UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION III

STATEMENT OF BASIS

FORMER TRW DANVILLE SITE

Danville, Pennsylvania

EPA ID NO. PAD003037934

Prepared by
Office of Pennsylvania Remediation
Land and Chemicals Division
August, 2015

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Section 1: Introduction

The United States Environmental Protection Agency (EPA) has prepared this Statement of Basis (SB) to solicit public comment on its proposed remedy for the former TRW Inc. facility located at 601 East Market Street, Danville, Pennsylvania 17821 (Facility), which is subject to EPA's Corrective Action program under the Solid Waste Disposal Act, as amended, commonly referred to as the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Sections 6901 et seq. Pursuant to 40 C.F.R. § 124.7. EPA has prepared this SB to describe the background and basis for the proposed remedy.

EPA is providing a 30-day public comment period on this SB and may modify its proposed remedy based on comments received during this period. EPA will announce its selection of a final remedy for the Facility in a Final Decision and Response to Comments (Final Decision) after the comment period has ended.

Information on the Corrective Action program, a fact sheet, and the Government Performance and Results Act Environmental Indicator Determinations for the Facility can be found by navigating http://www.epa.gov/reg3wcmd/correctiveaction.htm.

The Administrative Record (AR) for the Facility contains all documents, including data and quality assurance information, on which EPA's proposed remedy is based. See Section VIII, Public Participation, for information on how you may review the AR.

Section 2: Facility Background

The Facility was originally constructed in the late 1880s to manufacture rolled steel and steel parts. In 1952, TRW, Inc. (TRW) acquired the Facility and manufactured valves for internal combustion engines. Northrop Grumman Systems Corporation (Northrop Grumman) acquired the Facility in 2002 and subsequently sold it to TRW Automotive (TRWA) in 2003. In 2007, TRWA sold the Facility to MBC Development, LP.

The Facility property consists of 15 acres. Figure 1 shows the Facility location. Approximately 500,000 square feet of the Facility is covered with buildings and asphalt paving with the remaining 150,000 square feet consisting of vegetated cover. Figure 2 is a map of the Facility. The Facility is bordered by a mixture of residential, commercial, and light industrial use properties. The Susquehanna River is located approximately 1000 feet from the Facility.

Section 3: Summary of Environmental Investigations

3.1 Environmental Investigations and Remedial Activities

A total of 20 tanks and 6 Waste Disposal Pits (WDPs) were historically used on site for storage of raw materials and wastes. Of the 20 tanks, 14 were Underground Storage Tanks (USTs) and 6 were Aboveground Storage Tanks (ASTs). The types of wastes known to have been stored include gasoline, Varsol ®, kerosene, fuel oil, cutting oil, hydraulic oil and waste oil.

WDPs 17 and 18 were removed in 1972. The WDPs were excavated, backfilled with soil, and covered with asphalt pavement. No soil or groundwater samples were taken at this time. Eleven USTs (2-9 and 12-14) and 2 WDPs (10 and 11) were tested and removed in 1986. Confirmatory samples collected exhibited concentrations of oil and grease above 15,000 mg/kg. The Pennsylvania Department of Environmental Protection (PADEP) was notified of the soil contamination on April 14, 1986 and oversaw the resulting investigative and remedial activities.

In 1987 a remedial investigation was initiated to determine the extent of soil and groundwater impacts. A total of 33 soil borings and 26 groundwater monitoring wells were completed within the areas of concern. Samples were analyzed for volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), and petroleum hydrocarbons. Soil was found to be impacted by VOCs and PCBs. Light non-aqueous phase liquid (LNAPL) was found in several wells and groundwater was found to be impacted by VOCs.

Remedial activities to address groundwater contamination were initiated in 1988. A bentonite slurry wall was constructed to hydraulically control impacted perched groundwater flow to Sechler's Run located just beyond the Northeastern side of the Facility. In addition, an asphalt cap was constructed from the Facility building to the slurry wall to minimize rainwater infiltration in the area. Figure 3 shows the extent of the slurry wall and asphalt cap. In 1989, a groundwater pump and treatment (P&T) system was installed. The objectives of the P&T system were to hydraulically contain, and reduce concentrations of, impacted groundwater. A total of 11 groundwater extraction wells were installed at the Facility. The number of extraction wells was modified on multiple occasions to optimize the system performance and expedite remedial progress. In 2006, due to negligible continued LNAPL removal, the system was shut down. More than 10,000 gallons of LNAPL and 29,000 lbs of VOCs were recovered during the operational period between 1989 and 2006.

A soil vapor extraction (SVE) system was installed in 1990 and operated until 1997. The location was in the approximate area of WDPs 17-21 and can be seen on Figure 2. The purpose was to reduce VOC impacts in the northern portion of the Facility. More than 2,100 pounds of trichloroethene (TCE) was removed during the operational period.

An Administrative Consent Order was executed between PADEP and TRW on February 24, 1994 to formalize the groundwater P&T system. An ACO amendment was executed on October 24, 2000 to incorporate the PADEP Land Recycling and Environmental Remediation Standards Act (Act 2)), 35 P.S. Sections 6026.101 *et seq*., program Notice of Intent to Remediate (NIR) to Site-Specific Standards submitted by TRW on December 14, 1999.

In July 2002, TRW submitted a Remedial Investigation and Risk Assessment Report (RIRAR) to address the ACO and Act 2 requirements. PADEP cited insufficiencies in several areas and disapproved the RIRAR on October 28, 2002.

To address PADEP's comments on the RIRAR, TRW performed the following activities between 2002 and 2009:

- Installed additional monitoring wells and collected additional soil samples to further delineated LNAPL and VOC impacts and,
- Evaluated indoor air quality,
- Evaluated natural attenuation mechanisms,
- Evaluated potential impacts to the Susquehanna River,
- Further investigated the WDPs 17/18 area and implemented a steam-enhanced interim remedial measure (IRM), and
- Continued groundwater monitoring.

The nature and extent of the LNAPL and VOC impacts were characterized by the additional soil and groundwater samples collected. Soil and groundwater sampling results were compared to the PADEP Act 2 Statewide Health Standard (SHS) residential and non-residential Medium-Specific Concentrations (MSCs). The Facility soils do not exceed the MSCs for non-residential ingestion and dermal direct contact exposure. Facility soils exceed only PADEP's soil-to-groundwater MSCs. LNAPL was determined to be a residual source of impact to groundwater from the WDP 17/18 area. Groundwater continued to be impacted by VOCs but PCB analysis was discontinued with PADEP approval in January 2006 due to low to non-detect results. Figure 4 shows the area of soil impacts. Figures 5&6 show the area of groundwater impacts to the shallow and deep aquifers, respectively. Figure 7 shows the area of LNAPL impacts. These figures were developed using RIRARCP data and do not reflect subsequent remedial progress made by implementing additional remedial measures pursuant to the Cleanup Plan as summarized below.

Indoor air quality was evaluated in December 2006 via collection of indoor air and sub-slab soil gas samples near the WDP 17/18 area; in the main warehouse building, Former Steel Room, and the office area; and a background location. Results were compared to PADEP's indoor air MSCs for non-residential use. One indoor air sample exceeded PADEPs MSC for Trichloroethylene at a location overlying the former WDP 17/18 area.

In 2009, Northrop Grumman submitted an IRM Completion Report for the Former Pit 17/18 Area. The IRM operated from January 2008 until May 2009 and was designed to reduce residual VOC source mass and LNAPL in the former Pit 17/18 Area. Based on continuous monitoring, the IRM was shut down due to decreasing mass removal rates of VOCs and decreasing trends in LNAPL recovery. As a result of the IRM, approximately 19,500 lbs of VOCs and 12,700 gallons of LNAPL were removed. Up to 90 percent of the source area VOC concentrations were effectively removed during the IRM operational period.

In June 2010, Northrop Grumman submitted a Remedial Investigation, Risk Assessment & Cleanup Plan (RIRARCP) which summarized the investigation activities and monitoring results of the activities discussed above that occurred between 2002 and 2009. A Conceptual Site Model (CSM) was developed using the collective historical data and information in the RIRARCP. Potential sources, exposure pathways, and receptors for current and future uses were determined and are diagrammed on Figure 3.

Using the CSM, a human health and ecological risk assessment (HHERA) was prepared for the Facility as part of the RIRARCP and in accordance with PADEP regulations and EPA guidance. The HHERA concluded that the presence of residual impacts in the subsurface will not cause any adverse impacts to human health or the environment. The assumptions made in the HHERA based on the CSM and RIRARCP data are that contaminated soils are covered by impermeable surfaces (the asphalt cap and building slabs), the slurry wall prevents migration to Sechler's Run, LNAPL has not migrated beyond the source area, groundwater is not used, and the Facility use will remain industrial. Constituents of Concern (COCs) were identified and screened against EPA Region 3 Regional Screening Levels (RSLs). Potentially complete exposure pathways were identified and site-specific standards (SSSs) were developed for the individual COCs. Table 1 is a list of the COCs identified and table 2 are the SSSs calculated and evaluated in the HHERA.

Natural attenuation was evaluated as part of a fate and transport evaluation in the RIRARCP. Referencing groundwater monitoring data and concentration trend graphs presented in the RIRARCP, it was determined that the biotic and abiotic transformation, adsorption and retardation, dilution, and volatilization natural attenuation processes are all occurring which continue to help reduce overall concentrations of the residual VOCs.

Potential impacts to the Susquehanna River were also evaluated using the *Pennsylvania Single Discharge Wasteload Allocation Computer Program for Toxic Substances* (PENTOXSD) model to calculate surface water concentrations using groundwater COC concentration data. The results of the PENTOXSD evaluation indicates that surface water concentrations for the identified COCs would be below PADEP's Chapter 16 *Water Quality Criteria for Toxic Substances* (25 § 16.102) and EPA's National Recommended Water Quality Criteria for both human health and aquatic life.

Additionally, the RIRARCP provided a Cleanup Plan (CP) for mitigating potential risks which outlined proposed remedial action goals and attainment demonstration criteria for all impacted media. The CP proposed shutting down the P&T system and monitoring groundwater to demonstrate stabilization of groundwater and attainment with the SSSs, completing SSS soil attainment sampling in the former WDP 17/18 Area, demonstrating via indoor air sampling that indoor air will meet PADEP MSCs, and executing an environmental covenant. The RIRARCP was approved by PADEP in August 2010.

Thirteen quarters of groundwater monitoring occurred from 2011 through 2014 to demonstrate attainment. Monitoring results indicate that groundwater COC concentrations remain below the SSS and trend analyses show stable or decreasing trends for each COC at each individual well. Complete monitoring data and trend analyses and graphs are included in the quarterly Groundwater Monitoring Reports included in the AR.

In February 2011, Northrop Grumman submitted a Summary of Soil Attainment Sampling Scope and Results to PADEP. Soil attainment sampling was performed on December 13 and 14, 2010. Soil sampling results indicated that all VOC concentrations were below the PADEP non-residential direct contact MSCs, the calculated soil-to-groundwater site-specific standards, and that PCBs were below the MSCs.

On January 30, 2012, TRW requested to enter into the One Cleanup Program as described in the April 2004 Memorandum of Agreement (MOA) between EPA and PADEP. This MOA which describes how facilities can be remediated under Act 2 while simultaneously satisfying federal Corrective Action obligations. EPA and PADEP entered the Facility into the One Cleanup Program on June 24, 2013.

On November 5, 2013, Northrop Grumman submitted a Cleanup Plan to PADEP to install a vapor mitigation system in the Former Steel Room to address the indoor air TCE exceedance noted in the RIRARCP. PADEP approved the Cleanup Plan on November 8, 2013. A passive sub-slab depressurization system (PSSDS) was installed in mid-November 2013 and was operational in January 2014. In July 2014, Northrop Grumman submitted a Vapor Intrusion (VI) Attainment Demonstration Report. VI samples were taken in February and March 2014 and were below PADEP's non-residential indoor air MSCs.

An Act 2 Final Report (FR) was submitted in July 2014. The FR summarized the activities described above that were completed to demonstrate that the Facility has been remediated to Act 2 standards. EPA and PADEP reviewed the FR and requested additional information to confirm off-site vapor intrusion of TCE is not a concern, since the Johnson & Ettinger (J&E) model was used in the FR, as well as to confirm 1,4-Dioxane attainment. A supplemental field investigation was performed in November 2014. Northrop Grumman used EPA's Vapor Intrusion Screening Level (VISL) calculator which incorporates updated TCE toxicity information (not accounted for in J&E model) in conjunction with EPA's Draft Vapor Intrusion Screening Guidance to determine groundwater and indoor air concentrations that

would not cause an indoor air risk using site-specific information. The VISL TCE VI indoor air screening level is 21 ug/m^3 corresponding to a 10^{-5} risk in a residential exposure scenario. The investigation results showed that no soil gas samples exceeded this screening level. 1,4-Dioxane sampling was also performed in November 2014 and the maximum groundwater concentration is within EPAs acceptable RSL risk range.

An Act 2 Final Report addendum was submitted in January 2015 to include the supplemental field investigation work described above. A post-remediation care plan was included in the FR which proposes that an environmental covenant be executed to include prohibiting groundwater use, restricting the Facility to non-residential use, and maintenance requirements for the slurry wall, passive sub-slab depressurization system, and asphalt cap. The Final Report was approved by PADEP on March 2, 2015. EPA has reviewed and agrees with the conclusions and recommendations in the Final Report.

PADEP approval of the Final Report required an Environmental Covenant pursuant to the Pennsylvania Uniform Environmental Covenants Act, 27 Pa. C.S. Sections 6501-6517, (UECA) to be recorded with the deed for the Facility. On June 12, 2015, MBC Danville, LP, as the current owner, recorded an Environmental Covenant (2015 Environmental Covenant) on the deed to the Facility property with land and groundwater use restrictions including the following:

A. Land use is limited to industrial and commercial activities (excludes schools, nursing homes, day care centers, and other residential style facilitates and recreation areas), as well as limits on digging and excavation activities.

B. Groundwater use is prohibited for any purpose. The Borough of Danville Ordinance No. 507 prohibits groundwater use.

C. Routine inspections and reporting to confirm compliance with the engineering and institutional controls.

D. Ensure that the physical integrity of the PSSDS vent piping, stacks, and wind turbines in the Former Steel Room is intact and the wind turbines are functional.

E. Ensure the existing asphalt/building coverage remains in place.

F. Ensure that no intrusive disturbance of the asphalt/soils overlying the slurry wall has occurred.

3.3 EPA Assessment

The investigations discussed in the previous sections were completed under PADEP oversight pursuant to PADEP's Act 2 Program. Soil and groundwater sampling results in those reports were initially compared to Act 2 MSCs. For the COCs listed on Table 1, direct contact soil standards are equivalent to EPA's RSLs and groundwater standards are equivalent to EPA's MCLs. As part of the HHERA, site-specific standards (SSSs) for groundwater and soil-to-groundwater were calculated and evaluated in accordance with EPA guidelines. All COCs were below these SSSs which are within EPA's acceptable risk range for Corrective Action. EPA concurs with the conclusions and recommendations contained in the HHERA. Therefore, the presence of residual impacts will not cause any adverse health effects to the exposed population. Additionally, the ecological screening evaluation indicates that there is not an unacceptable risk to ecological receptors.

The aquifer under the Facility is not a current or potential source of drinking water. Well searches were conducted in 1987, 2001, and 2007. Results indicate that there are no wells at risk of being receptors to contamination from the Facility. Furthermore, Ordinance No. 507 was adopted by the Borough of Danville on July 10, 2012 that prohibits well installation and groundwater use within the Borough for domestic and agricultural use. The reason the Ordinance was enacted was that the Borough was aware that the groundwater had become contaminated by hazardous substances from several facilities and that a prohibition on the use of wells was necessary to protect public health.

In summary, Facility source areas that have impacted soil, soil gas, and groundwater have been removed to the maximum extent practicable. The environmental investigations and risk assessment discussed above have shown that residual contamination is within EPA's Corrective Action risk range as long as the Facility remains industrial use; the groundwater use restrictions are upheld; and the asphalt cap, passive sub-slab depressurization system, and slurry wall are maintained. Groundwater sampling results and statistical trend graphs have demonstrated that the contaminated groundwater meets calculated SSSs, is not migrating, is naturally degrading, and does not impact the Susquehanna River.

Section 4: Corrective Action Objectives

EPA's Corrective Action Objectives for the specific environmental media at the Facility are the following:

1. Groundwater

EPA expects final remedies to return usable groundwater to its maximum beneficial use

within a timeframe that is reasonable given the particular circumstances of the project. For projects where aquifers are either currently used for water supply or have the potential to be used for water supply, EPA will use the National Primary Drinking Water Standard Maximum Contaminant Levels (MCLs) promulgated pursuant to Section 42 U.S.C. §§ 300f et seq. of the Safe Drinking Water Act and codified at 40 CFR Part 141.

However, EPA has determined that the aquifer under the former Facility is not a current or potential source of drinking water. It is contaminated with industrial contamination from historical industrial operations in the region. The Borough is aware of this regional contamination and has prohibited the use of wells in order to protect public health. Furthermore, groundwater is not used at the Facility for drinking water and no downgradient users of off-site groundwater exist as determined by the well searches and the Borough Ordinance. Therefore, EPA's Corrective Action objectives detailed below are based on the findings of the HHERA and groundwater attainment sampling.

EPA has determined that the risk-based site-specific groundwater concentration levels calculated in the HHERA for groundwater are protective of human health and the environment for the COCs at this Facility given that the aquifer is not a potential source of drinking water.

As such, EPA's Corrective Action Objectives for Facility groundwater are to:

a. Maintain the risk based site-specific cleanup levels developed in the HHERA as shown in Table 2; and
b. As long as contaminants remain in the groundwater above applicable MCLs, control exposure to the hazardous constituents remaining in the groundwater by requiring compliance with and maintenance of groundwater use restrictions; and
c. Prevent potential migration of perched groundwater to Sechler's Run by maintaining the slurry wall.

2. Soil

PADEP's direct contact MSCs for non-residential usage meet or are more conservative than EPA's acceptable risk range for non-residential usage. Site-specific soil-to-groundwater standards calculated as part of the HHERA are protective of human health and the environment for individual contaminants at the Facility provided that the Facility is not used for residential purposes. Given that the current and reasonably anticipated future use of Facility property is industrial and that Facility soils have met PADEP's direct contact MSCs and site-specific soil-to-groundwater standards shown in Table 2, EPA's Corrective Action Objectives for soils are:

a. Eliminate the exposure to the impacted soil by maintaining the asphalt cap; and

b. Prohibit future residential use based on risk based cleanup levels achieved and current and future use risk exposure assumptions.

3. Indoor Air

One indoor air sample from the Former Steel Room exceeded PADEP's non-residential indoor air MSC for TCE in 2006. To address this, a passive sub-slab depressurization system was installed in 2014 and VI samples taken in February and March 2014 were below PADEP's non-residential indoor air MSCs.

Therefore, EPA's Corrective Action Objectives for Facility indoor air is to:

a. Prevent residual VOCs from entering indoor air by maintaining the passive sub-slab depressurization system.

Section 5: Proposed Remedy

EPA's proposed remedy is to require the Facility to 1) comply with the requirements of and 2) maintain the land and groundwater use restrictions in the 2015 Environmental Covenant.

Section 6: Evaluation of Proposed Remedy

This section provides a description of the criteria EPA used to evaluate the proposed remedy consistent with EPA guidance. The criteria are applied in two phases. In the first phase, EPA evaluates three decision threshold criteria as general goals. In the second phase, for those remedies which meet the threshold criteria, EPA then evaluates seven balancing criteria.

Threshold Criteria	Evaluation
1) Protect human health and the environment	EPA's proposed remedy protects human health and the environment by eliminating, reducing, or controlling potential unacceptable risks. The HHERA evaluated all exposures to human health and the environment and concluded that residual impacts will not cause adverse impacts to human health or the environment. EPA's proposed remedy for the Facility protects

	potentially open pathways through the adherence to land and groundwater use restrictions established under the 2015 Environmental Covenant at the Facility.
2) Achieve media cleanup objectives	EPA's proposed remedy meets the media cleanup objectives based on assumptions regarding current and reasonably anticipated land and water resource uses. The remedy proposed in this SB is based on the current and future anticipated land use at the Facility as non-residential. The groundwater is unsuitable as a current or potential drinking water source and site specific cleanup objectives for groundwater and soils were met.
3) Remediating the Source of Releases	In all proposed remedies, EPA seeks to eliminate or reduce further releases of hazardous wastes and hazardous constituents that may pose a threat to human health and the environment. The Facility has met this objective. The sources have been excavated and remediated to the maximum extent practicable.

Balancing Criteria	Evaluation
4) Long-term effectiveness	The current and reasonably anticipated use of the Facility is non-residential. In addition, groundwater is not used at the Facility for drinking water, no downgradient users of off-site groundwater exist, and a city ordinance prohibits groundwater use. Therefore, the long-term effectiveness of the remedy for the Facility will be maintained by the implemented land and groundwater use controls.
5) Reduction of toxicity, mobility, or volume of the Hazardous Constituents	The reduction of mobility and volume of hazardous constituents has been achieved to the maximum extent practicable as demonstrated by the remedial activities and data from the soil and groundwater monitoring.
6) Short-term effectiveness	EPA's proposed remedy does not involve any activities, such as construction or excavation, that would pose short-term risks to workers, residents, and the environment. The land and groundwater use restrictions have already been implemented through the 2015 Environmental Covenant.

7) Implementability	The land and groundwater use restrictions have already been implemented through the enforceable 2015 Environmental Covenant.
8) Cost	An Environmental Covenant has already been recorded in the chain of title of the deed to the Facility property. The costs associated with this proposed remedy including the maintenance of the asphalt cap and passive vapor mitigation system and inspection of the slurry wall are minimal (estimated cost of less than $10,000 per year). Therefore, EPA's proposed remedy is cost effective.
9) Community Acceptance	EPA will evaluate Community acceptance of the proposed remedy during the public comment period and will be described in the Final Decision and Response to Comments.
10) State/Support Agency Acceptance	PA was the lead agency for the remediation at this Facility with input from EPA. PADEP has reviewed and approved the Final Report, the June 2015 Environmental Covenant, and associated remedial activities and use restrictions for the Facility. EPA, therefore, expects State acceptance of the proposed remedy.

Section 7: Financial Assurance

EPA has evaluated whether financial assurance for corrective action is necessary to implement EPA's proposed remedy at the Facility. Given that EPA's proposed remedy does not require any further actions to remediate soil, groundwater or indoor air contamination, the costs of implementing land and groundwater use restrictions at the Facility have already been incurred, and the maintenance costs of the asphalt cap and passive vapor mitigation system and inspection of the slurry wall is minimal, EPA is proposing that no financial assurance be required.

Section 8: Public Participation

Interested persons are invited to comment on EPA's proposed remedy. The public comment period will last 30 calendar days from the date that notice is published in a local newspaper. Comments may be submitted by mail, fax, e-mail, or phone to Mr. Kevin Bilash at the address listed below.

A public meeting will be held upon request. Requests for a public meeting should be

made to Mr. Kevin Bilash at the address listed below. A meeting will not be scheduled unless one is requested.

The Administrative Record contains all the information considered by EPA for the proposed remedy at this Facility. The Administrative Record is available at the following location:

U.S. EPA Region III
1650 Arch Street
Philadelphia, PA 19103
Contact: Kevin Bilash (3LC30)
Phone: (215) 814-2796
Fax: (215) 814 - 3113
Email: bilash.kevin@epa.gov

Section 9: Signature

Date: _____ _____

John A. Armstead, Director
Land and Chemicals Division
US EPA, Region III

Attachments:

Figure 1: Facility Location
Figure 2: Map of Facility
Figure 3: Extent of slurry wall and asphalt cap
Figure 4: Extent of soil impacts
Figure 5: Extent of shallow groundwater impacts
Figure 6: Extent of deep groundwater impacts
Figure 7: Extent of LNAPL impacts
Figure 8: Conceptual Site Model

Table 1: Constituents of Concern
Table 2: Site-specific Standards

Section 10: Index to Administrative Record

Remedial Investigation & Risk Assessment Report, Geoservices – 2002

Interim Remedial Measure Completion Report Former Pit 17/18 Area, CDM Smith – October 2009

Remedial Investigation, Risk Assessment & Cleanup Plan, CDM Smith – June 2010

Quarterly Groundwater Attainment Monitoring Reports, CDM Smith – 2011 thru 2014

Summary of Sub-slab Soil Vapor Sampling Scope & Results, CDM Smith– 14 January 2011

Summary of Soil Attainment Sampling Scope & Results, CDM Smith - 16 February 2011

Supplemental Soil Attainment Sampling Results, CDM Smith – February 2012

Cleanup Plan – Vapor Mitigation System, Panther Technologies, Inc. – November 5, 2013

Vapor Intrusion Attainment Demonstration, Brown and Caldwell – July 2014

EPA VISL Calculator Results, EPA - March 2014

Act 2 Final Report, Brown and Caldwell – June 2014

Act 2 Final Report Addendum, Brown and Caldwell – January 2015

Environmental Covenant, MBC Danville, LP - recorded June 12, 2015

Figures

Table 1

Constituents of Concern

Soil	Groundwater
Chloroethane	Chloroethane
1,1-Dichloroethane	1,1-Dichloroethane
1,1-Dichloroethylene	1,1-Dichloroethylene
cis-1,2-Dichloroethylene	cis-1,2-Dichloroethylene
1,4-Dioxane	1,4-Dioxane
Methylene Chloride	Methylene Chloride
Tetrachloroethylene	Tetrachloroethylene
1,1,1-Trichloroethane	1,1,1-Trichloroethane
Trichloroethylene	Trichloroethylene
Vinyl Chloride	Vinyl Chloride

Table 2

Site-Specific Standards

COC	Site-Specific Groundwater Standard (ug/L)	Site-Specific Soil Standard (mg/kg)
Chloroethane	69,464	1,501
1,1-Dichloroethane	1,091	26
1,1-Dichloroethylene	255	7
cis-1,2-Dichloroethylene	1,484	35
1,4-Dioxane	5,934	78
Methylene Chloride	721	11
Tetrachloroethylene	449	39
1,1,1-Trichloroethane	8,135	294
Trichloroethylene	1,988	68
Vinyl Chloride	28	0.38