

**FIRST FIVE-YEAR REVIEW REPORT FOR
NORTH PENN – AREA 2 SUPERFUND SITE
MONTGOMERY COUNTY, PENNSYLVANIA**



MAY 2017

Prepared by

**U.S. Environmental Protection Agency
Region 3
Philadelphia, Pennsylvania**

A handwritten signature in blue ink, reading "Karen Melvin", is positioned above the printed name.

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MAY 7 2017

Date

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LIST OF ABBREVIATIONS & ACRONYMS

ARAR	Applicable or Relevant and Appropriate Requirement
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COC	Contaminant of Concern
DCE	Dichloroethylene
EPA	United States Environmental Protection Agency
ERM	Environmental Resources Management
FYR	Five-Year Review
HQ	Hazard Quotient
HTMA	Hatfield Township Municipal Authority
IC	Institutional Control
ICAP	Institutional Control Assurance Plan
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
µg/L	Micrograms per Liter
mg/kg	Milligrams per Kilogram
MW	Monitoring Well
NCP	National Contingency Plan
NPL	National Priorities List
O&M	Operation and Maintenance
OU	Operable Unit
PCE	Tetrachloroethylene
Penn Color	Penn Color, Inc.
PFAS	Perfluoroalkyl substance
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctane sulfonate
POTW	Publicly Owned Treatment Works
PRP	Potentially Responsible Party
PW	Pumping Well
RAO	Remedial Action Objective
RBC	Risk-based Concentration
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RSL	Regional Screening Level
TCE	Trichloroethylene
UU/UE	Unrestricted Use / Unrestricted Exposure
VISL	Vapor Intrusion Screening Level
VOC	Volatile Organic Compound

I. INTRODUCTION

The purpose of a five-year review (FYR) is to evaluate the implementation and performance of a remedy to determine if the remedy is and will continue to be protective of human health and the environment. The methods, findings and conclusions of reviews are documented in FYR Reports such as this one. In addition, FYR Reports identify issues found during the review, if any, and document recommendations to address them.

The U.S. Environmental Protection Agency (EPA) is preparing this FYR pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121, consistent with the National Contingency Plan (NCP) (40 CFR Section 300.430(f)(4)(ii)), and considering EPA policy.

This is the first FYR for the North Penn – Area 2 Superfund site (the Site). The Site was originally listed as four operable units (OUs). Remedial investigations determined that out of the four OUs (eight properties), the 87-acre former AMETEK facility was the only property with contamination that warranted a response action (see Appendix C for additional background information). Therefore, the Site now consists of one OU (which the ROD simply refers to as the “Site”) which will be addressed in this FYR. The triggering action for this statutory review is the on-site construction start date of the remedial action for the Site. It addresses site groundwater, soil and wetland. The FYR has been prepared because hazardous substances, pollutants or contaminants remain at the Site above levels that allow for unlimited use and unrestricted exposure (UU/UE).

The FYR was led by EPA Remedial Project Manager William Geiger. Participants included Ryan Bower (EPA hydrogeologist), Martin Gehlhaus (EPA toxicologist), Bruce Pluta (EPA Biological Technical Assistance Group), Darriel Swatts (EPA Community Involvement Coordinator), Dustin Armstrong and Bonnie McClennen (Pennsylvania Department of Environmental Protection (PADEP)), and Alison Cattani and Kirby Webster (Skeo). The review began on 7/13/2016. Appendix A provides documents reviewed as part of this FYR.

Site Background

The 87-acre Site is located in Hatfield Township in Montgomery County, Pennsylvania (Figure D-1). From 1963 to 1986, the Site was operated by AMETEK and manufactured precision springs, reels, and measuring and controlling apparatus. Trichloroethylene (TCE) was used as a degreasing solvent. The former AMETEK facility had a wastewater system that included a settling basin, several sumps and two neutralizing lagoons on the southeast portion of the Site (Figure D-2). Historic operation of the wastewater system and sumps, as well as the former TCE storage tank, resulted in impacts to soil and groundwater at the Site, primarily by volatile organic compounds (VOCs) and metals, such as cadmium. On June 28, 1988, Penn Color, Inc. (Penn Color) purchased the property from AMETEK and continues to operate an ink, color and coating manufacturing facility at the Site. A detailed site chronology is provided in Appendix B. Additional background information is provided in Appendix C.

Land use in the area is light industrial. A commuter railroad is located immediately west of the Site. An intermittent tributary, Western Tributary to Neshaminy Creek, flows through the Site. Groundwater occurs in a bedrock aquifer, consisting of shallow, intermediate and deep zones. Groundwater flow direction in the absence of pumping is generally to the south. As part of the 2005 remedial investigation, a well survey located 11 off-site private drinking water wells within a half mile of the source area at the Site. The survey found 11 properties in the area that had private drinking water wells. Sampling did not detect site-related contamination in drinking water wells.

FIVE-YEAR REVIEW SUMMARY FORM

SITE IDENTIFICATION		
Site Name: North Penn – Area 2		
EPA ID: PAD002342475		
Region: 3	State: PA	City/County: Hatfield/Montgomery
SITE STATUS		
NPL Status: Final		
Multiple OUs? No	Has the site achieved construction completion? Yes	
REVIEW STATUS		
Lead agency: EPA		
Author name: William Geiger, with additional support provided by Skeo		
Author affiliation: EPA Region 3		
Review period: 7/13/2016 - 5/14/2017		
Date of site inspection: 9/26/2016		
Type of review: Statutory		
Review number: 1		
Triggering action date: 5/14/2012		
Due date (<i>five years after triggering action date</i>): 5/14/2017		

II. RESPONSE ACTION SUMMARY

Basis for Taking Action

In 1974, the settling basin and neutralizing lagoons were closed under the supervision of the Pennsylvania Department of Environmental Resources (PADER), now known as PADEP. Prior to closure, sludge was removed from the settling basin and used as fill on the property. In March 1980, the North Penn Water Authority detected various VOCs in its production wells near the Site.

In 1986, AMETEK removed contaminated soils near the TCE tank, Paint Storage Area and Disturbed Excavation Area (Figure D-2). The soils were treated and then placed in a berm on site. As a result, a 1994 soil investigation detected relatively low VOC contamination that did not necessitate further remediation. However, the investigation also detected elevated concentrations of cadmium in the former neutralizing lagoons, portions of the Ground Scar Area and the Soil Berm Area. AMETEK removed cadmium-impacted soils in 1995 with EPA approval to an industrial risk-based concentration (RBC) of 510 milligrams per kilogram (mg/kg). About 2,406 tons of cadmium-impacted soil were excavated and disposed at an off-site facility.

EPA listed the Site (all four OUs encompassing eight properties) on the Superfund National Priorities List (NPL) on October 4, 1989.

The results of eight remedial investigations indicated that none of the PRPs, except AMETEK, had significant contamination in the soils or groundwater at their facilities. In a May 25, 1990 letter to counsel for AMETEK, the EPA office of General Counsel clarified that the Site would ultimately be defined by “the lateral extent of the contamination originating at the AMETEK facility, and would not include other, unconnected areas of contamination that happen to be in the vicinity.” The contamination emanating from the AMETEK facility is not commingled or physically connected to any other contamination.

In accordance with a 1999 Administrative Order on Consent, potentially responsible parties (PRPs) AMETEK and Penn Color completed the Remedial Investigation (RI) in 2005. The RI identified several contaminants of concern (COCs) – VOCs, 1,4-dioxane and metals in groundwater; metals contamination in wetland soil; and VOCs and metals contamination in surface soil.

Remedy Selection

EPA issued the Record of Decision (ROD) in May 2009. The ROD established the following remedial action objectives (RAOs):

- Protect human health for current and future industrial site use.
- Prevent exposure of human or ecological populations to contaminated media that would result in unacceptable levels of risk.
- Prevent or minimize further migration of the groundwater plume.
- Mitigate further releases of hazardous substances to groundwater.
- Prevent or minimize contaminant migration from wetland soils and sediments to surface water and groundwater.
- Ensure buildings and pavements continue to protect groundwater from potential soil-to-groundwater contaminant migration.
- Restore groundwater throughout the plume to drinking water standards.
- Restore forested wetland and surface soil areas if disturbed by cleanup.

The remedy selected in the 2009 ROD consisted of the following components:

- Actively recovering contaminated groundwater to achieve aquifer restoration until maximum contaminant levels (MCLs) are attained and the excess cancer risk associated with potential residential use of the groundwater is reduced to one in ten thousand (1×10^{-4}) or less and the hazard index is reduced to 1.0 or less for each target organ for a period of three consecutive years.
- Discharging contaminated groundwater to the publicly owned treatment works (POTW) for aerobic biological treatment.
- Excavating and properly disposing of approximately 1,175 cubic yards of contaminated wetland soils and disposing off-site, while preserving mature trees.
- Restoring disturbed wetland area with grasses and shrubs.
- Excavating and properly disposing of about 370 cubic yards of contaminated surface soils off-site.
- Backfilling the excavated surface soil area and planting appropriate vegetation.
- Monitoring groundwater and wetland area to ensure the effectiveness of the remedy.

- Implementing institutional controls that run with the land, such as a covenant to protect the integrity of the remedy, to prevent exposure to contaminated groundwater and soils, and to restrict the future use of the site to industrial purposes.

Table 1 shows COC cleanup levels listed in the ROD.

Table 1: COC Cleanup Levels

COC	Groundwater ^{a,h} (µg/L)	Wetland Soil ^b (mg/kg)	Surface Soil ^c (mg/kg)
Carbon tetrachloride	5	--	--
1,2-Dichloroethane	5	--	--
Cis-1,2-dichloroethylene (DCE)	70	--	--
1,1-DCE	7	--	--
Tetrachloroethylene (PCE)	5	--	0.0047 ^f
TCE	5	--	0.00026 ^f
Vinyl chloride	2	--	--
Antimony	6	--	13 ^g
Arsenic	10	9.5	9.5 ^g
Cadmium	--	55	--
Chromium	--	43	--
Lead	--	143	--
Manganese	217 ^d	--	--
Thallium	0.5 ^e	--	3.6 ^g
Zinc	--	1,662	--
1,4-Dioxane	6.1 ^d	--	--

Notes:

- Table 20 of the 2009 ROD, based on MCLs unless otherwise noted.
- Table 21 of the 2009 ROD, cleanup level represents the residual average cleanup level (95% upper confidence limit).
- Table 22 of the 2009 ROD, based on cumulative risk less than 1×10^{-4} or hazard index less than 1.0.
- COC does not have an MCL, based upon human health risk.
- Non-zero maximum contaminant level goal (MCLG).
- Risk Based Concentration (RBC), migration to groundwater.
- Based on background concentrations.
- AND Cumulative excess cancer associated with potential residential use of the groundwater at 1.0×10^{-4} or less and the HI at 1.0 or less (target-organ specific).

-- = no cleanup level for contaminant

µg/L = micrograms per liter

mg/kg = milligrams per liter

Remedy Implementation

On September 24, 2010, EPA entered into an Administrative Order on Consent, EPA Docket No. CERC 03-2010-0289 DC, with AMETEK and Penn Color to perform the Remedial Design. The Administrative Order on Consent for Remedial Design was superseded by the February 10, 2011 CERCLA Consent Decree. EPA signed the preliminary close-out report on August 8, 2012.

Groundwater

Significant pumping of groundwater for industrial use has occurred at the Site since 1962. In accordance with the 2009 ROD, one extraction well, PW-3, is currently utilized to provide non-contact cooling water to the Penn Color facility as well as contain and treat contaminated groundwater. Groundwater is also recovered from a shallow monitoring well, MW-2. Well PW-3 is 550 feet deep and pumps an average of 20,000 gallons per day. Significant modifications to the PW-3 extraction system were performed during the remedial action implementation in June 2012. These modifications were described in the 2012 Remedial Action Report and include installation of a control system, new electrical wires, pump motor and piping as well as other system upgrades. Groundwater extracted from PW-3 is used by Penn Color for non-contact cooling water and then discharged to the Hatfield Township Municipal Authority (HTMA) sewer system for treatment at HTMA's POTW in Colmar, Pennsylvania. Penn Color installed a treatment system to treat PW-3 groundwater prior to use as cooling water, however, this on-site treatment system is not required as part of the selected remedy in the 2009 ROD.

Well MW-2 is a 35-foot-deep former monitoring well that pumps an average of 144 gallons per day (0.1 gallons per minute) from the shallow, more contaminated portion of the aquifer. Groundwater extracted from MW-2 is pumped directly to HTMA's POTW for treatment. The recovery and treatment of groundwater in the aquifer will continue until the cleanup levels are attained and the excess cancer risk associated with potential residential use of the groundwater is reduced to one in ten thousand (1×10^{-4}) or less and the hazard index is reduced to 1.0 or less.

Wetland Soils

Remedial activities to address the wetlands were conducted between May and July 2012. Construction activities included installation of soil erosion and sediment control measures, clearing of vegetation, excavation of contaminated materials in three areas (Figure D-3), disposal at an off-site facility, and grading of excavation side slopes. Wetland areas were excavated to the lesser of a 2-foot depth or bedrock. The horizontal limits of the excavation areas were defined based on several rounds of wetland soil sampling conducted during the remedial investigation and other field investigations. Accordingly, post-excavation sampling was not required. Approximately 900 cubic yards of soil and sediment were excavated and disposed of at off-site landfills in Morrisville, Pennsylvania. Based on the remedial design, the excavated volume was less than the volume estimated in the 2009 ROD.

Surface Soils

Soil cleanup activities were conducted between May and July, 2012. Four areas of contaminated soil were addressed, SB2, SB3, SS5B, and SB16. Construction activities at the SB2, SS5B and SB16 excavation areas included installation of soil erosion and sediment control measures, excavation of contaminated materials, soil loadout, and backfilling of excavated areas with clean topsoil (Figure D-3). Construction activities at the SB3 area included paving of a 180-square-foot grassy area with asphalt due to its proximity to a large liquid nitrogen tank and its concrete foundation pad. Excavation of contaminated soils could not occur in the SB3 area due to concerns about impacting the structural integrity of the liquid nitrogen tank.

Confirmation (grab) soil samples in SB2, SS5B, and SB16 were collected from excavation bottoms and sidewalls at a frequency of one sample per 200 square feet. In all three areas, soil was excavated until post-excavation sampling showed that cleanup levels were achieved, bedrock was encountered or the excavation offset boundary was encountered. The excavation offset boundaries were field verified and agreed upon by EPA and the supervising contractor, established in accordance with construction specifications to protect the structural integrity

of existing buildings, utilities or facilities, or to maintain safe excavation side slopes. In total, about 270 cubic yards of soil were excavated from the three areas and disposed of at off-site landfills.

Institutional Control (IC) Summary

An Institutional Control Assurance Plan (ICAP) was included in the 2011 Remedial Design Work Plan and implemented in accordance with the 2009 ROD, 2011 Consent Decree and 2013 EPA Approval to Modify Language for Institutional Control Sign in Pump Room at the Penn Color Facility. The purpose of the institutional controls is to prevent exposure to unacceptable risks associated with remaining site-related contaminants and to protect the components of the selected remedy, prevent exposure to contaminated groundwater and soils, and restrict the future use of the Site to commercial/industrial purposes.

The ICAP outlined the following requirements:

- Environmental covenant (see description below).
- Signage at the following locations:
 - In the pump room, near the groundwater recovery equipment, requiring management approval prior to disturbing mechanical equipment.
 - On the building wall near wells PW-3 and MW-2, warning against disturbance of the groundwater recovery system and prohibiting groundwater use for purposes other than non-contact cooling water.
 - On the gate and at 100-foot intervals along the fence that separates the remediated wetlands from the plant, to guard against unauthorized access to the area.
- Fencing and gates to limit plant access to the wetlands area and limit public access to the groundwater recovery and conveyance system and other impervious areas that are part of the remedy.
- Inclusion of institutional control information in Penn Color facility personnel training, including awareness training regarding site conditions and emplaced institutional controls, practices to avoid incidental ingestion or consumption of contaminated soil and groundwater, and practices to avoid disturbance of infrastructure related to the remedy and the areas subject to remediation.

An environmental covenant (Appendix I) was recorded on July 5, 2012, with the Recorder of Deeds in Montgomery County, in deed book 5840, pages 1375-1391, instrument number 2012064873. The covenant designates the following activity and use restrictions for the property:

- Any activity or use that could interfere with the operation of the groundwater recovery or treatment system, such as excavation, construction within the area of treatment system, or pumping that affects recovery of contaminated groundwater shall be prohibited.
- Any activity that could interfere with the structure and function of restored wetlands at the Site shall be prohibited.
- Except for on-site use of contaminated groundwater as non-contact cooling water, use and/or contact with contaminated groundwater at the Site via ingestion, vapor inhalation or dermal contact shall be prohibited to avoid unacceptable exposure to contaminants in groundwater.
- Contact with contaminated soils at the Site via ingestion, vapor inhalation or dermal contact shall be prohibited to avoid unacceptable exposure to contaminants.
- The integrity of existing buildings and pavement that currently prevent direct contact and minimize infiltration through contaminated soil shall be maintained and protected, and any modifications to the existing buildings or impervious surfaces shall be done in such a way as to prevent direct contact and minimize infiltration through contaminated soil.

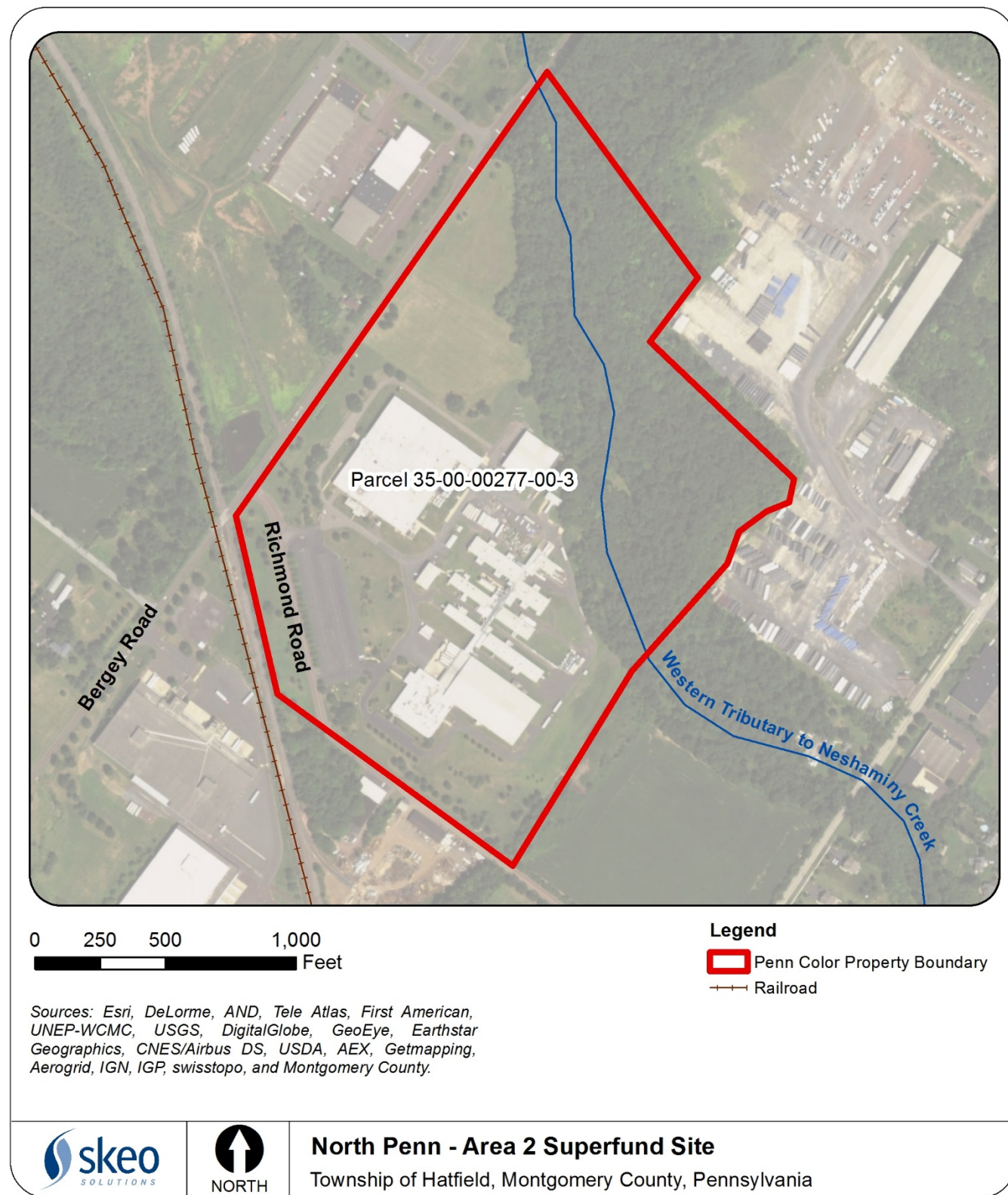
- The future land use shall be restricted to commercial/industrial purposes, unless the 2012 Environmental Covenant is modified.
- Proper indoor air monitoring and mitigation shall be ensured in the event the facility use is changed and is not covered by Occupational Safety and Health Administration rules and regulations.

Schedule C, Figure 1 of the Environmental Covenant refers to areas where contamination remains. This figure needs to be updated to show the areas where contaminated soil was either removed or paved over as part of the 2012 remedial action. Table 2 provides a summary of the implemented institutional controls and Figure 1 shows the associated Site parcel.

Table 2: Summary of Implemented Institutional Controls (ICs)

Media, Engineered Controls, and Areas that Do Not Support UU/UE based on Current Conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date
Wetland, Groundwater, Soils	Yes	Yes	35-00-00277-00-3	Covenant to protect the integrity of the remedy, to prevent exposure to contaminated groundwater and soils, and to restrict the future use of the Site to industrial purposes.	Environmental Covenant (2012)

Figure 1: Institutional Control Map



Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding EPA's response actions at the Site.

Systems Operations/Operation & Maintenance

The Operation and Maintenance (O&M) Plan for the Site is included as Appendix H of the 2012 Final (100%) Remedial Design Report. The plan covers requirements for inspection and monitoring for groundwater recovery and discharge, wetland and surface soil removal areas, and institutional controls. The groundwater recovery and discharge system is to be operated until groundwater cleanup levels are achieved and groundwater contamination is not causing the surface water in the intermittent tributary to exceed state water quality standards.

O&M is performed in accordance with the O&M Plan as follow:

Quarterly

- Groundwater pumping rate monitoring

Semi Annually

- Water level monitoring
- Groundwater sampling
- Surface water sampling
- Wetland and surface soil inspection

Annually

- IC inspection

Upon cessation of groundwater pumping, surface water sampling will be performed quarterly for at least two years and then annually thereafter to confirm that there are no exceedances of the surface water quality standards.

Periodic monitoring and inspections of the discharge to the HTMA POTW are required and performed monthly. The wetland and surface soil work areas are inspected semiannually, as required in the O&M Plan. Monitoring of institutional controls is performed annually. Activities include checking fencing and signage, monitoring wells and impervious coverage, and verifying that the facility (Penn Color) is conducting appropriate training and that facility staff are aware of site institutional controls.

III. PROGRESS SINCE THE LAST REVIEW

This is the first FYR for the Site.

IV. FIVE-YEAR REVIEW PROCESS

Community Notification, Involvement & Site Interviews

A public notice was made available in the Times Herald newspaper on 3/5/2017, stating that EPA was conducting a FYR, providing some details on the Site and instructions on accessing the final document. The results of the review and the report will be made available at the Site information repository, located at the Lansdale Public Library, 301 Vine Street in Lansdale, Pennsylvania. A copy of the public notice is provided in Appendix F.

During the FYR process, interviews were conducted to document any perceived problems or successes with the remedy that has been implemented to date. The results of these interviews are summarized below.

Three residents and the Hatfield Township manager were interviewed for this FYR. The residents were unaware of the former environmental issues at the Site or the cleanup activities that have been conducted. One resident has a private well that is in use. The other residents are connected to public water. They did not identify any issues or concerns with the Site. The Hatfield Township manager was aware of the Site. He feels they have a good relationship with Penn Color and he has no issues with the Site.

Data Review

Data collected during this FYR includes semiannual groundwater and surface water sampling data. Groundwater and surface water data have been collected at the Site since 1995 as part of the remedial investigation. Post-ROD semiannual sampling has been conducted at Site monitoring wells since November 2012. Figure 2 shows well locations.

The 2009 ROD anticipated groundwater extraction and treatment would be needed for at least an additional 20 to 25 years to reach cleanup goals. Since 2004 when the pumps started operating, the PRP estimates approximately 1,580 pounds of VOCs have been extracted from PW-3 and MW-2 collectively based on the total VOC concentration in each well. It is estimated that 930 pounds of VOCs remain. This data section presents the groundwater and surface water data collected from 2012 to present. Groundwater concentrations of COCs are variable with some concentrations increasing and some decreasing as contaminated water is being moved toward the extraction wells. Monitoring wells generally consist of interior wells and boundary wells. Exceedances of the cleanup goals are generally limited to interior wells, however boundary well MW-13D exceeds the arsenic cleanup goal of 10 micrograms per liter ($\mu\text{g/L}$). Site COCs have not been detected in surface water since 2012, except for cadmium, which was detected in May 2014 and 2015 but has not been detected in subsequent sampling events.

Groundwater

The PRP samples all monitoring wells annually for all site COCs (VOCs and metals). The semiannual events include seven monitoring wells (extraction wells PW-3 and MW-2 and boundary wells MW-9I, MW-14I, MW-13D, MW-13I and MW-13S) analyzed only for VOCs. Groundwater levels are monitored at every sampling event and potentiometric surface maps for the shallow, intermediate and deep wells are provided in the annual progress reports. The 2015 potentiometric maps are included in Appendix J as Figures J-1 through J-6. The figures indicate groundwater drawdown and capture is occurring with groundwater moving toward the extraction wells in the shallow, intermediate and deep bedrock zones.

COC cleanup level exceedances are generally limited to deep pumping well PW-3 and interior monitoring well clusters MW-2, MW-3, MW-5 and MW-6. Exceedances are observed in shallow, intermediate and deep zones and concentrations are variable due to extraction activities at PW-3 and MW-2. Shallow extraction well MW-2 historically has had the highest concentrations of VOCs on site. Table 3 provides the yearly maximum concentrations for each VOC that exceeds the cleanup level at MW-2 from 2012 to 2016. Concentrations increased post-remedy implementation, indicating the pumping was effectively moving the contaminant mass toward the extraction wells. However, concentrations have been decreasing for all COCs since 2013 as VOC mass is removed from the system.

Groundwater contamination currently extends below occupied buildings and vapor intrusion should be evaluated. Additionally, historic operations at the Site indicate the potential for perfluoroalkyl substances (PFASs), specifically perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) contamination in groundwater.

Table 3. VOC Concentrations at MW-2 (2012-2016)

COC	Cleanup Level	2012 Maximum Concentration ($\mu\text{g/L}$)	2013 Maximum Concentration ($\mu\text{g/L}$)	2014 Maximum Concentration ($\mu\text{g/L}$)	2015 Maximum Concentration ($\mu\text{g/L}$)	2016 Maximum Concentration ($\mu\text{g/L}$)
1,1-DCE	7	802	3,760	3,720	1,900	880
cis-1,2-DCE	70	62.8	155	120	71	30
PCE	5	106	327	210	120	36
TCE	5	3,640	13,200	11,000	6,700	1,600

COC	Cleanup Level	2012 Maximum Concentration (µg/L)	2013 Maximum Concentration (µg/L)	2014 Maximum Concentration (µg/L)	2015 Maximum Concentration (µg/L)	2016 Maximum Concentration (µg/L)
1,4-Dioxane	6.1	NA	985	640	290	130
Notes: DCE = Dichloroethylene PCE = Tetrachloroethylene NA = Not analyzed Bold = Exceeds the respective cleanup level						

Metal concentrations are highest at monitoring well cluster MW-5 and exceedances are observed for arsenic and manganese. Table 4 shows concentrations of these COCs at shallow, intermediate and deep wells in the MW-5 cluster. Analytical data were not collected from this well in 2012. Results are generally variable with concentrations increasing and decreasing. Manganese concentrations in the deep well MW-5XD increased significantly in 2016. This well is screened from 510 to 540 feet below ground surface.

Table 4. Metals Concentrations at MW-5 (S/I/D/XD)

COC	Cleanup Level	Well Depth Interval	2013 Maximum Concentration (µg/L)	2014 Maximum Concentration (µg/L)	2015 Maximum Concentration (µg/L)	2016 Maximum Concentration (µg/L)
Arsenic	10	S	51	49.2	25.3	29.8
		I	9.3	9.8	9	10.1
		D	14	15.3	15.9	16.5
		XD	24	25.7	25.8	15.5
Manganese	217	S	490	507	1980	688
		I	38	132	129	99.6
		D	10	18.7	20.6	16.3
		XD	22	26.3	26.6	3,700
<i>Notes:</i> S = Shallow I = Intermediate D = Deep XD = Deep						

Arsenic has exceeded the cleanup level in boundary well MW-13D since before the remedy was implemented. Concentrations have decreased slightly from 20 µg/L in May 2013 to 16.7 µg/L in May 2016. The shallow and intermediate wells do not exceed the arsenic cleanup level and manganese does not exceed the cleanup level at any depth at the MW-13 cluster.

In 2011, the PRP contractor sampled all wells to evaluate current conditions following the issuance of the ROD. During this investigation, arsenic exceeded the cleanup level in several deep wells at the Site. Since these exceedances occurred in the deep wells and were often unassociated with VOC exceedances, the arsenic concentration was attributed to natural background conditions. These results were reported in the 2011 Final (100%) Remedial Design Report. See Appendix J for the most recent annual groundwater analytical data tables from the 2015 Progress Report (Tables J-1 and J-2).

Surface Water

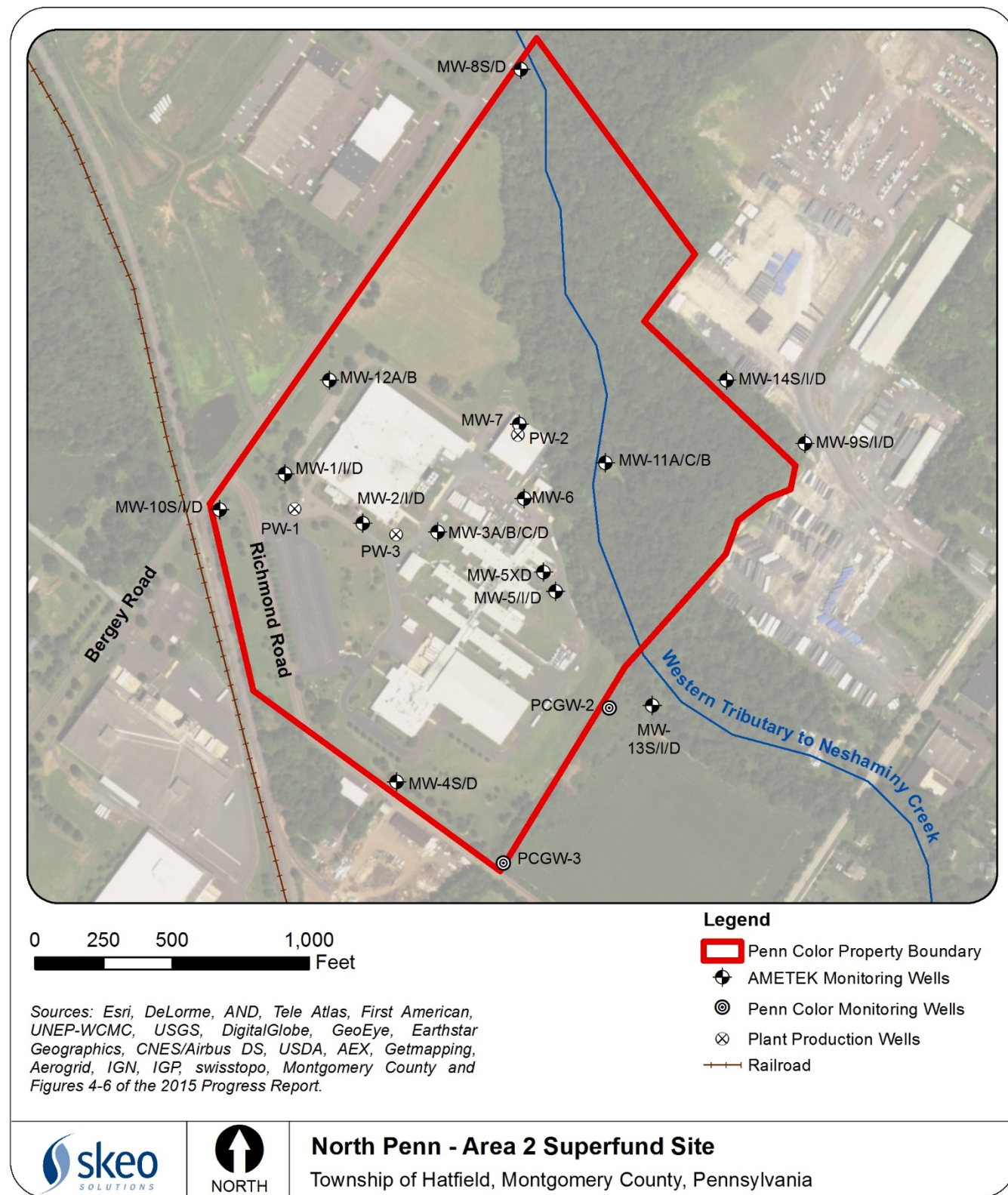
Surface water level gauging and sampling takes place semiannually at four locations along the Western Tributary to Neshaminy Creek to monitor if contaminated groundwater is discharging to the stream. Samples are analyzed for site COCs. Results are compared to the lower value of the fish and aquatic life chronic criteria and the human

health criteria presented in the Pennsylvania Water Quality Criteria for Toxic Substances provided in the Sampling and Analysis Plan (Appendix G of the Final [100%] Remedial Design Report). Except for two results at SMP-2, results since 2012 have not been detected above cleanup levels for site COCs. Surface water sampling location SMP-2 exceeded the cadmium surface water standard of 0.32 µg/L in May 2014 and May 2015. Cadmium was not detected during the November 2015, May 2016 or November 2016 sampling events.

Table 5. Cadmium Concentrations at SMP-2

Sampling Location	Cleanup Level	2012 Maximum Concentration (µg/L)	2013 Maximum Concentration (µg/L)	2014 Maximum Concentration (µg/L)	2015 Maximum Concentration (µg/L)	2016 Maximum Concentration (µg/L)
SMP-2	0.32	N/A	ND	4.7*	0.60	ND
Notes: N/A = Not analyzed. ND = Not detected above method detection limit. * = Concentration was reported as 0.0047 µg/L in the 2014 Q2 Progress Report. The correct value is 4.7 µg/L as reported in the laboratory data. Bold = Exceeds cleanup level.						

Figure 2: Detailed Site Map



Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding EPA's response actions at the Site.

Site Inspection

The site inspection took place on 9/26/2016. Site inspection participants met at the entrance of Penn Color's Building #1. Site inspection participants included William Geiger, Ryan Bower, Andrew Haneiko, Bruce Pluta and Darriel Swatts (EPA); Dustin Armstrong and Bonnie McClennen (Pennsylvania Department of Environmental Protection); Jake Ferry and Rich Dulcey (ERM); Katy Kropp and Jim Souder (Penn Color); Tom Jones (Penn Environmental & Remediation, Inc, Penn Color's consultant); and Kirby Wester and Alison Cattani (Skeo). Participants signed in on the Penn Color visitors log and received visitor badges. The Penn Color facility is fenced and signage was clearly visible on the perimeter fence to ensure no trespassing. No vandalism, trespassing or damage was evident or reported.

Participants walked along the side of Building #1 and through a locked gate to the wetland area. A sign on the gate indicates that the area is a restoration area and is not to be disturbed. Participants observed all three wetland soil removal areas. Vegetation is well established and original shrub plantings were present. Wetland soil removal areas were very dry. Some *Phragmites* was observed; participants discussed whether the invasive species will be a future concern. The Western Tributary to Neshaminy Creek was mostly dry, with some small pools. Participants viewed marked locations where surface water samples and stream height are measured to monitor the effectiveness of the soil removal and whether the creek is gaining groundwater discharge. Nylon filter socks used to prevent erosion and siltation remain from the construction activities. During a storm event, the socks will aid in ensuring bank stabilization.

Participants exited the wetland area through the locked gate and returned to the facility footprint. The soil removal areas were observed, behind Building #2 and next to the Penn Color nitrogen tank. A portion of the pavement next to the nitrogen tank removal area was repaved to cover remaining contamination that could not be excavated due to the need to maintain the nitrogen tank's stability. Participants observed the locations of extraction wells MW-2 and PW-3, and Penn Color's treatment system where water from PW-3 is treated before the company uses it as a coolant. About 20,000 gallons of water a day is extracted and discharged to the HTMA sewer system for treatment in accordance with the HTMA discharge permit. All monitoring well clusters were observed during the inspection. All wells were locked and labeled.

Site inspection participants briefly discussed Penn Color's plan to implement a facility remodel. Participants also discussed whether Occupational Safety and Health Administration (OSHA) indoor monitoring includes site COCs. Participants believed that site COCs are not included in current indoor air monitoring and no data were provided.

William Geiger and Andrew Haneiko (EPA) and Kirby Webster and Alison Cattani (Skeo) visited the site repository, Lansdale Public Library, located at 301 Vine Street in Lansdale, Pennsylvania. Site documents dating to 2009 were available on compact disc. Appendix E contains the Site inspection checklist and Appendix G contains the Site inspection photos.

V. TECHNICAL ASSESSMENT

QUESTION A: Is the remedy functioning as intended by the decision documents?

A review of the relevant site documents (Appendix A), applicable or relevant and appropriate requirements (ARARs) and the site inspection indicates that the remedy is functioning as specified in the 2009 ROD. The remedy included recovery and discharge of contaminated groundwater, subsurface and wetland soil excavation, restoration, and the implementation of institutional controls. According to the 2012 Remedial Action Completion Report, soil cleanup goals were met in all excavation areas. Revegetation of excavated areas has been successful. A small area near a large nitrogen tank could not be excavated due to its proximity to the tank. The area was subsequently paved to prevent contact with remaining soil and an IC prohibits disturbance of this cover. Groundwater recovery and discharge continues and monitoring takes place semiannually to ensure the plume is

hydraulically contained. With the exception of arsenic, COC exceedances are limited to interior site wells. Arsenic exceedances at boundary well MW-13D are attributed to natural background conditions.

Surface water monitoring evaluates potential contaminated groundwater discharge to the Western Tributary to Neshaminy Creek. With the exception of cadmium during the 2014 and 2015 sampling events, all results have been below COC surface water standards. Cadmium concentrations in two subsequent surface water samples were below the laboratory method detection limit.

O&M activities support the current remedy. Routine inspections of the removal areas and groundwater extraction and discharge system are conducted regularly and adequately. Institutional controls are implemented at the Site in the form of access controls, signage, a 2012 Environmental Covenant, and land use restrictions to commercial or industrial.

QUESTION B: Are the exposure assumptions, toxicity data, cleanup levels and RAOs used at the time of the remedy selection still valid?

Changes in Exposure Pathways

Exposure assumptions used at the time of the remedy are largely still valid. However, the vapor intrusion pathway has not been evaluated because it was not part of the 2009 ROD. Therefore, a screening-level risk evaluation was conducted during this FYR to determine if the vapor intrusion exposure pathway requires further evaluation and if changes in toxicity values impact ROD cleanup goals.

Buildings #1 and #2 are located in close proximity to MW-2, which is the most contaminated well on site. A vapor intrusion screening-level risk assessment was conducted on groundwater results from MW-2 using the EPA vapor intrusion screening level (VISL) tool (Appendix H). Results indicated an exceedance of the cancer target risk range and non-cancer target hazard quotient for TCE and an exceedance of the non-cancer target hazard quotient for 1,1-DCE and TCE. Therefore, additional lines of evidence should be evaluated to assess if vapor intrusion poses a risk to human health at the Site.

Changes in Toxicity and Other Contaminant Characteristics

A screening level risk evaluation was also performed to determine if cleanup goals established in the 2009 ROD remain protective of human health and the environment. Although toxicity values have changed for some COCs, the evaluation (see Appendix H) demonstrated that cleanup goals remain protective. Although EPA established an MCL for thallium in 1992 of 2 µg/L, EPA selected the health-based maximum contaminant level goal (MCLG) of 0.5 µg/L as the cleanup goal. However, the screening-level risk evaluation conducted on the MCLG (Appendix H) demonstrated that the cleanup goal exceeds the non-cancer target hazard quotient for thallium. Thallium has not been detected in recent groundwater sampling events, and the detection limit for thallium, 0.15 ug/L, is protective of human health. Therefore, the thallium cleanup goal does not currently impact the protectiveness of the Remedy.

Changes in Standards and TBCs

Groundwater cleanup goals for most COCs were MCLs; the MCLs have not changed.

Expected Progress Towards meeting RAOs

The remedy is progressing as expected toward meeting RAOs. Groundwater concentrations in monitoring wells along the site boundary continue to be below cleanup levels, indicating the groundwater extraction and treatment system continues to hydraulically contain the plume effectively.

QUESTION C: Has any other information come to light that could call into question the protectiveness of the remedy?

With the past history of the Site in metal work and the current production of chemical color products, there is a possibility of PFASs, specifically PFOA and PFOS contamination in groundwater. Sampling for PFASs is recommended.

VI. ISSUES/RECOMMENDATIONS

Issues and Recommendations Identified in the FYR:

OU: 1	Issue Category: Monitoring			
	Issue: Based on historic Site usage, PFASs, primarily PFOA and PFOS, may be present in groundwater at the Site.			
	Recommendation: Sampling for PFAS is recommended.			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party	Milestone Date
No	Yes	PRP	EPA	5/1/2019

OU: 1	Issue Category: Remedy Performance			
	Issue: Results from a conservative vapor intrusion screening-level risk assessment indicate a need for further evaluation of the vapor intrusion pathway at the Site.			
	Recommendation: Evaluate additional lines of evidence to assess if vapor intrusion poses a potential risk to human health at the Site.			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party	Milestone Date
Yes	Yes	PRP	EPA	12/1/2017

OTHER FINDINGS

The findings below were also identified during the FYR; they do not affect current and/or future protectiveness.

- Nylon filter socks used to prevent erosion and siltation remain from the construction activities. Because these are non-biodegradable, a portion of the socks should be removed each year. During a storm event, the socks will aid in ensuring bank stabilization.
- Some *Phragmites* was observed in the restored wetland area. This invasive species has the potential to interfere with the functionality of the wetland. Removal/mitigation should be considered.
- The site repository was last updated in 2009. Update the repository with recent site-related documents.
- Penn Color is in the process of planning a facility remodel. Monitor remodeling plans and activities to make sure contaminated soil remaining on site and remedy components are not disturbed.

- The noncancer hazard quotient for thallium cleanup goal is above the threshold of 1.0. Evaluate whether the thallium cleanup goal remains protective based on EPA's current risk assessment approaches.
- The environmental covenant contains a figure that shows site conditions prior to the 2012 remedial action. Update the figure in the environmental covenant to reflect current site conditions.

VII. PROTECTIVENESS STATEMENT

Sitewide Protectiveness Statement	
<i>Protectiveness Determination:</i> Protectiveness Deferred	<i>Planned Addendum Completion Date:</i> 12/1/2017
<i>Protectiveness Statement:</i> A protectiveness determination of the remedy at OU1 cannot be made at this time until further information is obtained. The protectiveness of the remedy will be evaluated after the vapor intrusion investigation is completed.	

VIII. NEXT REVIEW

The next FYR Report for the Site is required five years from the completion date of this review.

APPENDIX A – REFERENCE LIST

Final (100%) Remedial Design. North Penn – Area 2 Superfund Site. Hatfield Township, Pennsylvania. Prepared by ERM. December 2011.

North Penn – Area 2 Superfund Site/Former AMETEK Facility Progress Report for 2013 Quarter 1. Prepared by Environmental Resources Management. Prepared for U.S. Environmental Protection Agency, Region 3. April 2013.

North Penn – Area 2 Superfund Site/Former AMETEK Facility Progress Report for April through December 2013. Prepared by Environmental Resources Management. Prepared for U.S. Environmental Protection Agency, Region 3. January 2014.

North Penn – Area 2 Superfund Site/Former AMETEK Facility Progress Report for 2014 Quarter 1. Prepared by Environmental Resources Management. Prepared for U.S. Environmental Protection Agency, Region 3. May 2014.

North Penn – Area 2 Superfund Site/Former AMETEK Facility Progress Report for 2014 Quarter 2. Prepared by Environmental Resources Management. Prepared for U.S. Environmental Protection Agency, Region 3. July 2014.

North Penn – Area 2 Superfund Site/Former AMETEK Facility Progress Report for 2014 Quarter 3. Prepared by Environmental Resources Management. Prepared for U.S. Environmental Protection Agency, Region 3. October 2014.

North Penn – Area 2 Superfund Site/Former AMETEK Facility Progress Report for 2014 Quarter 4. Prepared by Environmental Resources Management. Prepared for U.S. Environmental Protection Agency, Region 3. February 2015.

North Penn – Area 2 Superfund Site/Former AMETEK Facility Progress Report for 2015. Prepared by Environmental Resources Management. Prepared for U.S. Environmental Protection Agency, Region 3. December 2015.

Operation and Maintenance Plan. North Penn – Area 2 Superfund Site. Hatfield Township, Pennsylvania. Prepared by Environmental Resources Management. December 2011.

Record of Decision. North Penn – Area 2 Superfund Site. Hatfield Township, Montgomery County, Pennsylvania. U.S. EPA Region 3. May 2009.

Remedial Action Construction Completion Report. North Penn – Area 2 Superfund Site. Hatfield Township, Pennsylvania. Prepared by Environmental Resources Management. November 2012.

Remedial Action Sampling and Analysis Plan. North Penn – Area 2 Superfund Site. Hatfield Township, Pennsylvania. Prepared by Environmental Resources Management. September 2011.

Remedial Investigation Report. North Penn – Area 2/Former AMETEK Site. Prepared by Environmental Resources Management. April 2005.

Soil Remediation Summary Report. North Penn – Area 2 Superfund Site/Former AMETEK Facility. Hatfield Township, Pennsylvania. Prepared by Environmental Resources Management. December 1995.

Superfund Preliminary Close-Out Report. North Penn – Area 2 Superfund Site. Hatfield Township, Montgomery County, Pennsylvania. August 8, 2012.

APPENDIX B – SITE CHRONOLOGY

Table B-1: Site Chronology

Event	Date
EPA discovered the Site	August 18, 1986
EPA completed site inspection	December 2, 1986
EPA proposed the Site for listing on the NPL	January 22, 1987
EPA began combined remedial investigation/feasibility study (RI/FS)	June 30, 1988
EPA listed the Site on the NPL	October 4, 1989
The PRP began work on RI/FS	January 31, 1993
EPA signed the Consent Decree	March 19, 1998
EPA completed the RI/FS	September 15, 2003 to April 20, 2005
EPA signed the Record of Decision (ROD)	May 8, 2009
EPA signed the second Consent Decree	February 10, 2011
The PRP began the long-term response action	January 6, 2012
The PRP began the soil and sediment removal	May 14, 2012
The PRP completed the soil and sediment removal	July 2, 2012
Environmental Covenant recorded	July 5, 2012
EPA prepared Preliminary Close-Out Report	August 8, 2012
EPA completed the Sitewide Ready for Anticipated Use designation	September 27, 2012

APPENDIX C – SITE BACKGROUND

In 1989, when EPA listed the Site on the Superfund program's NPL, the Site included eight properties totaling about 330 acres, shown in Figure 2 of the 2009 ROD. These property owners included:

- B&G Manufacturing Company, Inc.
- Eastern Prestressed Concrete Products
- Fendt Finding
- Penn Color Inc. (former AMETEK, Inc. facility)
- Porter Instruments
- Republic Environmental (formerly Waste Conversion)
- Hallowell Industries, Inc. (formerly SPS Technologies)
- A. Steiert & Sons, Inc.

To manage site investigations and cleanup, EPA originally divided the Site into four operable units (OUs):

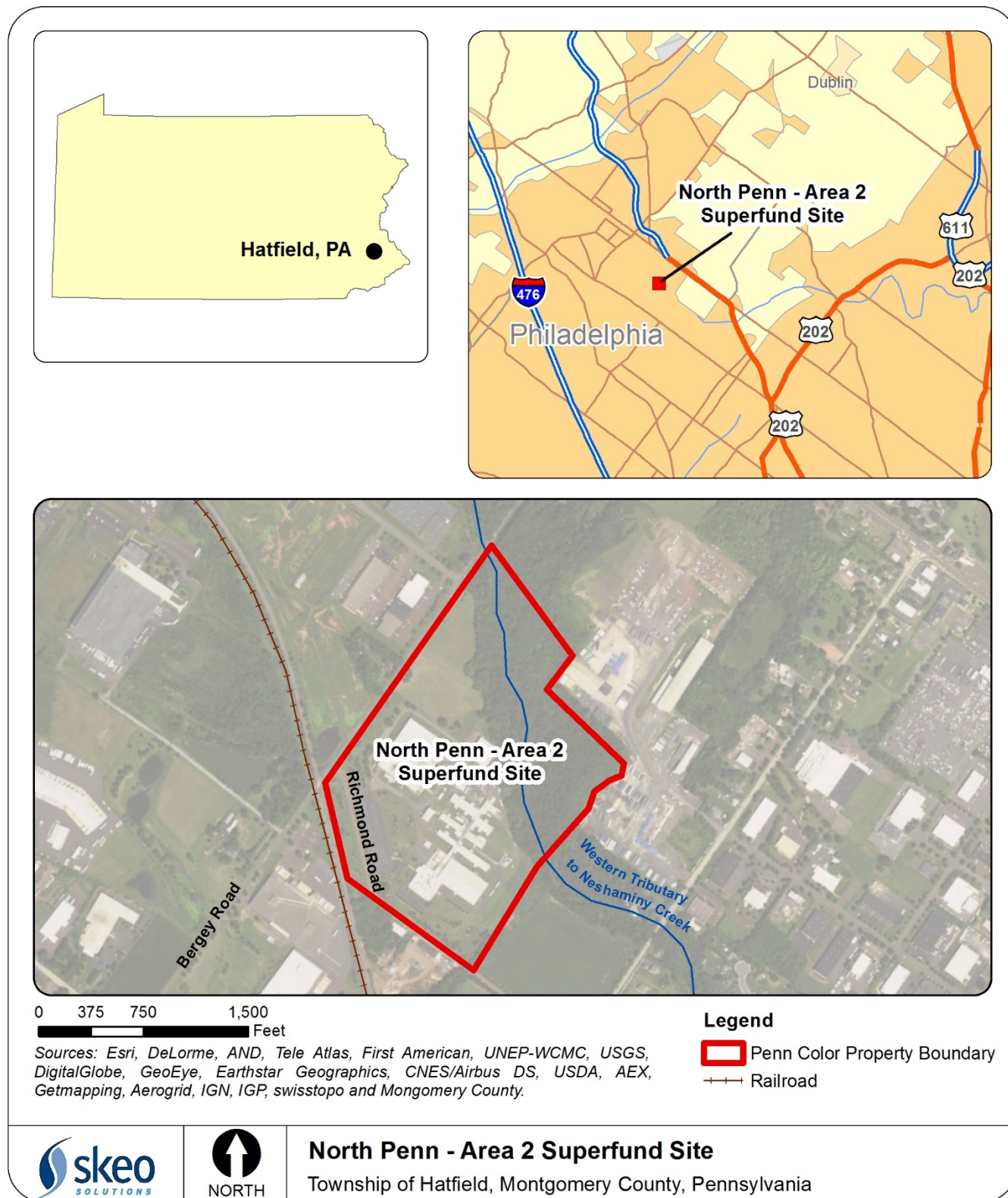
Operable Unit	Identification
00	Sitewide
01	Fund-lead Investigations
02 ^a	PRP-lead Investigations
03	Steiert Facility
Notes: Source: 2005 Remedial Investigation Report, Section 1.2.1, page 1-3. a = OU2 is the original designation for the former AMETEK facility. It is the only site OU in the Site's 2009 ROD.	

Remedial investigations determined that out of the eight properties, the 87-acre former AMETEK facility was the only property with contamination that warranted a response action. The Site is located at the intersection of Bergey and Richmond Roads in Hatfield Township, Montgomery County, Pennsylvania. The former AMETEK facility is now the only site OU, as described in the Site's 2009 ROD. A summary of the investigation findings is also provided in the 2009 ROD.

The Site is underlain by a bedrock aquifer that occurs in shallow, intermediate and deep zones. Groundwater flow direction in the absence of pumping is generally to the south. However, water level measurements from on-site wells indicate that pumping affects the local flow regime, creating a cone of depression in the vicinity of the pumping wells. There is a bedrock fault and several bedrock fractures immediately beneath the Site that also affects groundwater flow regime, resulting in some east-to-west movement along the fault zone to the pumping wells.

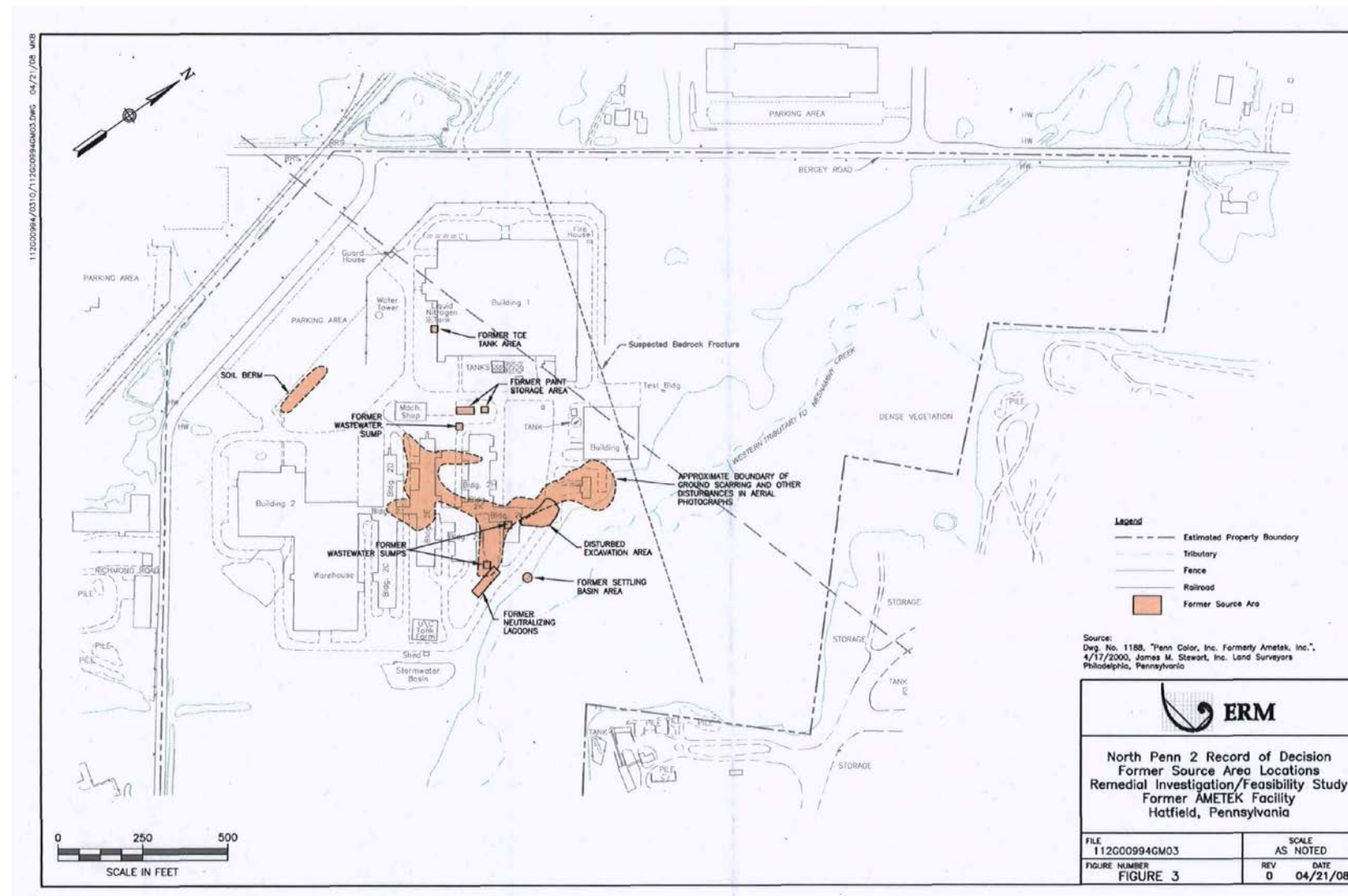
APPENDIX D – SITE MAPS

Figure D-1: Site Vicinity Map



Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding EPA's response actions at the Site.

Figure D-2: Historical Contamination Source Locations¹



¹ Figure 3 from Site's 2009 ROD.

2 North Penn Area 2 Remedial Action Construction Completion Report, Appendix A, Drawing Number 1.
D-3



APPENDIX E – SITE INSPECTION CHECKLIST

FIVE-YEAR REVIEW SITE INSPECTION CHECKLIST			
I. SITE INFORMATION			
Site Name: <u>North Penn - Area 2</u>		Date of Inspection: <u>September 28, 2016</u>	
Location and Region: <u>Hatfield, PA and Region 3</u>		EPA ID: <u>PAD002342475</u>	
Agency, Office or Company Leading the Five-Year Review: <u>EPA</u>		Weather/Temperature: <u>Clear/50s</u>	
Remedy Includes: (Check all that apply) <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input type="checkbox"/> Landfill cover/containment <input checked="" type="checkbox"/> Access controls <input checked="" type="checkbox"/> Institutional controls <input checked="" type="checkbox"/> Groundwater pump and treatment <input type="checkbox"/> Surface water collection and treatment <input type="checkbox"/> Other: <u>Soil removal and wetland mitigation</u> </div> <div style="width: 50%;"> <input type="checkbox"/> Monitored natural attenuation <input checked="" type="checkbox"/> Groundwater containment <input type="checkbox"/> Vertical barrier walls </div> </div>			
Attachments: <input checked="" type="checkbox"/> Inspection team roster attached <input type="checkbox"/> Site map attached			
II. INTERVIEWS (check all that apply)			
1. O&M Site Manager <div style="display: flex; justify-content: space-between; margin-top: 5px;"> _____ _____ _____ </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> Name Title Date </div> <div style="margin-top: 5px;"> Interviewed <input type="checkbox"/> at site <input type="checkbox"/> at office <input type="checkbox"/> by phone Phone: _____ </div> <div style="margin-top: 5px;"> Problems, suggestions <input type="checkbox"/> Report attached: _____ </div>			
2. O&M Staff <div style="display: flex; justify-content: space-between; margin-top: 5px;"> _____ _____ _____ </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> Name Title Date </div> <div style="margin-top: 5px;"> Interviewed <input type="checkbox"/> at site <input type="checkbox"/> at office <input type="checkbox"/> by phone Phone: _____ </div> <div style="margin-top: 5px;"> Problems/suggestions <input type="checkbox"/> Report attached: _____ </div>			
3. Local Regulatory Authorities and Response Agencies (i.e., state and tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices). Fill in all that apply. <div style="margin-top: 10px;"> Agency _____ Contact _____ <div style="display: flex; justify-content: space-between; margin-top: 5px;"> _____ _____ _____ _____ </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> Name Title Date Phone No. </div> Problems/suggestions <input type="checkbox"/> Report attached: _____ </div> <div style="margin-top: 10px;"> Agency _____ Contact _____ <div style="display: flex; justify-content: space-between; margin-top: 5px;"> _____ _____ _____ _____ </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> Name Title Date Phone No. </div> Problems/suggestions <input type="checkbox"/> Report attached: _____ </div> <div style="margin-top: 10px;"> Agency _____ Contact _____ <div style="display: flex; justify-content: space-between; margin-top: 5px;"> _____ _____ _____ _____ </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> Name Title Date Phone No. </div> Problems/suggestions <input type="checkbox"/> Report attached: _____ </div> <div style="margin-top: 10px;"> Agency _____ Contact _____ <div style="display: flex; justify-content: space-between; margin-top: 5px;"> _____ _____ _____ _____ </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> Name Title Date Phone No. </div> Problems/suggestions <input type="checkbox"/> Report attached: _____ </div> <div style="margin-top: 10px;"> Agency _____ Contact _____ <div style="display: flex; justify-content: space-between; margin-top: 5px;"> _____ _____ _____ _____ </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> Name Title Date Phone No. </div> Problems/suggestions <input type="checkbox"/> Report attached: _____ </div>			

Name	Title	Date	Phone No.
Problems/suggestions <input type="checkbox"/> Report attached: _____			
4. Other Interviews (optional) <input type="checkbox"/> Report attached: _____			
III. ON-SITE DOCUMENTS AND RECORDS VERIFIED (check all that apply)			
1. O&M Documents			
<input type="checkbox"/> O&M manual	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> As-built drawings	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Maintenance logs	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: <u>Site-related document located with PRP contractor – ERM.</u>			
2. Site-Specific Health and Safety Plan			
<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A	
<input type="checkbox"/> Contingency plan/emergency response plan	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: <u>Site-related document located with PRP contractor – ERM.</u>			
3. O&M and OSHA Training Records			
<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A	
Remarks: <u>Site-related document located with PRP contractor – ERM.</u>			
4. Permits and Service Agreements			
<input type="checkbox"/> Air discharge permit	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Effluent discharge	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Waste disposal, POTW	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Other permits: _____	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: <u>Penn Color uses the groundwater as a coolant and the company has the appropriate POTW permit. No permits applicable to the remedy.</u>			
5. Gas Generation Records			
<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A	
Remarks: _____			
6. Settlement Monument Records			
<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A	
Remarks: _____			
7. Groundwater Monitoring Records			
<input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A	
Remarks: _____			
8. Leachate Extraction Records			
<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A	
Remarks: _____			
9. Discharge Compliance Records			
<input type="checkbox"/> Air	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Water (effluent)	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: _____			
10. Daily Access/Security Logs			
<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A	

Remarks: _____																							
IV. O&M COSTS																							
1.	O&M Organization <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> State in-house <input type="checkbox"/> PRP in-house <input type="checkbox"/> Federal facility in-house <input type="checkbox"/> _____ </div> <div> <input type="checkbox"/> Contractor for state <input checked="" type="checkbox"/> Contractor for PRP <input type="checkbox"/> Contractor for Federal facility </div> </div>																						
2.	O&M Cost Records <div style="display: flex; justify-content: space-between;"> <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date </div> <div style="display: flex; justify-content: space-between;"> <input type="checkbox"/> Funding mechanism/agreement in place <input type="checkbox"/> Unavailable </div> <p>Original O&M cost estimate: _____ <input type="checkbox"/> Breakdown attached</p> <p style="text-align: center;">Total annual cost by year for review period if available</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">From: _____ Date</td> <td style="width: 25%;">To: _____ Date</td> <td style="width: 25%;">_____ Total cost</td> <td style="width: 25%; text-align: right;"><input type="checkbox"/> Breakdown attached</td> </tr> <tr> <td>From: _____ Date</td> <td>To: _____ Date</td> <td>_____ Total cost</td> <td style="text-align: right;"><input type="checkbox"/> Breakdown attached</td> </tr> <tr> <td>From: _____ Date</td> <td>To: _____ Date</td> <td>_____ Total cost</td> <td style="text-align: right;"><input type="checkbox"/> Breakdown attached</td> </tr> <tr> <td>From: _____ Date</td> <td>To: _____ Date</td> <td>_____ Total cost</td> <td style="text-align: right;"><input type="checkbox"/> Breakdown attached</td> </tr> <tr> <td>From: _____ Date</td> <td>To: _____ Date</td> <td>_____ Total cost</td> <td style="text-align: right;"><input type="checkbox"/> Breakdown attached</td> </tr> </table>			From: _____ Date	To: _____ Date	_____ Total cost	<input type="checkbox"/> Breakdown attached	From: _____ Date	To: _____ Date	_____ Total cost	<input type="checkbox"/> Breakdown attached	From: _____ Date	To: _____ Date	_____ Total cost	<input type="checkbox"/> Breakdown attached	From: _____ Date	To: _____ Date	_____ Total cost	<input type="checkbox"/> Breakdown attached	From: _____ Date	To: _____ Date	_____ Total cost	<input type="checkbox"/> Breakdown attached
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From: _____ Date	To: _____ Date	_____ Total cost	<input type="checkbox"/> Breakdown attached																				
From: _____ Date	To: _____ Date	_____ Total cost	<input type="checkbox"/> Breakdown attached																				
3.	Unanticipated or Unusually High O&M Costs during Review Period Describe costs and reasons: _____																						
V. ACCESS AND INSTITUTIONAL CONTROLS <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A																							
A. Fencing																							
1.	Fencing Damaged <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Gates secured <input type="checkbox"/> N/A Remarks: _____																						
B. Other Access Restrictions																							
1.	Signs and Other Security Measures <input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A Remarks: <u>Signs in good condition and used appropriately.</u>																						
C. Institutional Controls (ICs)																							

1.	Implementation and Enforcement	
	Site conditions imply ICs not properly implemented	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
	Site conditions imply ICs not being fully enforced	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
	Type of monitoring (e.g., self-reporting, drive by): <u>Self-reporting.</u>	
	Frequency:	
	Responsible party/agency: <u>PRP/Ametek</u>	
	Contact _____	_____
	Name	Title
		Date
		Phone no.
	Reporting is up to date	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
	Reports are verified by the lead agency	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
	Specific requirements in deed or decision documents have been met	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	Violations have been reported	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
	Other problems or suggestions: <input checked="" type="checkbox"/> Report attached	

2.	Adequacy <input checked="" type="checkbox"/> ICs are adequate <input type="checkbox"/> ICs are inadequate <input type="checkbox"/> N/A	
	Remarks: <u>Map attached to environmental covenant should be updated.</u>	

D. General

1.	Vandalism/Trespassing <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> No vandalism evident	
	Remarks: _____	
2.	Land Use Changes On Site <input checked="" type="checkbox"/> N/A	
	Remarks: _____	
3.	Land Use Changes Off Site <input checked="" type="checkbox"/> N/A	
	Remarks: _____	

VI. GENERAL SITE CONDITIONS

	A. Roads <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A	
1.	Roads Damaged <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Roads adequate <input type="checkbox"/> N/A	
	Remarks: _____	

B. Other Site Conditions

Remarks: _____

VII. LANDFILL COVERS
☐ Applicable
 ☒ N/A

A. Landfill Surface

1.	Settlement (low spots) <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Settlement not evident	
	Arial extent: _____	Depth: _____
	Remarks: _____	
2.	Cracks <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Cracking not evident	
	Lengths: _____	Widths: _____
	Depths: _____	
	Remarks: _____	

3.	Erosion Arial extent: _____ Remarks: _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> Erosion not evident Depth: _____	
4.	Holes Arial extent: _____ Remarks: _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> Holes not evident Depth: _____	
5.	Vegetative Cover <input type="checkbox"/> No signs of stress Remarks: _____	<input type="checkbox"/> Grass <input type="checkbox"/> Trees/shrubs (indicate size and locations on a diagram) <input type="checkbox"/> Cover properly established	
6.	Alternative Cover (e.g., armored rock, concrete) Remarks: _____	<input type="checkbox"/> N/A	
7.	Bulges Arial extent: _____ Remarks: _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> Bulges not evident Height: _____	
8.	Wet Areas/Water Damage <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <input type="checkbox"/> Wet areas <input type="checkbox"/> Ponding <input type="checkbox"/> Seeps <input type="checkbox"/> Soft subgrade </div> <div style="width: 30%;"> <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Location shown on site map </div> <div style="width: 30%;"> <input type="checkbox"/> Wet areas/water damage not evident Arial extent: _____ Arial extent: _____ Arial extent: _____ Arial extent: _____ </div> </div> Remarks: _____		
9.	Slope Instability <input type="checkbox"/> No evidence of slope instability Arial extent: _____ Remarks: _____	<input type="checkbox"/> Slides <input type="checkbox"/> Location shown on site map	
B. Benches <input type="checkbox"/> Applicable <input type="checkbox"/> N/A (Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)			
1.	Flows Bypass Bench Remarks: _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A or okay	
2.	Bench Breached Remarks: _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A or okay	
3.	Bench Overtopped Remarks: _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A or okay	
C. Letdown Channels <input type="checkbox"/> Applicable <input type="checkbox"/> N/A (Channel lined with erosion control mats, riprap, grout bags or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)			

1.	Settlement (Low spots)	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of settlement
	Arial extent: _____		Depth: _____
	Remarks: _____		
2.	Material Degradation	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of degradation
	Material type: _____		Arial extent: _____
	Remarks: _____		
3.	Erosion	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of erosion
	Arial extent: _____		Depth: _____
	Remarks: _____		
4.	Undercutting	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of undercutting
	Arial extent: _____		Depth: _____
	Remarks: _____		
5.	Obstructions	Type: _____	<input type="checkbox"/> No obstructions
	<input type="checkbox"/> Location shown on site map	Arial extent: _____	
	Size: _____		
	Remarks: _____		
6.	Excessive Vegetative Growth	Type: _____	
	<input type="checkbox"/> No evidence of excessive growth		
	<input type="checkbox"/> Vegetation in channels does not obstruct flow		
	<input type="checkbox"/> Location shown on site map	Arial extent: _____	
	Remarks: _____		
D. Cover Penetrations <input type="checkbox"/> Applicable <input type="checkbox"/> N/A			
1.	Gas Vents	<input type="checkbox"/> Active	<input type="checkbox"/> Passive
	<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning	<input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition
	<input type="checkbox"/> Evidence of leakage at penetration	<input type="checkbox"/> Needs maintenance	<input type="checkbox"/> N/A
	Remarks: _____		
2.	Gas Monitoring Probes	<input type="checkbox"/> Active	<input type="checkbox"/> Passive
	<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning	<input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition
	<input type="checkbox"/> Evidence of leakage at penetration	<input type="checkbox"/> Needs maintenance	<input type="checkbox"/> N/A
	Remarks: _____		
3.	Monitoring Wells (within surface area of landfill)		
	<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning	<input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition
	<input type="checkbox"/> Evidence of leakage at penetration	<input type="checkbox"/> Needs maintenance	<input type="checkbox"/> N/A
	Remarks: _____		
4.	Extraction Wells Leachate		
	<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning	<input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition

<input type="checkbox"/> Evidence of leakage at penetration	<input type="checkbox"/> Needs maintenance	<input type="checkbox"/> N/A
Remarks: _____		
5. Settlement Monuments	<input type="checkbox"/> Located	<input type="checkbox"/> Routinely surveyed <input type="checkbox"/> N/A
Remarks: _____		
E. Gas Collection and Treatment <input type="checkbox"/> Applicable <input type="checkbox"/> N/A		
1. Gas Treatment Facilities		
<input type="checkbox"/> Flaring	<input type="checkbox"/> Thermal destruction	<input type="checkbox"/> Collection for reuse
<input type="checkbox"/> Good condition	<input type="checkbox"/> Needs maintenance	
Remarks: _____		
2. Gas Collection Wells, Manifolds and Piping		
<input type="checkbox"/> Good condition	<input type="checkbox"/> Needs maintenance	
Remarks: _____		
3. Gas Monitoring Facilities (e.g., gas monitoring of adjacent homes or buildings)		
<input type="checkbox"/> Good condition	<input type="checkbox"/> Needs maintenance	<input type="checkbox"/> N/A
Remarks: _____		
F. Cover Drainage Layer <input type="checkbox"/> Applicable <input type="checkbox"/> N/A		
1. Outlet Pipes Inspected <input type="checkbox"/> Functioning <input type="checkbox"/> N/A		
Remarks: _____		
2. Outlet Rock Inspected <input type="checkbox"/> Functioning <input type="checkbox"/> N/A		
Remarks: _____		
G. Detention/Sedimentation Ponds <input type="checkbox"/> Applicable <input type="checkbox"/> N/A		
1. Siltation Area extent: _____ Depth: _____ <input type="checkbox"/> N/A		
<input type="checkbox"/> Siltation not evident		
Remarks: _____		
2. Erosion Area extent: _____ Depth: _____		
<input type="checkbox"/> Erosion not evident		
Remarks: _____		
3. Outlet Works <input type="checkbox"/> Functioning <input type="checkbox"/> N/A		
Remarks: _____		
4. Dam <input type="checkbox"/> Functioning <input type="checkbox"/> N/A		
Remarks: _____		
H. Retaining Walls <input type="checkbox"/> Applicable <input type="checkbox"/> N/A		
1. Deformations <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Deformation not evident		
Horizontal displacement: _____		Vertical displacement: _____
Rotational displacement: _____		
Remarks: _____		

2.	Degradation	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Degradation not evident
Remarks: _____			
I. Perimeter Ditches/Off-Site Discharge		<input type="checkbox"/> Applicable	<input type="checkbox"/> N/A
1.	Siltation	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Siltation not evident
Area extent: _____		Depth: _____	
Remarks: _____			
2.	Vegetative Growth	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> N/A
<input type="checkbox"/> Vegetation does not impede flow			
Area extent: _____		Type: _____	
Remarks: _____			
3.	Erosion	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Erosion not evident
Area extent: _____		Depth: _____	
Remarks: _____			
4.	Discharge Structure	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
Remarks: _____			
VIII. VERTICAL BARRIER WALLS		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1.	Settlement	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Settlement not evident
Area extent: _____		Depth: _____	
Remarks: _____			
2.	Performance Monitoring	Type of monitoring: _____	
<input type="checkbox"/> Performance not monitored			
Frequency: _____		<input type="checkbox"/> Evidence of breaching	
Head differential: _____			
Remarks: _____			
IX. GROUNDWATER/SURFACE WATER REMEDIES		<input checked="" type="checkbox"/> Applicable	<input type="checkbox"/> N/A
A. Groundwater Extraction Wells, Pumps and Pipelines		<input checked="" type="checkbox"/> Applicable	<input type="checkbox"/> N/A
1.	Pumps, Wellhead Plumbing and Electrical		
<input checked="" type="checkbox"/> Good condition <input checked="" type="checkbox"/> All required wells properly operating <input type="checkbox"/> Needs maintenance <input type="checkbox"/> N/A			
Remarks: _____			
2.	Extraction System Pipelines, Valves, Valve Boxes and Other Appurtenances		
<input checked="" type="checkbox"/> Good condition <input type="checkbox"/> Needs maintenance			
Remarks: _____			
3.	Spare Parts and Equipment		
<input type="checkbox"/> Readily available <input checked="" type="checkbox"/> Good condition <input type="checkbox"/> Requires upgrade <input type="checkbox"/> Needs to be provided			
Remarks: _____			
B. Surface Water Collection Structures, Pumps and Pipelines		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A

1.	Collection Structures, Pumps and Electrical <input type="checkbox"/> Good condition <input type="checkbox"/> Needs maintenance Remarks: _____
2.	Surface Water Collection System Pipelines, Valves, Valve Boxes and Other Appurtenances <input type="checkbox"/> Good condition <input type="checkbox"/> Needs maintenance Remarks: _____
3.	Spare Parts and Equipment <input type="checkbox"/> Readily available <input type="checkbox"/> Good condition <input type="checkbox"/> Requires upgrade <input type="checkbox"/> Needs to be provided Remarks: _____
C. Treatment System <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A	
1.	Treatment Train (check components that apply) <input type="checkbox"/> Metals removal <input type="checkbox"/> Oil/water separation <input type="checkbox"/> Bioremediation <input type="checkbox"/> Air stripping <input type="checkbox"/> Carbon adsorbers <input type="checkbox"/> Filters: _____ <input type="checkbox"/> Additive (e.g., chelation agent, flocculent): _____ <input type="checkbox"/> Others: _____ <input type="checkbox"/> Good condition <input type="checkbox"/> Needs maintenance <input type="checkbox"/> Sampling ports properly marked and functional <input type="checkbox"/> Sampling/maintenance log displayed and up to date <input type="checkbox"/> Equipment properly identified <input type="checkbox"/> Quantity of groundwater treated annually: _____ <input type="checkbox"/> Quantity of surface water treated annually: _____ Remarks: <u>Not part of remedy, conducted by Penn Color for use as cooling water.</u>
2.	Electrical Enclosures and Panels (properly rated and functional) <input type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Needs maintenance Remarks: _____
3.	Tanks, Vaults, Storage Vessels <input type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Proper secondary containment <input type="checkbox"/> Needs maintenance Remarks: _____
4.	Discharge Structure and Appurtenances <input type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Needs maintenance Remarks: _____
5.	Treatment Building(s) <input type="checkbox"/> N/A <input type="checkbox"/> Good condition (esp. roof and doorways) <input type="checkbox"/> Needs repair <input type="checkbox"/> Chemicals and equipment properly stored Remarks: _____

6. Monitoring Wells (pump and treatment remedy) <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> All required wells located </div> <div> <input type="checkbox"/> Functioning <input type="checkbox"/> Needs maintenance </div> <div> <input type="checkbox"/> Routinely sampled <input type="checkbox"/> N/A </div> <div> <input type="checkbox"/> Good condition </div> </div> Remarks: _____	
D. Monitoring Data	
1. Monitoring Data <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <input checked="" type="checkbox"/> Is routinely submitted on time <input checked="" type="checkbox"/> Is of acceptable quality </div>	
2. Monitoring Data Suggests: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <input checked="" type="checkbox"/> Groundwater plume is effectively contained <input checked="" type="checkbox"/> Contaminant concentrations are declining </div>	
E. Monitored Natural Attenuation	
1. Monitoring Wells (natural attenuation remedy) <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> All required wells located </div> <div> <input type="checkbox"/> Functioning <input type="checkbox"/> Needs maintenance </div> <div> <input type="checkbox"/> Routinely sampled <input type="checkbox"/> N/A </div> <div> <input type="checkbox"/> Good condition </div> </div> Remarks: _____	
X. OTHER REMEDIES	
If there are remedies applied at the site and not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.	
XI. OVERALL OBSERVATIONS	
A. Implementation of the Remedy	
Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is designed to accomplish (e.g., to contain contaminant plume, minimize infiltration and gas emissions). <u>The remedy included soil excavations to remove source areas and groundwater pumping to contain the groundwater plume. The remedy is effective and functioning as designed. Soil excavation areas are well vegetated and the wetland appears to be functioning appropriately. Groundwater extraction wells are in good condition and the VOC plume appears to be hydraulically contained.</u>	
B. Adequacy of O&M	
Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy. <u>O&M is adequate. Wells are locked and in good condition.</u>	
C. Early Indicators of Potential Remedy Problems	
Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs that suggest that the protectiveness of the remedy may be compromised in the future. <u>None.</u>	
D. Opportunities for Optimization	
Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy. <u>Not applicable at this time.</u>	

APPENDIX F – PRESS NOTICE

EPA REVIEWS CLEANUP **North Penn Area 2 Superfund Site**

The U.S. Environmental Protection Agency (EPA) is conducting a Five-Year Review of the North Penn Area 2 Superfund Site located in Hatfield, Montgomery County. EPA inspects sites regularly to ensure that cleanups conducted remain fully protective of public health and the environment. Construction of this site's cleanup remedy was completed in 2012. Results from this first EPA cleanup review will be publically available by June 2017.

To access results of the review (starting June 2017):

<http://epa.gov/5yr>

To read detailed site and contact information:

<http://go.usa.gov/x9GxX>

To ask questions or provide site information:

Contact: Darriel Swatts **Phone:** 215-814-5536

Email: swatts.darriel@epa.gov

Protecting public health and the environment

APPENDIX G –SITE INSPECTION PHOTOS



Front entrance of Penn Color facility.



Wetland soil excavation area with nylon filter sock in foreground, lower right.



Surface water sampling location SMP-1, marked with pink flag.



Restored wetland area, facility in the background.



Western Tributary to Neshaminy Creek.



Soil removal area and MW-5 monitoring well cluster.



Fence separating facility from wetland area.



PW-3 extraction well.



MW-2 extraction well.



Entrance to groundwater treatment system and institutional control sign.



MW-13 monitoring well cluster.

APPENDIX H – SCREENING LEVEL RISK REVIEW

This section evaluates whether the ARARs remain current and whether changes in toxicity values effect the validity of the ROD groundwater, soil and sediment cleanup goals. The section also includes a screening level risk assessment for vapor intrusion.

Groundwater

The Site's 2009 ROD established remedial goals for groundwater. Table H-1 compares chemical-specific ARARs from the 2009 ROD to 2016 MCLs. It shows that the remedial goals remain current for all COCs. Although EPA had established an MCL of 2 µg/L for thallium in 1992, the ROD selected a more stringent value, the MCLG of 0.5 µg/L. EPA began a health assessment of thallium in 2008 and continues to evaluate whether the MCL may require revision based on changes in toxicity values. A revised MCL has not yet been established. A screening-level risk evaluation of the MCLG is further evaluated below.

Table H-1: Groundwater ARARs Review

COC	2009 ROD Remedial Goal (µg/L) ^a	2016 EPA MCL (µg/L) ^b	ARAR
Carbon tetrachloride	5	5	No change
1,2-Dichloroethane	5	5	No change
Cis-1,2-DCE	70	70	No change
1,1-DCE	7	7	No change
PCE	5	5	No change
TCE	5	5	No change
Vinyl chloride	2	2	No change
Antimony	6	6	No change
Arsenic	10	10	No change
Manganese	NA	No MCL	No change
Thallium	0.5 ^c	2	New Value
1,4-Dioxane	NA	No MCL	No change
Notes: a. Table 20 of the 2009 ROD, based on MCLs unless otherwise noted. b. Federal Safe Drinking Water Act MCLs are available at: http://www.epa.gov/safewater/contaminants/index.html (accessed 09/20/2016). c. EPA selected non-zero MCLG of 0.5 µg/L as the cleanup goal; the MCL is undergoing review. NA = not applicable. An MCL had not been established in the ROD. PCE = Tetrachloroethylene DCE = Dichloroethylene			

To determine if groundwater cleanup goals remain valid for COCs without established MCLs, the cleanup goals were compared to EPA's 2016 tapwater regional screening levels (RSLs) (Table H-2). The screening-level risk evaluation demonstrates that the cancer risk associated with the 2009 ROD cleanup goals are within EPA's cancer risk management range of 1×10^{-6} to 1×10^{-4} . However, the noncancer hazard quotient (HQ) for thallium is above the threshold of 1.0. As discussed above, EPA is currently conducting a health assessment for thallium to determine if the 1992 MCL requires revision. Thus, EPA selected the MCLG as a cleanup goal in 2009. Based on the screening-level risk evaluation, the MCLG still may not be stringent enough. Accordingly, it is recommended that EPA evaluate whether the cleanup goal of 0.5 µg/L remains protective.

Table H-2: Risk Review of Groundwater Cleanup Goals

COC	2009 ROD Remedial Goal (µg/L)	EPA Resident Tapwater RSL ^a (µg/L)		Resident Tapwater Risk Level	
		1 x 10 ⁻⁶ Risk	HQ = 1	Cancer Risk ^b	Noncancer HQ ^c
Manganese	217	--	430	--	0.5
Thallium	0.5	--	0.2	--	2.5
1,4-Dioxane	6.1	0.46	57	1.3 x 10 ⁻⁵	0.1
Notes: a. Current RSLs, dated May 2016, are available at http://www.epa.gov/risk/risk-based-screening-table-generic-tables (accessed 10/03/2016). b. Cancer risks were calculated using the following equation, based on the fact that RSLs are derived based on 1 x 10 ⁻⁶ risk: Cancer risk = (remedial goal ÷ cancer RSL) × 10 ⁻⁶ c. The noncancer HQ was calculated using the following equation: HQ = (remedial goal ÷ noncancer RSL) NA = noncancer hazard index not identified for this contaminant					

Wetland Soil

The Site's 2009 ROD established remedial goals for wetland soil based on the residual average cleanup levels, 95% upper confidence limit. Table H-3 compares the cleanup goal to EPA's industrial RSL since the current land use is industrial and the Environmental Covenant requires that Site uses remain industrial. Table H-3 demonstrates that the cleanup goals are equivalent to cancer risks that fall within EPA's risk management range and the HQs are less than 1.0.

Table H-3: Review of Wetland Soil Cleanup Goals

COC	2009 ROD Remedial Goal (mg/kg)	EPA Industrial RSL ^a (mg/kg)		Industrial Risk Level	
		1 x 10 ⁻⁶ Risk	HQ = 1	Cancer Risk ^b	Noncancer HQ ^c
Soil					
Arsenic	9.5	3	480	3.2 x 10 ⁻⁶	0.02
Cadmium	55	9,300	980	5.9 x 10 ⁻⁹	0.06
Chromium	43	6.3 ^d	3,500 ^d	6.8 x 10 ⁻⁶	0.012
Lead	143	--	800	--	0.18
Zinc	1,662	--	350,000	--	0.005
Notes:					
a. Current RSLs, dated May 2016, are available at http://www.epa.gov/risk/risk-based-screening-table-generic-tables (accessed 10/03/2016).					
b. Cancer risks were calculated using the following equation, based on the fact that RSLs are derived based on 1 x 10 ⁻⁶ risk: Cancer risk = (remedial goal ÷ cancer RSL) × 10 ⁻⁶					
c. The noncancer HI was calculated using the following equation: HI = (remedial goal ÷ noncancer RSL)					
d. Assume chromium is in the more toxic hexavalent form.					

Surface Soil

The 2009 ROD identified surface soil cleanup goals based on cumulative risk less than 1×10^{-4} or HQ less than 1.0 under an industrial land use. Table H-4 compares the cleanup goal to EPA's industrial RSL. Table H-4 demonstrates that the cleanup goals are equivalent to cancer risks that fall within EPA's risk management range and the HQs are less than 1.0.

Table H-4: Review of Surface Soil Cleanup Goals

COC	2009 ROD Remedial Goal (mg/kg)	EPA Industrial RSL ^a (mg/kg)		Industrial Risk Level	
		1 x 10 ⁻⁶ Risk	HQ = 1	Cancer Risk ^b	Noncancer HQ ^c
Soil					
PCE	0.0047 ^d	100	390	4.7 x 10 ⁻¹¹	1.2 x 10 ⁻⁵
TCE	0.0026 ^d	6	19	4.3 x 10 ⁻¹⁰	1.3 x 10 ⁻⁴
Antimony	13 ^e	--	470	--	0.03
Arsenic	9.5 ^e	3	480	3.2 x 10 ⁻⁶	0.02
Thallium	3.6 ^e	--	12	--	0.3
Notes:					
a. Current RSLs, dated May 2016, are available at http://www.epa.gov/risk/risk-based-screening-table-generic-tables (accessed 10/03/2016).					
b. Cancer risks were calculated using the following equation, based on the fact that RSLs are derived based on 1 x 10 ⁻⁶ risk: Cancer risk = (remedial goal ÷ cancer RSL) × 10 ⁻⁶					
c. The noncancer HI was calculated using the following equation: HI = (remedial goal ÷ noncancer RSL)					
d. RBC, migration to groundwater					
e. Industrial risk-based value					
NA = noncancer hazard index not identified for this contaminant					
PCE = Tetrachloroethylene					
TCE = Trichloroethylene					

1995 Soil Removal

In 1986, AMETEK removed contaminated soils near the TCE tank, Paint Storage Area and Disturbed Area Excavation. The soils were treated and then placed in a berm on site. As a result, a 1994 soil investigation detected relatively low VOC contamination that did not necessitate further remediation. However, the 1994 soil investigation detected elevated concentrations of cadmium east of Building 1, at the former neutralizing lagoons, within portions of the Ground Scar Area and the Soil Berm Area. With EPA approval, these cadmium-impacted soils were remediated in 1995 to a cleanup standard of 510 mg/kg, which was the RBC industrial direct contact soil value at the time. Approximately 2,406 tons of cadmium-impacted soil were excavated from the Site and disposed of at an off-site facility. Table H-5 compares the cadmium cleanup goal to EPA's industrial RSL.

Table H-5: Review of 1995 Soil Cleanup Removal

COC	1995 Removal Goal (mg/kg)	EPA Industrial RSL ^a (mg/kg)		Industrial Risk Level	
		1 x 10 ⁻⁶ Risk	HQ = 1	Cancer Risk ^b	Noncancer HQ ^c
Soil					
Cadmium	510	9,300	980	5.5 x 10 ⁻⁸	0.52

COC	1995 Removal Goal (mg/kg)	EPA Industrial RSL ^a (mg/kg)		Industrial Risk Level	
		1 x 10 ⁻⁶ Risk	HQ = 1	Cancer Risk ^b	Noncancer HQ ^c
<i>Notes:</i>					
a. Current RSLs, dated May 2016, are available at http://www.epa.gov/risk/risk-based-screening-table-generic-tables (accessed 10/03/2016).					
b. Cancer risks were calculated using the following equation, based on the fact that RSLs are derived based on 1 x 10 ⁻⁶ risk: Cancer risk = (remedial goal ÷ cancer RSL) × 10 ⁻⁶					
c. The noncancer HI was calculated using the following equation: HI = (remedial goal ÷ noncancer RSL)					



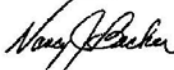
Vapor Intrusion

A vapor intrusion evaluation was not conducted as part of the 2009 ROD. Due to the presence of shallow groundwater VOC contamination and occupied buildings on Site, vapor intrusion is a potential human exposure pathway at the Site. A vapor intrusion screening evaluation was conducted using the EPA VISL calculator and the 2016 groundwater VOC detections at the Site. Results are provided in Table H-6. With the exception of TCE and 1,1-DCE, all other constituents are within the EPA acceptable risk range for carcinogens (1 x 10⁻⁴ – 1 x 10⁻⁶) and a HQ less than 1.0 for non-carcinogens.

Table H-6: Screening-Level Vapor Intrusion Risk Evaluation Using Maximum Detected Groundwater Concentrations

Contaminant	Maximum Detected Groundwater (µg/L)	Commercial/Industrial ^a	
		Cancer Risk	Noncancer HQ
1,1-DCE	880 (MW-2)	No Inhalation Unit Risk value	1.1
1,4-Dioxane	130 (MW-2)	1 x 10 ⁻⁸	0.0002
PCE	96 (MW-3A)	1.5 x 10 ⁻⁶	0.4
TCE	1,600 (MW-2)	2.2 x 10⁻⁴	74
Vinyl chloride	0.7 (MW-2I)	2.9 x 10 ⁻⁷	0.002
<p><i>Notes:</i></p> <p>Only COCs detected in 2016 are shown.</p> <p>Bold = Indicates vapor intrusion carcinogenic risk greater than 1 x 10⁻⁴ for carcinogens or vapor intrusion hazard greater than or equal to 1.</p> <p>a. May 2016 VISL calculator version 3.51 at: https://www.epa.gov/vaporintrusion/vapor-intrusion-screening-levels-visls (accessed 1/25/2017).</p> <p>PCE = Tetrachloroethylene</p> <p>DCE = Dichloroethylene</p>			

APPENDIX I – ENVIRONMENTAL COVENANT

 <p>RECORDER OF DEEDS MONTGOMERY COUNTY <i>Nancy J. Becker</i></p> <p>One Montgomery Plaza Swede and Airy Streets ~ Suite 303 P.O. Box 311 ~ Norristown, PA 19404 Office: (610) 278-3289 ~ Fax: (610) 278-3869</p>	<p>DEED BK 5840 PG 01375 to 01391 INSTRUMENT # : 2012064873 RECORDED DATE: 07/05/2012 11:12:35 AM</p>  <p>2751383-0012P</p> <p align="center">MONTGOMERY COUNTY ROD</p>								
<p align="center">OFFICIAL RECORDING COVER PAGE Page 1 of 17</p>									
<p>Document Type: Deed Miscellaneous Document Date: 02/09/2012 Reference Info:</p>	<p>Transaction #: 2695595 - 1 Doc(s) Document Page Count: 16 Operator Id: dcane</p>								
<p>RETURN TO: (Simplifile) Grim, Biehn & Thatcher 104 South 6th Street Perkasie, PA 18944 (215) 257-6811</p>	<p>PAID BY: GRIM BIEHN & THATCHER</p>								
<p>* PROPERTY DATA:</p>									
<p>Parcel ID #: 35-00-00277-00-3 Address: 2755 BERGEY RD</p>									
<p>PA Municipality: Hatfield Township (100%) School District: North Penn</p>									
<p>* ASSOCIATED DOCUMENT(S):</p>									
<p>CONSIDERATION/SECURED AMT: \$0.00 TAXABLE AMOUNT: 0.00</p> <p>FEES / TAXES:</p> <table border="0"> <tr> <td>Recording Fee: Deed Miscellaneous</td> <td>\$52.00</td> </tr> <tr> <td>Additional Pages Fee</td> <td>\$24.00</td> </tr> <tr> <td>Rejected Document Fee</td> <td>\$5.00</td> </tr> <tr> <td>Total:</td> <td>\$81.00</td> </tr> </table>	Recording Fee: Deed Miscellaneous	\$52.00	Additional Pages Fee	\$24.00	Rejected Document Fee	\$5.00	Total:	\$81.00	<p>DEED BK 5840 PG 01375 to 01391 Recorded Date: 07/05/2012 11:12:35 AM</p> <p>I hereby CERTIFY that this document is recorded in the Recorder of Deeds Office in Montgomery County, Pennsylvania.</p>   <p align="right">Nancy J. Becker Recorder of Deeds</p>
Recording Fee: Deed Miscellaneous	\$52.00								
Additional Pages Fee	\$24.00								
Rejected Document Fee	\$5.00								
Total:	\$81.00								

PLEASE DO NOT DETACH
THIS PAGE IS NOW PART OF THIS LEGAL DOCUMENT

NOTE: If document data differs from cover sheet, document data always supersedes.
*COVER PAGE DOES NOT INCLUDE ALL DATA, PLEASE SEE INDEX AND DOCUMENT FOR ANY ADDITIONAL INFORMATION.

Certification signature by montgomery.county.rod@propertyinfo.com, Validity Unknown

Certified and Digitally Signed

Validation may require Adobe "Windows Integration"

eCertified copy of recorded # 2012064873 (page 1 of 17)
Montgomery County Recorder of Deeds



Prepared By: Jonathan J. Reiss, Esquire

Return To: Jonathan J. Reiss, Esquire
Grim, Biehn & Thatcher
P.O. Box 215
Perkasie, PA 18944

MONTGOMERY COUNTY COMMISSIONERS REGISTRY
35-00-00277-00-3 HATFIELD TOWNSHIP
2755 BERGEY RD
PENN COLOR INC
B 076 L U 018 3340 07/05/2012

\$10.00
LG

CPN# 35-00-00277-00-3

HATFIELD TOWNSHIP

ENVIRONMENTAL COVENANT

**NORTH PENN AREA 2 SUPERFUND SITE
2755 BERGEY ROAD, HATFIELD, PA 19440**



Environmental Covenant

When recorded, return to:
[name & address of person filing the Environmental Covenant]

The County Parcel Identification No. of the Property is: 35-00-00277-00-3
GRANTOR: Penn Color, Inc.
PROPERTY ADDRESS: 2755 Bergey Road, Hatfield, Pa. 19440

ENVIRONMENTAL COVENANT

This Environmental Covenant is executed pursuant to the Pennsylvania Uniform Environmental Covenants Act, Act No. 68 of 2007, 27 Pa. C.S. §§ 6501 – 6517 (UECA). This Environmental Covenant subjects the Site identified in Paragraph 1 to the activity and/or use limitations in this document. As indicated later in this document, this Environmental Covenant has been approved by the United States Environmental Protection Agency (“EPA”).

1. **Property affected.** The property affected (“Site”) by this Environmental Covenant is located in Hatfield Township (name of municipality), Montgomery County.

The postal street address of the Site [if any] is: 2755 Bergey Road, Hatfield, Pa. 19440. The latitude and longitude of the center of the Site affected by this Environmental Covenant is: [either decimal degrees (DD.DDDDDD) or DD/MM/SS or DD/MM/SS.SSSS; preferred is decimal degrees] 40.29465/75.29738. The Site has been known by the following name(s): North Penn Area 2 Superfund Site

A complete description of the Site is attached to this Environmental Covenant as Exhibit A. A map of the Site is attached to this Environmental Covenant as Exhibit B.

2. **Site Owner / GRANTOR.** Penn Color, Inc., is the “Owner” of the Site and the GRANTOR of this Environmental Covenant. Owner’s address is 2755 Bergey Road, Hatfield, PA 19440.

3. **Holder(s) / GRANTEE(S).** AMETEK, Inc., is the GRANTEE and a “holder,” as that term is defined in 27 Pa. C.S. § 6502, of this Environmental Covenant. Holder’s address is 37 North Valley Road, Building 4, P.O. Box 1764, Paoli, PA 19301.

4. **Description of Contamination & Remedy** Certain substances were detected in certain portions of the Site in soil and groundwater, and additional information about the specific substances detected, the sampling and monitoring that was performed, and the remedial activities that were performed on the Site may be found in the May 8, 2009 Record of Decision and the February, 2011 Consent Decree (“Consent Decree”) for the Property which can be obtained from EPA, Region III, 1650 Arch Street, Philadelphia, PA.



5. **Activity & Use Limitations.** The Site is subject to the following activity and use limitations, which the then current owner of the Site, and its tenants, agents, employees and other persons under its control, shall abide by:

- a. Any activity or use that could interfere with the operation of the groundwater recovery or treatment system, such as excavation, construction within the area of the treatment system, or pumping that affects recovery of contaminated groundwater shall be prohibited;
- b. Any activity that could interfere with the structure and function of restored wetlands at the Site shall be prohibited;
- c. Except for on-Site use of contaminated groundwater as non-contact cooling water, use and/or contact with contaminated groundwater at the Site via ingestion, vapor inhalation, or dermal contact shall be prohibited to avoid unacceptable exposure to contaminants in groundwater;
- d. Contact with contaminated soils at the Site via ingestion, vapor inhalation, or dermal contact shall be prohibited to avoid unacceptable exposure to contaminants;
- e. The integrity of existing buildings and pavement that currently prevent direct contact and minimize infiltration through contaminated soil shall be maintained and protected, and any modifications to the existing buildings or impervious surfaces shall be done in such a way as to prevent direct contact and minimize infiltration through contaminated soil;
- f. The future land use shall be restricted to commercial/industrial purposes, unless reviewed and approved by EPA pursuant to the National Contingency Plan (as defined in the Consent Decree); and,
- g. Proper indoor air monitoring and mitigation shall be ensured in the event the facility use is changed and is not covered by Occupational Safety and Health Administration (OSHA).

6. **Access by the Agency.** This Environmental Covenant grants to the EPA a right of access at all reasonable times to the Site to conduct any activity regarding the Consent Decree, including, but not limited to:

- a. Monitoring the Work (as defined in the Consent Decree);
- b. Verifying any data or information submitted to the United States;
- c. Conducting investigations relating to contamination at or near the Site;



- d. Obtaining samples;
- e. Assessing the need for, planning, or implementing additional response actions at or near the Site;
- f. Assessing implementation of quality assurance and quality control practices as defined in the approved Quality Assurance Project Plans (as set forth in the Consent Decree);
- g. Implementing the Work pursuant to the conditions set forth in Paragraph 88 of the Consent Decree;
- h. Inspecting and copying records, operating logs, contracts, or other documents maintained or generated by Owner, Holder, or their agents consistent with Section XXIV of the Consent Decree;
- i. Assessing Owner and Holder compliance with the Consent Decree;
- j. Determining whether the Site or other property is being used in a manner that is prohibited or restricted, or that may need to be prohibited or restricted, by or pursuant to the Consent Decree; and,
- k. Implementing, monitoring, maintaining, reporting on and enforcing any Institutional Controls (as defined in the Consent Decree).

7. **Recording & Proof & Notification.** Within 90 days after the Environmental Covenant has been approved and signed by EPA, Owner shall file this Environmental Covenant with the Recorder of Deeds for Montgomery County and shall send a file-stamped copy of this Environmental Covenant to EPA, the Holder, Hatfield Township, Montgomery County, each person holding a recorded interest in the Site, and each person in possession of the Site.

8. **Termination or Modification.** Except as otherwise provided herein, this Environmental Covenant may only be terminated or modified in accordance with Section 9 of UECA, 27 Pa. C.S. § 6509. This Environmental Covenant may be amended or terminated as to any portion of the Site subject to the Environmental Covenant that is acquired for use as highway right of way by the Commonwealth of Pennsylvania, provided that:

- a. The Pennsylvania Department of Environmental Protection (“Department”) waives the requirements for an environmental covenant and for conversion under Section 6517 of UECA to the same extent that the environmental covenant is amended or terminated;



b. The Department determines that termination or modification of the environmental covenant will not adversely affect human health or the environment; and,

c. The Department will provide 30-days advance written notice to the current Site owner, each holder, and, as practicable, each person that originally signed the environmental covenant or successors in interest to those persons.

Executed February 9, 2012.

ACKNOWLEDGMENTS by Owner(s) and any Holder(s), in the following form:

Date: 2-9-12 Penn Color, Inc., Grantor
By: [Signature]
Name: KEVIN S. PUTMAN
Title: CEO

Date: 3/26/12 AMETEK, Inc., Grantee
By: [Signature]
Name: Thomas A. Deener
Title: VP Corp Compliance & Auditing

APPROVED, by United States
Environmental Protection Agency
Date: 5/16/2012 By: [Signature]
Name: RONALD J. BORSZELINO
Title: DIRECTOR, HAZARDOUS SITE
CLEANUP DIVISION
EPA - REGION 3



COMMONWEALTH OF PENNSYLVANIA) [other state, if executed outside PA]

COUNTY OF Bucks) SS:

On this 9th day of February, 2012, before me, the undersigned officer, personally appeared Kevin S. Putman, ^{CEO of PennColor, Inc.} Owner and Grantor, who acknowledged himself/herself to be the person whose name is subscribed to this Environmental Covenant, and acknowledged that s/he executed same for the purposes therein contained.

In witness whereof, I hereunto set my hand and official seal.

COMMONWEALTH OF PENNSYLVANIA
 Notarial Seal
 Denise L. Galik, Notary Public
 Doylestown Twp., Bucks County
 My Commission Expires July 14, 2012
 Member, Pennsylvania Association of Notaries

Denise L. Galik
 Notary Public

COMMONWEALTH OF PENNSYLVANIA) [other state, if executed outside PA]

COUNTY OF Chester) SS:

On this 26 day of March, 2012, before me, the undersigned officer, personally appeared Thomas A. Deeney, VP, ^{CORP COMPLIANCE & AUDITING METEK, INC.} Holder and Grantee, who acknowledged himself/herself to be the person whose name is subscribed to this Environmental Covenant, and acknowledged that s/he executed same for the purposes therein contained.

COMMONWEALTH OF PENNSYLVANIA) In witness whereof, I hereunto set my hand and official seal.

Notarial Seal
 Joy Atwell, Notary Public
 Tredyffrin Twp., Chester County
 My Commission Expires June 5, 2012
 Member, Pennsylvania Association of Notaries

Joy Atwell
 Notary Public

COMMONWEALTH OF PENNSYLVANIA)

COUNTY OF Philadelphia) SS:

On this 16th day of May, 2012, before me, the undersigned officer, personally appeared RONALD J. BORSELLINO, who acknowledged himself/herself to be the DIRECTOR, HSCD of the U.S. Environmental Protection Agency, Region III, whose name is subscribed to this Environmental Covenant, and acknowledged that s/he executed same for the purposes therein contained.

In witness whereof, I hereunto set my hand and official seal.

COMMONWEALTH OF PENNSYLVANIA
 NOTARIAL SEAL
 Patricia J. Schwenke, Notary Public
 City of Philadelphia, Philadelphia County
 My commission expires August 14, 2014

Patricia J. Schwenke
 Notary Public



CORPORATION DEED.

Printed for and sold by John C. Clark Co., 1325 Walnut St., Phila.

This Indenture made the 28th

day of June,

in the year of our Lord one thousand nine

hundred and eighty-eight

Between AMETEK, INC., a Delaware corporation, having an office at 410 Park Avenue, New York, N.Y. 10022, (formerly known as AMERICAN MACHINE AND METALS, INC.)

(hereinafter called the Grantor), of the one part, and
 PENN COLOR, INC., a Pennsylvania corporation, having an office at 400 Old Dublin Pike, Doylestown, Pennsylvania 18901,

(hereinafter called the Grantee), of the other part,

Witnesseth,

That the said Grantor

for and in consideration of the sum of

THREE MILLION FIVE HUNDRED THOUSAND DOLLARS '00/100 (\$3,500,000.00)

lawful

money of the United States of America, unto it well and truly paid by the said Grantee, at or before the sealing and delivery, hereof, the receipt whereof is hereby acknowledged, has granted, bargained and sold, aliened, enfeoffed, released and confirmed, and by these presents does grant, bargain and sell, alien, enfeoff, release and confirm unto the said Grantee, its successors and assigns,

ALL THAT CERTAIN piece or parcel of land consisting of approximately 86.274 acres with the buildings and improvements thereon erected, situate, lying and being in Hatfield Township, Montgomery County, Pennsylvania, known as and by the street number One Spring Avenue, more particularly described on Schedule A annexed hereto and made part hereof (hereinafter called the "Premises").

BEING the same Premises which MARIE R. MOYER, widow, by deed dated the 26th day of February, 1960, recorded on the first day of March, 1960, in the Office of the Recorder of Deeds for Montgomery County, in Deed Book 3039, at page 105, granted and conveyed unto AMERICAN MACHINE AND METALS, INC., a Delaware corporation, in fee. By Articles of Amendment to its charter filed in the Department of State of Delaware, the name of said AMERICAN MACHINE AND METALS, INC. was changed to AMETEK, INC.

TOGETHER with all right, title and interest, if any, of the Grantor in and to any land lying in the bed of any street, road or avenue opened or proposed, in front of or adjoining the Premises, to the center line thereof.

EXHIBIT

Exhibit A

REALTY TRANS. TAX PAID	
STATE	35,000.00
LOCAL	35,000.00
TOTAL	

Montgomery County Recorder of Deeds



Together with all and singular the buildings and Improvements, Ways, Streets, Alleys, Passages, Waters, Water-courses, Rights, Liberties, Privileges, Hereditaments and Appurtenances, whatsoever thereunto belonging, or in any wise appertaining, and the Reversions and Remainders, Rents, Issues and Profits thereof; and all the Estate, Right, Title, Interest, Property, Claim and Demand whatsoever of Grantor,

in law as in equity, or otherwise howsoever, of, in, and to the same and every part thereof. The groundwater underlying the Premises contains the hazardous substances set forth in Part I in Schedule C attached hereto and made a part hereof. The soil on the Premises contains the hazardous substances set forth in Part II of Schedule C, which are located on Figure 1 attached to Schedule C, same being incorporated herein by reference.

To have and to hold the said Premises with the buildings and improvements thereon, together with the

Hereditaments ~~and Premises~~ hereby granted, or mentioned and intended so to be, with the Appurtenances, therein unto the said Grantee, its Successors and Assigns, to and for the only proper use and behoof of the said Grantee, its Successors and Assigns, forever.

This transfer and conveyance is made under and subject to those matters set forth on Schedule B attached hereto and made a part hereof.

And the said Grantor

does by

these presents, covenant, grant and agree, to and with the said Grantee, its Successors and Assigns, that the said Grantor does grant

all and singular the

Hereditaments and Premises herein above described and granted, or mentioned and intended so to be, with the Appurtenances, unto the said Grantee, its Successors

and Assigns,

against it the said Grantor

and against all and every

Person or Persons whomsoever lawfully claiming or to claim the same or any part thereof, by, from or under the Grantor or any of them,

shall and will

SPECIALLY WARRANT and forever DEFEND,

subject to the matters set forth in Schedule B annexed hereto, as aforesaid.

In Witness Whereof

Sealed and Delivered

IN THE PRESENCE OF US:

Madeline R. Berg
Robert Ferguson

AMETEK, INC.

By

William H. Ferguson
Vice Pres.



MONTGOMERY COUNTY COMMISSIONERS REGISTRY
 35-00-00277-00-3 HATFIELD
 2755 BERGEY RD
 AMERICAN MACHINE & METALS INC
 E 074 U 018 L 3340 DATE: 06/30/2012

ALL THAT CERTAIN message, barn, outbuildings and tract of farm and woodland along the southeast side of Bergey Road extending from the Souderton-Hatfield Road to the Bethlehem Pike in Hatfield Township, Montgomery County, Pennsylvania, bounded and described according to a survey and plan dated December 31, 1951, as prepared by Stanley F. Moyer, Registered Engineer and Land Surveyor, Souderton, Pennsylvania, as follows, to wit:

BEGINNING at an iron pin, a corner in the center line of Bergey Road, 33.0 feet wide, and in the east property line of Bethlehem Branch of the North Pennsylvania Railroad; thence along the center line of Bergey Road the next two courses and distances: (1) North Forty two degrees sixteen minutes East the distance of One thousand seven hundred and sixteen hundredths feet (1700.16') to a spike a corner; thence (2) North Forty two degrees forty six minutes East the distance of Eight hundred twenty three and seventy three hundredths feet (823.73') to an iron pin a corner; thence along land of Alfred Zischang South Thirty nine degrees forty four minutes East the distance of Five hundred twenty three and eighty three hundredths feet (523.83') to an iron pin a corner; thence along land of Pierce Gerhart South Forty five degrees nine minutes West the distance of Five hundred sixteen and twenty four hundredths feet (516.24') to a stone a corner; thence along the same and land of Elizabeth Matiskoyny South thirty six degrees twenty one minutes East the distance of Four hundred fifty five and thirty four hundredths feet (455.34') to an iron pin a corner; thence along land of Max York the next two courses and distances: (1) South Fifty one degrees fifty four minutes West the distance of Three hundred thirty five and six hundredths feet (335.06') to an iron pin a corner; thence (2) South Forty degrees forty three minutes East the distance of Eight hundred twenty and twenty eight hundredths feet (820.28') to a stone a corner; thence along land of John R. Hutt South Forty nine degrees seven minutes West the distance of Six hundred forty eight and thirty six hundredths feet (648.36') to an iron pin and stone a corner; thence along land of Samuel M. Rorer the next two courses and distances: (1) North Forty six degrees Seven minutes West the distance of Twenty eight and Fifty hundredths feet (28.50') to an iron pin a corner; thence (2) South Thirty nine degrees forty four minutes West the distance of One thousand two hundred sixty eight and ninety three hundredths feet (1268.93') to an iron pin a corner in the center line of Moyer Road; thence along the center line of the same North Forty seven degrees West the distance of One thousand eighty and seventy-three hundredths feet (1080.73') to an iron pin a corner in the east property line of the Bethlehem Branch of the North Pennsylvania Railroad; thence along the same North seven degrees West the distance of Seven hundred forty seven and eighty three hundredths feet (747.83') to the place of beginning.

CONTAINING 86.274 acres of land, more or less.

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RI# 107000000



SCHEDULE B

The property is sold and shall be sold and transferred under and subject only to the following:

- (i) State of facts shown on survey made by Stanley F. Mayer dated December 31, 1951 and any subsequent or other state of facts which an accurate survey or personal inspection would show provided such subsequent or other state of facts would not render title unmarketable;
- (ii) Easement agreement between the Seller and the North Penn Water Authority recorded on June 16, 1983, in Deed Book 4709, page 2246;
- (iii) Agreement dated December 20, 1982 between the Seller and the North Penn Water Authority for the Bergey Road Water District, but Seller shall assume and make all payments due to North Penn Water Authority during the remainder of the term of such agreement;
- (iv) Agreement made with Pennsylvania Power & Light Company dated March 25, 1966 for the supply of electricity;
- (v) Easement made by Ametek, Inc. to Pennsylvania Power & Light Company dated October 4, 1962;
- (vi) Permit No. 9005 of the Hatfield Township Municipal Authority for discharge of waste water into the sanitary sewer system.



SCHEDULE C

PART I

The following hazardous substances are contained in the groundwater underlying the Premises:

1,1 - dichloroethene
1,1 - dichloroethane
trans - 1,2 dichloroethene
1,1,1 - trichloroethane
tri-chloroethene
tetrachloroethene
fluorothrchloromethane
toluene

PART II

The following hazardous substances are contained in the soil on the premises, in the locations shown as "TCE Tank Area Excavation," "Paint Storage Excavation" and/or "Wooded Area Excavation" on Figure 1, annexed hereto:

trichlorethene
toluene
Methylene chloride
ethylbenzene
xylenes
1,4 dioxane
2,2 - oxybispropane

The following hazardous substances are contained in the soil on the premises, in the location shown as "Wooded Area Excavation" on Figure 1, annexed hereto:

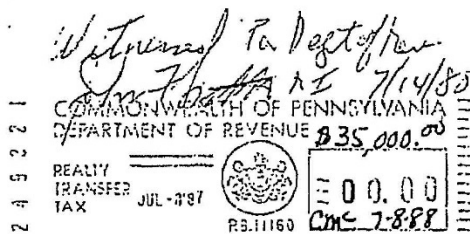
trichloroethene
tetrachloroethene
toluene
naphthalene
methylene chloride
phenanthrene
bis (2-ethylhexyl) phthalate
xylenes

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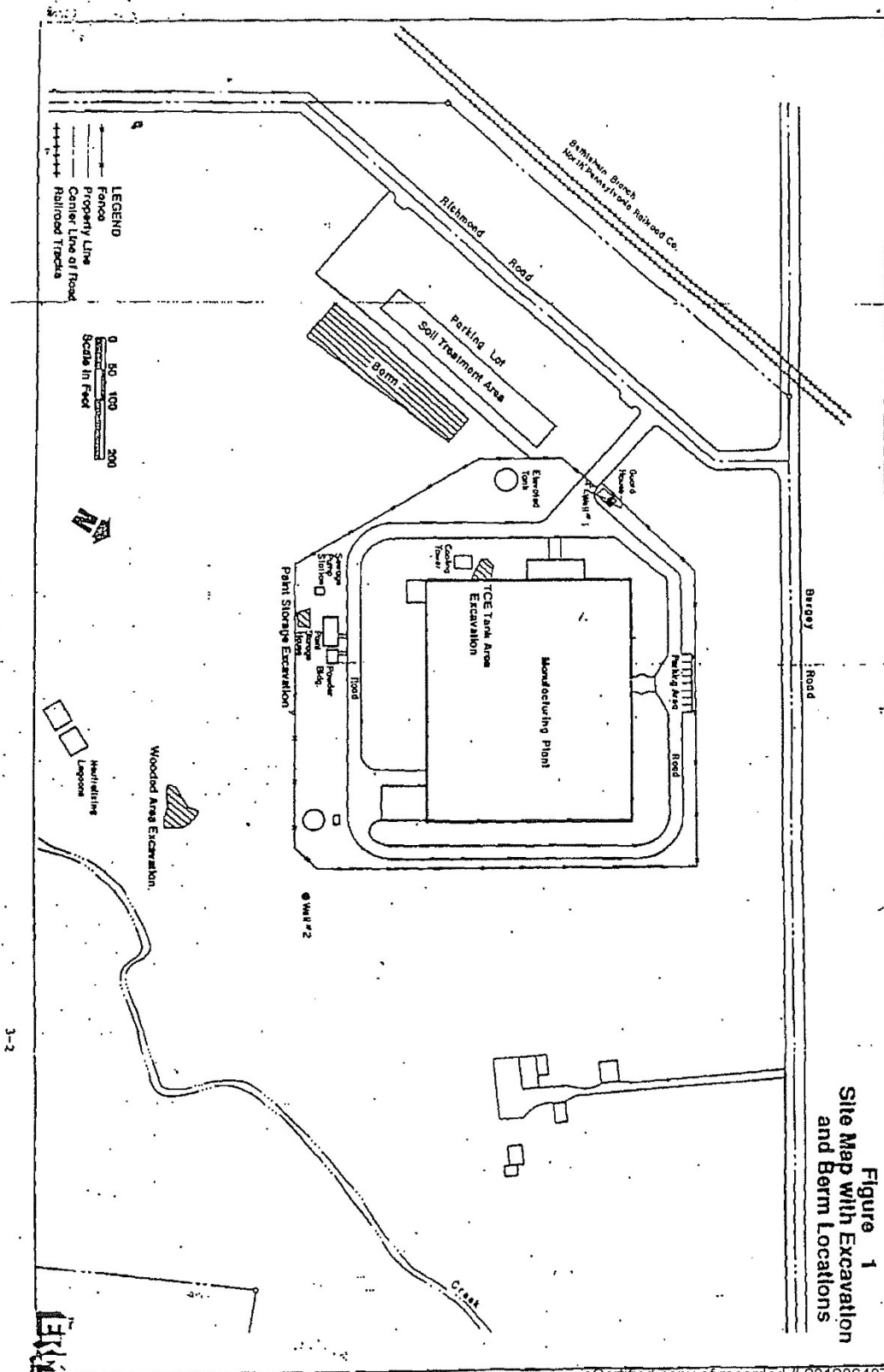
The following hazardous substances are contained in the soil on the premises, in the location shown as "Berm" on Figure 1, annexed hereto:

trichloroethene
tetrachloroethene
1,1 - dichloroethene
toulene
methylene chloride
3 - methyl heptane
acetone
1,1,1 trichloroethane



-2-





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Montgomery County Recorder of Deeds



Commonwealth of Pennsylvania

County of Bucks

On this, the 28th day of June, 19 , before me, ,

the undersigned officer,

personally appeared WILLIAM H. SPENCER who acknowledged himself (~~herself~~)
 to be the Vice-President of AMETEK, INC.,
 a corporation, and that he as such Vice-President, being authorized to do so, executed
 the foregoing instrument for the purposes therein contained by signing the name of the corporation by
 himself (~~herself~~) as Vice-President.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal.

[Signature]
 Notary Public.
 Doylestown Bucks Co. Pa

My Commission Expires: 12/14/89

DEED.

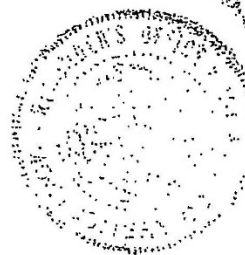
AMETEK, INC.

TO

PENN COLOR, INC.

750-S John C. Clark Co., Philadelphia 1974

Montgomery County, S.S.
 Recorded in the Office for Recording of Deeds & c.
 in and for said county in Deed book
 No. 4078 Page 244
 Witness to July office this 16 89
[Signature]
 Notary



The address of the above-named Grantee

400 Old Public Pl.

Doylestown, Pa 18901

On Behalf of the Grantee

[Signature]

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 4078 612 Montgomery County Recorder of Deeds



(vii) All other covenants, restrictions, easements and agreements of record, provided the same are not violated by the existing structures or the existing use thereof;

(viii) Zoning regulations and ordinances of the state, county, township, city, town and other governmental and municipal agencies in which the Premises lie;

(ix) Consents by the Seller or any former owner of the Premises for the erection of any structure or structures on, under or above any street or streets on which the Premises may abut;

(x) Agreements, if any, of other public utility companies for the supply of utilities to the Premises;

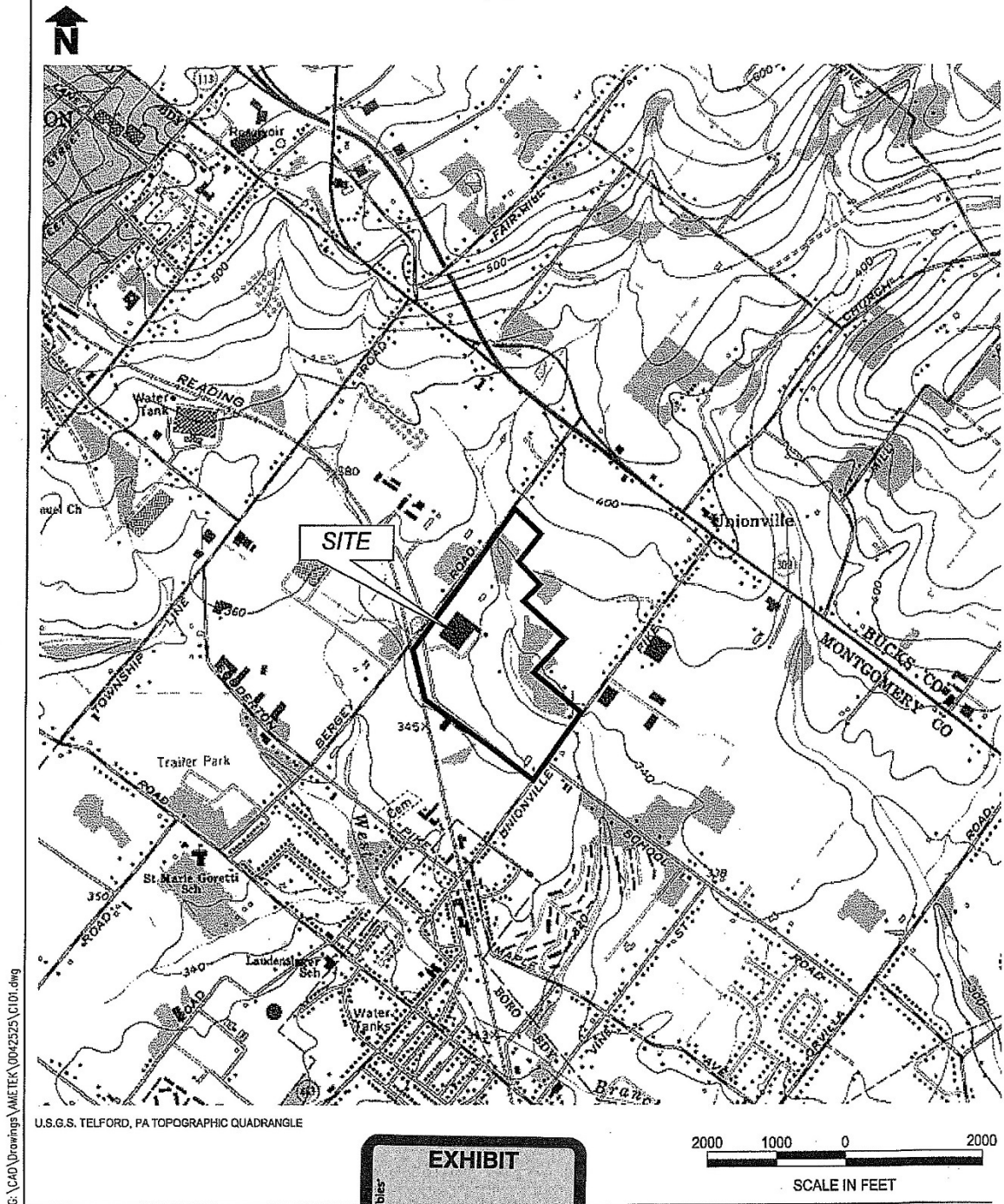
(xi) Public and private rights in that portion of the Premises lying in the beds of public roads;

(xii) Riparian rights of owners of the ground abutting all streams of water flowing through the Premises;

(xiii) Real estate and other taxes affecting the Premises, if any, not yet due and payable.



FIGURE 1
SITE LOCATION MAP
NORTH PENN AREA 2 SUPERFUND SITE
HATFIELD, PENNSYLVANIA



G:\CAD\Drawings\AMETEK\0042525\CI01.dwg

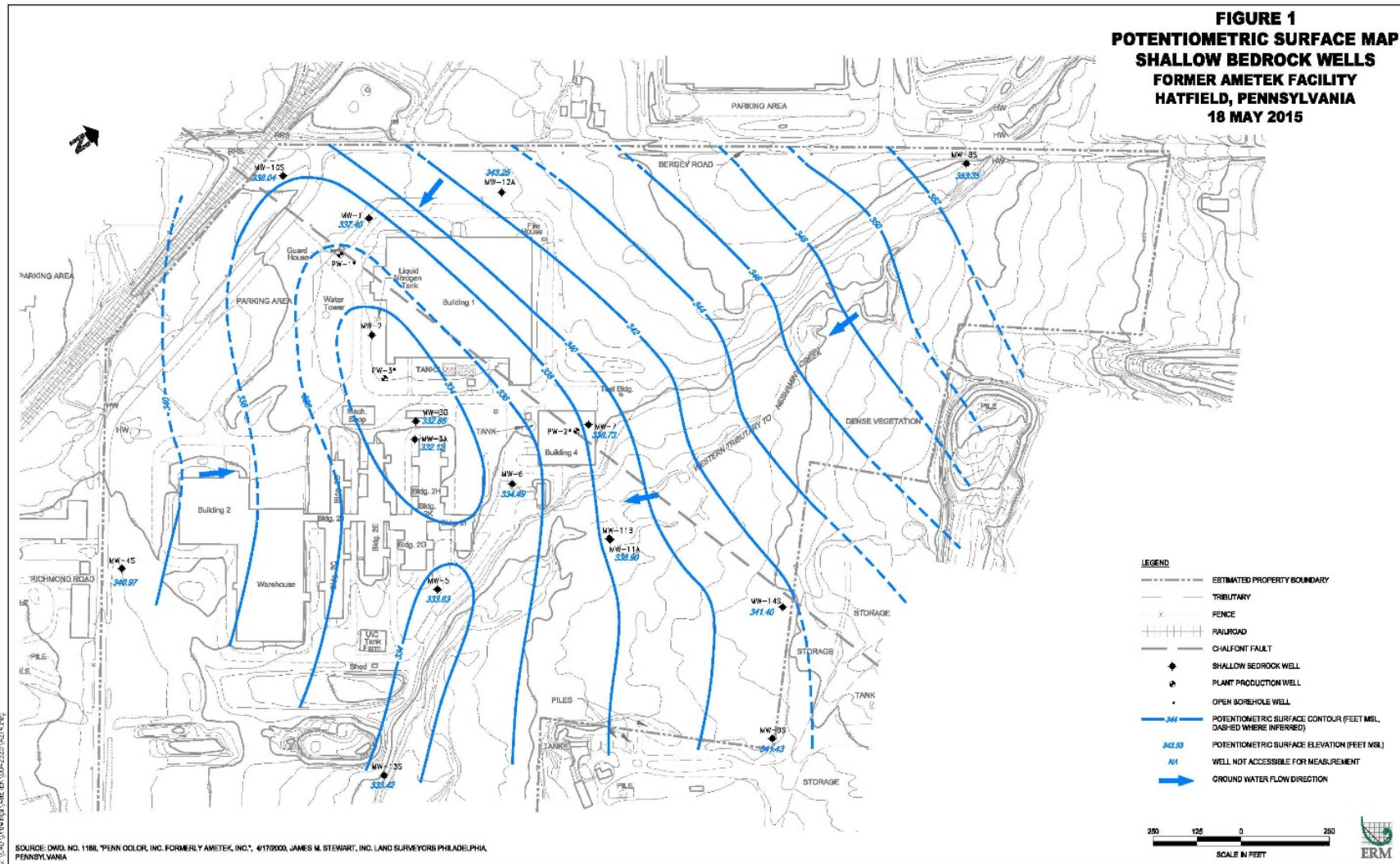
MLB/4-29-10

PRV
 eCertified copy of recorded # 2012064873 (page 17 of 17)
 Montgomery County Recorder of Deeds



APPENDIX J – DATA SUPPORT

Figure J-1. Potentiometric Surface Map Shallow Bedrock Wells – May 2015



C:\CD\Drawings\METEX\00\2525\215.dwg



Figure J-3: Potentiometric Surface Map Deep Bedrock Wells – May 2015

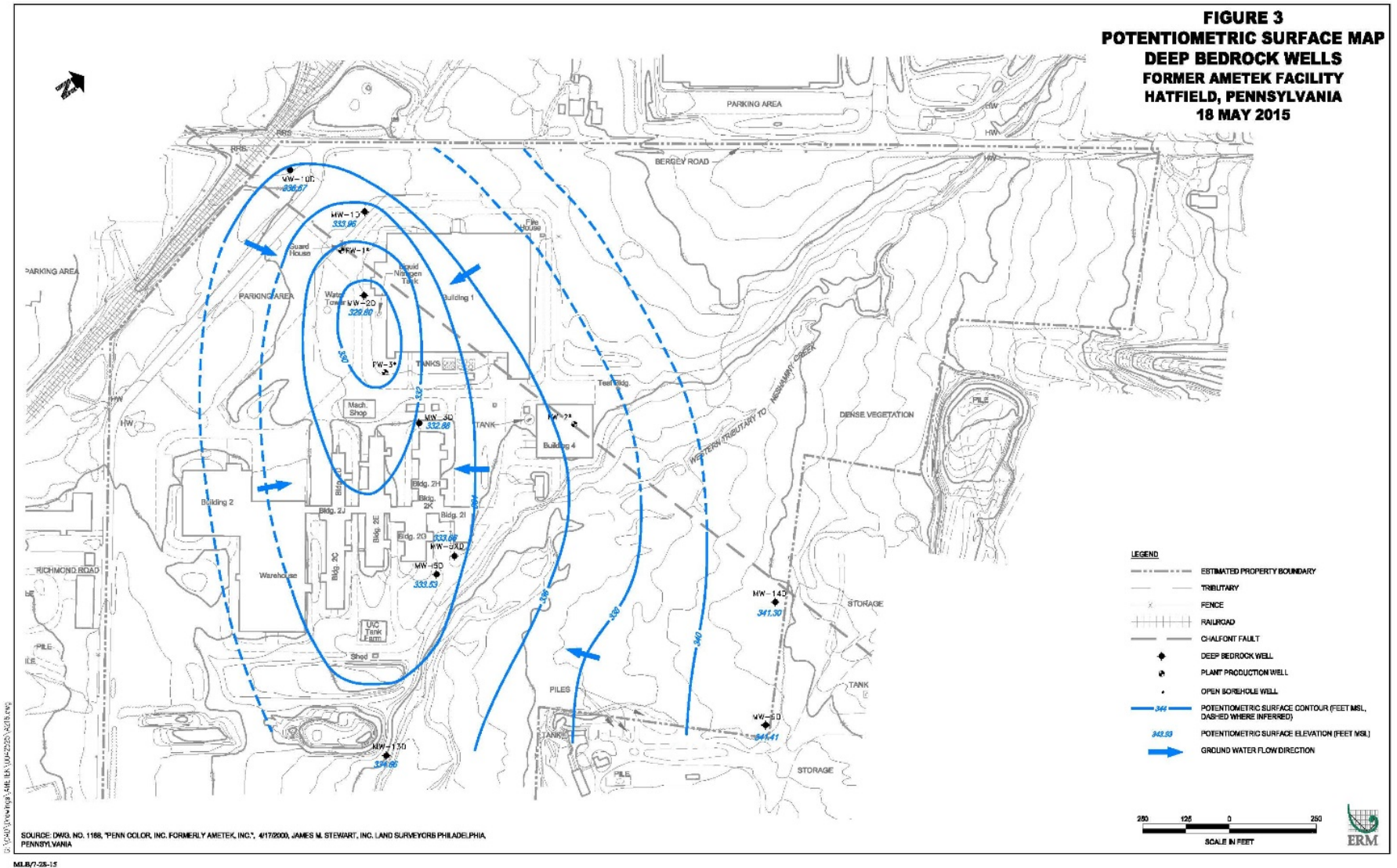


Figure J-4. Potentiometric Surface Map Shallow Bedrock Wells – November 2015

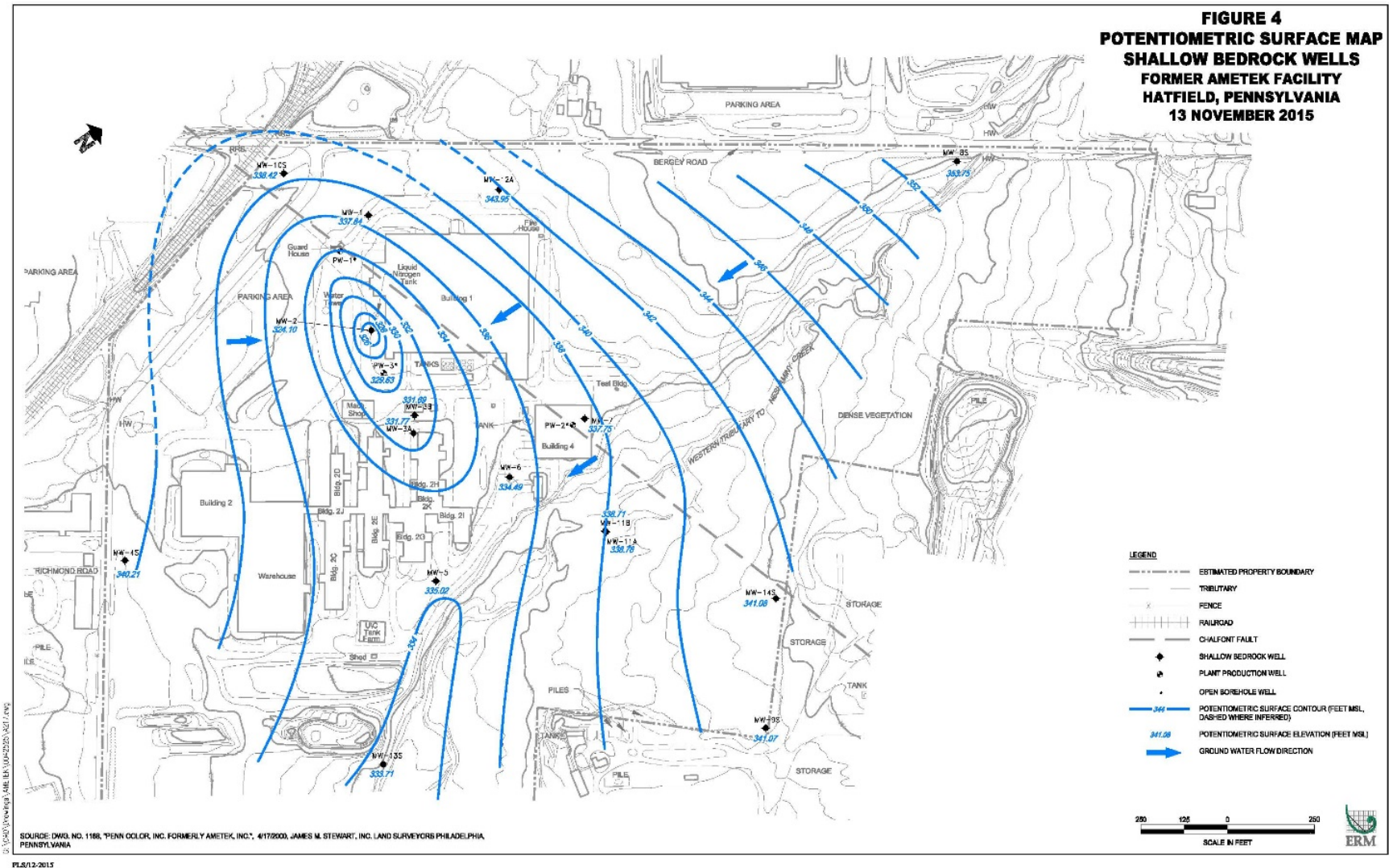


Figure J-5: Potentiometric Surface Map Intermediate Bedrock Wells – November 2015

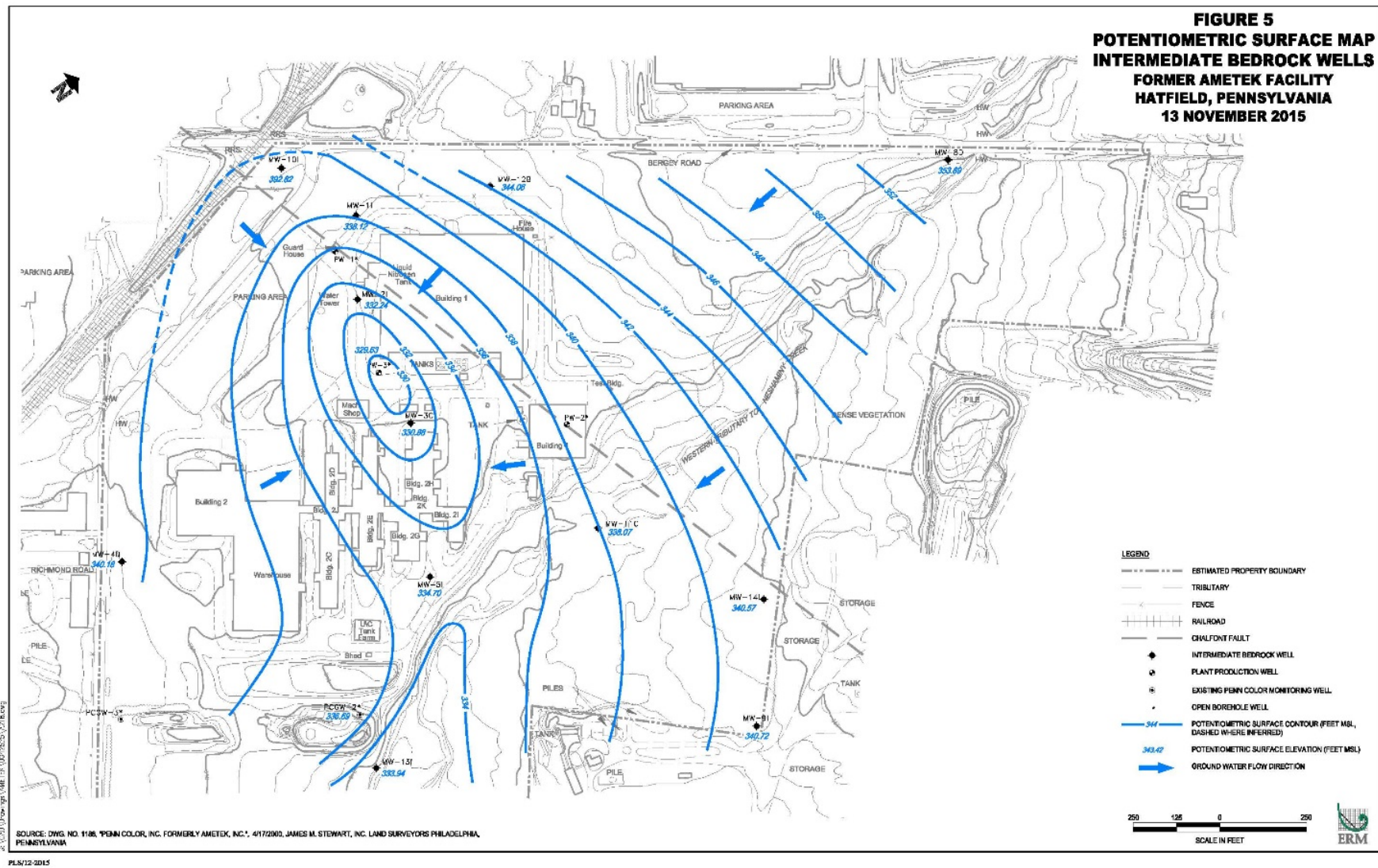


Figure J-6: Potentiometric Surface Map Deep Bedrock Wells – November 2015

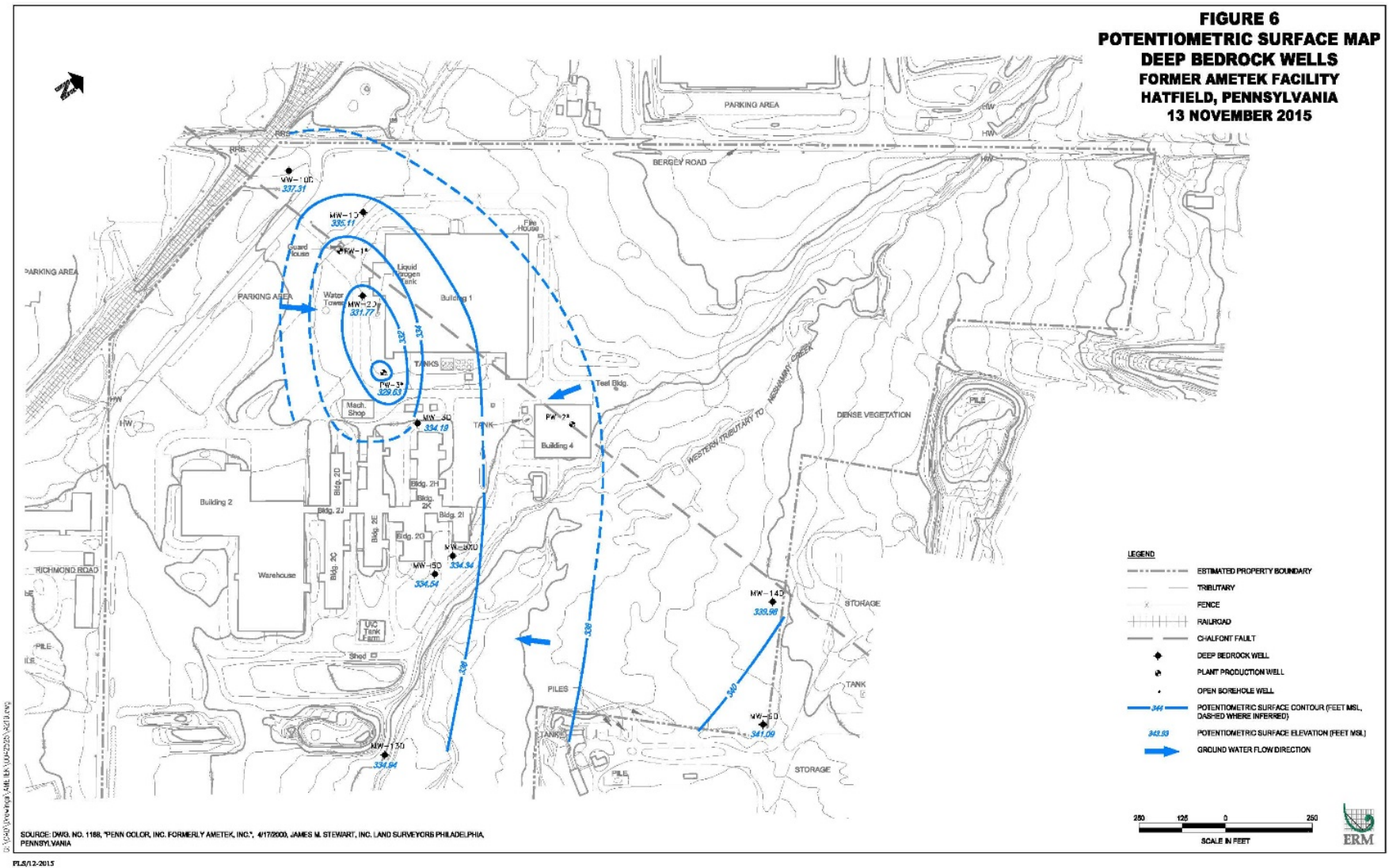


Table J-1: Groundwater Sampling Results – May 2015

CLIENT ID LAB ID COLLECTION DATE SAMPLE MATRIX SAMPLE UNITS Cleanup Standard* (µg/L)	MW-2 7893328 5/18/2015 Groundwater µg/L	MW-21 7902340 5/22/2015 Groundwater µg/L	MW-2D 7902341 5/22/2015 Groundwater µg/L	MW-3A 7898504 5/20/2015 Groundwater µg/L	MW-3B 7898505 5/20/2015 Groundwater µg/L	MW-3C 7898506 5/20/2015 Groundwater µg/L	MW-3D 7898507 5/20/2015 Groundwater µg/L	MW-3DMS 7898508 5/20/2015 Groundwater µg/L	MW-3DMSD 7898509 5/20/2015 Groundwater µg/L	MW-3DDUP 7898510 5/20/2015 Groundwater µg/L														
Analyte	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Volatile Organic Compounds																								
Carbon Tetrachloride	5	ND	5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	NS		NS		NS		NS		NS
1,2-Dichloroethane	5	ND	5	0.5	J	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	NS		NS		NS		NS	
1,1-Dichloroethene	7	1.900	5	510	5	7	0.5	13	0.5	42	0.5	38	0.5	140	0.5	NS		NS		NS		NS		NS
cis-1,2-Dichloroethene	70	71	5	39	0.5	N.D.	0.5	22	0.5	12	0.5	77	0.5	4	0.5	NS		NS		NS		NS		NS
Tetrachloroethene	5	120	5	2	0.5	0.9	J	0.5	240	0.5	6	0.5	ND	0.5	4	0.5	NS		NS		NS		NS	
Trichloroethene	5	6.700	30	910	5	17	0.5	270	0.5	270	0.5	15	0.5	370	E	0.5	NS		NS		NS		NS	
Vinyl Chloride	2	ND	5	1	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	0.5	J	0.5	NS		NS		NS		NS	
Semi-volatile Organic Compounds																								
1,4-Dioxane	6.1	290	30	44	1	ND	1	15	1	7	1	9	1	25	1	NS		NS		NS		NS		NS
Dissolved Metals																								
Antimony	6	N.D.	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	6.8	0.33	6.4	0.33	ND	0.33	ND	0.33	0.33
Arsenic	30	1.3	J	0.82	8.3	0.82	10.4	0.82	1.2	J	0.82	2.1	0.82	3.1	0.82	11.6	0.82	21.7	0.82	22.8	0.82	10.4	0.82	
Manganese	217	4.7	0.55	39.2	0.55	44.1	0.55	13.3	0.55	0.76	J	0.55	153	0.55	40.8	0.55	96.1	0.55	95.2	0.55	39.3	0.55	0.55	
Thallium	0.5	N.D.	0.15	ND	0.15	ND	0.15	ND	0.15	ND	0.15	ND	0.15	ND	0.15	2.1	0.15	2.1	0.15	ND	0.15	ND	0.15	0.15

CLIENT ID LAB ID COLLECTION DATE SAMPLE MATRIX SAMPLE UNITS Cleanup Standard* (µg/L)	MW-35 7896148 5/19/2015 Groundwater µg/L	MW-51 7896145 5/19/2015 Groundwater µg/L	MW-5D 7900168 5/21/2015 Groundwater µg/L	MW-5D 7896151 5/19/2015 Groundwater µg/L	MW-65 7900166 5/21/2015 Groundwater µg/L	MW-75 7900167 5/21/2015 Groundwater µg/L	MW-91 7896147 5/19/2015 Groundwater µg/L	PCGW2 7893327 5/18/2015 Groundwater µg/L	DUP-052015 7898511 5/20/2015 Groundwater µg/L	EB-52015 7898512 5/20/2015 Equipment Blank µg/L														
Analyte	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Volatile Organic Compounds																								
Carbon Tetrachloride	5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	0.5
1,2-Dichloroethane	5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	0.5
1,1-Dichloroethene	7	ND	0.5	28	0.5	44	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	130	0.5	ND	0.5	0.5
cis-1,2-Dichloroethene	70	12	0.5	2	0.5	3	0.5	ND	0.5	1	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	5	0.5	ND	0.5	0.5
Tetrachloroethene	5	6	0.5	4	0.5	3	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	4	0.5	ND	0.5	0.5
Trichloroethene	5	22	0.5	66	0.5	140	0.5	ND	0.5	18	0.5	2	0.5	ND	0.5	ND	0.5	ND	0.5	260	5	ND	0.5	0.5
Vinyl Chloride	2	ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	0.6	J	0.5	ND	0.5
Semi-volatile Organic Compounds																								
1,4-Dioxane	6.1	ND	1	5	J	1	9	1	ND	1	2	J	1	ND	1	ND	1	ND	1	26	1	ND	1	1
Dissolved Metals																								
Antimony	6	0.66	J	0.34	ND	0.34	ND	0.33	ND	0.33	0.49	J	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	0.33
Arsenic	30	25.3	0.82	9	0.82	15.9	0.82	25.8	0.82	2.5	0.82	0.87	J	0.82	3.5	0.82	4.7	0.82	11.2	0.82	ND	0.82	0.82	
Manganese	217	1.980	0.55	129	0.55	20.6	0.55	26.6	0.55	306	0.55	ND	0.55	1.3	J	0.55	73.7	0.55	39.3	0.55	ND	0.55	0.55	
Thallium	0.5	ND	0.15	ND	0.15	ND	0.15	ND	0.15	N.D.	0.15	ND	0.15	ND	0.15	ND	0.15	ND	0.15	ND	0.15	ND	0.15	0.15

Notes:

* Cleanup Standard as listed in Record of Decision.

** Dup-03014 was collected at MW-11 A, DUP-060314 was collected at MW-51

MDL: Medium Detection Limit

Q: Lab Qualifier

J: Indicates an estimated value between the MDL and the Practical Quantitation Limit (PQL) for the analyte.

E: Result estimated because it exceeded the calibration range of the instrument

Bolded values indicate results greater than MDL.

Highlighted values indicate results exceed the cleanup standard.

ND: Not Detected

NS: Not Sampled

CLIENT ID	MW-11A	DUP-061915**	MW-11B	MW-11C	MW-13S	MW-13I	MW-13D	MW-14I	P603
LAB ID	7896152	7896153	7896149	7896150	7896324	7896325	7896326	7896146	7896329
COLLECTION DATE	5/19/2015	5/19/2015	5/19/2015	5/19/2015	5/18/2015	5/18/2015	5/18/2015	5/19/2015	5/18/2015
SAMPLE MATRIX	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
SAMPLE UNITS	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Cleanup Standard ^a (ug/L)	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Volatiles Organic Compounds									
Carbon Tetrachloride	3	ND	0.5	ND	0.5	ND	0.5	ND	0.5
1,2-Dichloroethane	3	ND	0.5	ND	0.5	ND	0.5	ND	0.5
1,1-Dichloroethene	7	ND	0.5	ND	0.5	ND	0.5	ND	0.5
cis-1,2-Dichloroethene	70	ND	0.5	ND	0.5	ND	0.5	ND	0.5
Tetrachloroethene	3	ND	0.5	ND	0.5	ND	0.5	ND	0.5
Trichloroethene	3	ND	0.5	ND	0.5	ND	0.5	ND	0.5
Vinyl Chloride	2	ND	0.5	ND	0.5	ND	0.5	ND	0.5
Semi-volatile Organic Compounds									
1,4-Dioxane	0.1	ND	1	ND	1	ND	1	ND	1
Elemental Metals									
Antimony	6	ND	0.20	ND	0.20	ND	0.20	ND	0.20
Arsenic	10	1	0.02	1.2	0.02	1.2	0.02	1.4	0.02
Manganese	217	0.72	0.55	2.4	0.55	5.4	0.55	17.7	0.55
Thallium	0.5	ND	0.15	ND	0.15	ND	0.15	ND	0.15

CLIENT ID	FB-052115	TS-051815	TS-051915	TS-052015	TS-052115	TS-052215
LAB ID	7900169	7893323	7896144	7896303	7900165	7902399
COLLECTION DATE	5/21/2015	5/18/2015	5/19/2015	5/20/2015	5/21/2015	5/22/2015
SAMPLE MATRIX	Equipment Blank	Trp Blank	Trp Blank	Trp Blank	Trp Blank	Trp Blank
SAMPLE UNITS	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Cleanup Standard ^a (ug/L)	Result	Q	MDL	Result	Q	MDL
Volatiles Organic Compounds						
Carbon Tetrachloride	3	ND	0.5	ND	0.5	ND
1,2-Dichloroethane	3	ND	0.5	ND	0.5	ND
1,1-Dichloroethene	7	ND	0.5	ND	0.5	ND
cis-1,2-Dichloroethene	70	ND	0.5	ND	0.5	ND
Tetrachloroethene	3	ND	0.5	ND	0.5	ND
Trichloroethene	3	ND	0.5	ND	0.5	ND
Vinyl Chloride	2	ND	0.5	ND	0.5	ND
Semi-volatile Organic Compounds						
1,4-Dioxane	0.1	ND	1	ND	1	ND
Elemental Metals						
Antimony	6	ND	0.20	ND	0.20	ND
Arsenic	10	ND	0.02	ND	0.02	ND
Manganese	217	ND	0.55	ND	0.55	ND
Thallium	0.5	ND	0.15	ND	0.15	ND

Notes

^a Cleanup Standard as listed in Record of Decision.
 ** Dup-050514 was collected at MW-11A, DUP-060514
 MDL: Medium Detection Limit
 Q: Lab Qualifier
 J: Indicates an estimated value between the MDL and the E. Result estimated because it exceeded the calibration.
 Bold values indicate results greater than MDL.
 Highlighted values indicate results exceed the cleanup.
 ND: Not Detected
 NS: Not Sampled

Table J-2: Groundwater Sampling Results – November 2015

CLIENT ID: LAB ID: COLLECTION DATE: SAMPLE MATRIX: SAMPLE UNITS: Cleanup Standard* (µg/L)		PW-3 8134437 11/13/2015 Groundwater µg/L			MW-2 8134436 11/13/2015 Groundwater µg/L			MW-91 8134432 11/13/2015 Groundwater µg/L			MW-141 8134431 11/13/2015 Groundwater µg/L			MW-13D 8134433 11/13/2015 Groundwater µg/L			MW-131 8134435 11/13/2015 Groundwater µg/L			MW-135 8134434 11/13/2015 Groundwater µg/L			TB201511113 8134438 11/13/2015 Groundwater µg/L		
Analyte		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Volatile Organic Compounds																									
Carbon Tetrachloride	5	ND		0.5	ND		3	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
1,2-Dichloroethane	5	ND		0.5	ND		3	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
1,1-Dichloroethene	7	160		0.5	1,600		25	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
cis-1,2-Dichloroethene	70	9		0.5	48		3	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
Tetrachloroethene	5	59		0.5	79		3	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
Trichloroethene	5	420		5	4,700		25	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
Vinyl Chloride	2	ND		0.5	ND		3	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5

Notes:

*Cleanup Standard as listed in Record of Decision

MDL: Medium Detection Limit

Q: Lab Qualifier

All units in microgram per liter (µg/L)

J: Indicates an estimated value between the MDL and the Practical Quantitation Limit (PQL) for the analyte.

Bolded values indicate results greater than MDL.

Highlighted values indicate results exceed the cleanup standard.

ND: Not Detected

Table J-3: Surface Water Sampling Results – May 2015

CLIENT ID: LAB ID: COLLECTION DATE: SAMPLE MATRIX: SAMPLE UNITS:		SMP-0 7893283 5/18/2015 Surface Water µg/L			SMP-1 7893284 5/18/2015 Surface Water µg/L			SMP-2 7893285 5/18/2015 Surface Water µg/L			SMP-3 7893284 5/18/2015 Surface Water µg/L		
Analyte	Surface Water Criteria* (µg/L)	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Volatile Organic Compounds													
Carbon Tetrachloride	0.23	ND		0.5	ND		0.5	ND		0.5	ND		0.5
1,2-Dichloroethane	0.38	ND		0.5	ND		0.5	ND		0.5	ND		0.5
1,1-Dichloroethene	33	ND		0.5	ND		0.5	ND		0.5	ND		0.5
Tetrachloroethene	0.69	ND		0.5	ND		0.5	ND		0.5	ND		0.5
Trichloroethene	2.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
Vinyl Chloride	0.025	ND		0.5	ND		0.5	ND		0.5	ND		0.5
Metals													
Chromium	5.6	1.3	J	1.3	ND		1.3	ND		0.34	ND		0.34
Trivalent Chromium waters	10	ND		7.0	ND		7.0	ND		0.78	ND		0.8
Cadmium	0.32	ND		0.17	ND		0.17	0.60		0.00023	0.23	J	0.00023
Antimony	NA	0.37	J	0.33	ND		0.33	ND		0.0016	ND		0.0016
Arsenic	NA	ND		0.82	ND		0.82	ND		0.006	ND		0.006
Manganese	101	59.8		0.55	45.4		0.55	154		0.006	222		0.0016
Thallium	3.79	ND		0.15	ND		0.15	ND		0.000085	ND		0.000085
Hexavalent Chromium	0.24	ND		7.0	ND		7.0	ND		0.015	ND		0.015
Zinc, Total	163	NA			NA			NA			NA		

Notes:

* Criteria are the lower value of the Fish and Aquatic Life Continuous Criteria and the Human Health Criteria. See Table 1 in Remedial Action Sampling and Analy.

** Chromium III = Total Chromium - Hexavalent Chromium. Calculation performed by the laboratory.

MDL: Medium Detection Limit

Q: Lab Qualifier

J: Indicates an estimated value between the MDL and the Practical Quantitation Limit (PQL) for the analyte.

Bold values indicate results greater than MDL.

Highlighted values indicate results exceed the cleanup standard.

ND: Not Detected

NS: Not Sampled

NA: Not Analyzed (due to laboratory issue)

Table J-4: Surface Water Sampling Results – November 2015

CLIENT ID: LAB ID: COLLECTION DATE: SAMPLE MATRIX: SAMPLE UNIT\$ Surface Water Criteria* (µg/L)		SMP-0 8134426 11/13/2015 Surface Water µg/L			SMP-1 8134427 11/13/2015 Surface Water µg/L			SMP-2 8134428 11/13/2015 Surface Water µg/L			SMP-3 8134429 11/13/2015 Surface Water µg/L			TB20151113 8134438 11/13/2015 Trip Blank µg/L		
Analyte		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Volatile Organic Compounds																
Carbon Tetrachloride	0.23	ND		0.1	ND		0.1	ND		0.1	ND		0.1	ND		0.5
1,2-Dichloroethane	0.38	ND		0.1	ND		0.1	ND		0.1	ND		0.1	ND		0.5
1,1-Dichloroethene	33	ND		0.1	ND		0.1	ND		0.1	ND		0.1	ND		0.5
Tetrachloroethene	0.69	ND		0.1	ND		0.1	ND		0.1	ND		0.1	ND		0.5
Trichloroethene	2.5	ND		0.1	ND		0.1	ND		0.1	ND		0.1	ND		0.5
Vinyl Chloride	0.025	ND		0.1	ND		0.1	ND		0.1	ND		0.1	ND		0.50
Metals																
Chromium	5.6	ND		1.5	ND		1.5	ND		1.5	ND		1.5			NS
Trivalent Chromium waters	101	ND		7	ND		7	ND		7	ND		7			NS
Zinc, Total	163	5.8	J	3.9	ND		3.9	ND		3.9	5	J	3.9			NS
Cadmium	0.32	ND		0.23	ND		0.23	ND		0.23	ND		0.23			NS
Lead	3.79	ND		0.13	0.26	J	0.13	ND		0.13	ND		0.13			NS
Antimony	5.6	ND		0.33	ND		0.33	0.38	J	0.33	ND		0.33			NS
Arsenic	10	ND		0.54	ND		0.54	ND		0.54	ND		0.54			NS
Thallium	0.24	ND		0.15	ND		0.15	ND		0.15	ND		0.15			NS
Hexavalent Chromium	101	ND		7	ND		7	ND		7	ND		7			NS

Notes:

* Criteria are the lower value of the Fish and Aquatic Life Continuous Criteria and the Human Health Criteria. See Table 1 in Remedial Action Sampling and Analysis Plan.

** Chromium III = Total Chromium - Hexavalent Chromium. Calculation performed by the laboratory.

All units in microgram per liter (µg/L)

MDL: Medium Detection Limit

Q: Lab Qualifier

J: Indicates an estimated value between the MDL and the Practical Quantitation Limit (PQL) for the analyte.

Bolded values indicate results greater than MDL.

Highlighted values indicate results exceed the cleanup standard.

ND: Not Detected

NS: Not Sampled

APPENDIX K – INTERVIEW FORMS

North Penn – Area 2 Superfund Site

Five-Year Review Interview Form

Site Name: North Penn – Area 2

EPA ID No.: PAD002342475

Interviewer Name: Darriel Swatts

Affiliation: EPA

Subject Name: Resident #1

Affiliation:

Time:

Date: 01/30/2017

Interview Location:

Interview Format (circle one): In Person Phone Mail Other:

Interview Category: Residents

1. Are you aware of the former environmental issues at the Site and the cleanup activities that have taken place to date?

No.
2. What is your overall impression of the project, including cleanup, maintenance and reuse activities (as appropriate)?

None.
3. What have been the effects of this Site on the surrounding community, if any?

I haven't heard of the Site at all.
4. Have there been any problems with unusual or unexpected activities at the Site, such as emergency response, vandalism or trespassing?

No.
5. Has EPA kept involved parties and surrounding neighbors informed of activities at the Site? How can EPA best provide site-related information in the future?

No.
6. Do you own a private well in addition to or instead of accessing city/municipal water supplies? If so, for what purpose(s) is your private well used?

Yes, for personal use.
7. Do you have any comments, suggestions or recommendations regarding any aspects of the project?

I would like to know more about what is happening. Resident provided phone number and email for additional information.

Site Name:	<u>North Penn – Area 2</u>	EPA ID No.:	<u>PAD002342475</u>		
Interviewer Name:	<u>Darriel Swatts</u>	Affiliation:	<u>EPA</u>		
Subject Name:	<u>Resident #2</u>	Affiliation:			
Time:		Date:	<u>01/30/2017</u>		
Interview Location:					
Interview Format (circle one):	<u>In Person</u>	Phone	Mail	Other:	
Interview Category:	Residents				

1. Are you aware of the former environmental issues at the Site and the cleanup activities that have taken place to date?

No.

2. What is your overall impression of the project, including cleanup, maintenance and reuse activities (as appropriate)?

Its going well, I don't think there have been any real big issues.

3. What have been the effects of this Site on the surrounding community, if any?

No. I haven't heard anything bad.

4. Have there been any problems with unusual or unexpected activities at the Site, such as emergency response, vandalism or trespassing?

No. The few times I go past there I've never noticed anything.

5. Has EPA kept involved parties and surrounding neighbors informed of activities at the Site? How can EPA best provide site-related information in the future?

No. I have friends on the Hatfield Township Committee. I'm sure if there that I needed to know about they would inform me.

6. Do you own a private well in addition to or instead of accessing city/municipal water supplies? If so, for what purpose(s) is your private well used?

Yes, but we don't use it since we are connected to public water and sewer.

7. Do you have any comments, suggestions or recommendations regarding any aspects of the project?

I can't think of anything.

Site Name: North Penn – Area 2 **EPA ID No.:** PAD002342475

Interviewer Name: Amanda Miles and **Affiliation:** EPA
Lavar Thomas

Subject Name: Resident #3 **Affiliation:**
Time: Date: 01/30/2017

Interview Location:

Interview Format (circle one): In Person **Phone** **Mail** **Other:**

Interview Category: **Residents**

1. Are you aware of the former environmental issues at the Site and the cleanup activities that have taken place to date?

No.

2. What is your overall impression of the project, including cleanup, maintenance and reuse activities (as appropriate)?

I was not aware of it.

3. Have there been any problems with unusual or unexpected activities at the Site, such as emergency response, vandalism or trespassing?

I haven't seen any vandalism. As for trespassing, I have no idea who belongs there or doesn't.

4. Has EPA kept involved parties and surrounding neighbors informed of activities at the Site? How can EPA best provide site-related information in the future?

This is my first time hearing about it. Resident shared business card for additional information.

5. Do you own a private well in addition to or instead of accessing city/municipal water supplies? If so, for what purpose(s) is your private well used?

No.

Site Name:	<u>North Penn – Area 2</u>	EPA ID No.:	<u>PAD002342475</u>
Interviewer Name:	<u>Darriel Swatts</u>	Affiliation:	<u>EPA</u>
Subject Name:	<u>Aaron Bibro</u>	Affiliation:	<u>Township Manager, Hatfield</u>
Time:		Date:	<u>02/14/2017</u>
Interview Location:			
Interview Format (circle one):	<u>In Person</u>	Phone	Mail
		Other:	
Interview Category:	Local Government		

1. Are you aware of the former environmental issues at the Site and the cleanup activities that have taken place to date?

Not specifically. I was aware that it was a Superfund Site but not aware of the specific efforts of what happened over the years.

2. Do you feel well-informed regarding the Site's activities and remedial progress? If not, how might EPA convey site-related information in the future?

We have a good relationship with Penn Color. Whatever efforts they've had to comply with over the years, I don't know how much involvement I would have had. I have been here for four years. A lot of it may have taken place before that. Email notifications or traditional communication would work moving forward.

3. Have there been any problems with unusual or unexpected activities at the Site, such as emergency response, vandalism or trespassing?

No issues. The Site is very secure.

4. Are you aware of any changes to state laws or local regulations that might affect the protectiveness of the Site's remedy?

No.

5. Are you aware of any changes in projected land use(s) at the Site?

Not the use. But they are in the process of expanding and they have approval from the Township to expand current use.

6. Has EPA kept involved parties and surrounding neighbors informed of activities at the Site? How can EPA best provide site-related information in the future?

I don't know. I haven't gotten any complaints.

7. Do you have any comments, suggestions or recommendations regarding the project?

No.

8. Do you consent to have your name included along with your responses to this questionnaire in the FYR report?

Yes.