THIRD QUARTER 2003 PROGRESS REPORT
VERNAY LABORATORIES, INC.
PLANT 2/3 FACILITY
YELLOW SPRINGS, OHIO

Project No. 0292.11.14

October 14, 2003

Prepared For

VERNAY LABORATORIES, INC.
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Yellow Springs, Ohio 45387

Prepared By

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VIA FEDERAL EXPRESS (*AM Priority)*

October 14, 2003

United States Environmental Protection Agency
Region 5
Corrective Action Section, DW-8J
77 West Jackson
Chicago, Illinois 60604

Attention: Ms. Patricia J. Polston, Project Manager
Waste Management Branch

Reference: Quarterly Progress Report (Third Quarter 2003)
Administrative Order on Consent
Vernay Laboratories, Inc.
Yellow Springs, Ohio
Project No. 0292.11.14

Dear Ms. Polston:

The Payne Firm, Inc. (Payne Firm) is pleased to submit, on behalf of Vernay Laboratories, Inc. (Vernay), the attached Progress Report for the Third Quarter 2003, as required by the Administrative Order on Consent (AOC) journalized by the United States Environmental Protection Agency (US EPA) on September 27, 2002.

We understand that the US EPA plans to provide this quarterly progress report on the US EPA's website at www.epa.gov/region5/sites/vernay. The electronic version of this quarterly progress report is also included on a CD-Rom in Appendix I.

Should you have any questions regarding the enclosed document, please contact either of us at (513) 489-2255 or by e-mail at dcc@paynefirm.com or ddw@paynefirm.com.

Sincerely,

The Payne Firm, Inc.

David C. Contant, C.P.G.
Project Manager

Daniel D. Weed, C.P.G.
Principal

cc: Mr. Doug Fisher – Vernay Laboratories, Inc.
Mr. Scott Doran – Vorys, Sater, Seymour and Pease
Mr. Joseph Lonardo – Vorys, Sater, Seymour and Pease
Mr. Rob Hillard – Village of Yellow Springs
Ms. Connie Collett – Yellow Springs Community Library

PROGRESS REPORT – THIRD QUARTER 2003
Vernay Laboratories, Inc. RCRA Corrective Action
Yellow Springs, Ohio

A. IDENTIFICATION OF FACILITY AND ACTIVITY

Vernay Laboratories, Inc. (Vernay) is under a 3008(h) Administrative Order on Consent (AOC), journalized September 27, 2002, to complete a United States Environmental Protection Agency (US EPA) Resource Conservation and Recovery Act (RCRA) Corrective Action for the Vernay Facility located at 875 Dayton Street in Yellow Springs, Ohio.

B. STATUS OF WORK AT THE FACILITY AND PROGRESS DURING THE QUARTER

The status of the work at the Facility and a summary of the progress made during the quarter are presented below.

1. As required by Section VI.13 of the AOC, Vernay, in consultation with the US EPA, has installed additional ground water monitoring wells in the Cedarville Aquifer and storm sewer backfill. The work was performed within portions of the 825 Dayton Street property and the Village of Yellow Springs' Right-of-Way along Dayton Street, Omar Circle, Wright Street, Suncrest Drive and Green Street. A total of eight additional Cedarville monitoring wells and one additional storm sewer monitoring well were installed following a Geoprobe® water sampling event. This work was completed between August 21 and September 11, 2003, and consisted of the following elements:

   Sewer Backfill Geoprobe® Sampling
   Geoprobe® borings were drilled along Dayton Street between the Facility and Limestone Street in order to determine the optimum location to install a monitoring well into the sewer backfill (Figure 1). This investigation consisted of utilizing a direct-push Geoprobe® rig to complete borings into the backfill material surrounding the sewer. Once the sewer backfill was identified by logging, a water sample was collected directly from within the borehole (if saturated); the hole was then abandoned to the ground surface in accordance with state guidelines. The water samples that were collected from the borehole were analyzed for volatile organic compounds (VOCs). A copy of the laboratory analytical report from this investigation is presented in Appendix I.

   Storm Sewer Monitoring Well Installation
   Following analyses of VOC results from the water within the storm sewer backfill, one monitoring well (MW02-12) was installed into the storm sewer backfill along Dayton Street (Figure 1). The monitoring well is located in an area of lowest VOC concentration based on the Geoprobe® sample data. Consistent with the existing storm sewer monitoring well on the Facility (MW01-13), the additional well on Dayton Street (MW02-12) was constructed of two inch diameter PVC with a five foot screen length.

   Also during this event, soil samples from native material (adjacent to and/or below the storm sewer backfill) were collected and analyzed for VOCs (boring locations GP02-53 and GP02-54, Figure 1). These soil borings were drilled to the top of the Cedarville Aquifer at the two locations exhibiting the highest VOC concentrations identified from the Geoprobe® water sampling in the backfill. A copy of the laboratory analytical report from this investigation is presented in Appendix I.

   Cedarville Aquifer Geoprobe® Sampling
   Ground water samples were collected from the top of the Cedarville Aquifer at the 825 Dayton Street property, Wright Street, Suncrest Drive, and Green Street using a Geoprobe® (Figure 1).

Results from this investigation provided information for optimum monitoring well placement into the Cedarville Aquifer. A copy of the laboratory analytical report from this investigation is presented in Appendix I.

Cedarville Aquifer Monitoring Well Installation

Following analyses of the VOC results from the Geoprobe® investigation of the upper Cedarville Aquifer, eight ground water monitoring wells were installed into the Cedarville Aquifer at locations on the 825 Dayton Street property, Omar Circle, Suncrest Drive, and Green Street using sonic drilling (Figure 1). The subsurface stratigraphy was cored and logged by a Payne Firm geologist. The monitoring wells are constructed of two inch diameter PVC with ten foot screen lengths placed within the upper, middle or deep portions of the Cedarville Aquifer. As required by Section VI.13 of the AOC, boring logs and well construction diagrams will be included in the Ground Water Technical Memorandum. The Technical Memorandum will be submitted to the US EPA by December 31, 2003.

At Omar Circle, a well screened in the deep portion of the Cedarville Aquifer (MW02-03SE) was installed adjacent to an existing shallow Cedarville Aquifer monitoring well, which is near the southern fringe of the contaminated ground water (MW02-03, Figure 1). The deep well screen at MW02-03SE also intersects the upper one foot of the Osgood Aquitard.

At the 825 Dayton Street property, a cluster of two wells (one shallow [MW02-11] and one deep well [MW02-11SE]) were installed downgradient of the Facility in the Cedarville Aquifer. At a separate location, a cluster of three Cedarville Aquifer wells (shallow [MW02-08], middle [MW02-08CD], and deep [MW02-08SE]) were constructed downgradient of wells on the Facility that contain elevated concentration of VOCs. As indicated on Figure 1, this cluster of three wells is positioned near the eastern portion of the 825 Dayton Street property. As with monitoring well MW02-03SE on Omar Circle, the deep well screens for these monitoring wells (MW02-08SE and MW02-11SE) also intersect the top one foot of the Osgood Aquitard.

At Suncrest Drive (MW02-09) and Green Street (MW02-10), a shallow monitoring well at each street location were installed in the upper portion of the Cedarville Aquifer at the approximate areas of highest VOC detections previously identified by the Geoprobe® investigation (Figure 1).

The additional Cedarville Aquifer and storm sewer monitoring wells located in streets are completed flush with the surface consistent with the existing wells located on Wright Street and Omar Circle. The top of the monitoring well PVC casing is completed below the road grade protected by a steel road guard. The Cedarville Aquifer monitoring wells at the 825 Dayton Street property are completed above ground with steel guard post protection. Well development was completed in accordance with Payne Firm SOPs. A licensed surveyor located the coordinates and elevations of the Geoprobe® and well locations following completion. Survey data for the new monitoring wells are included on Table 4.

2. As required by AOC Section VI.13., Vernay completed a ground water monitoring event during the third quarter of 2003. The monitoring event was conducted between September 10 and September 15, 2003. The objective of the quarterly monitoring program is to collect sufficient data to make the appropriate determinations required by the RCRA Ground Water and Human Health Environmental Indicators, to support the baseline risk assessment, and to evaluate corrective measures including the existing ground water extraction interim measure.

   - The monitoring network consists of 20 monitoring wells on the Facility and 16 monitoring wells located off of the Facility, all of which are screened in the upper, middle, or lower portions of the Cedarville Aquifer or within the sewer backfill. During this quarterly monitoring event, water

samples were collected from all 20 monitoring wells on the Facility property, and from all 16 monitoring wells off of the Facility property. Monitoring wells sampled during this event are shown on Figure 1.

- During this sampling event, water samples were analyzed for VOCs by US EPA Method SW846-8260B as indicated on Table 1. Water samples were not analyzed for metals (copper, chromium, and zinc) or for SVOCs during this monitoring event since these compounds were not detected above the laboratory reporting limits during the first and second quarterly monitoring events, respectively.
- The field activities associated with this monitoring event followed the project QAPP and the Payne Firm Standard Operating Procedures (SOPs), which are consistent with the May 2002 US EPA guidance document entitled *Ground Water Sampling Guidelines for Superfund and RCRA Project Managers*.
- Detected concentrations of VOCs from monitoring wells are summarized on Table 2. Detected concentrations of VOCs from QA/QC samples are also summarized on Table 3. An electronic version of the laboratory analytical report is included in Appendix I.
- The data quality assessment and validation process for the third quarter 2003 monitoring event followed procedures presented in Section 10.0 of the project QAPP. This process included the completion of a Data Validation Checklist , which is summarized in the Payne Firm October 10, 2003 Data Validation Memorandum (Appendix I). The data associated with the third quarter monitoring event exhibited acceptable levels of precision and accuracy, except for acetone, 2-butanone, and chloroform. Laboratory data associated with these compounds was rejected by the Payne Firm.

3. Data associated with the existing ground water interim measure were collected. These data include water level measurements from the Facility monitoring well network and collecting water samples analyzed for VOCs from the ground water treatment systems of the capture zone and the utility tunnel sump. Water level elevations are summarized in Table 4.

   Water samples collected from the capture zone treatment system included: 1) a sample at each wellhead (CW01-01 and CW01-02); 2) a sample after the first carbon vessel; and 3) a system effluent sample after treatment. Likewise, samples collected from the utility tunnel sump treatment system included: 1) a pre-treatment sample; 2) a sample after the first carbon drum; and 3) a post-sump sample after treatment. The VOC data collected from the two treatment systems are summarized on Tables 5 and 6, respectively. Electronic versions of the laboratory analytical reports are included in Appendix I.

4. Vernay and its technical representatives participated in a meeting with the US EPA representatives on July 8, 2003 at the US EPA's office in Chicago. The purpose of the meeting was to discuss the conceptual site model for risk and proposed monitoring well locations and construction methodology.

5. Vernay planned for a survey of water wells in the vicinity of the Facility.

C. PROBLEMS ENCOUNTERED DURING THE QUARTER

No difficulties were encountered during this quarter.

D. ACTIONS TAKEN TO RECTIFY PROBLEMS

No actions to rectify problems were required this quarter.

E. PROJECT SCHEDULE

The following activities are planned for next quarter (Q4-2003).

- Conduct the fourth quarterly monitoring event on and off the Facility.
- Continue monthly monitoring of existing interim measures.
- Initiate a water well and subsurface structure survey in the vicinity of the Vernay facility.
- Prepare a Ground Water Technical Memorandum, as required by Section VI.13 of the AOC.
- Plan for additional Cedarville Aquifer investigation on and off the Facility.
- Plan for additional soil investigation on and off the Facility.

A project schedule showing the percent project completed is included in Table 7.

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