

**SIXTH FIVE-YEAR REVIEW REPORT FOR
LEHIGH ELECTRIC & ENGINEERING CO. SUPERFUND SITE
LACKAWANNA COUNTY, PENNSYLVANIA**



February 2020

**Prepared By:
United States Environmental Protection Agency
Region 3
Philadelphia, Pennsylvania**

**Paul Leonard, Acting Director
Superfund and Emergency Management Division
U. S. EPA, Region III**

January 30, 2020
Date

Page intentionally left blank

Table of Contents

LIST OF ABBREVIATIONS & ACRONYMS	ii
I. INTRODUCTION.....	1
Site Background	1
Five-Year Review Summary Form	3
II. RESPONSE ACTION SUMMARY	4
Basis for Taking Action.....	4
Response Actions	4
Status of Implementation.....	4
Systems Operations/Operation & Maintenance	6
III. PROGRESS SINCE THE PREVIOUS REVIEW	7
IV. FIVE-YEAR REVIEW PROCESS	8
Community Notification, Involvement & Site Interviews	8
Data Review	8
Site Inspection	11
V. TECHNICAL ASSESSMENT	12
QUESTION A: Is the remedy functioning as intended by the decision documents?	12
QUESTION B: Are the exposure assumptions, toxicity data, cleanup levels and remedial action objectives (RAOs) used at the time of the remedy selection still valid?	13
QUESTION C: Has any other information come to light that could call into question the protectiveness of the remedy?.....	14
VI. ISSUES/RECOMMENDATIONS	14
VII. PROTECTIVENESS STATEMENT	15
VIII. NEXT REVIEW	16
APPENDIX A – REFERENCE LIST.....	A-1
APPENDIX B – SITE MAPS.....	B-1
APPENDIX C – SITE CHRONOLOGY	C-1
APPENDIX D – SITE BACKGROUND	D-1
APPENDIX E – PRESS NOTICE.....	E-1
APPENDIX F – DATA SUMMARY	F-1
APPENDIX G – 2011 SITE FIGURES AND DATA SUMMARY TABLES	G-1
APPENDIX H – SITE INSPECTION CHECKLIST	H-1
APPENDIX I – SITE INSPECTION PHOTOS	I-1

LIST OF ABBREVIATIONS & ACRONYMS

ARAR	Applicable or Relevant and Appropriate Requirement
bgs	Below ground surface
BTAG	Biological Technical Assistance Group
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CIC	Community Involvement Coordinator
CFR	Code of Federal Regulations
DNAPL	Dense Nonaqueous Phase Liquid
EPA	United States Environmental Protection Agency
FYR	Five-Year Review
GPRA	Government Performance and Results Act
GMUC	Groundwater Migration Under Control
HSCA	Hazardous Sites Cleanup Act
HEPR	Human Exposure Controlled and Protective Remedy in Place
IC	Institutional Control
LVC	Lackawanna Valley Conservancy
mg/kg	Milligrams per Kilogram
MW	Monitoring Well
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
O&M	Operation and Maintenance
OU	Operable Unit
PADEP	Pennsylvania Department of Environmental Protection
PADER	Pennsylvania Department of Environmental Resources
PCB	Polychlorinated Biphenyl
RAO	Remedial Action Objective
RI/FS	Remedial Investigation and Feasibility Study
ROD	Record of Decision
RPM	Remedial Project Manager
RSL	Region 3 Risk Screening Levels
SSC	Superfund State Contract
SWRAU	Sitewide Ready for Anticipated Use
TCB	Trichlorobenzene
VOC	Volatile Organic Compound
µg/kg	Micrograms per kilogram
µg/l	Micrograms per Liter
UU/UE	Unlimited Use and Unlimited Exposure

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 United States 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 Code of Federal Regulations (CFR) Section 300.430(f)(4)(ii)) and considering EPA policy.

This is the sixth FYR for the Lehigh Electric & Engineering Superfund Site (Site). The triggering action for this policy review is the completion date of the previous FYR. 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 Site consists of two operable units (OUs); this FYR addresses both OUs. OU1 addressed polychlorinated biphenyl (PCB)-contaminated transformers, capacitors and other material on the Site. OU2 addressed the remaining PCB-contaminated soils on the Site.

The FYR was led by the EPA Remedial Project Manager (RPM). Participants included the RPM; EPA Community Involvement Coordinator (CIC); and Pennsylvania Department of Environmental Protection (PADEP). The review began on October 1, 2019.

Appendix A includes a list of documents reviewed for this FYR. Appendix B includes Site figures. Appendix C includes a Site chronology. Appendix D includes additional background information for the Site.

Site Background

The Site is located southeast of the intersection of Bridge and Howard Streets in the Borough of Old Forge, Lackawanna County, Pennsylvania (Figure B-1 and Figure B-2). The Site was formerly part of a coal processing facility. Lehigh Electric & Engineering Company used the Site as an electrical equipment repair and storage yard and stored about 4,000 transformers and capacitors at the facility from approximately the mid-1970's to 1981. Improper handling and disposal of dielectric fluids containing PCBs resulted in soil and debris contamination. Three buildings previously existed on the Site. Currently, the Site has not been redeveloped or reused.

The Site is approximately 5.5 acres; however, the Site is broken into two sections: the western section (JMG Parcel) and the eastern section. A chain-link fence with locked gates surrounds the Site and separates the two sections. The western section of the Site, the JMG Parcel, appears not to be currently in use but has been used in the past as a vehicle and equipment storage lot for a nearby active coal processing facility. The western section is partially gravel-covered and partially grass-covered. The eastern section of the Site is approximately 3.69 acres in size. The Site has no road frontage, and vehicle access to the eastern section is via the western section. The majority of the eastern section is covered with a grass-covered soil cap (clean soil backfill over previously excavated areas). Based on an October 1, 2006 aerial photograph, the soil cap appears to be approximately 2 acres in size.

The soil cap is heavily vegetated with grasses and some briars. The rest of the Site is primarily woodlands north and south of the soil cap area. The southern woodlands are present along the bank and floodplain of the Lackawanna River which is located approximately 200 feet south of the Site. The riverbank is relatively steep, dropping between 40 and 60 feet to the Lackawanna River.

The soil cap was designed to promote surface water runoff to the northwestern drainage conveyance system (an underground pipe situated along the northwestern fence line from 4 to 8 feet below ground surface). Three drain inlets are located along the conveyance pipe to receive surface water runoff from the Site and adjacent buffer zones. The northwestern conveyance system discharges the runoff via an outfall to the Lackawanna River floodplain. Stormwater runoff from the woods north of the soil cap appears to drain to the northern drainage ditch. The northern drainage ditch lies outside of the Site fence. An eastern drainage swale discharges surface water runoff to the Lackawanna River floodplain near the Site's southeastern corner.

Land use in the vicinity of the Site is primarily agricultural and residential. A neighborhood is located directly north of the Site. About 7,000 people live within one mile of the Site. The Lackawanna County Assessor's Office parcel identification number for the Site property is 18412040002. The Site property is zoned Environmental Conservation by the Borough of Old Forge. The Lackawanna Valley Conservancy (LVC) owns a 10-foot wide corridor that runs along the Site's eastern and northern boundaries; the corridor is part of a larger 8-acre parcel owned by LVC that lies mainly east of the Site, along the Lackawanna River.

The Site's subsurface contains abandoned mine workings, which affects groundwater flow and creates the potential for subsidence. The abandoned subsurface mine workings make it difficult to determine the direction of groundwater flow.

Residents in Old Forge Borough, adjacent to and downgradient of the Site, rely on public water for drinking water supply. Groundwater in the area is not usable for potable purposes due to mine-related contamination.

Five-Year Review Summary Form

SITE IDENTIFICATION		
Site Name: Lehigh Electric & Engineering Co.		
EPA ID: PAD980712731		
Region: 3	State: PA	City/County: Old Forge Borough/Lackawanna County
SITE STATUS		
NPL Status: Deleted		
Multiple OUs? Yes	Has the site achieved construction completion? Yes	
REVIEW STATUS		
Lead agency: EPA If "Other Federal Agency" selected above, enter Agency name:		
Author name: EPA RPM		
Author affiliation: EPA Region 3		
Review period: October 2019 – February 2020		
Date of site inspection: November 25, 2019		
Type of review: Policy		
Review number: 6		
Triggering action date: February 3, 2015		
Due date (<i>five years after triggering action date</i>): February 3, 2020		

II. RESPONSE ACTION SUMMARY

Basis for Taking Action

In February 1983, EPA completed the remedial investigation and feasibility study (RI/FS) at the Site that indicated soil, sediments and groundwater were impacted by PCBs.

A human health risk assessment for the Site concluded that an unacceptable risk to human health existed at the Site due to ingestion, direct contact and inhalation of PCB-contaminated soils and contact with PCB-contaminated equipment. In addition, a risk was identified due to the ingestion of PCB-contaminated fish, game and other biota.

The risk assessment did not evaluate the potential risk from ingestion of groundwater. Groundwater in the area is not usable for potable purposes due to mine-related contamination. Additionally, EPA did not conduct an ecological risk assessment for this Site.

Response Actions

EPA inspected the Site in March 1981 and found hundreds of PCB-contaminated items, primarily electrical equipment, including transformers, capacitors and regulators. After the owner/operator revoked permission for EPA to inspect and sample, EPA obtained warrants and a temporary restraining order to enter, inspect and perform federal response activities. After the responsible parties failed to initiate response actions, EPA determined that the Site needed to be secured. EPA erected a 6-foot chain-link fence around the Site in April 1981.

EPA divided the Site's cleanup into two phases: Phase I (OU1), an emergency removal action, and Phase II (OU2), the remedial action. During Phase I, from July through September 1982, EPA removed PCB-contaminated transformers, capacitors and other material, and disposed of them off-site. Following the removal action, EPA proposed listing the Site on the National Priorities List (NPL) on December 30, 1982. EPA finalized the Site's listing on the NPL on September 8, 1983.

EPA issued a Record of Decision (ROD) selecting the Phase II remedy on February 11, 1983, following the completion of Phase I actions. The remedy included:

- Excavation and off-site disposal of soil with a PCB concentration of 50 milligrams per kilogram (mg/kg) or greater.
- Additional soil excavation and removal where cost-effective (i.e., substantial PCB removal for small incremental cost increase).
- Demolition of on-site buildings.
- Backfilling, grading and vegetating the Site to minimize erosion and to control percolation and runoff.

The objective of the cleanup was to reduce the human health risk posed by the PCB-contaminated soil. In 1983, EPA's ROD stated that "analytical results of samples taken from the Lackawanna River and wells drilled on-site indicate that the Site is not measurably impacting the surface or groundwater." Therefore, the ROD did not call for a remedial action to address groundwater or surface water.

Status of Implementation

EPA demolished the on-site buildings. EPA excavated soil from 50 x 50-foot areas with PCB concentrations of greater than 50 mg/kg. Once the 50 mg/kg PCB-contaminated soil cleanup standard was achieved, additional PCB-contaminated soil was removed in 20 of 56 grids to meet the ROD requirement of additional removal where it was determined to be cost-effective. The excavated soil was disposed off-site. After excavating the

contaminated soils, EPA covered the remaining soils containing low-level PCBs with 10 to 15 feet of clean backfill (e.g., soil cap).

EPA completed the Phase II remedial action in September 1984. EPA deleted the Site from the NPL on March 7, 1986.

Institutional Control Review

The ROD did not call for institutional controls (ICs). However, in response to EPA's 2005 FYR, PADEP filed a Hazardous Sites Cleanup Act (HSCA) Section 512 Order for the Site with the Lackawanna County Recorder of Deeds on May 8, 2007. The HSCA 512 Order prohibits disturbing the remedy, using groundwater for domestic purposes, and excavating contaminated soils without prior approval. The HSCA 512 Order protects the remedy and prevents potential exposure to contaminants. Figure B-3 depicts the parcel subject to the Section 512 Order.

EPA prepared an Addendum to the 2005 FYR on October 30, 2008 documenting that the ICs were implemented. An Insignificant Change to the Selected Remedy Memorandum, dated June 11, 2013, also documented EPA's conclusion that implementation of the ICs was a minor change to the 1983 ROD which would not have a significant impact on the scope, performance, or cost of the selected remedy. Collectively, the HSCA 512 Order, FYR Addendum, and Insignificant Change Memorandum formally document the ICs implemented at the Site.

Table 1 below summarizes the Site's institutional controls.

Table 1: Institutional Control (IC) Summary Table

Medium that does not support UU/UE based on current conditions	ICs Needed?	ICs Called for in the Decision Documents?	Impacted Parcel	IC Objective	Instrument in Place	Notes
Groundwater	Yes	Yes (Insignificant Change to the Selected Remedy Memorandum, dated 6/11/2013)	18412040002	Prevent exposure to contaminated groundwater	May 8, 2007 Section 512 Order	HSCA 512 Order prohibits any use of on-site groundwater for domestic purposes, including drinking water.
Soil	Yes	Yes (Insignificant Change to the Selected Remedy Memorandum, dated 6/11/2013)	18412040002	Prevent exposure to contaminated soil and sediments	May 8, 2007 Section 512 Order	HSCA 512 Order prohibits any excavation of contaminated soils anywhere on the Site, without prior written approval of EPA and PADEP and prohibits any disturbance of the Site cap.

UU/UE – Unlimited Use/Unlimited Exposure

On November 21, 2019, EPA reviewed the Lackawanna County Recorder of Deeds website and found the institutional control information pertaining to the Site (shown in Table 2) recorded with the deed. The Lackawanna County Assessor's Office website lists the current owner of the Site property.

Table 2: Institutional Control (IC) Document from Lackawanna County Recorder of Deeds Website

Date	Instrument Type	Description	Instrument Number
5/8/2007	Notice	Hazardous Sites Cleanup Act Section 512 Order prohibiting: disturbing the cap, fence, monitoring wells and all other remedy components; using groundwater for domestic purposes; and excavating contaminated soils without prior written approval from EPA and PADEP.	200712027

Systems Operations/Operation & Maintenance

Pursuant to a May 1983 Superfund State Contract (SSC), PADEP (formerly the Pennsylvania Department of Environmental Resources (PADEP)) initiated operation and maintenance (O&M) activities following completion of the OU2 remedial action. The May 1983 SSC required PADEP to perform O&M for a period of 30 years. PADEP performed periodic routine O&M requirements including grass cutting, cap repairs, and fence maintenance. Although the ROD did not require a remedial action for groundwater, groundwater monitoring was performed in order to monitor PCB contamination in groundwater. PADEP sampled on-site monitoring wells from October 1986 until 1995 and 1996, when high concentrations of PCBs were discovered in monitoring well MW-2. In 2000, EPA began periodic groundwater sampling, reconstructed the existing monitoring wells, and installed additional monitoring wells at the Site in response to elevated levels of PCBs found at MW-2. Site monitoring well locations are shown in Figure B-2.

Additional PCB-Contaminated Soil Removal

A small area of elevated PCB-contaminated soils (up to 340 mg/kg) was discovered in the vicinity of MW-2 near some off-site coal slag piles and in the drainage path from these piles to the Site. It was theorized that drainage from the piles was carrying contamination onto the Site and into MW-2 via flow down the outside of the well casing. PADEP performed additional identification of this potential PCB source area and removed an approximate 100 square feet of PCB-contaminated surface soil in the vicinity of MW-2 near the coal slag piles.

Current O&M Status

An O&M Plan was prepared in 2014, but the O&M plan was never implemented.

The O&M Plan calls for the following activities:

- Annual groundwater monitoring and sampling for PCBs, trichlorobenzene (TCB) and volatile organic compounds (VOCs).
- Annual verification of compliance with the institutional controls in the Hazardous Sites Cleanup Act Section 512 Order.
- Semiannual inspections of the Site's soil cover, vegetative cover, surface drainage structures and Site access and security.
- Annual reports documenting the results of the above activities.

PADEP continues to maintain the fence and mow the grass; however, PADEP has not taken over the groundwater sampling since 1996. EPA last conducted groundwater sampling at the Site in 2011 and obtained groundwater elevations in 2014. PADEP maintains that there is no longer any contractual relationship with EPA to continue O&M at the Site because their 30-year O&M obligation under the May 1983 SSC has ended.

III. PROGRESS SINCE THE PREVIOUS REVIEW

This section includes the protectiveness determinations and statements from the previous FYR as well as the recommendations from the previous FYR and the current status of those recommendations.

Table 3: Protectiveness Determinations/Statements from the 2015 FYR

OU #	Protectiveness Determination	Protectiveness Statement
1	Protective	The removal action at OU1 (removal of equipment from the Site) is protective of human health and the environment, since EPA removed PCB-contaminated transformers, capacitors and other material, and disposed of them off-site.
2	Protectiveness Deferred	The remedy for OU2 has been constructed and is functioning as intended by the ROD. The remedial action (removal of contaminated soil and debris) is protective of human health, since people are not exposed to residual Site contamination. However, a protectiveness determination of the remedy at OU2 cannot be made at this time because data collected in 2014 to evaluate ecological risk has not been fully reviewed by EPA. Sample results and Site reconnaissance that was performed in 2011 and 2014 will be used to evaluate potential ecological risk. It is expected that these actions will take approximately 12 months to complete, at which time a protectiveness determination will be documented in an addendum to this Five-Year Review (FYR).
Sitewide	Protectiveness Deferred	The remedy for OU1 and OU2 has been constructed according to the decision documents and appears to be functioning as intended by the decision documents. The remedial actions for OU1 and OU2 are protective of human health, since people are not exposed to residual Site contamination. However, a protectiveness determination cannot be made because the data collected in 2014 to evaluate ecological risk has not been fully reviewed by EPA. Sample results and information gathered during a Site reconnaissance that were performed in 2011 and 2014 will be used to evaluate potential ecological risk. It is expected that these actions will take approximately 12 months to complete, at which time a protectiveness determination will be documented in an addendum to this Five-Year Review (FYR).

Table 4: Status of Recommendations from the 2015 FYR

OU #	Issue	Recommendation	Current Status	Current Implementation Status Description	Completion Date (if applicable)
OU2	An ecological risk was not performed	Complete the flood plain and river channel sample analysis, assess ecological risk and determine protectiveness	Completed	EPA resampled soil and sediments in 2014. The data collected in 2014 to evaluate ecological risk had been received and included in the 2015 FYR, but the ecological risk had not been fully reviewed by EPA at that time. The data review was completed on 3/28/17, and EPA concluded that no Site contamination had been identified in the river or floodplain that would likely present an ecological risk.	3/28/17

IV. FIVE-YEAR REVIEW PROCESS

Community Notification, Involvement & Site Interviews

A public notice was published in the *Scranton Times-Tribune* on October 31, 2019, stating that there was a FYR and inviting the public to submit any comments to EPA. The results of the review and the report will be made available online at www.epa.gov/superfund/lehighelectric and at the Site's information repository, located at the Old Forge Borough Municipal Building, 310 South Main Street, Old Forge, Pennsylvania 18518. Appendix E includes a copy of the public notice.

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.

LVC contacted EPA regarding an interest in acquiring the Site property. In September 2019 correspondence to EPA, LVC indicated that they would acquire the property in fee via issuance of a deed from the Lackawanna County Tax Claim Bureau. The Lackawanna County Tax Claim Bureau would grant the title to the LVC in fee for a nominal amount (one dollar) with the understanding that LVC would hold the title and would maintain the property in the public interest. LVC would use the property primarily for the passive conservation of open space and natural habitat, as well as recreational use. The recreational use may entail the development of a pedestrian and bicycle trail corridor and access to the Lackawanna River shoreline. LVC indicated that they are in contact with the regional PADEP office regarding the acquisition of the property, and active uses will be developed with input from EPA and PADEP. LVC is aware of the HSCA 512 Order and ICs on the property.

On Thursday December 12, 2019, the EPA RPM contacted the Old Forge Borough Manager to discuss any concerns the Borough may have about the Site, or if the Borough had received any inquiries regarding the Site from local residents since the previous FYR. The Borough Manager stated that the Borough had not received any inquiries from residents regarding the Site and had no additional concerns. The Borough Manager also indicated that the Borough was aware of LVC's interest in acquiring the Site property. EPA will continue to provide support and coordination with LVC, Old Forge Borough, and PADEP, as necessary.

PADEP, in response to interview questions regarding the Site, believes that the Site could benefit from further characterization of Site media. PADEP indicated that vandalism and trespass at the Site have occurred but has been limited to the periodic cutting of the fencing to gain access to the Site for unknown reasons. PADEP also feels that communication between PADEP and EPA needs improvement. PADEP is supportive of the potential reuse of part of the property as part of a riverfront park setting which would provide a benefit for the community.

Data Review

There was no additional monitoring or data collected during this FYR period. EPA last sampled the monitoring wells in 2011; however, EPA determined that the 2011 groundwater monitoring laboratory data was of unknown quality and might not be reliable. Therefore, the 2011 groundwater laboratory data was not used. The last round of EPA groundwater sampling prior to the 2011 event was in 2009. Groundwater elevation data was last collected in 2014.

EPA sampled soil and sediment in 2011; however, EPA determined that the 2011 soil and sediment laboratory data also was of unknown quality and might not be reliable, and therefore, the 2011 soil and sediment laboratory data was not used. EPA resampled soil and sediment in 2014 and presented the 2014 soil and sediment data in the 2015 FYR, but there was insufficient time to evaluate the data and draw any conclusions regarding ecological risk at the Site. Since the 2015 FYR, EPA completed an ecological risk evaluation of the soil and sediment data, and the conclusions are presented in this FYR.

Although the 2011 groundwater, soil, and sediment laboratory analytical data were determined to be of unknown quality, the 2011 groundwater data was generally in the same range as the 2009 groundwater data, and the 2011 soil/sediment data was in the same general range as the 2014 soil/sediment data. The 2011 groundwater and soil/sediment data are presented in Appendix G for informational and qualitative comparison purposes.

Below is a summary of past monitoring and data collection efforts at the Site.

Groundwater

No additional groundwater data was collected for this FYR. The Site has 13 monitoring wells screened in saturated fracture zones (Figure B-2). Although the ROD did not select a remedial action for groundwater, groundwater monitoring has been conducted periodically. For reference, EPA's maximum contaminant level (MCL) for PCBs in drinking water is 0.5 micrograms per liter ($\mu\text{g/l}$).

PCB (specifically Aroclor-1260) groundwater analytical data from October 1986 through 2011 are summarized in Table F-1.¹ High PCB concentrations have been historically detected in monitoring wells MW-2S and MW-2D located in the northeastern corner of the Site. PCB concentrations in MW-2S have ranged from 95,000 $\mu\text{g/l}$ (September 1995) to 17 $\mu\text{g/l}$ (April/May 2009) which revealed an overall decreasing trend at the time.² This is likely also due in part from the removal of Dense Non-Aqueous Phase Liquid (DNAPL) containing PCBs from the bottom of MW-2S.

DNAPL in MW-2S was originally discovered during a January 2003 sampling event as a brownish oil layer at an approximate thickness of 2.42 feet at the bottom of the well below the water table. Sampling of the DNAPL indicated it contained Aroclor-1260 at a concentration of 300,000 $\mu\text{g/l}$, confirming that the DNAPL contained PCBs. This DNAPL was periodically removed from MW-2S from October 2005 through February 2006. By the February 2006 event, the DNAPL was present only as an observable film in the well. DNAPL was not observed in any of the Site monitoring wells in 2011, and field instrumentation did not detect any organic vapors. Likewise, DNAPL was not observed when EPA performed groundwater elevation measurements in 2014.

All measured groundwater elevations are below the surface elevation of the Lackawanna River, and downward vertical groundwater gradients have been observed between all co-located well pairs at the Site. Groundwater potentiometric surface contours for the shallow and deep wells are presented on Figure B-4, showing apparent flow directions to the southwest towards the Lackawanna River in the shallow wells and toward the north or northwest in the deeper wells. Based on the groundwater analytical data collected up to 2011¹, groundwater contamination at the Site appears to be isolated in the vicinity of the MW-2 monitoring well cluster and, in conjunction with groundwater level elevation measurements, does not appear to be migrating off of the property.

Elevated TCBs have been detected in MW-2 dating back to 1996. 1,2,4-TCB and 1,2,3-TCB continued to be present in MW-2S and MW-2D during three groundwater sampling events conducted in 2005, 2006, and 2009 (Table F-2). TCBs were not analyzed for in 2011. During these three events, except for the 2005 sampling event, 1,2,4-TCB was detected below the MCL of 70 $\mu\text{g/l}$, but above the EPA Region III risk screening level (RSL) of 1.2 $\mu\text{g/l}$ for residential tapwater. No MCL exists for 1,2,3-TCB; however, 1,2,3-TCB was detected above its RSL of 7.0 $\mu\text{g/l}$ in the 2006 and 2009 sampling events. TCBs were not detected in any other monitoring wells. TCBs were historically combined with PCBs to form a material known as Askarel for use as a dielectric fluid in transformers.

¹ 2011 sampling data is provided for informational and qualitative comparison purposes.

² During EPA's 2011 investigation, the highest Aroclor-1260 concentration in groundwater at MW-2S was 91 $\mu\text{g/l}$. Although EPA has determined that the 2011 laboratory analytical data is of unknown quality; this result is still consistent with the historical overall decreasing trend of PCBs in MW-2S.

Vapor intrusion is not a concern at the Site because PCBs are not volatile, TCB concentrations have remained below MCLs, and the closest residences are over 400 feet from the known extent of groundwater contamination at the Site. Based on current data, no current potential exposure pathways exist for groundwater at the Site; and therefore, there is currently no risk to human health.

Surface Water

Due to a negligible solubility in water and the tendency for PCBs to adsorb onto soil and sediment particles, no surface water sampling was conducted in 2014, except for surface water quality parameters as presented in Table F-3. Instead, sediment samples were collected from the available depositional areas of the river channel and floodplain to assess potential impacts to the Lackawanna River, as further discussed below.

Sediment – Lackawanna River Channel

In 2014, EPA collected fifteen sediment samples from the Lackawanna River channel, including one “background” sample collected upstream of where on-site drainage channels discharge to the river. All samples were analyzed for PCBs. No PCBs were detected above their respective analytical laboratory method reporting limits, except for Aroclor-1242 (0.25 mg/kg) at sampling location R-22 which is slightly above the Aroclor-1242 residential RSL of 0.23 mg/kg. Table F-6 presents the river sediment analytical results. Figure B-6 shows the sampling locations along the Lackawanna River.

Sediment – Lackawanna Floodplain

In 2014, EPA collected fourteen sediment samples from ten locations from the Lackawanna River floodplain. All samples were analyzed for PCBs. No PCBs were detected above their respective analytical laboratory method reporting limits. Table F-5 presents the floodplain sediment analytical results. Figure B-6 shows the sampling locations in the floodplain.

Soil – On-Site Drainages

In 2014, EPA collected surface soil samples from the northwestern, eastern, and northern drainage culverts at a total of seven locations. Aroclor-1260 was detected at concentrations ranging from 0.10 mg/kg to 1.6 mg/kg. Four of the seven locations exceeded the Aroclor-1260 residential RSL of 0.24 mg/kg. No other PCBs were detected in the samples. Table F-4 presents the results. The drainage culverts are shown on Figure B-5.

Ecological Risk Screening

Soil and sediment analytical data collected in the 2014 sampling event was included in the 2015 FYR, but there was insufficient time to fully review and evaluate the ecological risk. The data review was completed by EPA’s Biological Technical Assistance Group (BTAG) on March 28, 2017; and EPA concluded that no Site contamination had been identified in the Lackawanna River or floodplain that would likely present an ecological risk. In addition, it is unlikely that the contaminant concentrations in the drainage channel soils pose an unacceptable risk to ecological receptors.

2011 Analytical Data Summary

Comprehensive sampling of the Site was conducted in 2011 to address data gaps identified in the 2010 FYR Report and to assess the continued overall effectiveness of the selected remedy. Because of laboratory analytical issues, EPA determined that the 2011 sampling data was of unknown quality and might not be reliable. Therefore, the 2011 data was not used for Site decision-making purposes. However, for completeness, the 2011 data is presented in Appendix G, and briefly discussed below.

2011 Soil Cap Area

A total of 48 locations (excluding the drainage ditches) were sampled on the soil cap area, including the grass-covered area and the woodlands north and south of the soil cap area. Aroclor-1260 was the only PCB detected with concentrations ranging from non-detect to 3,500 µg/kg (3.5 mg/kg). The only sample locations that exceeded the EPA RSL of 240 µg/kg for residential soil were sample locations SS-14 (700 µg/kg), SS-22 (3,500 µg/kg), and SS-33 (380 µg/kg). These sampling locations are assumed not to be covered by the soil cap. Nonetheless, all sample locations were below the 50 mg/kg PCB cleanup level (Appendix G; Figure G-1 and Table G-1).

2011 On-Site Drainages

EPA collected surface soil samples from the northwestern, northern, and eastern drainage culverts at a total of 17 locations. Aroclor-1260 was the only PCB detected with concentrations ranging from non-detect to 1,500 µg/kg (1.5 mg/kg). The only sample locations that exceeded the EPA RSL of 240 µg/kg for residential soil were northwestern drainage ditch sample locations NWD-05 (500 µg/kg), NWD-06 (910 µg/kg), NWD-07 (1,500 µg/kg), and eastern drainage ditch sample location ED-05 (1,300 µg/kg). All sample locations were below the 50 mg/kg PCB cleanup level (Appendix G; Figure G-1 and Table G-1). EPA resampled select locations in the Site drainage ditches in 2014, as discussed above.

2011 Sediment – Lackawanna Floodplain and River Channel

EPA collected sediment samples from 15 locations in the Lackawanna River floodplain and river channel, respectively. Aroclor-1260 was the only PCB detected in only one floodplain sample at FP-01 (120 µg/kg) collected 6-12 inches below ground surface (bgs). The lack of Aroclor-1260 at FP-01 in the surface sample (0-6 inches bgs) suggests active migration of PCB-contaminated soil is not occurring or not occurring at a rate greater than deposition of sediment within the Lackawanna River floodplain at this location.

No PCBs were detected above their respective analytical laboratory method reporting limits in any other floodplain or river channel sampling location. The lack of PCBs detected in the floodplain and channel sediment samples suggests either PCB-contaminated sediment from the Site have not discharged to the Lackawanna River floodplain and river channel or the sediment load from the Lackawanna River has been of sufficient volume to dilute the PCB-contaminated sediments to such a degree that PCB contamination cannot be detected (Appendix G; Figure G-2 and Tables G-2 & G-3). EPA resampled the Lackawanna River channel and select floodplain locations in 2014, as discussed above.

2011 Groundwater

Two new monitoring wells, MW-8S and MW-8D, were installed in late June and early July 2011. Groundwater samples were collected from all 13 monitoring wells for PCB analysis (Figure B-2). Aroclor-1260 was the only PCB detected in the Site groundwater. Aroclor-1260 was detected in wells MW-2S and MW-2D at concentrations of 60 µg/l (91 µg/l in the duplicate), and 6.8 µg/l, respectively. These concentrations exceed the tap water RSL of 0.0078 µg/l and the MCL for total PCBs of 0.5 µg/l (Appendix G; Table G-4).

Site Inspection

The Site inspection took place on November 25, 2019. In attendance were the EPA RPM, EPA CIC, PADEP representatives, and representatives from LVC which may have an interest in acquiring the Site property.

The purpose of the inspection was to assess the protectiveness of the remedy. Appendix H includes the completed FYR Site inspection checklist. Appendix I includes photographs taken during the Site inspection.

Site inspection attendees walked the Site and inspected all monitoring wells. All monitoring wells were in good condition and properly locked. The chain-link fence surrounding the Site was in good condition across most of the Site. However, a portion of fence was down near the far southeastern corner of the Site potentially allowing unauthorized access to occur. A smaller breach in the fence on the northern perimeter was also noted. The front gate was locked. There were no signs of trespassing or vandalism. Vegetation on the cap was well-established. The cap had no erosion or visible damage. No significant surface water ponding was observed on the cap, although some wet areas were observed along the eastern and southeastern perimeters.

No sediment buildup was observed adjacent to the northwest drainage conveyance system inlets and a small amount of water flow was observed in the stormwater conveyance drainpipe. The drain inlets are covered with metal grates and surrounded on three sides by concrete curbing. The drain inlets were surrounded by grass and no erosion was observed. The eastern drainage swale was grass-covered with no evidence of standing water or sediment erosion. The northern drainage ditch, which lies outside the northern fence-line, is well defined and moderately vegetated with trees and shrubs. Some debris was observed in the northern drainage ditch consisting of felled vegetation and abandoned tires.

On November 25, 2019, EPA staff visited the designated Site repository, the Old Forge Borough Municipal Building, as part of the Site inspection to verify that Site documents were available at the repository. However, because of the Thanksgiving holiday week, available staff at the Borough were unfamiliar with the repository and unable to provide assistance. EPA will confirm and/or resend instructions to the Borough for accessing Site documents on-line.

V. TECHNICAL ASSESSMENT

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

Question A Summary:

The remedy is functioning as intended by the ROD. EPA removed PCB-contaminated soil, debris, transformers, capacitors and other material, and disposed of them off-site. The soil cap is in good condition. Vegetation on the cap is well-established. There was no evidence of visible damage, erosion, or significant surface water ponding on the cap. The chain-link fence surrounding the Site was in good condition across most of the Site. However, a portion of fence was down near the far southeastern corner of the Site potentially allowing unauthorized access to occur. A smaller breach in the fence on the northern perimeter was also noted. The front gate was locked. During the 2019 FYR Site inspection, there were no signs of trespassing or vandalism.

In May 2007, PADEP filed a HSCA 512 Order with the Lackawanna County Recorder of Deeds, implementing institutional controls for the Site. PADEP's Section 512 Order for the Site prohibits:

- Disturbing the cap, fence, monitoring wells and all other remedy components.
- Using groundwater for domestic purposes.
- Excavating contaminated soils without prior written approval from EPA and PADEP.

Although the ROD did not select a remedial action for groundwater, PADEP implemented an institutional control to prohibit domestic groundwater use, and EPA has periodically monitored the groundwater quality. However, groundwater has not been monitored during this FYR review period. Historically, Aroclor-1260 has been found in the Site's groundwater at concentrations above EPA's MCL for PCBs in drinking water, and TCBS have been found above their respective RSLs. However, the PADEP Section 512 Order prohibits using the Site's groundwater for drinking water. In addition, residents in Old Forge Borough, adjacent to and downgradient of the Site, rely on public water for drinking water supply. Groundwater in the area is not usable for potable purposes due to mine-related contamination.

After reviewing the 2014 sediment data, EPA concluded that no Site contamination had been identified in the Lackawanna River or floodplain that would likely present an ecological risk. In addition, it is unlikely that the contaminant concentrations in the drainage channel soils pose an unacceptable risk to ecological receptors.

An O&M Plan for the Site was prepared in 2014, but it was never implemented. PADEP maintains that there is no longer any contractual relationship with EPA to continue O&M at the Site because their 30-year O&M obligation under the May 1983 SSC has ended. EPA will negotiate a new agreement with PADEP or future property owners for maintenance activities at the Site.

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

Question B Summary:

The exposure assumptions, toxicity data, cleanup levels and RAOs used at the time of the remedy selection are generally still valid.

The ROD did not identify applicable or relevant and appropriate requirements (ARARs), so this FYR does not contain an ARAR review. The cleanup level selected in the ROD for PCB in soil was 50 mg/kg which was consistent with the Toxic Substances and Control Act (TSCA) action level for PCB spill clean-up for soil, and is within EPA's current acceptable risk range for industrial use. However, the Site property is zoned Environmental Conservation, which allows residential use. During EPA's 2014 investigation, the highest PCB concentration detected in soil or sediment was 1.6 mg/kg for Aroclor-1260, which is above the Aroclor-1260 residential soil RSL of 0.24 mg/kg (240 µg/kg) but still within EPA's acceptable risk range (i.e., 1E-04 to 1E-06 lifetime excess carcinogenic risk) for residential soils.³ There are no non-cancer toxicity criteria for Aroclor-1260.

PADEP filed a HSCA 512 Order for the Site, which prohibits disturbing the remedy, using groundwater for domestic purposes, and excavating contaminated soils without prior approval. The HSCA 512 Order effectively prohibits any residential use.

Vapor intrusion is not a concern at this Site because the PCBs are not volatile, TCB concentrations have remained below MCLs, and the closest residences are over 400 feet from the known extent of the groundwater contamination at the Site. Based on current data, no current potential exposure pathways exist for groundwater at the Site; and therefore, there is currently no risk to human health.

The ROD's objective of reducing the human health risk posed by the Site's PCB-contaminated soil is still valid.

There are no RAOs to protect the ecological receptors. EPA gathered additional soil and sediment data in 2014 and the data review was completed on March 28, 2017. EPA concluded that no Site contamination had been identified in the Lackawanna River or floodplain that would likely present an ecological risk. In addition, it is unlikely that the contaminant concentrations in the drainage channel soils pose an unacceptable risk to ecological receptors.

The LVC has expressed an interest in potentially acquiring the Site property for recreational use. Because the current data indicates that Site PCB soil concentrations fall within EPA's acceptable risk range for residential soils, the Site is also protective of potential future recreational use provided that the restrictions as specified in the

³ During EPA's 2011 investigation, the highest Aroclor-1260 concentration in soil was 3.5 mg/kg. Although EPA has determined that the 2011 laboratory analytical data is of unknown quality; conservatively, if this value was used, it would also fall within EPA's acceptable risk range (1E-04 to 1E-06) for residential soils.

HSCA 512 Order are followed. EPA will continue to provide support and coordination with LVC and PADEP, as necessary.

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

No other information has come to light that could call into question the protectiveness of the remedy.

VI. ISSUES/RECOMMENDATIONS

Issues/Recommendations	
OU(s) without Issues/Recommendations Identified in the FYR:	
OU1	

Issues and Recommendations Identified in the FYR:				
OU(s): OU2	Issue Category: Operations and Maintenance			
	Issue: A 2014 O&M Plan for the Site was never implemented. PADEP maintains that there is no longer any contractual relationship with EPA to continue O&M at the Site because their 30-year O&M obligation under the May 1983 SSC has ended.			
	Recommendation: EPA will negotiate a new agreement with PADEP or future property owners for maintenance activities at the Site.			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party	Milestone Date
No	Yes	EPA/State	EPA/State	2/3/2021

Issues and Recommendations Identified in the FYR:				
OU(s): OU2	Issue Category: Site Access/Security			
	Issue: A portion of the Site's fence is down in southeastern corner of the Site and a hole exists in the fence along the northern Site perimeter			
	Recommendation: Repair the Site fence, where necessary.			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party	Milestone Date
No	Yes	State	EPA/State	2/3/2021

OTHER FINDINGS

In addition, the following additional items were identified during the FYR, but do not affect current and/or future protectiveness:

- EPA may consider additional groundwater sampling at the Site, if necessary, to confirm PCB groundwater concentrations remain stable.
- EPA will confirm and/or resend instructions to the Borough for accessing Site documents on-line.

VII. PROTECTIVENESS STATEMENT

Protectiveness Statement(s)	
<i>Operable Unit:</i> OU1	<i>Protectiveness Determination:</i> Protective
<i>Protectiveness Statement:</i> The removal action at OU1 (removal of equipment from the Site) is protective of human health and the environment, since EPA removed PCB-contaminated transformers, capacitors and other material, and disposed of them off-site.	

Protectiveness Statement(s)	
<i>Operable Unit:</i> OU2	<i>Protectiveness Determination:</i> Short-term Protective
<i>Protectiveness Statement:</i> The remedy for OU2 has been constructed and is functioning as intended by the ROD. The remedial action (removal of contaminated soil and debris) is protective of human health and the environment, since people are not exposed to residual Site contamination. Institutional controls have been enacted. The potential for ecological risk was evaluated, and EPA concluded that no Site contamination had been identified in the Lackawanna River or floodplain that would likely present an ecological risk. In order for the remedy to remain protective in the long-term, the following actions need to be taken: 1) Negotiate a new agreement with PADEP or future property owners for maintenance activities at the Site; and 2) Repair the Site fence, where necessary.	

Sitewide Protectiveness Statement	
<i>Protectiveness Determination:</i> Short-term Protective	
<i>Protectiveness Statement:</i> The remedy for OU1 and OU2 has been constructed according to the decision documents and appears to be functioning as intended by the decision documents. The remedial actions for OU1 and OU2 are protective of human health and the environment, since people are not exposed to residual Site contamination. Institutional controls have been enacted. The potential for ecological risk was evaluated, and EPA concluded that no Site contamination had been identified in the Lackawanna River or floodplain that would likely present an ecological risk. In order for the remedy to remain protective in the long-term, the following actions need to be taken: 1) Negotiate a new agreement with PADEP or future property owners for maintenance activities at the Site; and 2) Repair the Site fence, where necessary.	

Government Performance Results Act (GPRA) Measure Review:

As part of this FYR, the GPRA Measures have also been reviewed. The GPRA Measures and their status are provided as follows:

Environmental Indicators

Human Health: Human Exposure Controlled and Protective Remedy in Place (HEPR)

Groundwater Migration: Groundwater Migration under Control (GMUC)

Sitewide Ready for Anticipated Use (SWRAU)

The Site achieved the SWRAU Measure on July 24, 2013

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

EPA. 1983. Record of Decision.

EPA, Lehigh Electric & Engineering Co., Inc. and Joseph J. Menn, Sr. 1988. Civil Action No. 86-0465 Consent Decree.

EPA. 1999. Five-Year Review.

EPA. 2005. Five-Year Review.

EPA. 2008. Five Year Review Addendum. Memorandum-to-the-File

EPA. 2010. Five-Year Review.

EPA. 2013. Memorandum to Lehigh Electric and Engineering Site File. Subject: Insignificant Change to the Selected Remedy.

EPA. 2014. Operation and Maintenance Plan. Prepared by HydroGeoLogic, Inc.

EPA. 2015. Five-Year Review.

EPA. 2016. Summary of Soil Sampling Results, Lehigh Electric & Engineering Site. Prepared by HydroGeoLogic, Inc. (summarizes 2014 soil/sediment sampling event)

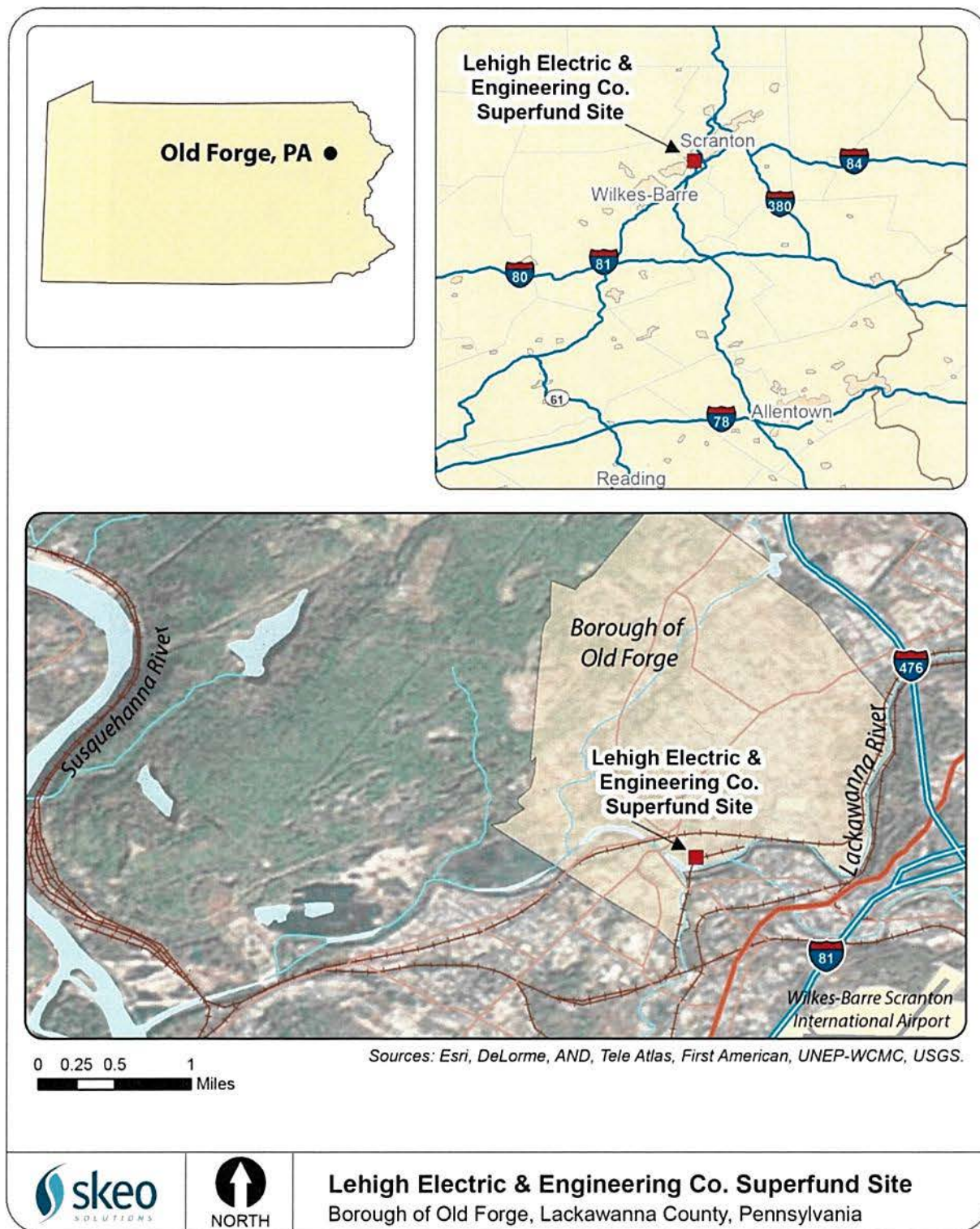
EPA. 2017. Memorandum from EPA BTAG to EPA RPM. Subject: Comments on Lehigh Electric & Engineering Site, Summary of Soil [and Sediment] Sampling Results.

PADEP. 2007. Hazardous Sites Cleanup Act Section 512 Order for Institutional Controls: Lehigh Electric & Engineering Site.

Page intentionally left blank

APPENDIX B – SITE MAPS

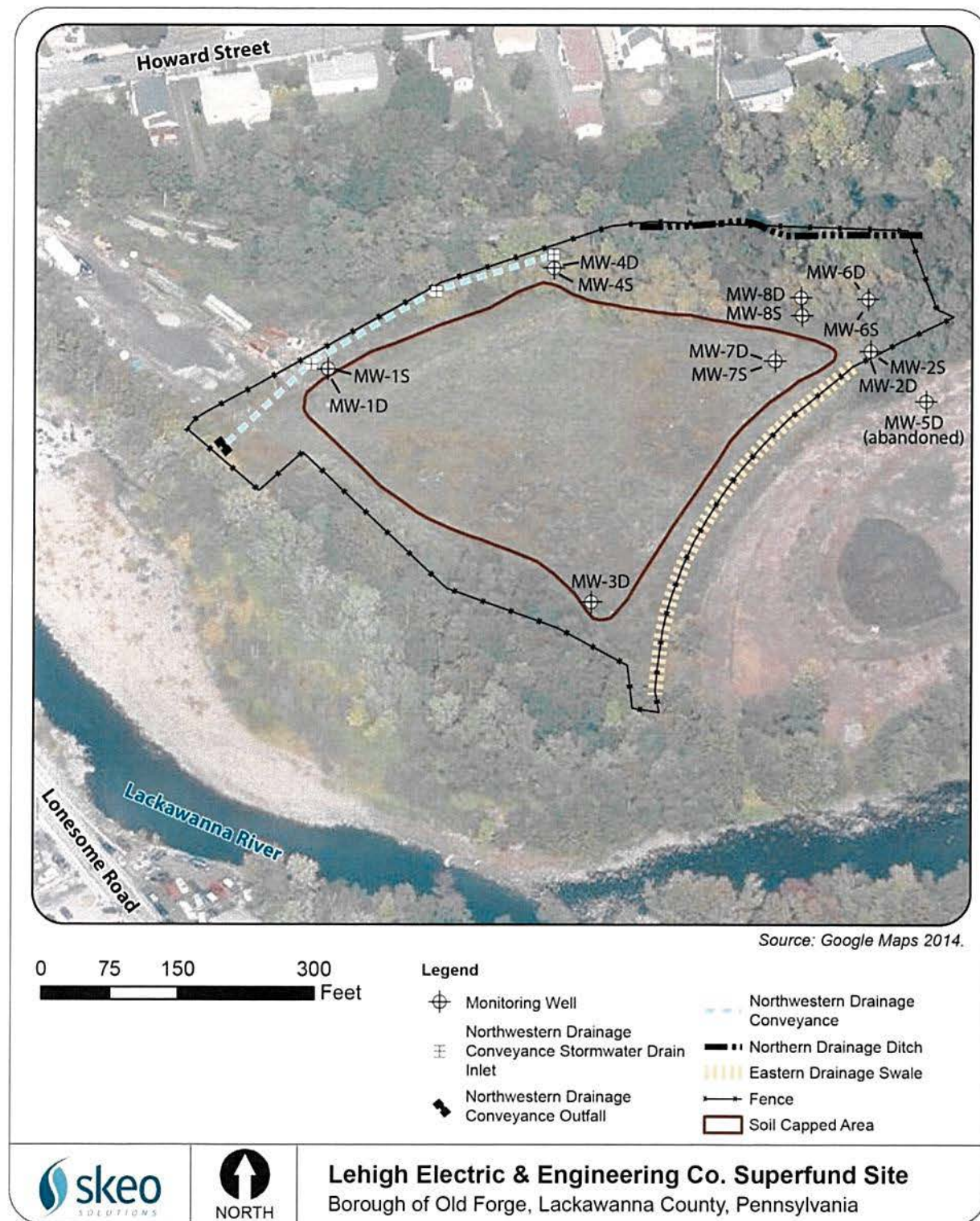
Figure B-1: Site Location Map



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.

*Map adopted from 2015 FYR

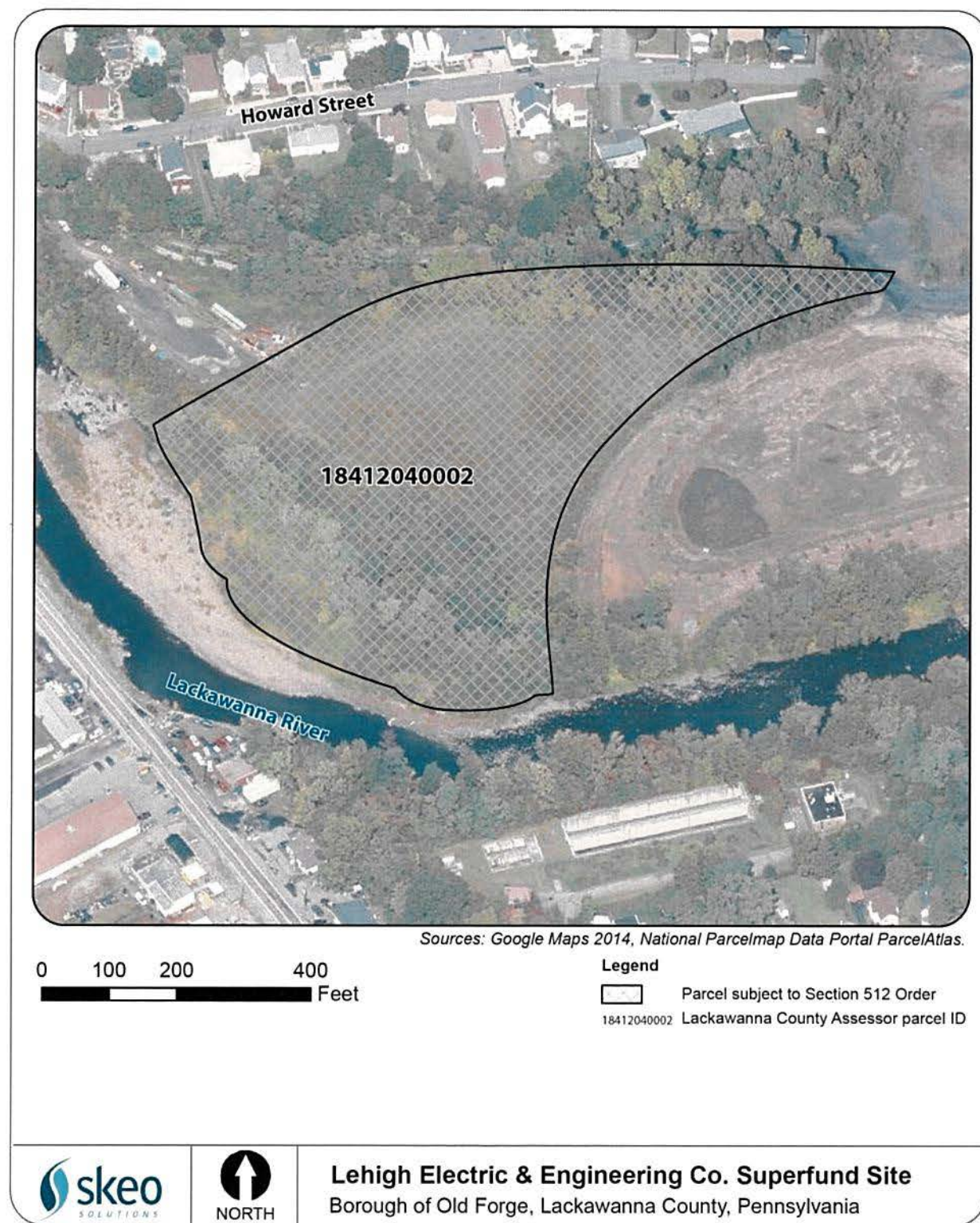
Figure B-2: Detailed Site Map



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

*Map adopted from 2015 FYR.

Figure B-3: Institutional Control Base 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.

*Map adopted from 2015 FYR

Figure B-4: Groundwater Potentiometric Surface Map – Shallow & Deep Wells, November 19, 2014

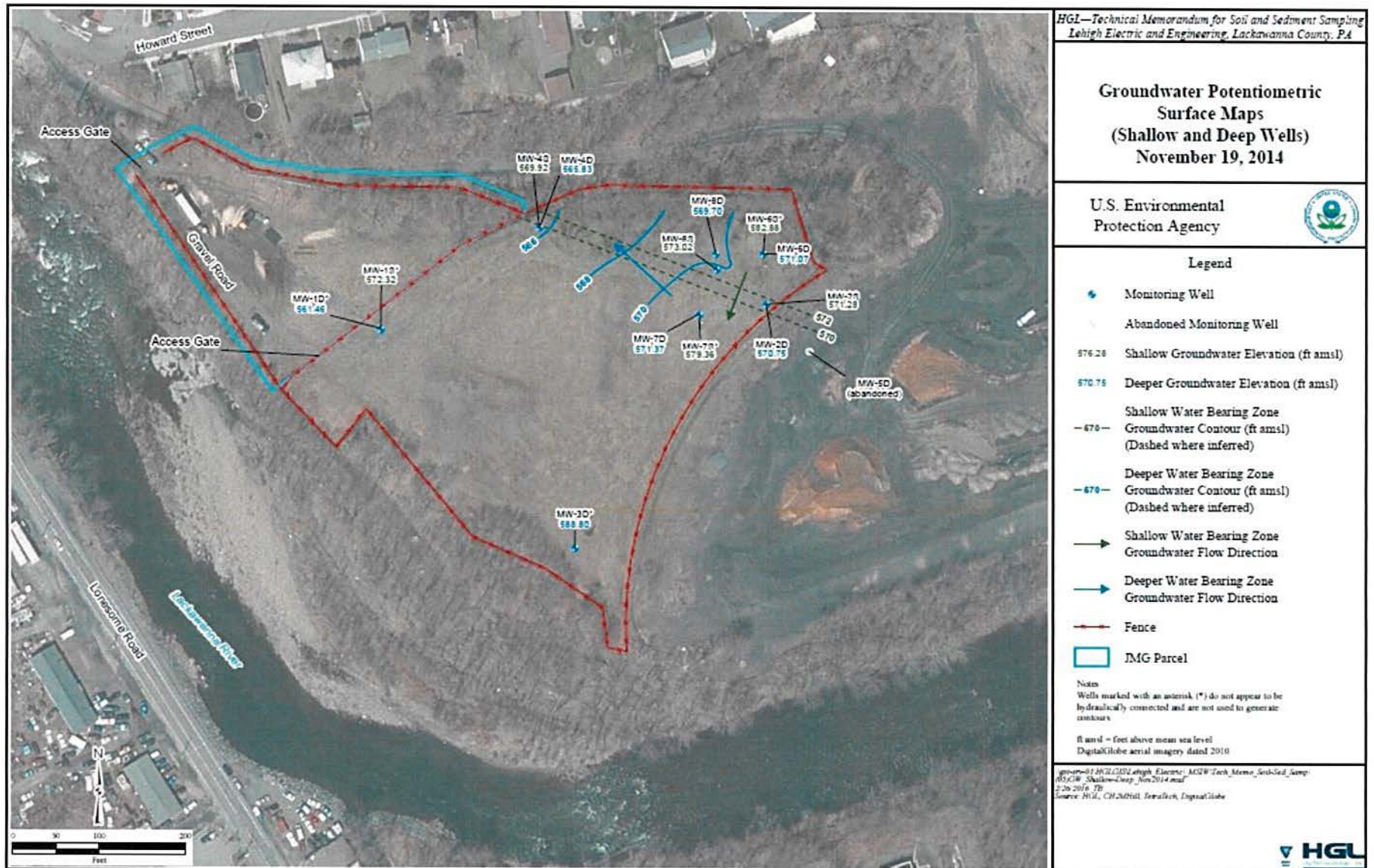
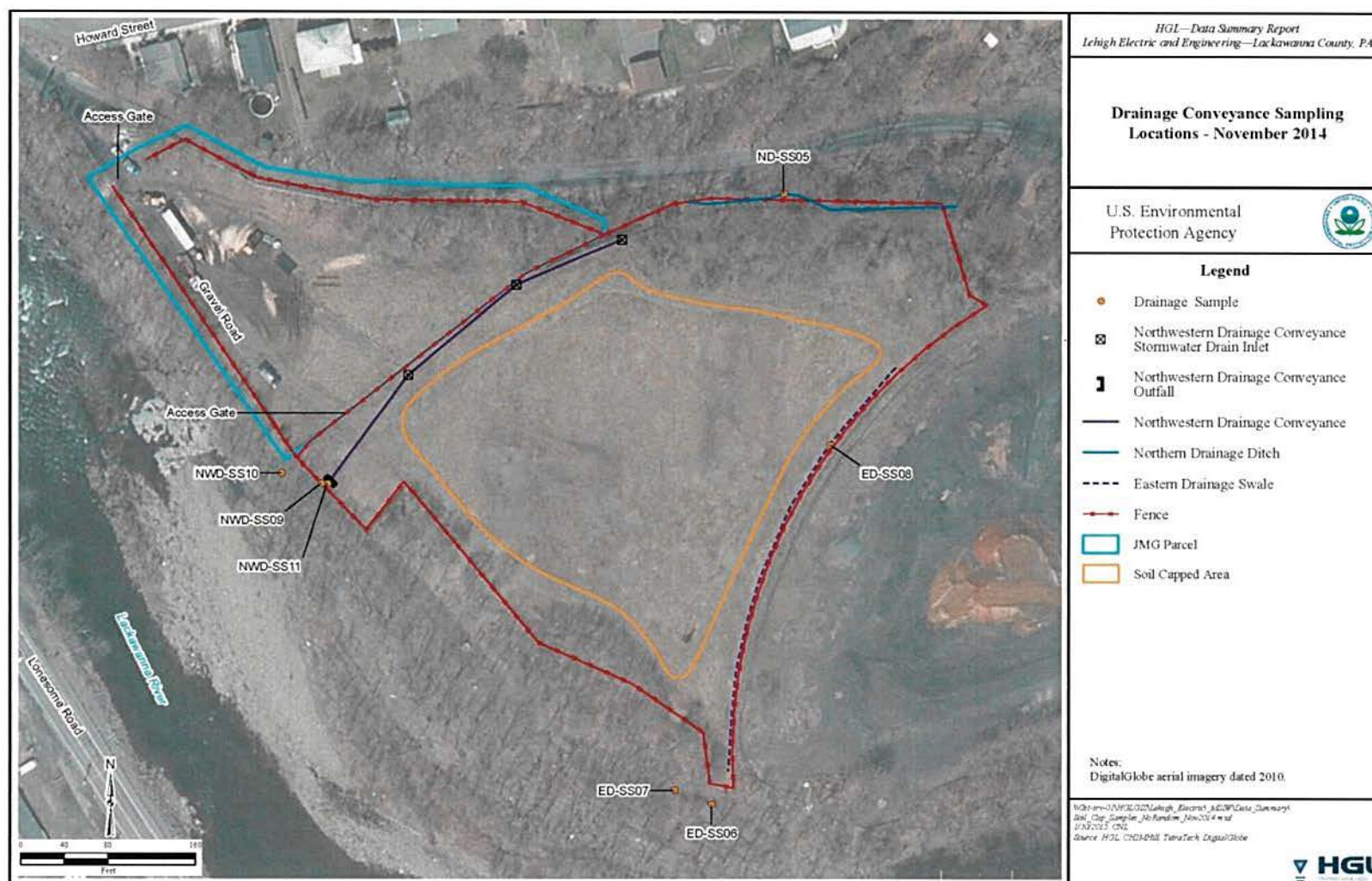
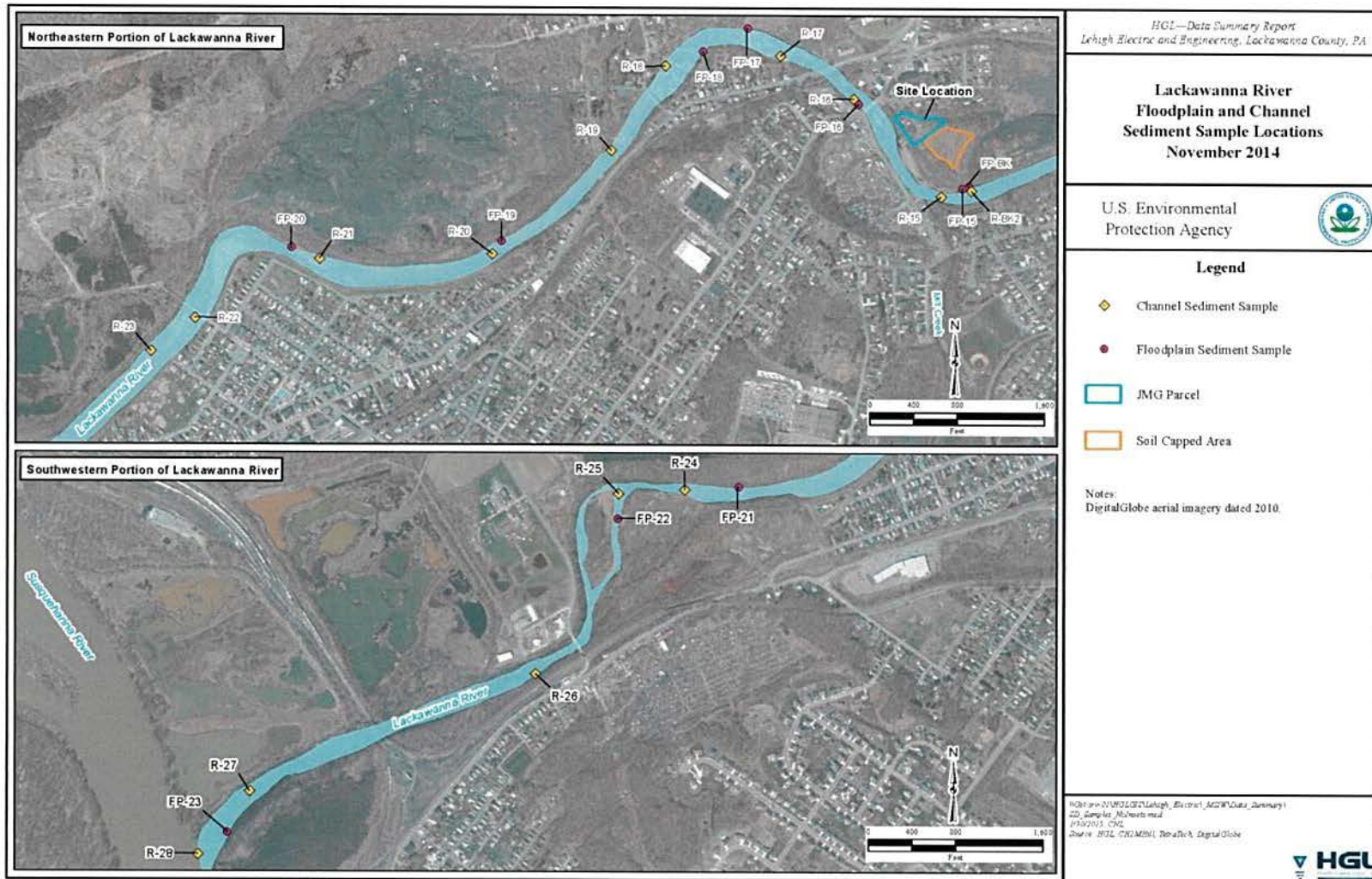


Figure B-5: Soil and Terrestrial Sediment, 2014 Sampling in Drainage Areas



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. *Map adopted from 2015 FYR

Figure B-6: Floodplain and Channel Sediment, 2014 Sampling Locations



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.

*Map adopted from 2015 FY

APPENDIX C – SITE CHRONOLOGY

Table C-1: Site Chronology

Event	Date
Initial discovery of contamination	March 1, 1981
EPA initiated the Phase I (OU1) removal action	April 1981
EPA began the remedial investigation/feasibility study for Phase II (OU2)	September 30, 1981
EPA began the feasibility study for the Phase I removal action	February 26, 1982
EPA completed the feasibility study for the Phase I removal action	March 31, 1982
EPA began the Phase I removal action (removal of all surface equipment and debris)	July 26, 1982
EPA completed the Phase I removal action (removal of all surface equipment and debris)	September 30, 1982
EPA proposed listing the Site on the National Priorities List (NPL)	December 30, 1982
EPA completed the remedial investigation/feasibility study for Phase II and issued the ROD for Phase II	February 11, 1983
EPA began the remedial design for Phase II	March 23, 1983
EPA finalized the Site's listing on the National Priorities List (NPL)	September 8, 1983
EPA completed the remedial design for Phase II	October 19, 1983
EPA completed the Phase II remedial action (removal of contaminated soil, demolition of on-site buildings, backfilling, grading and vegetating)	September 15, 1984
PADEP began operation and maintenance activities	March 15, 1985
EPA issued Notice of Intent to Delete Site from the NPL	December 1985
EPA deleted the Site from the NPL	March 7, 1986
PADEP began annual groundwater monitoring	October 1986
EPA, Lehigh Electric & Engineering Co., Inc. and Joseph J. Menn, Sr. signed consent decree regarding liability, payments by the defendants and Site access	April 15, 1988
EPA signed first FYR report	August 1993
EPA signed second FYR report	December 30, 1999
PADEP removes additional elevated PCB surface soil contamination in the vicinity of MW-2 near off-site coal slag piles.	2000
EPA signed third FYR report	January 13, 2005
PADEP filed a Hazardous Sites Cleanup Act Section 512 Order with the Lackawanna County Recorder of Deeds, implementing institutional controls for the Site	May 8, 2007
EPA issued addendum to third FYR	October 30, 2008
EPA signed fourth FYR report	February 3, 2010
EPA installed two additional groundwater wells (MW-8S and MW-8D) and conducted additional soil sampling to reassess the current conditions	June-July 2011
EPA prepared an Insignificant Change Memorandum documenting the institutional controls implemented by PADEP's Section 512 Order for the Site	June 11, 2013
EPA prepared an operation and maintenance plan	October 2014
EPA conducts additional soil/sediment sampling in floodplain and Lackawanna River channel	November 2014
EPA signed fifth FYR report	February 3, 2015
HydroGeologic (HGL) submits <i>Summary of Soil Sampling Results, Lehigh Electric & Engineering Site</i> , documenting November 2014 sampling event.	February 26, 2016

Page intentionally left blank

APPENDIX D – SITE BACKGROUND

D-1 Physical Characteristics

The 5.5-acre Site is southeast of the intersection of Bridge and Howard Streets in the Borough of Old Forge, Lackawanna County, Pennsylvania. The Lackawanna River is about 200 feet south of the Site; the Site is in the river's floodplain. The Lackawanna County Assessor's Office parcel identification number for the Site property is 18412040002. The Site has no road frontage and access to the Site is from the west across an adjacent property that is fenced and locked. Three buildings previously existed near the southeast corner of the Site.

The Site's elevation is 625 feet above mean sea level. About half of the Site is covered with grasses, shrubs and small trees. The rest of the Site is primarily woodlands north and south of the soil cap area. The southern woodlands are present along the bank and floodplain of the Lackawanna River. The riverbank is relatively steep, dropping between 40 and 60 feet to the Lackawanna River.

The soil cap area is grass-covered and was designed to promote surface water runoff to the northwestern drainage conveyance system (an underground pipe situated along the northwestern fence line from 4 to 8 feet below ground surface). Three drain inlets are located along the conveyance pipe to receive surface water runoff from the Site and adjacent buffer zones. The northwestern conveyance system discharges the runoff via an outfall to the Lackawanna River floodplain. Stormwater runoff from the woods north of the soil cap appears to drain to the northern drainage ditch. The northern drainage ditch lies outside of the Site fence. The eastern drainage swale discharges surface water runoff to the Lackawanna River floodplain near the Site's southeastern corner.

The Site's subsurface contains abandoned mine workings, which affects groundwater flow and creates the potential for subsidence. The abandoned subsurface mine workings make it difficult to determine the direction of groundwater flow.

D-2 Land and Resource Use

Currently, the Site is vacant and is surrounded by a fence with a locked gate. In the past, the Site was part of a coal processing facility. From the mid-1970s until 1981, Lehigh Electric & Engineering Company used the Site as an electrical equipment repair and storage yard. The Site property is zoned Environmental Conservation by the Borough of Old Forge.

Land use in the vicinity of the Site is primarily residential. A neighborhood is located directly north of the Site. To the northeast of the Site is a vacant area where another coal processing facility was once located. About 7,000 people live within one mile of the Site.

The lot to the west of the Site, which provides vehicular access to the Site, is used for equipment and material storage. A developer has proposed to build residences on the former coal processing facility to the northeast of the Site. The developer has not built any residences yet, but a large earthen stormwater retention pond has been constructed directly east of the Site. A 26-acre parcel owned by JMG Construction Inc. includes both the lot to the west of the Site and the former coal processing facility to the northeast of the Site. The Lackawanna Valley Conservancy owns a 10-foot wide corridor that runs along the Site's eastern and northern boundaries; the corridor is part of a larger 8-acre parcel owned by LVC that lies mainly east of the Site, along the Lackawanna River.

Residents in Old Forge Borough, adjacent to and downgradient of the Site, rely on public water for drinking water supply. Groundwater in the area is not usable for potable purposes due to mine-related contamination.

D-3 History of Contamination

Lehigh Electric & Engineering Company stored about 4,000 transformers and capacitors at the facility. Improper handling and disposal of dielectric fluids containing polychlorinated biphenyls (PCBs) resulted in soil and debris contamination. The Site's contamination also affected the Site's groundwater.

EPA inspected the Site in March 1981 and found hundreds of PCB-contaminated items, primarily electrical equipment, including transformers, capacitors and regulators. After the owner/operator revoked permission for EPA to inspect and sample, EPA obtained warrants and a temporary restraining order to enter, inspect and perform federal response activities. After the responsible parties failed to initiate response actions, EPA determined that the Site needed to be secured. EPA erected a 6-foot chain-link fence around the Site in April 1981.

EPA divided the Site's cleanup into two phases: Phase I (OU1), an emergency removal action, and Phase II (OU2), the remedial action. During Phase I, from July through September 1982, EPA removed PCB-contaminated transformers, capacitors and other material, and disposed of them off-site. Following the removal action, EPA proposed listing the Site on the National Priorities List (NPL) on December 30, 1982. EPA finalized the Site's listing on the NPL on September 8, 1983.

In February 1983, EPA completed the remedial investigation and feasibility study (RI/FS) at the Site that indicated soil, sediments and groundwater were impacted by PCBs.

A human health risk assessment for the Site concluded that an unacceptable risk to human health existed at the Site due to ingestion, direct contact and inhalation of PCB-contaminated soils and contact with PCB-contaminated equipment. In addition, a risk was identified due to the ingestion of PCB-contaminated fish, game and other biota.

The risk assessment did not evaluate the potential risk from ingestion of groundwater. Groundwater in the area is not usable for potable purposes due to mine-related contamination.

D-4 Remedy Selection

EPA issued a ROD selecting the Phase II remedy on February 11, 1983, following the completion of Phase I actions. The remedy included:

- Excavation and off-site disposal of soil with a PCB concentration of 50 milligrams per kilogram (mg/kg) or greater.
- Additional soil excavation and removal where cost-effective (i.e., substantial PCB removal for small incremental cost increase).
- Demolition of on-site buildings.
- Backfilling, grading and vegetating the Site to minimize erosion and to control percolation and runoff.

The objective of the cleanup was to reduce the human health risk posed by the PCB-contaminated soil. In 1983, EPA's ROD stated that "analytical results of samples taken from the Lackawanna River and wells drilled on-site indicate that the Site is not measurably impacting the surface or groundwater." Therefore, the ROD did not call for a remedial action to address groundwater or surface water.

D-5 Remedy Implementation

EPA conducted the OU2 remedial design from March 23, 1983, to October 19, 1983.

EPA demolished the on-site buildings. EPA excavated soil from 50 x 50-foot areas with PCB concentrations of greater than 50 mg/kg. Once the 50 mg/kg PCB-contaminated soil cleanup standard was achieved, additional PCB-contaminated soil was removed in 20 of 56 grids to meet the ROD requirement of additional removal where it was determined to be cost-effective. After excavating the contaminated soils, EPA covered the remaining soils containing low-level PCBs with 10 to 15 feet of clean backfill.

EPA completed the Phase II remedial action in September 1984. EPA deleted the Site from the NPL on March 7, 1986.

D-6 Institutional Controls

The ROD did not call for institutional controls (ICs). However, in response to EPA's 2005 FYR, PADEP filed a Hazardous Sites Cleanup Act (HSCA) Section 512 Order for the Site with the Lackawanna County Recorder of Deeds on May 8, 2007. The HSCA 512 Order specifically prohibits "inconsistent" uses of the Site including the following activities:

- Any disturbance of the Site cap by filling, drilling, excavation, change in topography, or any other physical alteration;
- Any use of on-site groundwater for domestic purposes, including drinking water;
- Any excavation of contaminated soils anywhere on the Site, without prior written approval of the EPA and PADEP; or
- Any actions that damage, interfere with, obstruct, or disturb the performance of the remedial measures at the Site, including, but not limited to, the Site fence, monitoring wells, and other equipment.

EPA prepared an Addendum to the 2005 FYR on October 30, 2008 documenting that the ICs were implemented. An Insignificant Change to the Selected Remedy Memorandum, dated June 11, 2013, also documented EPA's conclusion that implementation of the ICs was a minor change to the 1983 ROD which would not have a significant impact on the scope, performance, or cost of the selected remedy. Collectively, the HSCA 512 Order, FYR Addendum, and Insignificant Change Memorandum formally document the ICs implemented at the Site.

Page intentionally left blank

EPA PUBLIC NOTICE

EPA REVIEWS CLEANUP

LEHIGH ELECTRIC & ENGINEERING CO. SUPERFUND SITE

The U.S. Environmental Protection Agency (EPA) is reviewing the cleanup that was conducted at the Lehigh Electric & Engineering Company Superfund Site (Site) located in Old Forge, Pennsylvania. EPA inspects sites regularly to ensure that cleanups conducted protect public health and the environment. EPA's 2015 review of the Site concluded that the cleanups for Operable Unit 1 (OU-1) and Operable Unit 2 (OU-2) were working as intended and were protective of human health, but a further evaluation of ecological risk was necessary. Findings from the current review will be available in February 2020.

To access detailed site information, including the review report once finalized, visit <https://www.epa.gov/superfund/lehighelectric>

For questions or to provide site-related information for the review, contact:

**Lavar Thomas, EPA Community Involvement
Coordinator
215-814-5535 or thomas.lavar@epa.gov**

Page intentionally left blank

APPENDIX F – DATA SUMMARY

TABLE F-1: GROUNDWATER SAMPLING RESULTS FOR AROCLOR-1260, 1986-2011

Sampling Date	Monitoring Well Number and Sampling Results (µg/l)																	
	1	1S	1D	2	2S	2D	3	3D	4	4S	4D	5D	6S	6D	7S	7D	8S	8D
Oct. 1986	5.2	-	-	ND	-	-	ND	-	ND	-	-	-	-	-	-	-	-	-
Aug. 1987	5	-	-	0.75	-	-	ND	-	ND	-	-	-	-	-	-	-	-	-
Sep. 1988	32	-	-	ND	-	-	ND	-	ND	-	-	-	-	-	-	-	-	-
Dec. 1988	2.5	-	-	-	-	-	--	-	--	-	-	-	-	-	-	-	-	-
Sep. 1989	0.0	-	-	0.24	-	-	ND	-	ND	-	-	-	-	-	-	-	-	-
Sep. 1990	2.3	-	-	ND	-	-	ND	-	ND	-	-	-	-	-	-	-	-	-
Sep. 1991	1.5	-	-	6,080	-	-	ND	-	ND	-	-	-	-	-	-	-	-	-
Nov. 1991	1	-	-	609	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sep. 1992	15	-	-	ND	-	-	ND	-	193	-	-	-	-	-	-	-	-	-
Sep. 1994	11	-	-	2,320	-	-	4.7	-	ND	-	-	-	-	-	-	-	-	-
Sep. 1995	18	-	-	95,00	-	-	92	-	ND	-	-	-	-	-	-	-	-	-
Apr. 1996	1	-	-	1,000	-	-	0.9	-	-	-	-	-	-	-	-	-	-	-
Nov. 2000	A	-	ND	A	2,235	307	A	1.41	A	ND	0.58	-	-	-	-	-	-	-
Jan. 2003	A	ND	ND	A	2,200	9.9	A	2.5	A	ND	ND	-	-	-	-	-	-	-
June 2003	A	ND	ND	A	2,200	53	A	ND	A	ND	ND	ND	ND	ND	ND	ND	-	-
Jan. 2005	A	ND	ND	A	240	56	A	1.5	A	ND	ND	-	ND	ND	ND	ND	-	-
May 2005	A	-	-	A	120	21	A	15	A	ND	-	D	-	-	-	-	-	-
Mar. 2006	A	ND	ND	A	1,300	ND	A	ND	A	ND	ND	D	ND	ND	ND	ND	-	-
April/May 2009	A	ND	ND	A	17	9.6	A	0.63	A	ND	ND	D	ND	ND	ND	ND	-	-
July 2011**	A	ND	ND	A	60/91*	6.8	A	ND	A	ND	ND	D	ND	ND	ND	ND	ND	ND

Notes:

bold Result exceeds EPA's maximum contaminant level (MCL) for PCBs in drinking water (0.5 µg/l)

- Not sampled

A Well abandoned; no sample collected

D Well MW-5D decommissioned on June 24, 2005

ND Well was sampled, but analyte was not detected

MW-1, MW-2, and MW-4 were replaced as nested well pairs MW-1S/1D, MW-2S/2D, and MW-4S/4D, respectively, in 2000

MW-3 was replaced as MW-3D in 2000

MW-6S, MW-6D, MW-7S, and MW-7D were installed in 2003

MW-8S and MW-8D were installed in June/July 2011.

* Duplicate sample collected at this location; both results shown.

** EPA determined that the 2011 groundwater monitoring laboratory data was of unknown quality and might not be reliable. July 2011 data is provided for informational and qualitative purposes.

TABLE F-2

**SUMMARY OF HISTORICAL 1,2,4-TRICHLOROBENZENE (1,2,4-TCB) AND
1,2,3 TRICHLOROBENZENE (1,2,3-TCB) RESULTS FOR GROUNDWATER**

Sampling Date	Contaminant	Drinking Water MCL (µg/l)	November 2019 Tap Water RSL (µg/l)	Monitoring Well (MW) Number and Sampling Results (µg/l)										
				1S	1D	2S	2D	3D	4S	4D	6S	6D	7S	7D
January 2005	1,2,4 - TCB	70	1.2	ND	ND	<u>170</u>	30	ND	ND	ND	ND	ND	ND	ND
	1,2,3 - TCB	NA	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
March 2006	1,2,4 - TCB	70	1.2	ND	ND	66	10	ND	ND	ND	ND	ND	ND	ND
	1,2,3 - TCB	NA	7	ND	ND	19	3.4	ND	ND	ND	ND	ND	ND	ND
April/May 2009	1,2,4 - TCB	70	1.2	ND	ND	69	32	ND	ND	ND	ND	ND	ND	ND
	1,2,3 - TCB	NA	7	ND	ND	24	11	ND	ND	ND	ND	ND	ND	ND

Notes:

- Not Sampled

µg/l - micrograms per liter

RSL - Risk Screening Level

MCL – Maximum Contaminant Level

ND – Not Detected

Shaded cell indicates positive detection

Bolded value indicates concentration exceedance of November 2019 Residential Tap Water RSL ValueUnderline value indicates concentration exceedance of Drinking Water MCL

TABLE F-3

**2014 WATER QUALITY PARAMETER MEASUREMENTS
LACKAWANNA RIVER CHANNEL**

Sample ID	Sample Date	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Oxidation Reduction Potential (ORP) (mV)
R-BK2	11/17/2014	6.60	0.801	6.30	14.25	9.65	nr
R-15	11/18/2014	6.61	0.603	41.5	14.07	2.98	174.0
R-16	11/18/2014	7.17	0.589	2.50	15.47	3.09	169.0
R-17	11/18/2014	6.98	0.707	8.80	15.07	3.56	181.0
R-18	11/18/2014	nr	Nr	nr	nr	9.76	nr
R-19	11/18/2014	6.66	0.744	21.8	11.36	8.24	nr
R-20	11/18/2014	nr	Nr	nr	nr	6.15	nr
R-21	11/18/2014	6.47	0.537	2.30	13.56	6.20	nr
R-22	11/18/2014	6.64	0.822	20.3	10.23	6.28	nr
R-23	11/18/2014	5.59	0.620	8.78	9.78	6.20	nr
R-24	11/19/2014	nr	nr	nr	nr	nr	nr
R-25	11/19/2014	nr	nr	nr	nr	nr	nr
R-26	11/19/2014	nr	nr	nr	nr	nr	nr
R-27	11/19/2014	nr	nr	nr	nr	nr	nr
R-28	11/19/2014	nr	nr	nr	nr	nr	nr

NOTES:

mS/cm - millisiemens per centimeter

NTU - nephelometric turbidity unit

mg/L - milligram per liter

°C - degrees Celsius

mV – millivolt

ORP – Oxidation Reduction Potential

nr – not recorded. ORP meter malfunctioned and/or some Lackawanna River channel points were difficult to access with field instruments

TABLE F-4

2014 SOIL SAMPLE ANALYTICAL RESULTS - PCBs

Sample ID	November 2019 Aroclor-1260 Soil RSL		2104 Sample Results Aroclor-1260	2014 Sample Results Other PCBs	2011 Sample Results ¹ Aroclor-1260
	Residential	Industrial			
Northwestern Drainage Conveyance					
NWD-SS09	0.24	0.99	0.31	ND	NWD-07 (1.5)
NWD-SS10			1.6	ND	NWD-08 (0.04)
NWD-SS11			0.10	ND	NWD-06 (0.91)
Eastern Drainage Conveyance					
ED-SS06	0.24	0.99	ND	ND	ED-04 (0.10/0.16*)
ED-SS07			0.91/1.2*	ND	ED-05 (1.3)
ED-SS08			0.18	ND	ED-01 (ND)
Northern Drainage Conveyance					
ND-SS05	0.24	0.99	0.31	ND	ND-03 (0.14/0.17*)

Notes:

All results shown in milligrams per kilogram (mg/kg)

ND: Analyte was not detected above the laboratory method detection limit

*: Duplicate sample collected at this location; both results shown.

¹: 2011 Sample ID and Aroclor-1260 concentration corresponding to 2014 resample location.

EPA determined that the 2011 laboratory data was of unknown quality and might not be reliable. July 2011 data is provided for informational and qualitative purposes.

Shaded cell indicates positive detection

Bolded value indicates concentration exceedance of November 2019 Residential Soil RSL

Italicized value indicates concentration exceedance of November 2019 Industrial Soil RSL

TABLE F-5

**2014 SEDIMENT SAMPLE ANALYTICAL RESULTS - PCBs
LACKAWANNA RIVER FLOODPLAIN**

Sample ID	Interval Sampled (ft bgs)	November 2019 Aroclor-1260 Soil RSL		Aroclor-1260	Other PCBs
		Residential	Industrial		
Lackawanna River Channel Sediment Samples					
FP-BK	0.0- 0.5	0.24	0.99	<0.043	ND
FP-15	0.0-0.5			<0.034	ND
FP-16	0.0-0.5			<0.043	ND
FP-17	0.0-0.5			<0.036	ND
FP-17	0.5-1.0			<0.044	ND
FP-18	0.0-0.5			<0.044 / <0.045*	ND
FP-19	0.0-0.5			<0.054	ND
FP-20	0.0-0.5			<0.051	ND
FP-20	0.5-1.0			<0.051	ND
FP-21	0.0-0.5			<0.036	ND
FP-21	0.5-0.9			<0.035	ND
FP-22	0.0-0.5			<0.037	ND
FP-23	0.0-0.5			<0.041	ND
FP-23	0.5-1.0			<0.043 / <0.040*	ND

NOTES:

All results shown in milligrams per kilogram (mg/kg)

ft bgs: feet below the ground surface

<: Analyte was not detected above the indicated laboratory method reporting limit

ND: Analytes were not detected above their respective laboratory method reporting limits

*: Duplicate sample collected at this location; both results shown.

TABLE F-6

**2014 SEDIMENT SAMPLE ANALYTICAL RESULTS – PCBs
LACKAWANNA RIVER CHANNEL**

Sample ID	November 2019 Aroclor-1242 RSL		Aroclor-1242	November 2019 Aroclor-1260 RSL		Aroclor-1260	Other PCBs
	Residential	Industrial		Residential	Industrial		
Lackawanna River Channel Sediment Samples							
R-BK2	0.23	0.95	<0.041 / <0.041*	0.24	0.99	<0.041 / <0.041*	ND
R-15			<0.042 / <0.040*			<0.042 / <0.040*	ND
R-16			<0.041			<0.041	ND
R-17			<0.050			<0.050	ND
R-18			<0.042			<0.042	ND
R-19			<0.074			<0.074	ND
R-20			<0.046			<0.046	ND
R-21			<0.040			<0.040	ND
R-22			0.25			<0.046	ND
R-23			<0.046			<0.046	ND
R-24			<0.061			<0.061	ND
R-25			<0.043			<0.043	ND
R-26			<0.046			<0.046	ND
R-27			<0.051			<0.051	ND
R-28			<0.051 / <0.050*			<0.051 / <0.050*	ND

Notes:

All results shown in milligrams per kilogram (mg/kg)

<: Analyte was not detected above the indicated laboratory method reporting limit

ND: Analytes were not detected above their respective laboratory method reporting limits

*: Duplicate sample collected at this location; both results shown.

Shaded cell indicates positive detection

Bolded value indicates concentration exceedance of November 2019 Residential Soil RSL

APPENDIX G
2011 SITE FIGURES AND DATA SUMMARY TABLES

Page intentionally left blank

2011 SITE FIGURES

Page intentionally left blank

FIGURE G-1: SOIL CAP SAMPLING LOCATIONS (2011)

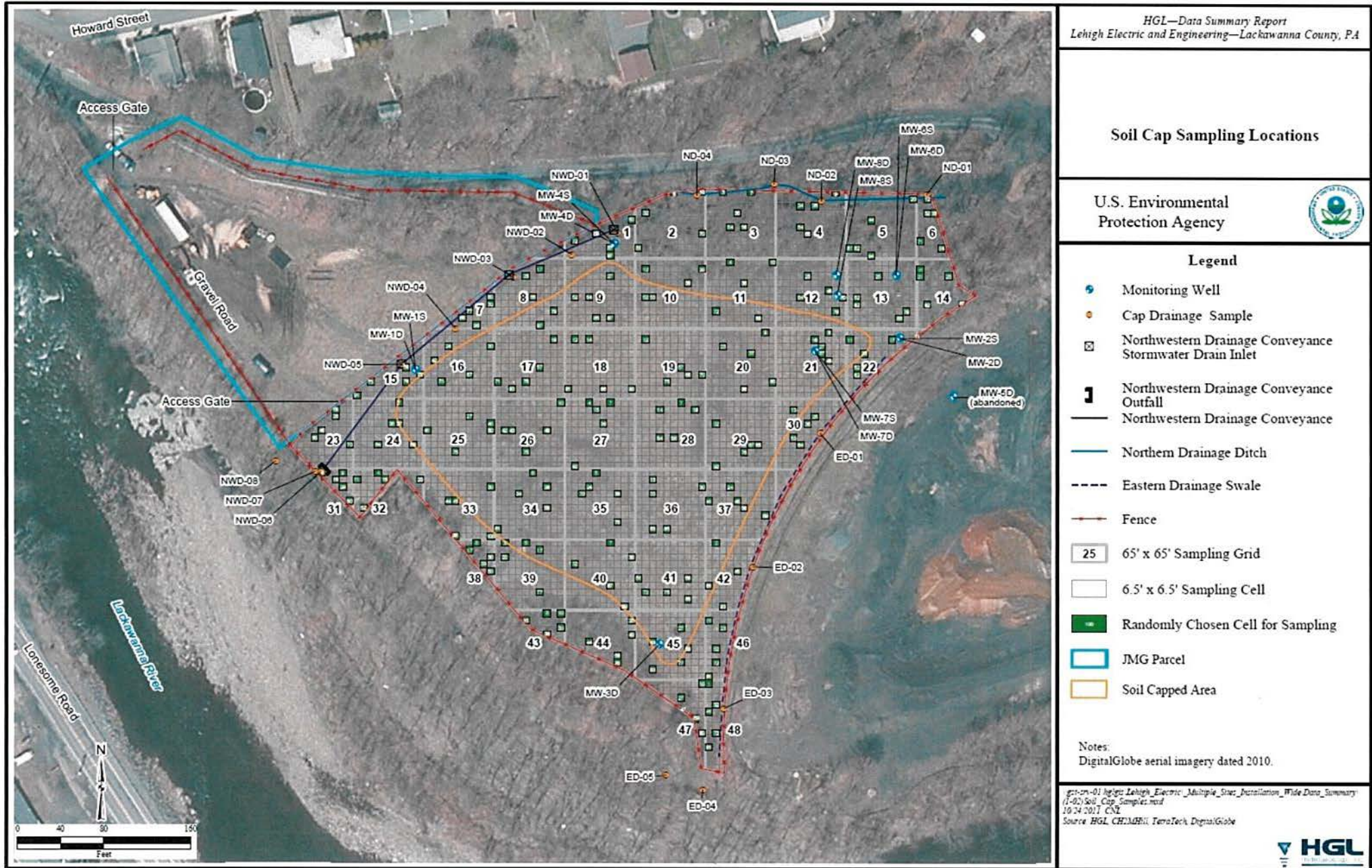
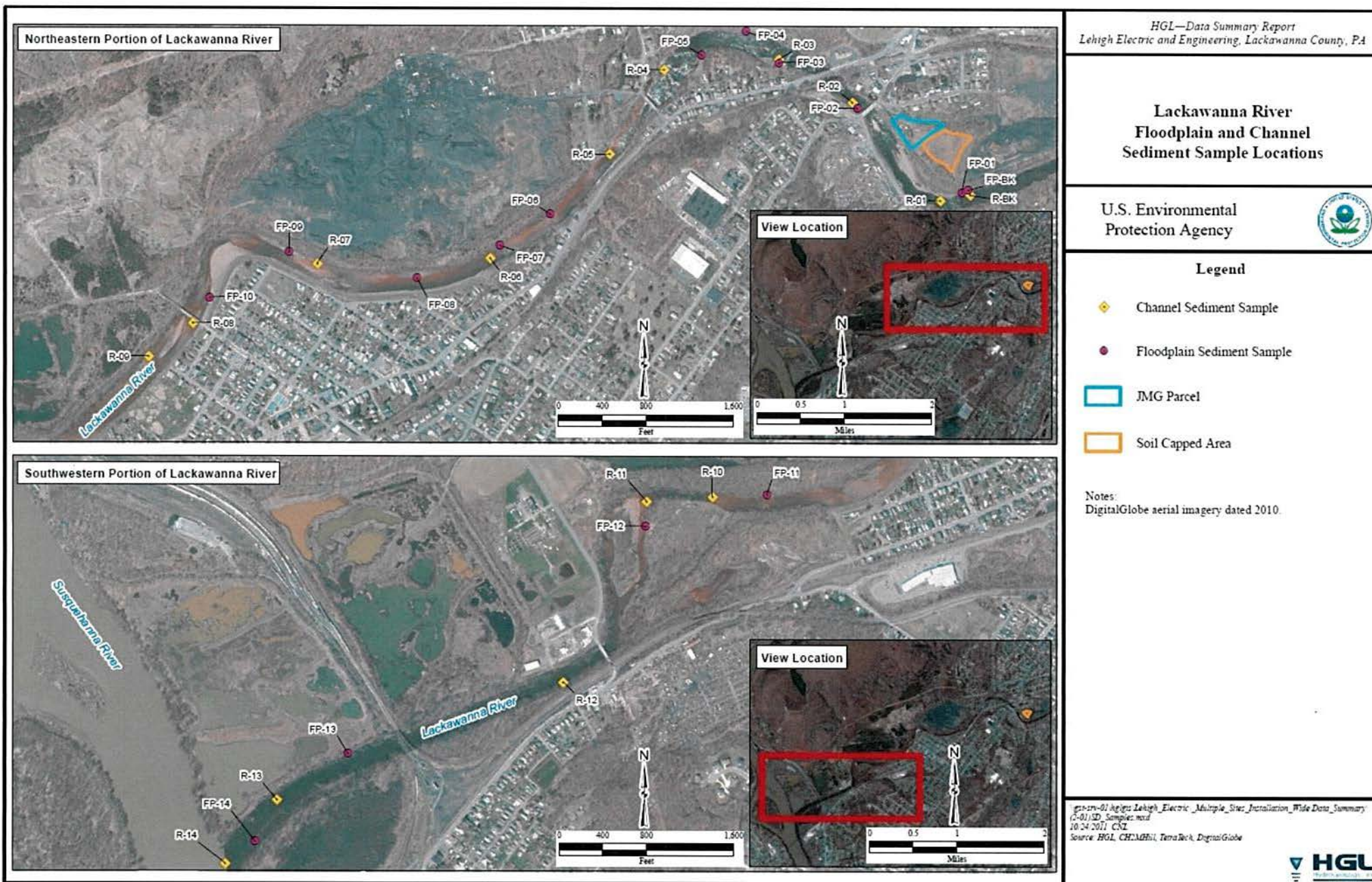


FIGURE G-2: LACKAWANNA RIVER FLOODPLAIN AND CHANNEL SEDIMENT SAMPLE LOCATIONS (2011)



2011 DATA SUMMARY TABLES

Page intentionally left blank

Table G-1
2011 Soil Cap and Drainage Sediment Sample Analytical Results**
Lehigh Electric and Engineering,
Lackawanna County, Pennsylvania

Analyte	November 2019 Residential Soil RSL	November 2019 Industrial Soil RSL	Location ID	Soil Cap Composite Samples										
			Field Sample ID	SS-01	SS-02	SS-03	SS-04	SS-05	SS-06	SS-07	SS-08	SS-09	SS-10	SS-11
			Date Collected	7/12/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/11/2011	7/12/2011	7/12/2011	7/13/2011	7/13/2011
			Sample Depth (bgs)	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft
			Sample Type	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Polychlorinated Biphenyls														
Aroclor 1016	4100	27000	µg/kg	42 U	43 U	43 U	44 U	43 U	44 U	43 U	42 U	45 U	43 U	39 U
Aroclor 1221	200	830	µg/kg	42 U	43 U	43 U	44 U	43 U	44 U	43 U	42 U	45 U	43 U	39 U
Aroclor 1232	170	720	µg/kg	42 U	43 U	43 U	44 U	43 U	44 U	43 U	42 U	45 U	43 U	39 U
Aroclor 1242	230	950	µg/kg	42 U	43 U	43 U	44 U	43 U	44 U	43 U	42 U	45 U	43 U	39 U
Aroclor 1248	230	940	µg/kg	42 U	43 U	43 U	44 U	43 U	44 U	43 U	42 U	45 U	43 U	39 U
Aroclor 1254	240	970	µg/kg	42 U	43 U	43 U	44 U	43 U	44 U	43 U	42 U	45 U	43 U	39 U
Aroclor 1260	240	990	µg/kg	42 U	43 U	43 U	44 U	43 U	44 U	43 U	42 U	45 U	43 U	39 U
Aroclor 1262	--	--	µg/kg	42 U	43 U	43 U	44 U	43 U	44 U	43 U	42 U	45 U	43 U	39 U
Aroclor 1268	--	--	µg/kg	42 U	43 U	43 U	44 U	43 U	44 U	43 U	42 U	45 U	43 U	39 U

Analyte	November 2019 Residential Soil RSL	November 2019 Industrial Soil RSL	Location ID	Soil Cap Composite Samples											
			Field Sample ID	SS-12	SS-13	SS-14	SS-15	SS-16	SS-17	SS-18	SS-19	SS-20		SS-21	
			Date Collected	7/13/2011	7/13/2011	7/13/2011	7/11/2011	7/11/2011	7/12/2011	7/12/2011	7/12/2011	7/13/2011	7/13/2011	7/13/2011	
			Sample Depth (bgs)	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	
			Sample Type	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Duplicate	Normal
			Polychlorinated Biphenyls												
Aroclor 1016	4100	27000	µg/kg	42 U	43 U	37 U	42 U	43 U	45 U	44 U	40 U	42 U	41 U	41 U	
Aroclor 1221	200	830	µg/kg	42 U	43 U	37 U	42 U	43 U	45 U	44 U	40 U	42 U	41 U	41 U	
Aroclor 1232	170	720	µg/kg	42 U	43 U	37 U	42 U	43 U	45 U	44 U	40 U	42 U	41 U	41 U	
Aroclor 1242	230	950	µg/kg	42 U	43 U	37 U	42 U	43 U	45 U	44 U	40 U	42 U	41 U	41 U	
Aroclor 1248	230	940	µg/kg	42 U	43 U	37 U	42 U	43 U	45 U	44 U	40 U	42 U	41 U	41 U	
Aroclor 1254	240	970	µg/kg	42 U	43 U	37 U	42 U	43 U	45 U	44 U	40 U	42 U	41 U	41 U	
Aroclor 1260	240	990	µg/kg	42 U	43 U	700	42 U	43 U	45 U	44 U	40 U	42 U	63	41 U	
Aroclor 1262	--	--	µg/kg	42 U	43 U	37 U	42 U	43 U	45 U	44 U	40 U	42 U	41 U	41 U	
Aroclor 1268	--	--	µg/kg	42 U	43 U	37 U	42 U	43 U	45 U	44 U	40 U	42 U	41 U	41 U	

Table G-1 (continued)
Soil Cap and Drainage Sediment Sample Analytical Results**
Lehigh Electric and Engineering,
Lackawanna County, Pennsylvania

Analyte	November 2019 Residential Soil RSL	November 2019 Industrial Soil RSL	Location ID	Soil Cap Composite Samples										
			Field Sample ID	SS-22	SS-23	SS-24	SS-25	SS-26		SS-27	SS-28	SS-29	SS-30	SS-31
			Date Collected	7/13/2011	7/11/2011	7/11/2011	7/11/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/13/2011	7/13/2011	7/11/2011
			Sample Depth (bgs)	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft
			Sample Type	Normal	Normal	Normal	Normal	Normal	Duplicate	Normal	Normal	Normal	Normal	Normal
Polychlorinated Biphenyls														
Aroclor 1016	4100	27000	µg/kg	40 U	41 U	43 U	40 U	40 U	41 U	41 U	41 U	41 U	42 U	48 U
Aroclor 1221	200	830	µg/kg	40 U	41 U	43 U	40 U	40 U	41 U	41 U	41 U	41 U	42 U	48 U
Aroclor 1232	170	720	µg/kg	40 U	41 U	43 U	40 U	40 U	41 U	41 U	41 U	41 U	42 U	48 U
Aroclor 1242	230	950	µg/kg	40 U	41 U	43 U	40 U	40 U	41 U	41 U	41 U	41 U	42 U	48 U
Aroclor 1248	230	940	µg/kg	40 U	41 U	43 U	40 U	40 U	41 U	41 U	41 U	41 U	42 U	48 U
Aroclor 1254	240	970	µg/kg	40 U	41 U	43 U	40 U	40 U	41 U	41 U	41 U	41 U	42 U	48 U
Aroclor 1260	240	990	µg/kg	3500	41 U	43 U	40 U	40 U	41 U	41 U	41 U	41 U	42 U	67 J
Aroclor 1262	--	--	µg/kg	40 U	41 U	43 U	40 U	40 U	41 U	41 U	41 U	41 U	42 U	48 U
Aroclor 1268	--	--	µg/kg	40 U	41 U	43 U	40 U	40 U	41 U	41 U	41 U	41 U	42 U	48 U

Analyte	November 2019 Residential Soil RSL	November 2019 Industrial Soil RSL	Location ID	Soil Cap Composite Samples										
			Field Sample ID	SS-32	SS-33	SS-34	SS-35	SS-36	SS-37		SS-38	SS-39		SS-40
			Date Collected	7/11/2011	7/11/2011	7/12/2011	7/12/2011	7/12/2011	7/13/2011	7/13/2011	7/11/2011	7/11/2011	7/11/2011	7/12/2011
			Sample Depth (bgs)	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft
			Sample Type	Normal	Normal	Normal	Normal	Normal	Normal	Duplicate	Normal	Normal	Duplicate	Normal
Polychlorinated Biphenyls														
Aroclor 1016	4100	27000	µg/kg	46 U	39 U	44 U	43 U	43 U	43 U	44 U	42 U	41 U	41 U	42 U
Aroclor 1221	200	830	µg/kg	46 U	39 U	44 U	43 U	43 U	43 U	44 U	42 U	41 U	41 U	42 U
Aroclor 1232	170	720	µg/kg	46 U	39 U	44 U	43 U	43 U	43 U	44 U	42 U	41 U	41 U	42 U
Aroclor 1242	230	950	µg/kg	46 U	39 U	44 U	43 U	43 U	43 U	44 U	42 U	41 U	41 U	42 U
Aroclor 1248	230	940	µg/kg	46 U	39 U	44 U	43 U	43 U	43 U	44 U	42 U	41 U	41 U	42 U
Aroclor 1254	240	970	µg/kg	46 U	39 U	44 U	43 U	43 U	43 U	44 U	42 U	41 U	41 U	42 U
Aroclor 1260	240	990	µg/kg	32 J	380 J	44 U	43 U	43 U	43 U	44 U	62	41 U	41 U	42 U
Aroclor 1262	--	--	µg/kg	46 U	39 U	44 U	43 U	43 U	43 U	44 U	42 U	41 U	41 U	42 U
Aroclor 1268	--	--	µg/kg	46 U	39 U	44 U	43 U	43 U	43 U	44 U	42 U	41 U	41 U	42 U

Table G-1 (continued)
Soil Cap and Drainage Sediment Sample Analytical Results**
Lehigh Electric and Engineering,
Lackawanna County, Pennsylvania

Analyte	November 2019 Residential Soil RSL	November 2019 Industrial Soil RSL	Location ID	Soil Cap Composite Samples								
			SS-41		SS-42	SS-43	SS-44	SS-45	SS-46	SS-47	SS-48	
			Field Sample ID	SS-41	SS-DUP03	SS-42	SS-43	SS-44	SS-45	SS-46	SS-47	SS-48
			Date Collected	7/12/2011	7/12/2011	7/13/2011	7/11/2011	7/12/2011	7/12/2011	7/13/2011	7/12/2011	7/13/2011
			Sample Depth (bgs)	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft
			Sample Type	Normal	Duplicate	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Polychlorinated Biphenyls												
Aroclor 1016	4100	27000	µg/kg	41 U	42 U	42 U	39 U	40 U	43 U	45 U	39 U	40 U
Aroclor 1221	200	830	µg/kg	41 U	42 U	42 U	39 U	40 U	43 U	45 U	39 U	40 U
Aroclor 1232	170	720	µg/kg	41 U	42 U	42 U	39 U	40 U	43 U	45 U	39 U	40 U
Aroclor 1242	230	950	µg/kg	41 U	42 U	42 U	39 U	40 U	43 U	45 U	39 U	40 U
Aroclor 1248	230	940	µg/kg	41 U	42 U	42 U	39 U	40 U	43 U	45 U	39 U	40 U
Aroclor 1254	240	970	µg/kg	41 U	42 U	42 U	39 U	40 U	43 U	45 U	39 U	40 U
Aroclor 1260	240	990	µg/kg	41 U	42 U	42 U	160	160	43 U	45 U	31 J	150
Aroclor 1262	--	--	µg/kg	41 U	42 U	42 U	39 U	40 U	43 U	45 U	39 U	40 U
Aroclor 1268	--	--	µg/kg	41 U	42 U	42 U	39 U	40 U	43 U	45 U	39 U	40 U

Analyte	November 2019 Residential Soil RSL	November 2019 Industrial Soil RSL	Location ID	Eastern Drainage Swale						Northern Drainage Swale				
			Field Sample ID	ED-01	ED-02	ED-03	ED-04		ED-05	ND-01	ND-02	ND-03		ND-04
			Date Collected	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011
			Sample Depth (bgs)	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft
			Sample Type	Normal	Normal	Normal	Normal	Duplicate	Normal	Normal	Normal	Normal	Normal	Duplicate
Polychlorinated Biphenyls														
Aroclor 1016	4100	27000	µg/kg	41 U	42 U	42 U	61 U	55 U	40 U	49 U	39 U	42 U	35 U	43 U
Aroclor 1221	200	830	µg/kg	41 U	42 U	42 U	61 U	55 U	40 U	49 U	39 U	42 U	35 U	43 U
Aroclor 1232	170	720	µg/kg	41 U	42 U	42 U	61 U	55 U	40 U	49 U	39 U	42 U	35 U	43 U
Aroclor 1242	230	950	µg/kg	41 U	42 U	42 U	61 U	55 U	40 U	49 U	39 U	42 U	35 U	43 U
Aroclor 1248	230	940	µg/kg	41 U	42 U	42 U	61 U	55 U	40 U	49 U	39 U	42 U	35 U	43 U
Aroclor 1254	240	970	µg/kg	41 U	42 U	42 U	61 U	55 U	40 U	49 U	39 U	42 U	35 U	43 U
Aroclor 1260	240	990	µg/kg	41 U	42 U	40 J	100	160	1300 J	49 U	180	140	170	160 J
Aroclor 1262	--	--	µg/kg	41 U	42 U	42 U	61 U	55 U	40 U	49 U	39 U	42 U	35 U	43 U
Aroclor 1268	--	--	µg/kg	41 U	42 U	42 U	61 U	55 U	40 U	49 U	39 U	42 U	35 U	43 U

Table G-1 (continued)
Soil Cap and Drainage Sediment Sample Analytical Results**
Lehigh Electric and Engineering,
Lackawanna County, Pennsylvania

Analyte	November 2019 Residential Soil RSL	November 2019 Industrial Soil RSL	Location ID	Northwestern Drainage Channel							
			Field Sample ID	NWD-01	NWD-02	NWD-03	NWD-04	NWD-05	NWD-06	NWD-07	NWD-08
			Date Collected	NWD-SS01	NWD-SS02	NWD-SS03	NWD-SS04	NWD-SS05	NWD-SS06	NWD-SS07	NWD-SS08
			Sample Depth (bgs)	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011
			Sample Type	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft
Polychlorinated Biphenyls											
Aroclor 1016	4100	27000	µg/kg	42 U	41 U	40 U	43 U	38 U	58 U	40 U	48 U
Aroclor 1221	200	830	µg/kg	42 U	41 U	40 U	43 U	38 U	58 U	40 U	48 U
Aroclor 1232	170	720	µg/kg	42 U	41 U	40 U	43 U	38 U	58 U	40 U	48 U
Aroclor 1242	230	950	µg/kg	42 U	41 U	40 U	43 U	38 U	58 U	40 U	48 U
Aroclor 1248	230	940	µg/kg	42 U	41 U	40 U	43 U	38 U	58 U	40 U	48 U
Aroclor 1254	240	970	µg/kg	42 U	41 U	40 U	43 U	38 U	58 U	40 U	48 U
Aroclor 1260	240	990	µg/kg	47	41 U	130	43 U	500	910 J	1500 J	40 J
Aroclor 1262	--	--	µg/kg	42 U	41 U	40 U	43 U	38 U	58 U	40 U	48 U
Aroclor 1268	--	--	µg/kg	42 U	41 U	40 U	43 U	38 U	58 U	40 U	48 U

Notes:

- RSL - U.S. EPA Regional Screening Level
- µg/kg - micrograms per kilogram
- ft - feet
- bgs - below ground surface
- - not applicable
- U - data validation qualifier indicating a non-detect result; the reporting limit value is presented
- J - data validation qualifier indicating a positive detection, estimated value

Shaded cell indicates positive detection

Bolded value indicates concentration exceedance of November 2019 Residential Soil RSL value

Italicized value indicates concentration exceedance of November 2019 Industrial Soil RSL value

** EPA determined that the 2011 laboratory data was of unknown quality and might not be reliable. 2011 data is provided for informational and qualitative purposes.

Table G-2
2011 Lackawanna River Floodplain Terrestrial Sediment Analytical Results**
Lehigh Electric and Engineering
Lackawanna County, Pennsylvania

Analyte	November 2019 Residential Soil RSL	November 2019 Industrial Soil RSL	Location ID	FP-BK		FP-01		FP-02	FP-03		FP-04	FP-05	FP-06		FP-07		FP-08
			Field Sample ID	FP-BK-0005	FP-BK-0510	FP-01-0005	FP-01-0510	FP-02-0005	FP-03-0005	FP-DUP01	FP-04-0003	FP-05-0005	FP-06-0005	FP-06-0510	FP-07-0005	FP-07-0510	FP-08-0005
			Date Collected	7/16/2011	7/16/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/15/2011	7/15/2011	7/15/2011	7/15/2011	7/15/2011	7/15/2011	7/15/2011
			Sample Depth (bgs)	0-0.5 ft	0.5-1 ft	0-0.5 ft	0.5-1 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.3 ft	0-0.5 ft	0-0.5 ft	0.5-1 ft	0-0.5 ft	0.5-1 ft	0-0.5 ft
			Sample Type	Normal	Normal	Normal	Normal	Normal	Normal	Duplicate	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Polychlorinated Biphenyls																	
Aroclor 1016	4100	27000	µg/kg	34 U	35 U	35 U	35 U	36 U	34 U	34 U	52 U	36 U	42 U	52 U	43 U	46 U	41 U
Aroclor 1221	200	830	µg/kg	34 U	35 U	35 U	35 U	36 U	34 U	34 U	52 U	36 U	42 U	52 U	43 U	46 U	41 U
Aroclor 1232	170	720	µg/kg	34 U	35 U	35 U	35 U	36 U	34 U	34 U	52 U	36 U	42 U	52 U	43 U	46 U	41 U
Aroclor 1242	230	950	µg/kg	34 U	35 U	35 U	35 U	36 U	34 U	34 U	52 U	36 U	42 U	52 U	43 U	46 U	41 U
Aroclor 1248	230	940	µg/kg	34 U	35 U	35 U	35 U	36 U	34 U	34 U	52 U	36 U	42 U	52 U	43 U	46 U	41 U
Aroclor 1254	240	970	µg/kg	34 U	35 U	35 U	35 U	36 U	34 U	34 U	52 U	36 U	42 U	52 U	43 U	46 U	41 U
Aroclor 1260	240	990	µg/kg	34 U	35 U	59 U	120	36 U	34 U	34 U	52 U	36 U	42 U	52 U	43 U	46 U	41 U
Aroclor 1262	--	--	µg/kg	34 U	35 U	35 U	35 U	36 U	34 U	34 U	52 U	36 U	42 U	52 U	43 U	46 U	41 U
Aroclor 1268	--	--	µg/kg	34 U	35 U	35 U	35 U	36 U	34 U	34 U	52 U	36 U	42 U	52 U	43 U	46 U	41 U

Table G-2 (continued)
Lackawanna River Floodplain Terrestrial Sediment Analytical Results**
Lehigh Electric and Engineering
Lackawanna County, Pennsylvania

Analyte	November 2019 Residential Soil RSL	November 2019 Industrial Soil RSL	Location ID	FP-09		FP-10		FP-11			FP-12		FP-13		FP-14			
			Field Sample ID	FP-09-0005	FP-09-0515	FP-10-0005	FP-10-0515	FP-11-0005	FP-11-0515	FP-DUP02	FP-12-0005	FP-12-0515	FP-13-0005	FP-13-0520	FP-14-0005	FP-14-0520	FP-DUP03	
			Date Collected	7/15/2011	7/15/2011	7/15/2011	7/15/2011	7/16/2011	7/16/2011	7/16/2011	7/16/2011	7/16/2011	7/16/2011	7/16/2011	7/16/2011	7/16/2011	7/16/2011	7/16/2011
			Sample Depth (bgs)	0-0.5 ft	0.5-1.5 ft	0-0.5 ft	0.5-1.5 ft	0-0.5 ft	0.5-1.5 ft	0-0.5 ft	0-0.5 ft	0.5-1.5 ft	0-0.5 ft	0.5-2 ft	0-0.5 ft	0.5-2 ft	0.5-2 ft	
			Sample Type	Normal	Normal	Normal	Normal	Normal	Normal	Duplicate	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Duplicate
Polychlorinated Biphenyls																		
Aroclor 1016	4100	27000	µg/kg	34 U	36 U	40 U	47 U	37 U	39 U	39 U	37 U	50 U	49 U	43 U	50 U	44 U	41 U	
Aroclor 1221	200	830	µg/kg	34 U	36 U	40 U	47 U	37 U	39 U	39 U	37 U	50 U	49 U	43 U	50 U	44 U	41 U	
Aroclor 1232	170	720	µg/kg	34 U	36 U	40 U	47 U	37 U	39 U	39 U	37 U	50 U	49 U	43 U	50 U	44 U	41 U	
Aroclor 1242	230	950	µg/kg	34 U	36 U	40 U	47 U	37 U	39 U	39 U	37 U	50 U	49 U	43 U	50 U	44 U	41 U	
Aroclor 1248	230	940	µg/kg	34 U	36 U	40 U	47 U	37 U	39 U	39 U	37 U	50 U	49 U	43 U	50 U	44 U	41 U	
Aroclor 1254	240	970	µg/kg	34 U	36 U	40 U	47 U	37 U	39 U	39 U	37 U	50 U	49 U	43 U	50 U	44 U	41 U	
Aroclor 1260	240	990	µg/kg	34 U	36 U	40 U	47 U	37 U	39 U	39 U	37 U	50 U	49 U	43 U	50 U	44 U	41 U	
Aroclor 1262	--	--	µg/kg	34 U	36 U	40 U	47 U	37 U	39 U	39 U	37 U	50 U	49 U	43 U	50 U	44 U	41 U	
Aroclor 1268	--	--	µg/kg	34 U	36 U	40 U	47 U	37 U	39 U	39 U	37 U	50 U	49 U	43 U	50 U	44 U	41 U	

Notes:

RSL - U.S. EPA Regional Screening Level

µg/kg - micrograms per kilogram

ft - feet

bgs - below ground surface

-- - not applicable

U - data validation qualifier indicating a non-detect result; the reporting limit value is presented

J - data validation qualifier indicating a positive detection, estimated value

Shaded cell indicates positive detection

Bolded value indicates concentration exceedance of November 2019 Residential Soil RSL value

Italicized value indicates concentration exceedance of November 2019 Industrial Soil RSL value

** EPA determined that the 2011 laboratory data was of unknown quality and might not be reliable. 2011 data is provided for informational and qualitative purposes.

Table G-3
2011 Lackawanna River Channel Sediment Analytical Results**
Lehigh Electric and Engineering
Lackawanna County, Pennsylvania

Analyte	November 2019 Residential Soil RSL	November 2019 Industrial Soil RSL	Location ID	R-BK		R-01		R-02	R-03	R-04	R-05	R-06	R-07	R-08	R-09	R-10	R-11	R-12	R-13	R-14	
			Field Sample ID	R-BK	R-DUP02	R-SD-01	R-DUP01	R-SD02	R-SD03	R-SD04	R-SD05	R-SD06	R-SD07	R-SD08	R-SD09	R-SD10	R-SD11	R-SD12	R-SD13	R-SD14	
			Date Collected	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/15/2011	7/15/2011	7/15/2011	7/15/2011	7/15/2011	7/15/2011	7/16/2011	7/16/2011	7/16/2011	7/16/2011	7/16/2011	7/16/2011
			Sample Depth (bgs)	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft
			Sample Type	Normal	Duplicate	Normal	Duplicate	Normal	Duplicate	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Polychlorinated Biphenyls																					
Aroclor 1016	4100	27000	µg/kg	40 U	41 U	39 U	40 U	43 U	38 U	41 U	46 U	45 U	38 U	40 U	39 U	40 U	42 U	40 U	36 U	38 U	
Aroclor 1221	200	830	µg/kg	40 U	41 U	39 U	40 U	43 U	38 U	41 U	46 U	45 U	38 U	40 U	39 U	40 U	42 U	40 U	36 U	38 U	
Aroclor 1232	170	720	µg/kg	40 U	41 U	39 U	40 U	43 U	38 U	41 U	46 U	45 U	38 U	40 U	39 U	40 U	42 U	40 U	36 U	38 U	
Aroclor 1242	230	950	µg/kg	40 U	41 U	39 U	40 U	43 U	38 U	41 U	46 U	45 U	38 U	40 U	39 U	40 U	42 U	40 U	36 U	38 U	
Aroclor 1248	230	940	µg/kg	40 U	41 U	39 U	40 U	43 U	38 U	41 U	46 U	45 U	38 U	40 U	39 U	40 U	42 U	40 U	36 U	38 U	
Aroclor 1254	240	970	µg/kg	40 U	41 U	39 U	40 U	43 U	38 U	41 U	46 U	45 U	38 U	40 U	39 U	40 U	42 U	40 U	36 U	38 U	
Aroclor 1260	240	990	µg/kg	40 U	41 U	39 U	40 U	43 U	38 U	41 U	46 U	45 U	38 U	40 U	39 U	40 U	42 U	40 U	36 U	38 U	
Aroclor 1262	--	--	µg/kg	40 U	41 U	39 U	40 U	43 U	38 U	41 U	46 U	45 U	38 U	40 U	39 U	40 U	42 U	40 U	36 U	38 U	
Aroclor 1268	--	--	µg/kg	40 U	41 U	39 U	40 U	43 U	38 U	41 U	46 U	45 U	38 U	40 U	39 U	40 U	42 U	40 U	36 U	38 U	

Notes:

- RSL - U.S. EPA Regional Screening Level
- µg/kg - micrograms per kilogram
- ft - feet
- bgs - below ground surface
- - not applicable
- U - data validation qualifier indicating a non-detect result; the reporting limit value is presented

Shaded cell indicates positive detection

Bolded value indicates concentration exceedance of November 2019 Residential Soil RSL value

Italicized value indicates concentration exceedance of November 2019 Industrial Soil RSL value

** EPA determined that the 2011 laboratory data was of unknown quality and might not be reliable. 2011 data is provided for informational and qualitative purposes.

Table G-4
Groundwater Analytical Results**
Lehigh Electric and Engineering
Lackawanna County, Pennsylvania

Analyte	November 2019 Tap Water RSL	Location ID	MW-1D	MW-1S	MW-2D	MW-2S		MW-3D	MW-4D	MW-4S	MW-6D		MW-6S	MW-7D	MW-7S	MW-8D	MW-8S
		Field Sample ID	MW1D	MW1S	MW2D	MW2S	MW-DUP02	MW3D	MW4D	MW4S	MW6D	MW-DUP01	MW6S	MW7D	MW7S	MW8D	MW8S
		Date Collected	7/17/2011	7/17/2011	7/18/2011	7/18/2011	7/18/2011	7/17/2011	7/17/2011	7/18/2011	7/17/2011	7/17/2011	7/17/2011	7/18/2011	7/18/2011	7/21/2011	7/17/2011
		Sample Type	Normal	Normal	Normal	Normal	Duplicate	Normal	Normal	Normal	Normal	Duplicate	Normal	Normal	Normal	Normal	Normal
		Units	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Aroclor 1016	0.22	µg/l	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor 1221	0.0047	µg/l	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor 1232	0.0047	µg/l	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor 1242	0.0078	µg/l	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor 1248	0.0078	µg/l	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor 1254	0.0078	µg/l	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor 1260	0.0078	µg/l	1 U	1 U	6.8	60	91	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor 1262	--	µg/l	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor 1268	--	µg/l	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Notes:

RSL - U.S. EPA Regional Screening Level

µg/l - micrograms per liter

-- - not applicable

U - data validation qualifier indicating a non-detect result; the reporting limit value is presented

Shaded cell indicates positive detection

Bolded value indicates concentration exceedance of November 2019 Residential Tap Water RSL value

Italicized value indicates concentration exceedance of PCB drinking water maximum contaminant level (MCL) of 0.5 µg/l.

** EPA determined that the 2011 groundwater monitoring laboratory data was of unknown quality and might not be reliable. July 2011 data is provided for informational and qualitative purposes.

APPENDIX H – SITE INSPECTION CHECKLIST

FIVE-YEAR REVIEW SITE INSPECTION CHECKLIST			
I. SITE INFORMATION			
Site Name: Lehigh Electric & Engineering Co.		Date of Inspection: 11/25/2019	
Location and Region: EPA Region 3, Old Forge, PA		EPA ID: PAD980712731	
Agency, Office or Company Leading the Five-Year Review: EPA		Weather/Temperature: Mostly Cloudy, about 45°F	
Remedy Includes: (Check all that apply) <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input checked="" type="checkbox"/> Landfill cover/containment <input type="checkbox"/> Access controls <input type="checkbox"/> Institutional controls <input type="checkbox"/> Groundwater pump and treatment <input type="checkbox"/> Surface water collection and treatment <input type="checkbox"/> Other: _____ </div> <div style="width: 48%;"> <input type="checkbox"/> Monitored natural attenuation <input type="checkbox"/> Groundwater containment <input type="checkbox"/> Vertical barrier walls </div> </div>			
Attachments: <input checked="" type="checkbox"/> Inspection team roster attached <input checked="" type="checkbox"/> Site map attached			
II. INTERVIEWS (check all that apply)			
1. O&M Site Manager <u>EPA RPM</u> _____ <u>mm/dd/yyyy</u> <div style="display: flex; justify-content: space-between;"> <div>Name</div> <div>Title</div> <div>Date</div> </div> Interviewed <input type="checkbox"/> at site <input type="checkbox"/> at office <input type="checkbox"/> by phone Phone: _____ Problems, suggestions <input type="checkbox"/> Report attached: _____			
2. O&M Staff _____ _____ <u>mm/dd/yyyy</u> <div style="display: flex; justify-content: space-between;"> <div>Name</div> <div>Title</div> <div>Date</div> </div> Interviewed <input type="checkbox"/> at site <input type="checkbox"/> at office <input type="checkbox"/> by phone Phone: _____ Problems/suggestions <input type="checkbox"/> Report attached: _____			

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.
Agency <u>PADEP</u> Contact <u>PADEP Project Manager</u> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> Name Title Date Phone No. </div> Problems/suggestions <input type="checkbox"/> Report attached: _____	
Agency _____ Contact _____ <div style="display: flex; justify-content: space-between; margin-top: 5px;"> Name Title Date Phone No. </div> Problems/suggestions <input type="checkbox"/> Report attached: _____	
Agency _____ Contact _____ <div style="display: flex; justify-content: space-between; margin-top: 5px;"> Name Title Date Phone No. </div> Problems/suggestions <input type="checkbox"/> Report attached: _____	
Agency _____ Contact _____ <div style="display: flex; justify-content: space-between; margin-top: 5px;"> Name Title Date Phone No. </div> Problems/suggestions <input type="checkbox"/> Report attached: _____	
Agency _____ Contact _____ <div style="display: flex; justify-content: space-between; margin-top: 5px;"> Name Title Date Phone No. </div> 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 <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input checked="" type="checkbox"/> O&M manual </div> <div style="width: 50%;"> <input checked="" type="checkbox"/> Readily available </div> <div style="width: 50%;"> <input type="checkbox"/> Up to date </div> <div style="width: 50%;"> <input type="checkbox"/> N/A </div> <div style="width: 50%;"> <input type="checkbox"/> As-built drawings </div> <div style="width: 50%;"> <input type="checkbox"/> Readily available </div> <div style="width: 50%;"> <input type="checkbox"/> Up to date </div> <div style="width: 50%;"> <input checked="" type="checkbox"/> N/A </div> <div style="width: 50%;"> <input type="checkbox"/> Maintenance logs </div> <div style="width: 50%;"> <input type="checkbox"/> Readily available </div> <div style="width: 50%;"> <input type="checkbox"/> Up to date </div> <div style="width: 50%;"> <input checked="" type="checkbox"/> N/A </div> </div> Remarks: <u>O&M Plan never implemented</u>
2.	Site-Specific Health and Safety Plan <input checked="" type="checkbox"/> Readily available <input checked="" type="checkbox"/> Up to date <input 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: _____
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: _____

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: _____			
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 type="checkbox"/> Up to date <input type="checkbox"/> N/A
	Remarks: <u>2011 data available</u>			
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			
	<input type="checkbox"/> State in-house	<input checked="" type="checkbox"/> Contractor for state		
	<input type="checkbox"/> PRP in-house	<input type="checkbox"/> Contractor for PRP		
	<input type="checkbox"/> Federal facility in-house	<input type="checkbox"/> Contractor for Federal facility		
	<input checked="" type="checkbox"/> <u>Contractor for EPA</u>			

2.	O&M Cost Records	<input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> Funding mechanism/agreement in place <input checked="" type="checkbox"/> Unavailable		
		Original O&M cost estimate: <u>\$46,000 (present worth value) for a period of 30 years</u> <input type="checkbox"/> Breakdown attached		
		Total annual cost by year for review period if available		
	From: <u>mm/dd/yyyy</u> Date	To: <u>mm/dd/yyyy</u> Date	<u> </u> Total cost	<input type="checkbox"/> Breakdown attached
	From: <u>mm/dd/yyyy</u> Date	To: <u>mm/dd/yyyy</u> Date	<u> </u> Total cost	<input type="checkbox"/> Breakdown attached
	From: <u>mm/dd/yyyy</u> Date	To: <u>mm/dd/yyyy</u> Date	<u> </u> Total cost	<input type="checkbox"/> Breakdown attached
	From: <u>mm/dd/yyyy</u> Date	To: <u>mm/dd/yyyy</u> Date	<u> </u> Total cost	<input type="checkbox"/> Breakdown attached
	From: <u>mm/dd/yyyy</u> Date	To: <u>mm/dd/yyyy</u> Date	<u> </u> Total cost	<input type="checkbox"/> Breakdown attached

3.	Unanticipated or Unusually High O&M Costs during Review Period Describe costs and reasons: <u> </u>
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: <u>Fence requires repair southeast corner and north perimeter</u>
B. Other Access Restrictions	
1.	Signs and Other Security Measures <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> N/A Remarks: <u> </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>during FYRs</u>			
Frequency: <u>every 5 years</u>			
Responsible party/agency: <u>EPA</u>			
Contact _____	_____	<u>mm/dd/yyyy</u>	_____
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 type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" 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 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: _____			
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 type="checkbox"/> N/A			
Remarks: <u>No changes in property use since last FYR</u>			
VI. GENERAL SITE CONDITIONS			
A. Roads <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
1. Roads Damaged <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Roads adequate <input type="checkbox"/> N/A			
Remarks: _____			
B. Other Site Conditions			
Remarks: _____			

VII. LANDFILL COVERS <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A			
A. Landfill Surface			
1.	Settlement (low spots) Aerial extent: _____ Remarks: _____	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> Settlement not evident Depth: _____
2.	Cracks Lengths: _____ Remarks: _____	<input type="checkbox"/> Location shown on site map Widths: _____	<input checked="" type="checkbox"/> Cracking not evident Depths: _____
3.	Erosion Aerial extent: _____ Remarks: _____	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> Erosion not evident Depth: _____
4.	Holes Aerial extent: _____ Remarks: _____	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> Holes not evident Depth: _____
5.	Vegetative Cover <input checked="" type="checkbox"/> No signs of stress Remarks: _____	<input checked="" type="checkbox"/> Grass <input checked="" type="checkbox"/> Trees/shrubs (indicate size and locations on a diagram)	<input checked="" type="checkbox"/> Cover properly established
6.	Alternative Cover (e. g. , armored rock, concrete) Remarks: _____		<input checked="" type="checkbox"/> N/A
7.	Bulges Aerial extent: _____ Remarks: _____	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> Bulges not evident Height: _____
8.	Wet Areas/Water Damage <input type="checkbox"/> Wet areas/water damage not evident <input checked="" type="checkbox"/> Wet areas <input type="checkbox"/> Location shown on site map Aerial extent: _____ <input type="checkbox"/> Ponding <input type="checkbox"/> Location shown on site map Aerial extent: _____ <input type="checkbox"/> Seeps <input type="checkbox"/> Location shown on site map Aerial extent: _____ <input type="checkbox"/> Soft subgrade <input type="checkbox"/> Location shown on site map Aerial extent: _____ Remarks: <u>Wet areas noted southeastern and eastern perimeter</u>		
9.	Slope Instability <input type="checkbox"/> Slides <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> No evidence of slope instability Aerial extent: _____ Remarks: _____		

B. Benches <input type="checkbox"/> Applicable <input checked="" 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	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A or okay Remarks: _____
2.	Bench Breached	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A or okay Remarks: _____
3.	Bench Overtopped	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A or okay Remarks: _____
C. Letdown Channels <input type="checkbox"/> Applicable <input checked="" 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 checked="" 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 checked="" 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 checked="" type="checkbox"/> N/A	
Remarks: _____					
3.	Monitoring Wells (within surface area of landfill)				
	<input checked="" type="checkbox"/> Properly secured/locked	<input checked="" type="checkbox"/> Functioning	<input type="checkbox"/> Routinely sampled	<input checked="" 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 checked="" type="checkbox"/> N/A	
Remarks: _____					
5.	Settlement Monuments	<input type="checkbox"/> Located	<input type="checkbox"/> Routinely surveyed	<input checked="" type="checkbox"/> N/A	
Remarks: _____					
E. Gas Collection and Treatment				<input type="checkbox"/> Applicable	<input checked="" 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 checked="" 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 checked="" 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 checked="" 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 checked="" type="checkbox"/> Applicable	<input type="checkbox"/> N/A	
1.	Siltation	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> Siltation not evident	
	Area extent: _____	Depth: _____		
	Remarks: _____			
2.	Vegetative Growth	<input checked="" type="checkbox"/> Location shown on site map	<input type="checkbox"/> N/A	
	<input checked="" 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 checked="" 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 type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
A. Groundwater Extraction Wells, Pumps and Pipelines		<input type="checkbox"/> Applicable	<input type="checkbox"/> N/A
1.	Pumps, Wellhead Plumbing and Electrical		
	<input type="checkbox"/> Good condition	<input 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 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: _____		
B. Surface Water Collection Structures, Pumps and Pipelines		<input type="checkbox"/> Applicable	<input 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 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: _____		
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) <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> All required wells located <input type="checkbox"/> Needs maintenance <input type="checkbox"/> N/A Remarks: _____		
D. Monitoring Data			

1. Monitoring Data	
<input type="checkbox"/> Is routinely submitted on time	<input type="checkbox"/> Is of acceptable quality
2. Monitoring Data Suggests:	
<input type="checkbox"/> Groundwater plume is effectively contained	<input type="checkbox"/> Contaminant concentrations are declining
E. Monitored Natural Attenuation	
1. Monitoring Wells (natural attenuation remedy)	
<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition
<input type="checkbox"/> All required wells located	<input type="checkbox"/> Needs maintenance <input type="checkbox"/> N/A
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	
Sitewide Protectiveness Statement: The remedy for OU1 and OU2 has been constructed according to the decision documents and appears to be functioning as intended by the decision documents. The remedial actions for OU1 and OU2 are protective of human health and the environment, since people are not exposed to residual Site contamination. Land use institutional controls have been enacted. The potential for ecological risk was evaluated, and EPA concluded that no Site contamination had been identified in the Lackawanna River or floodplain that would likely present an ecological risk. In order for the remedy to remain protective in the long-term, the following actions need to be taken: 1) Negotiate a new agreement with PADEP or future property owners for maintenance activities at the Site; and 2) Repair the Site fence, where necessary.	
B. Adequacy of O&M	
PADEP has maintained the Site cap and access. An O&M plan has been written but never implemented. The Site fence needs repair.	
C. Early Indicators of Potential Remedy Problems	
Aroclor-1260 continues to be found in the Site's groundwater at concentrations above EPA's MCL for PCBs in drinking water. However, the HSCA 512 Order prohibits using the Site's groundwater for drinking water.	
D. Opportunities for Optimization	
None.	

APPENDIX I – SITE INSPECTION PHOTOS
November 25, 2019



Monitoring Wells 1S and 1D



Monitoring Wells 2S and 2D



Top of Northwest Conveyance Drainage



Northern Drainage Ditch



Fence Breach Southeast Corner of Site



Fence Breach Northern Site Fence



Site Cap Looking Southeast



Site Cap Looking Northeast



Site Entrance Gate