 & Finth threaded PVC schedule 40 & Finth threaded PVC schedule 80 C. Continuous slot C. Continuous slot C. Continuous slot C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in |                                        | A 41                                              |                             |                  |                                                   |                     |
| E. Bentonite seal, top ft. MSL or 1 5 ft.  E. Bentonite seal, top ft. MSL or 3 5 ft.  F. Fine sand, top ft. MSL or 3 5 ft.  G. Filter pack, top ft. MSL or 4 0 ft.  H. Screen joint, top ft. MSL or 5 0 ft.  I. Well bentom ft. MSL or 15 0 ft.  J. Filter pack, bottom ft. MSL or 15 0 ft.  K. Borehole, bentom ft. MSL or 1 5 0 ft.  M. O.D. well casing 2 4 0 in.  M. O.D. well casing 2 0 0 in.  6. Bentonite seal: a Bentonite granule X b. Oll4 in. D3/3 in. D1/2 in. Bentonite pellets D c.  Other D c.  Other D c.  Other D c.  Other D c.  Other D c.  Other D c.  Other D c.  Other D c.  Other D c.  Other D c.  Other D c.  Other D c.  Other D c.  Other D c.  Solutions side: d. Slouted length:  No. I.D. well casing 2 0 0 in.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                        |                                                   |                             | ,                |                                                   |                     |
| E. Bentonite seal, top ft. MSL or 1 5 ft.  E. Bentonite seal, top ft. MSL or 3 5 ft.  F. Fine sand, top ft. MSL or 3 5 ft.  G. Filter pack, top ft. MSL or 4 0 ft.  H. Screen joint, top ft. MSL or 5 0 ft.  I. Well bettom ft. MSL or 15 0 ft.  I. Filter pack, bottom ft. MSL or 15 0 ft.  K. Borehole, bottom ft. MSL or 1 5 0 ft.  L. Borehole, diameter 8 2 in.  M. O.D. weil casing 2 4 0 in.  N. I.D. well casing 2 0 0 in.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | LE DELLE Suid made Ware D 02 Air       |                                                   |                             | . —              |                                                   |                     |
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| E. Bentonite seal, top ft. MSL or 1 . 5 ft.  E. Bentonite seal, top ft. MSL or 3 . 5 ft.  F. Fine sand, top ft. MSL or 3 . 5 ft.  G. Filter pack, top ft. MSL or 4 . 0 ft.  H. Screen joint, top ft. MSL or 5 . 0 ft.  I. Well bottom ft. MSL or 15 . 0 ft.  I. Filter pack, bottom ft. MSL or 15 . 0 ft.  E. Bentonite seal: a Bentonite granule X b. 0.14 in. 0.3/3 in. 0.1/2 in. Bentonite pellets 0 . 0.25 ft.  7. Fine sand material: Manufacture, product name & meh in Red Flint Filter Sends & Gravels #45 - #55 b. Volume added 0.17 ft.  8. Filter pack material: Manufacture, product name and meh in Red Flint Filter Sends & Gravels #30 b. Volume added 3.66 ft.  9. Well casing: Finth threaded PVC schedule 40 & Finth threaded PVC schedule 40 & Finth threaded PVC schedule 40 & Finth threaded PVC schedule 80 C. Continuous slot C. Continuous slot C. Continuous slot C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in |                                        |                                                   |                             | · ЪLC            | s/gal mud weightbeneaus-sz                        |                     |
| E. Bentonite seal, top ft. MSL or 1 . 5 ft.  E. Bentonite seal, top ft. MSL or 3 . 5 ft.  F. Fine sand, top ft. MSL or 3 . 5 ft.  G. Filter pack, top ft. MSL or 4 . 0 ft.  H. Screen joint, top ft. MSL or 5 . 0 ft.  I. Well bottom ft. MSL or 15 . 0 ft.  I. Filter pack, bottom ft. MSL or 15 . 0 ft.  E. Bentonite seal: a Bentonite granule X b. 0.14 in. 0.3/3 in. 0.1/2 in. Bentonite pellets 0 . 0.25 ft.  7. Fine sand material: Manufacture, product name & meh in Red Flint Filter Sends & Gravels #45 - #55 b. Volume added 0.17 ft.  8. Filter pack material: Manufacture, product name and meh in Red Flint Filter Sends & Gravels #30 b. Volume added 3.66 ft.  9. Well casing: Finth threaded PVC schedule 40 & Finth threaded PVC schedule 40 & Finth threaded PVC schedule 40 & Finth threaded PVC schedule 80 C. Continuous slot C. Continuous slot C. Continuous slot C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in | 16. Drilling additives used?   Yes     | M No.                                             |                             | c                | Rentonite Rentonite com                           |                     |
| E. Bentonite seal, top ft. MSL or 1 . 5 ft.  E. Bentonite seal, top ft. MSL or 3 . 5 ft.  F. Fine sand, top ft. MSL or 3 . 5 ft.  G. Filter pack, top ft. MSL or 4 . 0 ft.  H. Screen joint, top ft. MSL or 5 . 0 ft.  I. Well bottom ft. MSL or 15 . 0 ft.  I. Filter pack, bottom ft. MSL or 15 . 0 ft.  E. Bentonite seal: a Bentonite granule X b. 0.14 in. 0.3/3 in. 0.1/2 in. Bentonite pellets 0 . 0.25 ft.  7. Fine sand material: Manufacture, product name & meh in Red Flint Filter Sends & Gravels #45 - #55 b. Volume added 0.17 ft.  8. Filter pack material: Manufacture, product name and meh in Red Flint Filter Sends & Gravels #30 b. Volume added 3.66 ft.  9. Well casing: Finth threaded PVC schedule 40 & Finth threaded PVC schedule 40 & Finth threaded PVC schedule 40 & Finth threaded PVC schedule 80 C. Continuous slot C. Continuous slot C. Continuous slot C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in C. Stock in |                                        |                                                   | 를 冒                         |                  |                                                   |                     |
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| E. Bentonite seal, top ft. MSL or 1 5 ft.  E. Bentonite seal, top ft. MSL or 3 5 ft.  F. Fine sand, top ft. MSL or 3 5 ft.  G. Filter pack, top ft. MSL or 4 0 ft.  H. Screen joint top ft. MSL or 5 0 ft.  I. Well bottom ft. MSL or 15 0 ft.  I. Filter pack, bottom ft. MSL or 15 0 ft.  K. Borehole, diameter 8 2 in.  M. O.D. weil casing 2 4 0 in.  M. I.D. well casing 2 0 0 in.  6. Bentonite seal: a Bentonite granule X bentonite pellets concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the seal in the concerning and the concerning and the concerning and the concerning and the concerning and the concerning and the concerning and the concerning and the concerning and the concerning and the concerning and the concerning and the concerning and the concerning and the concerning and the concerning and the concerning and the concerning and the concerning and the concerning and the concerning and the concerning and the concerning and the concerning and the concern |                                        |                                                   |                             |                  |                                                   |                     |
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| G. Filter pack, top ft. MSL or 4 0 ft.  H. Screen joint top ft. MSL or 5 0 ft.  I. Well bottom ft. MSL or 15 0 ft.  J. Filter pack, bottom ft. MSL or 15 0 ft.  L. Borehole, bottom ft. MSL or 15 0 ft.  M. O.D. well casing 2 4 0 in.  N. I.D. well casing 2 0 0 in.  I. MSL or 2 0 ft.  I. MSL or 2 0 0 ft.  I. Backfill material (below filter pack): Name of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of the pack of t |                                        |                                                   |                             | Ć                |                                                   | _ Oh= 0             |
| H. Screen joint topft. MSL or                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | F. Fine sand, top ft. MSL of           | or3 .5 ft.                                        |                             |                  |                                                   |                     |
| H. Screen joint topft. MSL or                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | •                                      |                                                   | 情景/                         | Red Fl           |                                                   | <u>s #45 - #</u> 55 |
| H. Screen joint top ft. MSL or 5.0 ft.  I. Well bottom ft. MSL or 15.0 ft.  J. Filter pack, bottom ft. MSL or 15.0 ft.  K. Borehole, bottom ft. MSL or 15.0 ft.  L. Borehole, diameter 8.2 in.  M. O.D. well casing 240 in.  N. I.D. well casing 200 in.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | G. Filter pack, top ft. MSL            | or _ 4 .0 ft.                                     | 一日 臣                        |                  | 110 11000                                         |                     |
| I. Well bottom  ft. MSL or 15 0 ft.  J. Filter pack, bottom  ft. MSL or 15 0 ft.  I. Filter pack, bottom  ft. MSL or 15 0 ft.  K. Borehole, bottom  ft. MSL or 15 0 ft.  L. Borehole, diameter  8 2 in.  M. O.D. well casing 2 4 0 in.  N. I.D. well casing 2 0 0 in.  b. Volume seried 3.66 ft.  9. Well casing: Flush threaded PVC schedule 40 & Filter pack, bottom  Filter pack, bottom  Filter pack, bottom  Filter pack, bottom  Filter pack, bottom  Filter pack, bottom  Filter pack, bottom  Filter pack, bottom  Filter pack, bottom  Filter pack, bottom  Filter pack, bottom  Filter pack, bottom  Filter pack and pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in threaded PVC Schedule 40 & Filter pack in thr | 5- 1/61                                | 50 5                                              |                             | ,                |                                                   |                     |
| I. Well bottom  ft. MSL or 15 0 ft.  J. Filter pack, bottom  ft. MSL or 15 0 ft.  J. Filter pack, bottom  ft. MSL or 15 0 ft.  K. Borehole, bottom  ft. MSL or 15 0 ft.  L. Borehole, diameter  8 2 in.  M. O.D. well casing 2 4 0 in.  N. I.D. well casing 2 0 0 in.  19. Well casing: Flush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PVC schedule 40 & Fiush threaded PV | H. Screen joint top n. MSL             | or2.0 1                                           | -II-II /                    |                  |                                                   |                     |
| I. Filter pack, bottom                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | t William fr MSI                       | or 15 O fts                                       |                             |                  |                                                   |                     |
| J. Filter pack, bottom                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1. Well collour II MOL                 |                                                   |                             | J. 11 CH C       | •                                                 |                     |
| K. Borehole, bottom                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | J. Filter pack, bonom ft. MSL          | or 15 Q ft.                                       |                             | 10 5             | -                                                 | Cr.;== []           |
| L. Borehole, diameter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | K. Borehole, bottom ft. MSL            | or 15 0 ft.                                       | ,                           |                  | cen type:                                         | Expry cut ₺         |
| M. O.D. well casing 240 in.  c. Slot size: d. Slot ed length:  11. Backfill material (below filter pack):  Name 10. O. O. O. O. O. O. O. O. O. O. O. O. O.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | L Borehole, diameter <u>82</u> in.     |                                                   |                             |                  |                                                   | Other []            |
| N. I.D. well casing 200 in. 11. Backfill material (below filter pack): Norse &                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | M. O.D. well casing _ 2 4 0 in.        |                                                   |                             | c. Sic           | ot size:                                          | 0.0                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | N. I.D. well casing 200 in.            |                                                   |                             | `                |                                                   |                     |

Warzyn Irc.

Please complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160, W.S. Stars and ch. NR 141, Wis. Ad. Code. In accordance with ch. 144, Wis Stats, failure to file this form may result in a forfeigner of not less than \$10, for more to \$5000 for each day of violation. In accordance with ch. 147, Wis. Stats, failure to file this form may result in a forfeigner of not more than \$10,000 for each day of violation. NOTE: Speeded access are for DNR use only. See instructions for more information including where the completed form should be seen.

|                                                                             | i. Solid Waste 🗆<br>sponze & Repair C |                          |                             | — П                                               | MONTTORING WELL CO<br>Form 4400-113A                  | NSTRUCTION<br>Rev. 4-90                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------------------------------------------------|---------------------------------------|--------------------------|-----------------------------|---------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| acting/Project Name                                                         | Hecal Crid                            | Location of We           | 11                          | ٨.                                                | Yell Name                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| FFG Industries                                                              |                                       | (r2.                     |                             | _ㄸ믐툾 /                                            | LW-2                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Facility License, Permit or Monitoring Number                               |                                       |                          | _cng                        | ľ.                                                | WissiUnique Wall Aumbers DA                           | exercition of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the con |
| Type of Well Water Table Observation Well Piezometer                        | 11 St Plane                           | cuion of Wast            | i. N<br>/Source             | ft. E.                                            | Date Well Installed 12 / 0 6 mm / c                   | 5/9 <sup>1</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Distance Well Is From Waste/Source Boundary                                 | ft. 1/4 of                            | 1/4 of Sec.              | ,Т Ж,                       | R                                                 | Well Installed By: (Person's Na<br>Bugene Lehman      | me and hum)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Is Well A Point of Enforcement Std. Application of Yes                      | uon? u U                              | ografient<br>owngrelient | s 🗌 Sidegrad<br>n 🔲 Not Kno | ient<br>own                                       | J&J Soil Testing Ltd.                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| A. Protective pipe, top elevation                                           | fL MSL—                               |                          |                             | Cap and lock?                                     |                                                       | Ÿ Y= G %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                                                             | ft. MSL —                             | - ( )                    | 10000                       | a. Inside diam                                    |                                                       | 4 .0 in                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                             | f. MSL .                              | ~ ~11                    | 1                           | <ul><li>b. Length:</li><li>c. Material:</li></ul> |                                                       | <u> </u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| D. Surface seal, bottom ft. MS  12. USCS classification of soil near screen |                                       |                          |                             | 1 1 *** 1                                         |                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SW D SC D ML D MH D S                                                       | W 🗆 SP 🗆                              |                          |                             |                                                   | protection?                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Beccock []  13. Sieve analysis attached? [] Yes                             | KI Xh                                 |                          |                             |                                                   | • . •                                                 | Conceia 🗆 01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 14. Drilling method used: Ro                                                |                                       |                          |                             | 4. Marcial ber                                    | ween well casing and protective p                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Hollow Stem As                                                              | iger XI 41                            |                          |                             |                                                   |                                                       | Benonia 🛭 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| , C                                                                         | xte 🗆 🎬                               |                          |                             |                                                   |                                                       | beered [] Millians                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 15. Drilling fluid used: War [] 02                                          | A= D 01                               |                          |                             |                                                   |                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Drilling Mud 🔲 03                                                           | None 🗓 99                             |                          |                             |                                                   | ace seal:  1. Cranular  1. Sygal mud weight Beremie-s |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1. Day 12.                                                                  |                                       |                          |                             |                                                   | s/gal mud weight Benter                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 16. Dailing additives used?   □ Yes                                         | II No                                 |                          |                             | d% ]                                              | Benonite Benonite-cer                                 | ಸ <u>್ ಪ್ರಾಣ್</u> ದಿ. 50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Describe                                                                    |                                       |                          |                             |                                                   | Fr 3 volume added for any of                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 17. Source of water (anach analysis):                                       |                                       |                          |                             | f. How ins                                        |                                                       | Treme 0 01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                                             |                                       |                          |                             |                                                   | 2 2 44 5 44                                           | Crawley 位 03                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                                             |                                       |                          |                             | 6. Bentonite                                      | seal: a Bentoni                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| E. Bentonite seal, top ft. N                                                | 1SL or1 .5                            |                          |                             | c                                                 | m. □3/8 in. □1/2 in. Bento                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| F. Fine sand, top ft. ?                                                     | vISL or4 .0                           | it.                      |                             | 7. Fine sand                                      | maisial: Minufacture, production Filter Sands & Grave | ni name & meh siza                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| G. Filter pack, top ft. 1                                                   | MSL or4 .5                            | It.                      |                             | b. Yolum                                          | ne udded0.17ft <sup>3</sup>                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| H. Screen joint top ft.                                                     | MSL or5_0                             | ft.                      |                             | 1 Pei F                                           | ckmuend: Manuscare produ<br>Lint Filter Sands & Crav  | . 00015                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| I. Well bottom ft.                                                          | MSL or _ 1 5                          | 0 fr.                    |                             | b. Yolur<br>9. Well cas                           | •                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| J. Filter pack, bonom ft.                                                   | MSL or _15.                           | O 1:                     |                             |                                                   | Fiush threaded PVC :                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| K. Borehole, bottom ft.                                                     | MSL or _1 5 C                         | ) ft.                    |                             | 10. Screen n                                      | en type:                                              | Facility cut 🖾 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| L Borehole, diameter 82                                                     | in.                                   |                          |                             |                                                   |                                                       | minuous slot 🔲 (                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| M. O.D. well casing 2 4 0                                                   | in.                                   |                          |                             | c. Slot                                           | ufucurer <u>TDYO</u><br>size:<br>ied length:          | 0.010<br>10 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| N. I.D. well casing2_0_0                                                    | in.                                   | . •                      | •                           | \                                                 | l material (below filter pack):                       | Nor≈ ⊠<br>Ol>= □                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

Please complyte both sides of this form and serum to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141, Wis. Ad. Code. In accordance with ch. 144, Wis Stats., failure to file this form may result in a forfeiture of not less than \$10, for more than \$5000 for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than \$10,000 for each day of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be seen.

Warzyn Inc.

|                                               | <u>ste so:</u> Solid Waste 🗆<br>v. Response & Repair 🗖 |                                         |                 | · · · · · · · · · · · · · · · · · · ·    | NTORING WELL CON<br>N 4400-113A            |                              |
|-----------------------------------------------|--------------------------------------------------------|-----------------------------------------|-----------------|------------------------------------------|--------------------------------------------|------------------------------|
| cy/Project Name                               | Hocal Grid                                             | Location of Well                        |                 | Mell Marre                               |                                            | •                            |
| PPG Industries                                |                                                        | t. <u></u> t                            |                 | :                                        | Ľ1 <del>-3</del>                           |                              |
| nliry License, Permit or Monitoring N         | <u>  dat                                   </u>        | L                                       | cng             | c.                                       | אטר אביבהע היא אים ה                       | renn a regen avan ar 186     |
| pe of Well Water Table Observation Piezometer | Weil 20 11   St. Plane _                               | cation of Wastel                        | . н             | ft. E. Date Wei                          | 1 1 2 / 0 4 m m / 0 c c                    |                              |
| stance Well Is From Waste/Source Bot          |                                                        | 1/4 oi Sec.                             | ,TN.R.          | DE. Well Inst                            | ane Leman<br>Liled by: (Percons Nac        | הפ שהם דעדה)                 |
| Well A Point of Enforcement Std. Ap           | pplication? u Up                                       | gratient :                              | s 🔲 Sidegradien |                                          | Soil Testing Ltd.                          |                              |
| . Protective pipe, top elevation              | ft. MSL—                                               |                                         |                 | ip and lock?                             | -                                          | 7≥ <u>□ 1</u> %              |
| . Well easing, top elevation                  |                                                        |                                         | 72. Pr          | otective cover pipe:<br>Inside diameter: | Flush Mount                                | _8.5 ts                      |
| 2. Land surface elevation                     | ft. MSL .                                              |                                         | 1 2             | Length:                                  |                                            | 1.0 :                        |
| O. Surface seal, boccom                       | ft MSL or _1 _5 ft.  screen:  SW   SP                  |                                         |                 | . Additional protection                  | minum<br>n?                                | □ Y                          |
| 13. Sieve analysis attached?                  | rs 🖾 Yo                                                |                                         |                 | -                                        |                                            | Concert 25 01                |
| 14. Drilling method used:                     | Rotary [] 50 .<br>tem Auger [2] 41.                    |                                         | 4.1             |                                          | l casing and protective p                  | 0 ೯ ದಿ ಮೂಯವಾದಿ               |
|                                               | _ Ota D                                                |                                         |                 |                                          |                                            | المع عط<br>المع عط           |
| 15. Drilling fluid used: War []               | 02 Air 🗆 01                                            |                                         |                 | Armular space seal:                      |                                            | _ Ote 5: 33<br>Benteniu 8 33 |
| Drilling Mud []                               | 03 Nore 10 99                                          |                                         |                 |                                          | e-eight Bertonius<br>1 weight Bertonius    |                              |
| 16. Drilling additives used?                  |                                                        |                                         |                 | Lbs/g2l mu<br>! % Bentonit               | d weight Bence<br>:                        | ment grow [] 3               |
| Describe                                      |                                                        |                                         |                 | . How installed:                         | olume added for my of                      | Trank [] 0                   |
| 17. Source of water (anach analysis           | <b>;):</b>                                             | (1) (1) (1) (1) (1) (1) (1) (1) (1) (1) |                 |                                          |                                            | Gravity 20                   |
|                                               |                                                        | 그 : [#                                  |                 | 6. Bentonite seal:                       | a. Benion                                  |                              |
| E. Bentonite seal, top                        | _ ft. MSL or <u>1</u> _5                               | ) f                                     |                 |                                          | 13 in. 🗆 1/2 in. Bente                     | nite pelleu 🗋 🤅              |
| F. Fine sand, top                             | ft. MSL or 3 .5                                        | i i                                     |                 |                                          | i: Menufacters, produ<br>tler Sends & Grav | ಂ: ಗಾಗಾಂ & ಹವಗಿ ನ            |
| G. Filter pack, top                           | ft. MSL or4 .(                                         | C                                       |                 | b. Yolume záded                          | 0 17                                       | 3                            |
| H. Screen joint, top                          | _ ft. MSL or 5 .!                                      | 0 ir.                                   |                 |                                          | ilter Sancis & Grav                        | els #30                      |
| I. Well bottom                                | ft. MSL or _ 15 0                                      | ) [t.                                   |                 | 9. Well casing:                          | Flush threaded PYC Flush threaded PYC      |                              |
| J. Filter pack, bottom                        | ft_MSL or _ 1_5                                        | ō (r.                                   |                 | 10 Screen margin                         | Flush Threaded P                           | Cabre []                     |
| K. Borehole, bottom                           | ft. MSL or 1 5                                         | 0 10                                    |                 | a Screen type:                           |                                            | Feeding cut 🖾                |
| L. Borehole, diameter 8                       | <u>2</u> in.                                           |                                         |                 | b. Manufacan                             | THE ACT                                    | Other []                     |
| M. O.D. well casing $\frac{24}{}$             | 0 in.                                                  |                                         |                 | c. Slot size:  d. Slotad length          |                                            | ۰. O                         |
| N. I.D. well casing 2 C                       | 00 in.                                                 |                                         |                 | 1                                        | og (cejon tyret bæk):                      |                              |

Please complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160, Wis. Statument of the this form may result in a forfeiture of not less than \$10, for more than \$50000 for each day of violation. In accordance with ch. 147, Wis. Status, failure to file this form may result in a forfeiture of not more than \$10,000 for each day of violation. In accordance with ch. 147, Wis. Status, failure to file this form may result in a forfeiture of not more than \$10,000 for each day of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be seen.

| inte of Wise | consin<br>of Natural Resources                     | Route to: Soli                       | d Waste 🗌                               | Haz Waste []                          | Wasiewaier (                          | ] .<br>}~ П                           | MONTTÓRIN<br>Form 4400-1                             | IG WELL CONST?<br>13A                        | RUCTION<br>Rev. 4-90                                       |
|--------------|----------------------------------------------------|--------------------------------------|-----------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|------------------------------------------------------|----------------------------------------------|------------------------------------------------------------|
| -            |                                                    | Env. Response                        | C Kepair L                              | U19001 2500                           | 11 111125 (1)                         |                                       |                                                      |                                              |                                                            |
| acilicy/Proj | ject Name                                          |                                      | recal face i                            | יין אין מסטובסס                       | :11                                   | m s                                   | Well Name                                            |                                              |                                                            |
| · P          | PG Industries                                      |                                      |                                         | fr. HS                                |                                       | (t.   D E.                            |                                                      | LW-4D                                        |                                                            |
|              | ense, Permit or Monitor                            | na Number                            | Grid Origin                             | I carica                              |                                       |                                       | Wireliane Wali                                       | אייבולביים טאא איפ                           | نا میں۔ ۔                                                  |
| racinty Lice | ense, Permit of Mollimit                           | 3                                    | -                                       |                                       | Long.                                 |                                       | F. Chickens and considerable by color feet a tracer. | \$5740GBCCCCGGGGGGGGCCCCCCCCCCCCCCCCCCCCCCCC | Martine Committee Committee                                |
| Type of We   | Water Table Observ                                 | nicu Men Öll                         | St Plane_                               | · · · · · · · · · · · · · · · · · · · | ft. N,                                | ft. E.                                | Date Well Instilled                                  | 12/06/9<br>mm/ca/9                           | 1                                                          |
| <del></del>  | ell Is From WasterSource                           | - Varadani                           | Section T                               | mon of A m                            | t, yource                             | . 🗆 =                                 | Well imagellad Va                                    | m m c c                                      | / Y                                                        |
| •            |                                                    | ft.                                  | 1/4 of _                                | 1/4 of Sec<br>i Well Relative         | to WasterSou                          | ν, γ. <u> </u>                        | Expene Leme                                          | n m c d<br>: (Person's Name a                | .c Firm)                                                   |
| Is Well A I  | Point of Enforcement St                            |                                      | u 🗆 Uç                                  | gadient<br>wn gadient                 | s 🗆 Sidegr                            | ndiat                                 | J&J Soil Tes                                         |                                              |                                                            |
| A. Protecti  | ive pipe, top elevation                            |                                      |                                         |                                       |                                       | 1. Cap and lock                       | :?<br>over pipe: Flush                               |                                              | ۵ 🗀 🖔                                                      |
| B. Well co   | using, top elevation                               |                                      | n. MSL                                  |                                       | 78/                                   | 2. Inside dia                         |                                                      | . r.ounc                                     | _8 S_ in_                                                  |
| C. Land st   | arízce elevation                                   |                                      | ft. MSL 🔍                               |                                       |                                       | b. Length:                            |                                                      |                                              | == 0.4<br>丁·0;-                                            |
|              | e seal, bocom                                      |                                      | 1.5 ft.                                 | [三三                                   |                                       |                                       | Aluminum                                             |                                              |                                                            |
| 12 USC       | S classification of soil:                          | וכזו זכונכוו:                        |                                         | 1. 15:35                              | 1 Deck                                |                                       | al protection?                                       |                                              | Ye II No                                                   |
| 1            |                                                    |                                      | SP ml                                   | 11) /                                 | 117/                                  |                                       | ಜನ್ಡು                                                |                                              | <del>-</del> -                                             |
| MZ           | □ SC B ML□                                         | WHO CLD                              | CH 🖺                                    |                                       |                                       | 3. Surface sea                        |                                                      |                                              |                                                            |
| 1            | recit []<br>e analysis atteched?                   | □ Ye I                               | 1%                                      |                                       |                                       | \                                     | <del>.</del><br>·                                    |                                              | F= D >>>><br>== 집 01                                       |
| 1            | ling method used:                                  | Rotary 1                             | 50.                                     |                                       |                                       | 4. Mucial b                           | tween well casing :                                  |                                              |                                                            |
|              |                                                    | w Stem Auger                         |                                         |                                       |                                       |                                       | •                                                    |                                              | onite [] 30                                                |
| -            |                                                    | Other                                | J ###                                   | 1000                                  |                                       |                                       | Sand                                                 | ्र<br>भागानाम स्टब्स                         | <del></del>                                                |
| 15. Drī      | lling fluid used: War                              |                                      |                                         |                                       |                                       | 5. Armular s                          | cace seal:                                           | ı Grende Beni                                |                                                            |
|              | Drilling Muc                                       | □ 03 None                            | 区 99                                    | 1                                     |                                       | bL                                    | bs/gal mud weight                                    | ه المحنصنية Bحنصنية                          | ihuny 🛘 35                                                 |
| 16. Dri      | illing additives used?                             | · □ Yes                              | 必逆                                      | 1                                     |                                       | دل<br>ن ح                             | bs/gal mud weight                                    | Benunius 3 Benunius-cament                   | lurry D 3 l                                                |
| 1            |                                                    | •                                    |                                         | 8                                     |                                       | 0.67                                  | Ft 3 volume 20                                       | ded for my of the s                          | gove<br>Eografia                                           |
|              | once of with (attach an                            |                                      |                                         | }                                     |                                       |                                       | nstalled:                                            | T                                            | 01 🗋 عنست                                                  |
| 17.30        | omes of which (mixel) ar                           | шузьэ).                              | •                                       |                                       |                                       |                                       |                                                      |                                              | mped □ 02<br>Havity 10 08                                  |
| <u></u>      |                                                    |                                      |                                         |                                       |                                       | 6. Bentonit                           | s sent                                               | z Bentonite gr                               | mule X1 3-3                                                |
| E. Bei       | ntonite seal, top                                  | ft. MSL o                            | ri_5                                    | ſĽ                                    |                                       | <b>у</b> ь. □1,                       | /4 m. □3/8 in. □                                     | 11/2 in. Bentoniu                            | peller 🖸 32                                                |
| ,<br>, E E:_ | ne sand, top                                       | ft. MSL o                            | , 35                                    | fts                                   |                                       |                                       |                                                      |                                              |                                                            |
|              |                                                    |                                      |                                         |                                       |                                       | ,                                     | •                                                    | ends & Gravels                               |                                                            |
| G. Fi        | lter pack, top                                     | ft. MSL                              | $r = -\frac{40}{100}$                   | ir.                                   | <b>周</b>                              |                                       |                                                      | .17 ft <sup>3</sup>                          |                                                            |
| Ή. Sc        | creen joint top                                    | ft. MSL                              | or50                                    | . fi.                                 |                                       |                                       |                                                      | wixere, product r.<br>ands & Gravels         |                                                            |
| * .          |                                                    |                                      |                                         | . •                                   |                                       | b. Yol                                | ಬ್ಯಾಂ ಜರ್ರವ3.                                        | 56 ft <sup>3</sup>                           |                                                            |
| I. W         | /ell bonom                                         | ft. MSL                              | or _ <u>1</u> <u>5</u> .0               | - 10.                                 |                                       | 9. Well c                             | •                                                    | ರ್ರಜನವೆದೆ PYC sche<br>ರ್ರಜನೆದೆ PYC sche      |                                                            |
| J. F         | ilter pack, bottom                                 | ft MSL                               | or <u>150</u>                           | _ · ti                                | 有量人                                   | · · · · · · · · · · · · · · · · · · · |                                                      |                                              | ] O/F D []                                                 |
| <b>7</b> 7   | Borchole, bottom                                   | f 2151                               | or 150                                  | ) fr.                                 |                                       |                                       |                                                      | Threaded PVC S                               |                                                            |
| K. 1         | potenoie, pottom                                   |                                      | ئۇ سىرىساشىيە ئ <sup>ەت.</sup><br>ئادار | -                                     |                                       | - a. 5c                               | ien ilbe:                                            |                                              | noins spot $\square$ = 0 i<br>extectly ent $\square$ = 1 j |
| L-I          | Borehole, diameter                                 | <u>82</u> in.                        |                                         |                                       | 1                                     | · · · · ·                             |                                                      | TIMCC                                        | 0¢= 🛚 💹                                                    |
| . M.         | O.D. well casing                                   | $\frac{2}{2} \cdot \frac{40}{9}$ in. | • .                                     | •                                     |                                       | c. S'                                 | mulacarer<br>lot size:<br>lotted length:             |                                              | 0.010 i                                                    |
| н.           | I.D. well casing                                   | 200 in.                              |                                         | •                                     |                                       | <b>\</b>                              | aill maurial (below                                  | filer pock):                                 | None 🔯 1                                                   |
| 1.1          | hereby certify that                                | he information                       | on this fe                              | orm is true                           | and correct                           | t to the heet                         | al my knowled                                        | CA                                           |                                                            |
|              | gnanue Certify that                                | Q 4                                  | 11                                      | Firm                                  |                                       | -                                     | or in knowed                                         |                                              |                                                            |
| 157          | lease compolete both side                          | Z Hhy                                | l kenim in the                          | e appropriate                         | Warzyn I                              |                                       | this loop as recoil                                  | ed by che 144 14                             | Land Jah Win Sin                                           |
| . ar<br>S.   | nd ch. IX 141, Wis. Ad<br>5000 for each day of vio | . Code. In accord                    | ance with ch<br>ance with ch            | ı.144, Wis Sta<br>. 147, Wis. St      | is., failure to f<br>ais., failure to | ile this form mo<br>file this form m  | ly result in a forfeit<br>ay result in a forfei      | ure of not less than<br>ture of not more the | . \$10, ror more tha<br>an \$10,000 for e≃:                |
| ٦.           | matrialism NOTE.                                   | Shaded areas are                     | for DNR use                             | only. See in:                         | scuccions for n                       | nore informatio                       | n including where t                                  | he completed form                            | should be sent                                             |

| tate of Wisconsin                                                                   | Route to: Soli<br>Env. Response |                         |               |            |                                                    | C #                                             | ORING WELL C<br>400-113A                | ONSTRUCT<br>Rev.                                                   | TON<br>4-90                                 |
|-------------------------------------------------------------------------------------|---------------------------------|-------------------------|---------------|------------|----------------------------------------------------|-------------------------------------------------|-----------------------------------------|--------------------------------------------------------------------|---------------------------------------------|
|                                                                                     | <u> </u>                        | Local Grid Lo           | Li. D.Y.      | 1          | —_i:                                               | Mell Marixe                                     | LP-1                                    | -                                                                  |                                             |
| Facility License, Permit or Monitor                                                 |                                 | Grid Origin L           | I             | .cng       | c:                                                 |                                                 | אניז אמשטבר אינין<br>אניז אמשטבר אינין  | eraku tatan 600 mewe likir                                         | er sameni                                   |
| Type of Well Water Table Observ<br>Piezometer                                       | 四四                              | 10                      | .i 1\/        | /C         | f. E.                                              | 1                                               | . ~ ~                                   | 5 /9 l                                                             |                                             |
| Distance Well Is From Waste/Source                                                  | ft.                             | Location of             | W cll Χείπανο | to Wasters | ource                                              | Hell Installe                                   | d By: (Person's)<br>se Letman           | Name and F                                                         | <del></del> )                               |
| L Well A Point of Enforcement St                                                    | s 0 %                           | d 🗆 Dow                 |               |            | Known                                              |                                                 | oil Testing L                           |                                                                    |                                             |
| A. Protective pipe, top elevation  B. Well casing, top elevation                    |                                 |                         |               | 76         | 1. Cap and loc<br>2. Protective of<br>a Inside dis | wet pipe: F]                                    | lush Mount                              | ∑ Y≃ (                                                             | 5 in                                        |
| C. Land surface elevation                                                           |                                 | ft. MSL                 |               |            | b. Length:                                         | ·<br>•                                          |                                         |                                                                    | D 04                                        |
| D. Surface seal, bottom  12 USCS classification of soil  GP  GM  GC  GC  SM  SC  ML | uentaceeu:<br>CM □ SM □         | SP II                   |               |            | d. Addiedo<br>Hyes, o                              | lumirum  nal protection?                        |                                         | _ Circ<br>D Ye  Bevenius                                           | ë ≫                                         |
| Bedrock [] 13. Sieve analysis attached? 14. Drilling method used:                   | □ Ye                            | ☑ 1%<br>□ 50 .<br>☑ 41. |               |            | 3. Surface so                                      | ·                                               | ing and protectly                       | ar since sen<br>Concer<br>Remonite<br>Benonite<br>Concer<br>Concer | □ <u></u> □ 30                              |
| 15. Drilling fluid used: Warn Drilling Mu                                           | □ 02 Air<br>□ 03 None           | □ 01<br>□ 99            |               |            | b                                                  | Lbs/gal mud w                                   | 2. Granu<br>eight Bezoni<br>eight Be    | Other<br>lar Bentoniu<br>te-send shur<br>ntonius shurp             | 2 2 3 3 3 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 |
| Describe                                                                            |                                 | · · · }                 |               |            | c. <u>8.16</u><br>f. How                           |                                                 |                                         | of the abov<br>Tren<br>Cravi                                       | s<br>二 01<br>d 0 02<br>y 图 03               |
| E. Bentonite seal, top                                                              | ft. MSL o                       | or _ 21 . 0.            | 10            |            |                                                    |                                                 | in. 01/2 in. B                          |                                                                    | et 🖄 33                                     |
| •                                                                                   | ft. HSL                         |                         |               |            | 1 Re                                               | d Flint Fil                                     | Manufacture, pro<br>ter Sands & C       | oduci name i                                                       | ತ್ತೆ ಹದಗಿ siವ                               |
|                                                                                     | ft. MSL<br>ft. MSL              |                         |               |            | 8. Filter                                          |                                                 | ylanniaczne, b                          |                                                                    | -75.5                                       |
| • •                                                                                 | ft_MSL                          |                         |               |            | ъ. Y                                               | Flint Filt<br>olume addad _<br>  casing:        | er Sends & G<br>2.60<br>Flush Utended ? | ft.3                                                               |                                             |
| J. Filter pack, bonom                                                               | ,                               |                         | ,             |            |                                                    |                                                 | Firsh theoded P                         | YC scheiul:                                                        |                                             |
| K. Borehole, bottom                                                                 |                                 |                         |               |            |                                                    | en material: F<br>Screen type:                  | lush Threaded                           | PVC Sche<br>Fxxx                                                   | <u>āile</u> 40<br>17 cu 18                  |
| L. Borehole, diameter                                                               | _82 in.                         |                         |               |            |                                                    | (                                               | 977                                     |                                                                    | 2 slot □<br>Other □                         |
| M. O.D. well casing _                                                               | 2.4_ in.                        |                         |               |            | c.                                                 | Manufacturer S<br>Slot size:<br>Slotted length: |                                         |                                                                    | - , <sub>0.</sub> 010<br>_5_                |
| N. I.D. well casing                                                                 | 2.0 in.                         |                         |               |            | . \                                                |                                                 | (below filer peck                       | ):                                                                 | 1'az 10<br>0'z 0                            |
| I hereby certify that Signature                                                     | the information                 |                         | rm is true    | and corr   | ect to the be                                      | st of my Kno                                    | owledge.                                |                                                                    |                                             |

Warzyn Inc.

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| nte of Wisconsin  partment of Natural Resources  Fry Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | lid Waste 🗌 Haz Waste 🗎<br>e & Repair 🔲 Underzours |                               | MONITORING WELL C<br>Form 400-113A                              | ONSTRUCTION<br>Rev. 4-90       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|-------------------------------|-----------------------------------------------------------------|--------------------------------|
| nliry/Project Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Local Grad Location of We                          | ii [1                         | Well Name LP-3 WiskUnique Well Number ND                        |                                |
| PPG Industries cility License, Permit or Monitoring Number                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Grid Origin Location                               |                               | Mandurone Ash yamper Sh                                         | אג אפון אעשפבי                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | · [ **                                             | •                             |                                                                 |                                |
| pe of Well Water Table Observation Well 11 11 Piezometer 1212                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                    |                               | E. Date Well Installed 1 2 /0                                   | $\frac{4}{19}\frac{1}{1}$      |
| stance Well Is From Waste/Source Boundary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                    | ,TN, R                        | E. Well Installed By: (Person's                                 | Hame and Firm)                 |
| ft.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Location of Well Relative                          |                               | Elgere Leman                                                    |                                |
| Well A Point of Enforcement Std. Application?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | u 🛘 Upgradient                                     | s 🔲 Sidegradient              | J&J Soil Testing Ltd                                            | •                              |
| Protective pipe, top elevation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                    | 1. Cap and                    |                                                                 | M Ys C Yo                      |
| . Well casing, top elevation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1.5                                                |                               | ve cover pipe: Flush Mount diameters                            | 8 . 5 in                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | . 11                                               | b. Leng                       |                                                                 | 1.01                           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \              | c. Mare                       | ಗವ:                                                             | Steel 🔲 0 4                    |
| D. Surface seal, bottom ft. MSL or                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                    |                               |                                                                 |                                |
| 12. USCS classification of soil near screen:  GP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1 52 11                                            |                               | tional protection?<br>s, deservee                               | O Ye II %                      |
| SM D SC D MLD MHD CL D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | A CH D   VIII                                      | Ш / /                         |                                                                 | Bezonie D 30                   |
| Bedrock []                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                    | 3. Surface 4. Materi          |                                                                 | Concrete 🖾 01                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Q 76                                               |                               | 11                                                              |                                |
| 14. Drilling method used: Rotary Hollow Stem Auger                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | N 41                                               | 4. Maic.                      | al between well casing and protective                           | e proces<br>Bestonite D 30     |
| Other                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                    |                               | · · · · · · · · · · · · · · · · · · ·                           | प्रकटिस्त 🛮 💥                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | _                                                  |                               | - · Send                                                        |                                |
| 15. Drilling fluid used: Water 0 0 2 Air Drilling Mud 0 0 3 Nore                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                    | 5. Armu                       |                                                                 | ar Bentenius 🔯 33              |
| Diam's 1122 [1 02 1161]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                    | b. —                          | Lbs/gal mud weight Bezenit<br>Lbs/gal mud weight Bez            |                                |
| 16. Drilling additives used?   Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                    | d                             | % Bentonite Bentonite-                                          |                                |
| Describe                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                    | 6. 6.                         | .49 Ft 3 volume added for my                                    |                                |
| . 17. Source of water (anach analysis):                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 200                                                | f. H                          | ow installed: . Te                                              | 01 ☐ ≥ir=n7<br>20 ☐ ir=npezi ☐ |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \              |                               | ***                                                             | Gravity (1) 08                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 日 50<br>日 50<br>日 61<br>日 99<br>日 26 0 ft.         | 6. Ben                        | onite seal: 2. Bent                                             | •                              |
| E. Bentonite seal, top ft. MSL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | or _ 21_Ofi_                                       | В Д / Ъ.                      | □1/4 in. □3/8 in. □1/2 in. Be                                   |                                |
| F. Fine sand, top ft. MSL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | or. 260 fts                                        |                               | 3/8" Bentonite Chips                                            |                                |
| r. rme said, top                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | or 260 ft.                                         |                               | ed Flint Filter Sands & Gr                                      |                                |
| G. Filter pack, top ft. MSL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | or _ 28.0 ft.                                      |                               | Yolume added <u>0.67</u>                                        | ft <sup>3</sup>                |
| H. Screen joint too ft. MSL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | or 300 ft-                                         | 8. Fil.                       | er pack material: Manufacture, pr<br>ed Flint Filter Sends & Gr | it dem bu omin potoc           |
| H. Screen joint top R. MSL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | , 61 _ 3_3, 3                                      |                               | Yolume added 2-33                                               | ft <sup>3</sup>                |
| I. Well bottom ft. MSI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | or 350 ft.                                         | 1:                            | ell casing: Flush threaded PY                                   |                                |
| 6 MS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 350 1                                              |                               | Firsh tracked PV                                                | C schedule 80 🔲 24             |
| J. Filter pack, bottom ft. MS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 101 _3_3_0_ 1                                      | 10.50                         | acen material: Flush Threeded                                   | DV Strain (0)                  |
| K. Borehole, bottom ft. MS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Lor 350 ft.                                        |                               | Screen type:                                                    | Factory cut \$1 1              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                    |                               |                                                                 | Continuous slot [] 0           |
| L Borehole, diameter 8.2 in.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                    |                               | Manufacturer TTMTO                                              | ೦೮ವ 🛭 🖁                        |
| M. O.D. well casing 2 4 0 in.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                    | \ c.                          | Slot size: Slotted length:                                      | 0.010<br>50                    |
| N. I.D. well casing 200 in.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                    | \                             | Backfill material (below filter pock):                          | None XI<br>Oher [              |
| I hereby certify that the information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | n on this form is true                             | and correct to the b          | est of my knowledge.                                            |                                |
| Signature 9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Firm                                               | Warzyn Inc.                   |                                                                 |                                |
| Please complete both sides of this form fr                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | id renim to the appropriate f                      |                               | n of this form as required by the 1                             | 44. 147 and 161) Wie Si        |
| and ch. NR 141, Wis. Ad. Code. In according to the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the code of the cod | dance with ch.144, Wis State                       | s., failure to file this form | n may result in a forfeiture of not le                          | ss than \$10, nor more the     |
| a p a                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | - ו- מאח ב-ו מאח                                   | in for infa                   | arian'inabidina nyhana eta aamalaja                             | d form should be come          |

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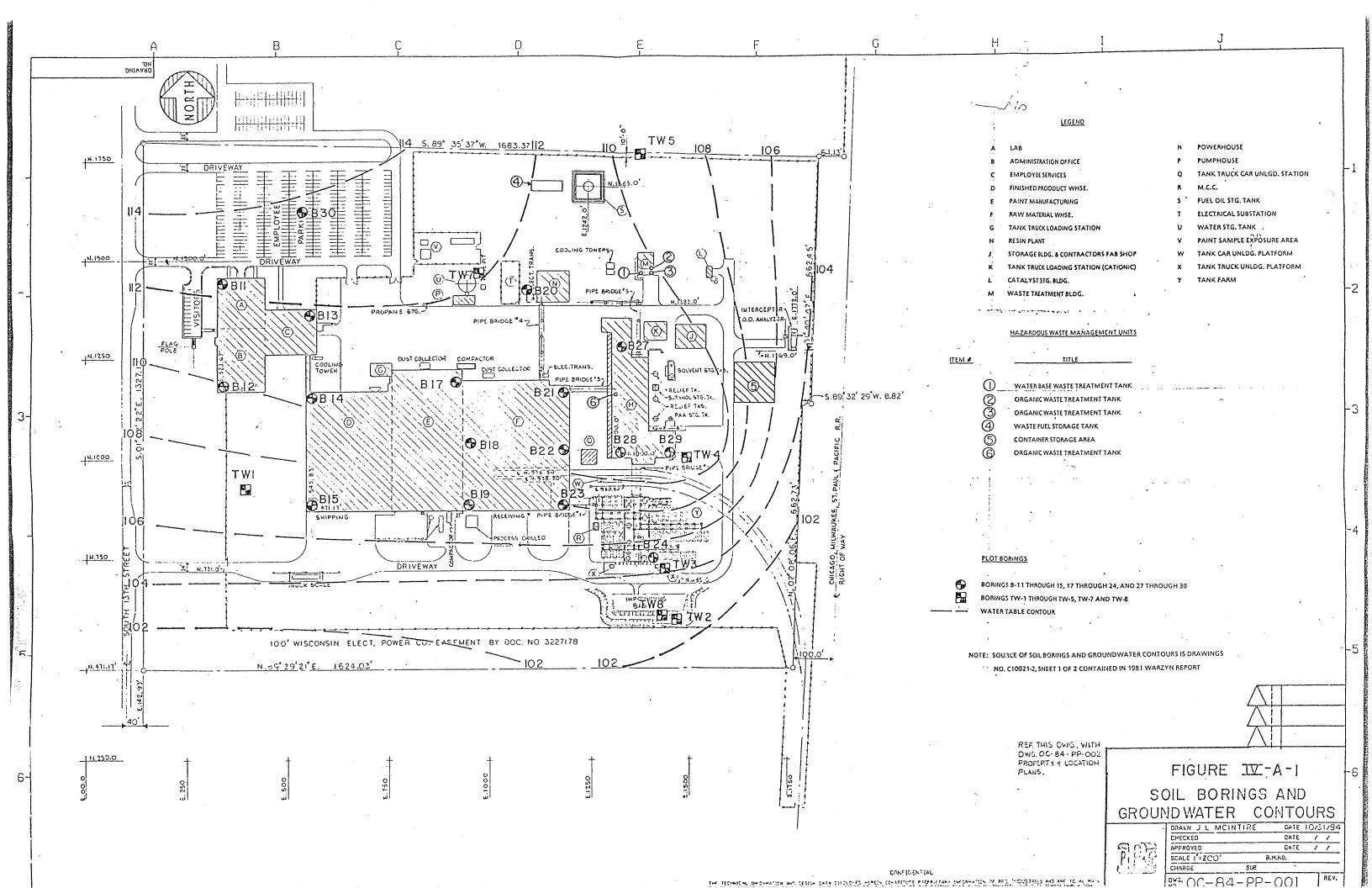
## GROUNDWATER CONTOUR MAPS

F1 - WARZYN ENGINEERING, INC., 1981

F2 - GERAGHTY & MILLER, 1987

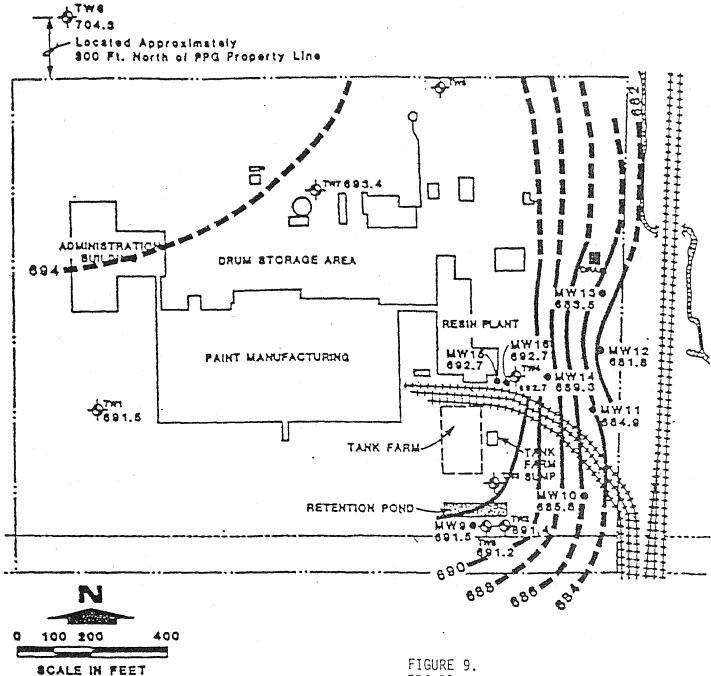
F1

WARZYN ENGINEERING, INC., 1981



F2

GERAGHTY & MILLER, 1987



#### LEGENO

WELLS INSTALLED JULY - AUGUST 1981

WELLS INSTALLED JAHUARY 1987

680 POTENTIMETRIC CONTOUR (FT ABOVE MEL)

MOTE: WATER LEVELS HEASURED ON 3-16-87.

FIGURE 9.

PPG Plant - Monitoring Well Locations and Potentiometric Contours (Shallow Wells Only)

SOURCE: Geraghty & Miller, 1987

# SUMMARY OF AVAILABLE SOIL AND GROUNDWATER INVESTIGATIONS

- G1 LAYNE-WESTERN COMPANY, INC., 1973
- G2 WARZYN ENGINEERING, INC., 1981
- G3 GERAGHTY & MILLER, 1986
- G4 O.H. MATERIALS CORP., 1987
- G5 GERAGHTY & MILLER, 1987
- G6 WARZYN INC., 1992
- G7 PERIODIC GROUNDWATER MONITORING

LAYNE-WESTERN COMPANY, INC., 1973

Firm: Layne-Western Company, Inc.

Year: 1973

Type of Investigation:

Geotechnical Soil Borings

Scope of Work:

Conduct 17 soil borings (B11-B15, B17-B24, B27-B30) throughout the active portion of the facility to depths ranging from approximately 15 to 30 feet below ground surface to evaluate site subsoils for constructability.

WARZYN ENGINEERING, INC., 1981

Firm: Warzyn Engineering, Inc.

Year: 1981

Type of Investigation:

Preliminary Hydrogeologic Investigation

Scope of Work:

Conduct eight soil borings in various locations at the site to depths ranging from 13 to 25 feet below ground surface. Soil samples were collected at 2.5 foot intervals to a depth of 10 feet and a 5 foot intervals thereafter. Representative samples were analyzed for grain size and Atterberg limits. Each boring was fitted with a water table well (TW1 to TW8). Water levels were measured and infield permeability testing was conducted. Six rounds of water samples were collected from five of the wells and three rounds of samples were collected from the remaining three wells. All water samples were analyzed for pH, specific conductivity, COD, total organic carbon, and mercury (constituent of some paints).

GERAGHTY & MILLER, 1986

Firm: Geraghty & Miller

Year: 1986

Type of Investigation:

Soil Gas Survey

Scope of Work:

The Petrex Static Collection Technique was utilized to collect 86 soil gas samples in the southeast quarter of the facility near the impoundment basin, tank farm sump and along a portion of the the east and south property lines. Samples were analyzed for low molecular weight aromatic and alkyl aromatic compounds, C4 and greater alkyl alcohols, C2-C10 parent alkanes, and compounds having an alkyl group of C4 or more in its structure. Data was reported as fluxes (i.e., relative to background values) but has little qualitative relevance to the RFI.

O.H. MATERIALS CORP., 1987

Firm: O.H. Materials Corp.

Year: 1987

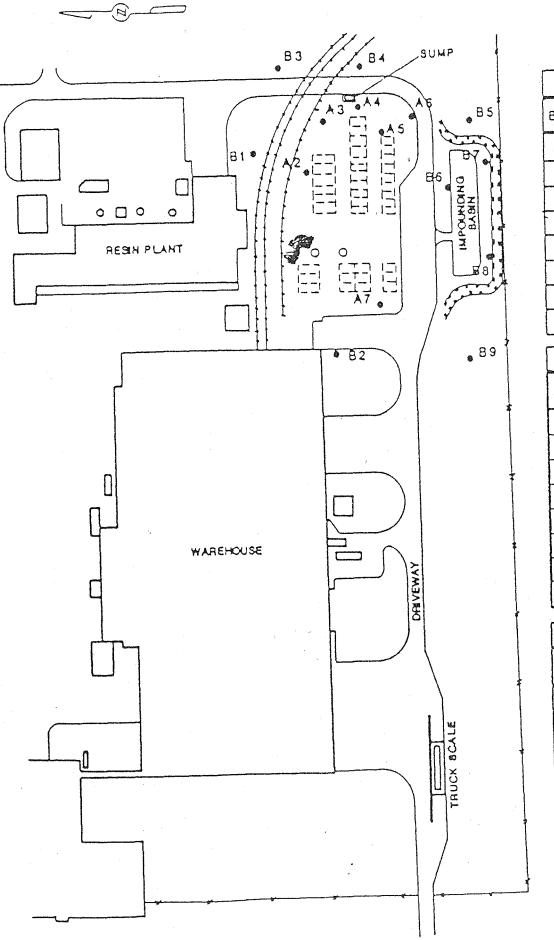
Type of Investigation:

Soil Boring and Sump Sampling

Scope of Work:

Conduct seven soil borings to a depth of 26.5 feet (A1-A7) and nine soil borings (B1-B9) to a depth of 12 feet in the southeast quarter of the facility, primarily near the impoundment basin, the tank farm, and the tank farm sump. Soil samples were collected at ground surface and every five feet thereafter and field screened for volatile organic compounds (VOCs) with a photoionization detector (PID). Thirteen soil samples, primarily with high PID results and from the 0 to 7 foot depth range were analyzed for aromatic volatile organics (EPA Method 8020) using purge and introduction techniques (EPA Method 5030). One sample was also collected from the tank farm underdrain sump and analyzed for aromatic volatile organics (EPA Method 602).

Pictorial representation of the soil analytical results from this investigation have also been included in this Appendix.



| TOLUENE |                    |  |  |  |
|---------|--------------------|--|--|--|
| 30RING  | CONCENTRA<br>(ppm) |  |  |  |
| 23      | 4                  |  |  |  |
| A2      | 80L                |  |  |  |
| A3      | 0.50               |  |  |  |
| A 4     | BOL                |  |  |  |
| A5      | 801                |  |  |  |
| A7      | 804                |  |  |  |
| 84      | BOL                |  |  |  |
| 87      | BOL                |  |  |  |

| TOTAL XYLENE |  |  |  |  |
|--------------|--|--|--|--|
| (ppm)        |  |  |  |  |
| 1,800        |  |  |  |  |
| BOL          |  |  |  |  |
| 1.05         |  |  |  |  |
| 1.03         |  |  |  |  |
| BOL          |  |  |  |  |
|              |  |  |  |  |

| ETHYL BENZENE |           |
|---------------|-----------|
| BORING        | CONCENTRA |
|               | (ppm)     |
| A1            | 280       |
| A2            | 801       |
| A3            | BOL       |
| A4            | BOL       |
| A5            | BOL       |
| A7 ·          | 800       |
| 84            | BOL       |
| B7            | BOL       |
|               |           |

FIGURE 2

TOLUENE, ETHYL BENZENE an-TOTAL XYLENE CONCENTRATIO @ 5-7 DEPTH Firm: Geraghty & Miller

Year: 1987

Type of Investigation:

Groundwater Investigation

Scope of Work:

Eight monitoring wells (MW9-MW16) were installed in the southeast quarter of the facility near the impoundment basin, the tank farm, the interceptor basin, and the southeast corner of the resin building. Six of the wells were water table wells, another well was screened from 25 to 35 feet, and the remaining well was completed at 25 feet. Water levels were measured and a slug test was performed. One round of water samples was collected and analyzed for priority pollutant volatiles and "Rexlist" compounds. Soil samples were collected at 2.5 ft intervals during installation of the monitoring wells and screened for VOCs with a total ionizable present (TIP) meter. Two soil samples were analyzed for priority pollutant volatiles and "Rexlist" compounds.

GERAGHTY & MILLER, 1987

WARZYN INC., 1992

Firm: Warzyn Inc.

Year: 1992

Type of Investigation:

Soil and Groundwater Assessment

Scope of Work:

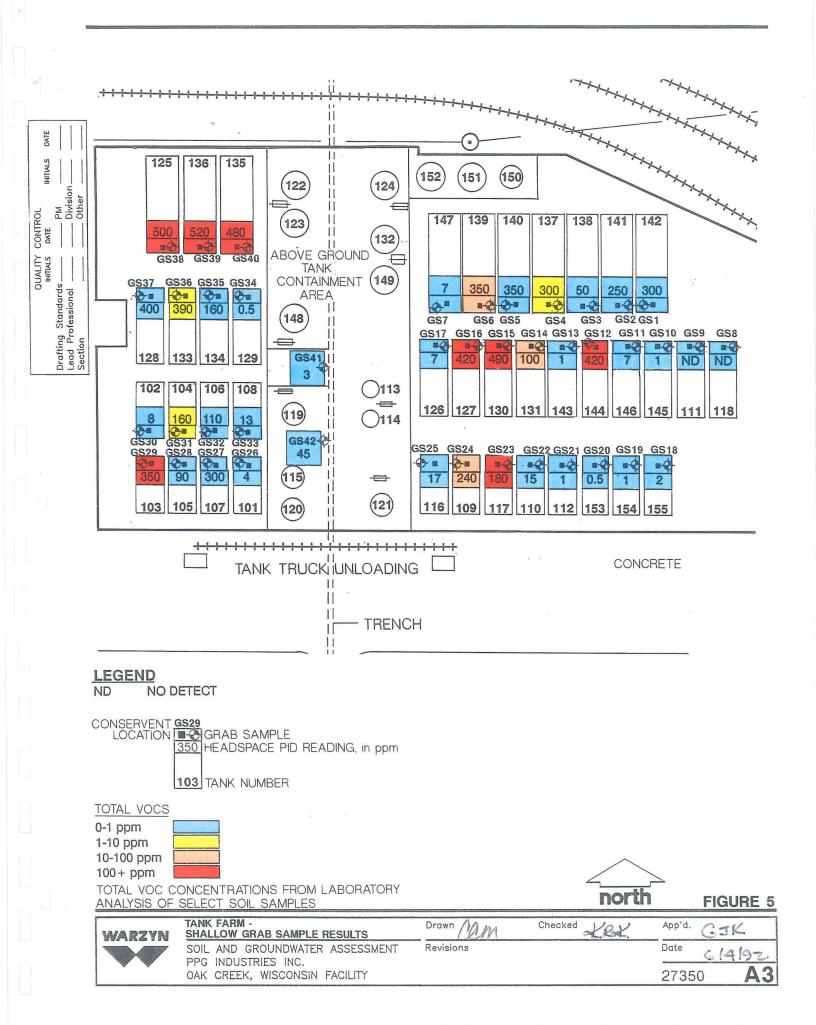
Thirteen soil borings (B1-B4, LW1-LW4D, LP1, and LP3) to depths ranging from 8 to 35.5 feet were conducted along the exterior of the tank farm. Soil samples were collected at 2.5 feet intervals to 20 feet and every 5 feet thereafter and screened for the presence of VOCs with a PID. Seven soil samples were analyzed for VOCs (EPA Method 8240). Four borings were fitted with water table wells (LW1-LW4D) and two borings were fitted as piezometer wells screened from 30 to 35 feet below ground surface (LP1, LP3). Water levels were measured and in-situ hydraulic conductivities were conducted. One round of water samples was collected from the six newly installed wells as well as from one of the previously installed wells near the impoundment basin, and the sump. Samples were analyzed for total complex hydrocarbons (ASTM Method D-3328), total organic nitrogen (EPA Method 350.2 and 351.3), and VOCs (EPA Methods 8240, purge and trap; 8240, direct aqueous injection; and 8260, purge and trap).

Forty-two (42) hand-auger borings (GS1-GS42) to a depth of 2 feet and seven soil borings (B5-B11) to depths ranging from 10.5 to 20.5 feet were conducted within the tank farm area. Soil samples were collected at 2.5 foot intervals for the soil borings and at the 1.5 to 2 ft depth interval for the hand-auger borings and screened for VOCs with a PID. The grab samples from each hand-auger boring and thirteen samples from the soil borings were analyzed for VOCs (EPA Method 8240). Two samples of sand and gravel tank backfill were analyzed for grain size and one natural clay sample below the tank backfill was analyzed for transmissivity/permeability.

Twelve shallow soil borings (GS43-GS54) to a depth of 2 feet, two soil borings (B12, B13), to a depth of 35 feet and four geotechnical borings (GTB1-GTB4) to a depth of 30 feet were conducted in the vicinity of the impoundment basin. Soil samples were collected at 2.5 foot intervals to a depth of 20 feet and every 5 feet thereafter for the soil borings and as grab samples from the 1.5 to 2 feet depth interval for each shallow boring. Each grab sample and seven samples from the soil borings were analyzed for VOCs (EPA Method 8240).

Six soil borings (B14-B19) to a depth of 20.5 feet were conducted surrounding the resin plant. Soil samples were collected at 2.5 foot intervals to a depth of 20.5 feet and screened for VOCs with a PID. One geotechnical boring (GTB1) was also conducted to a depth of 30 feet with soil samples collected at 2.5 foot intervals to a depth of 20 feet and every 5 feet thereafter. Eleven soil samples and three duplicates from these borings were analyzed for VOCs (EPA Method 8240).

Pictorial representation of the soil analytical results from this investigation have also been included in this Appendix.



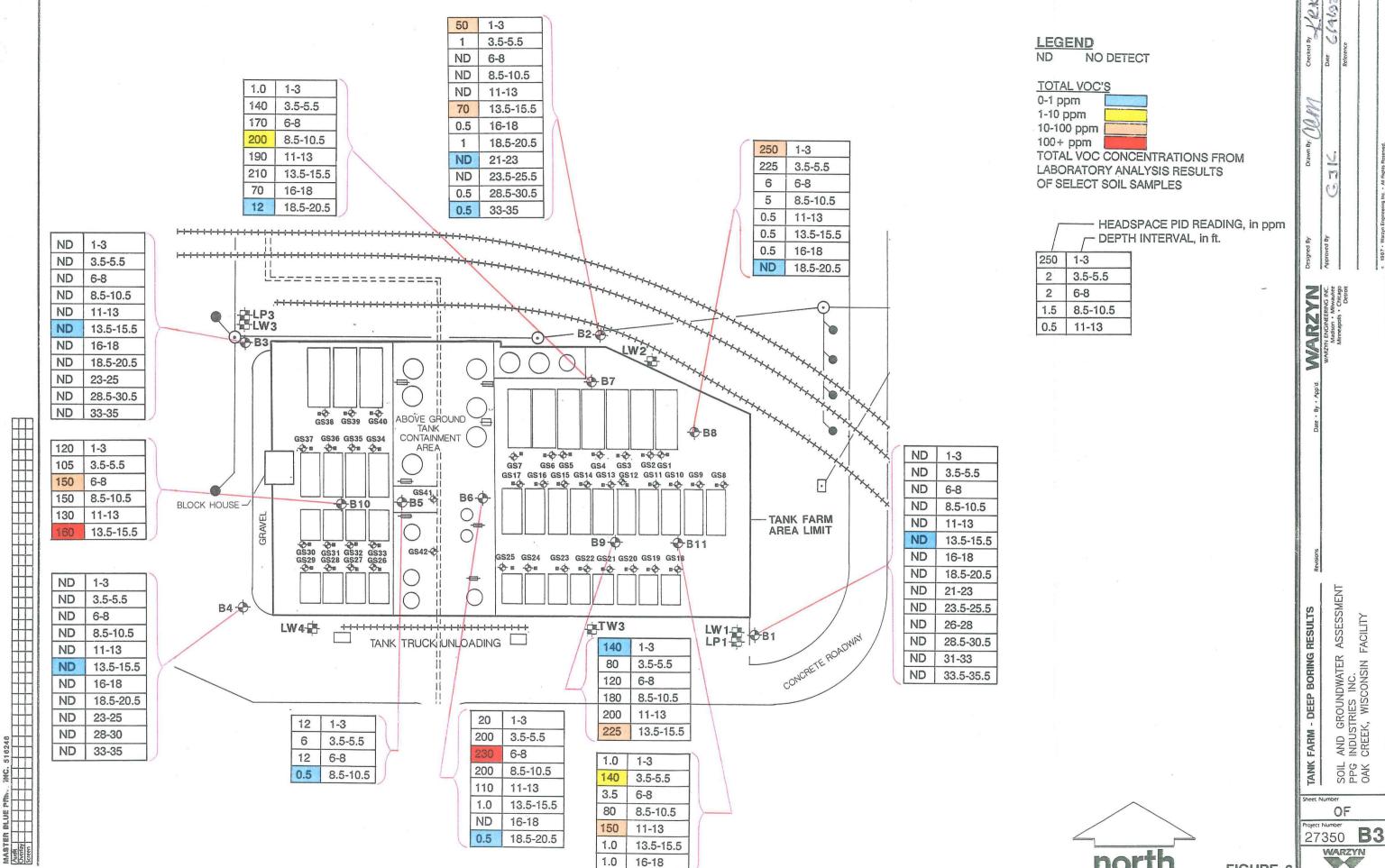
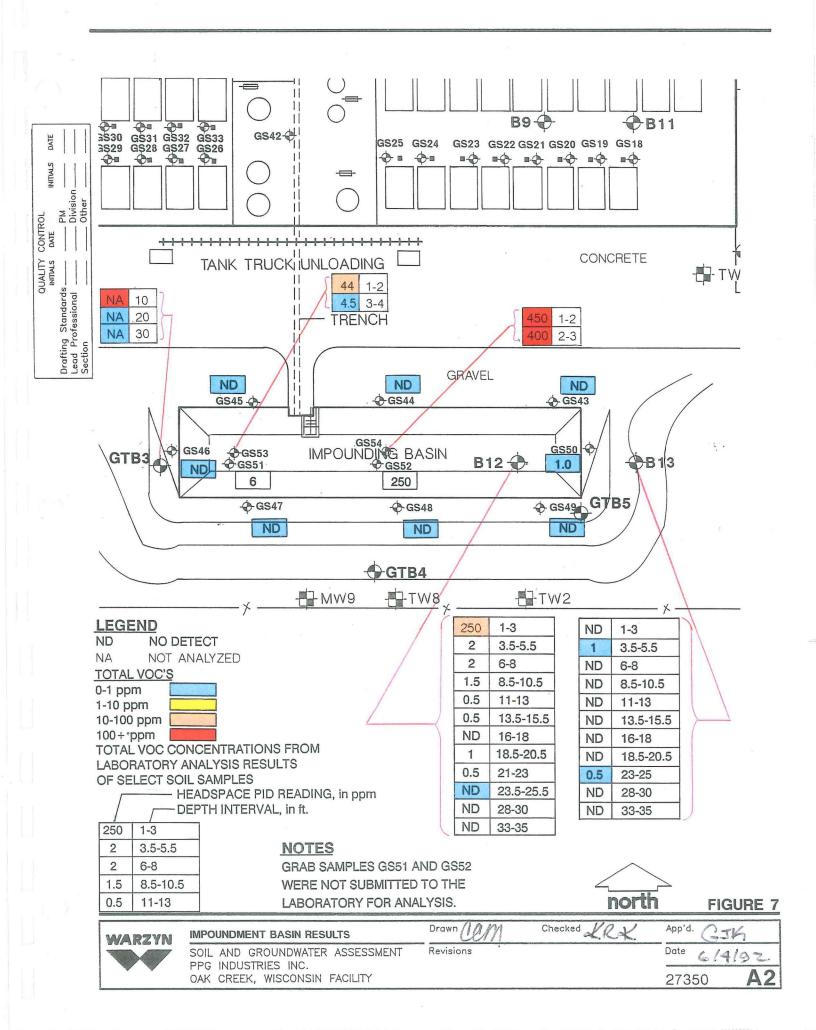
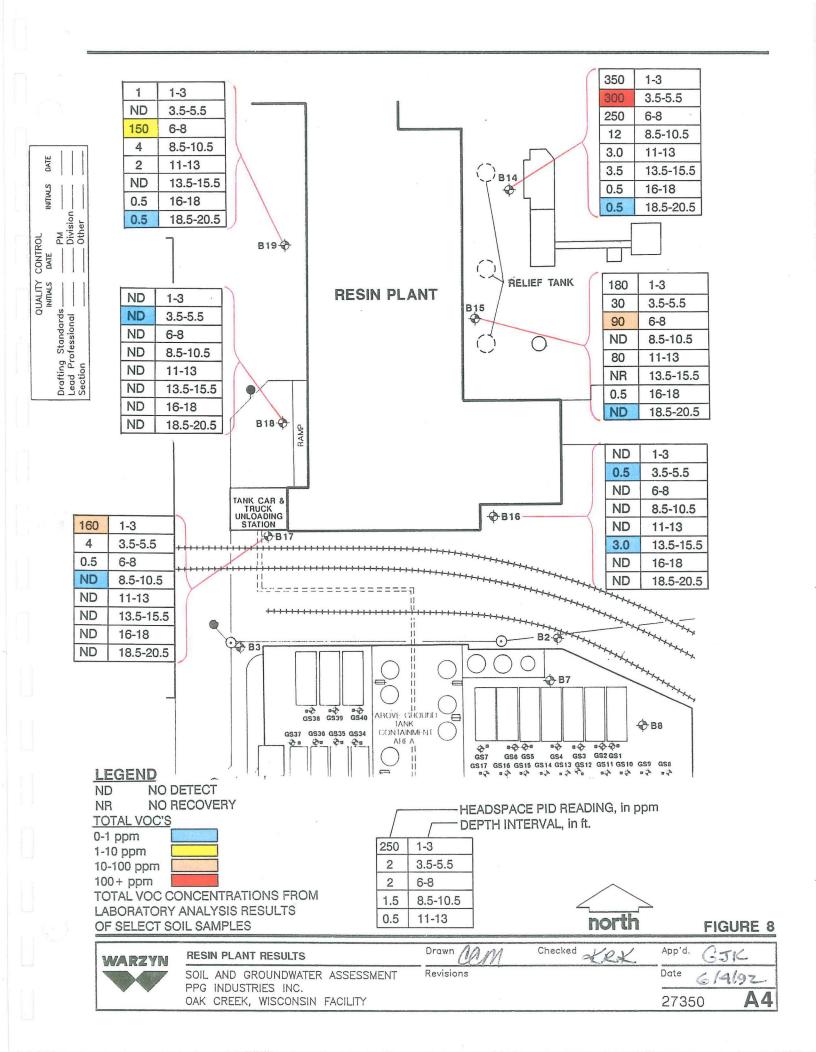


FIGURE 6





PERIODIC GROUNDWATER MONITORING

Firm: Geraghty & Miller, Warzyn

Year: 1988 to present

Type of Investigation:

Periodic Groundwater Monitoring

Scope of Work:

Periodic groundwater samples from various wells and the tank farm sump have been analyzed for various parameters over time. Analysis has included EPA Methods 602,624, 8240, 8260, 350.2 and 351.3. As well as ASTM Method D-3328.