SIXTH FIVE-YEAR REVIEW REPORT FOR TAYLOR BOROUGH DUMP SUPERFUND SITE LACKAWANNA COUNTY, PENNSYLVANIA

JUNE 2018

Prepared by

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

Karen Melvin

Karen Melvin, Director
Hazardous Site Cleanup Division
U.S. EPA, Region III

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Date

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LIST OF ABBREVIATIONS & ACRONYMS

ATSDR	Agency for Toxic Substances and Disease Registry
ATV	All-terrain Vehicle
BTAG	Biological Technical Assistance Group
CD	Consent Decree
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CIC	Community Involvement Coordinator
COC	Contaminant of Concern
EPA	United States Environmental Protection Agency
ESD	Explanation of Significant Differences
FCOR	Final Close-out Report
FYR	Five-Year Review
GPRA	Government Performance and Results Act
HRS	Hazard Ranking System
IC	Institutional Control
MCL	Maximum Contaminant Level
µg/L	Micrograms per Liter
mg/kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
NCP	National 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
PAH	Polycyclic Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
PRP	Potentially Responsible Party
RAO	Remedial Action Objective
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RPM	Remedial Project Manager
SWRAU	Sitewide Ready for Anticipated Use
TCE	Trichloroethene
USGS	United States Geological Survey
UU/UE	Unlimited Use and Unrestricted Exposure
VOC	Volatile Organic Compound

I. INTRODUCTION

The purpose of a Five-Year Review (FYR) is to evaluate the implementation and performance of the remedy at a Superfund Site in order to determine if that 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), Region 3, prepared 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 considered relevant EPA policy.

This is the sixth FYR for the Taylor Borough Dump 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), both of which are evaluated in this FYR. OU1 addressed surface water, soil and sediment. OU2 addressed groundwater.

The Taylor Borough Dump Superfund Site Five-Year Review was led by the EPA remedial project manager (RPM). Additional participants included other members of the EPA as the lead agency and the Pennsylvania Department of Environmental Protection (PADEP) as the support agency (Table 1). The City of Scranton, the potentially responsible party (PRP), was notified of the initiation of the FYR, which began on July 11, 2017. Skeo Solutions, Inc. (Skeo) provided contractor support for this FYR.

Table 1: Five-Year Review Team Participants

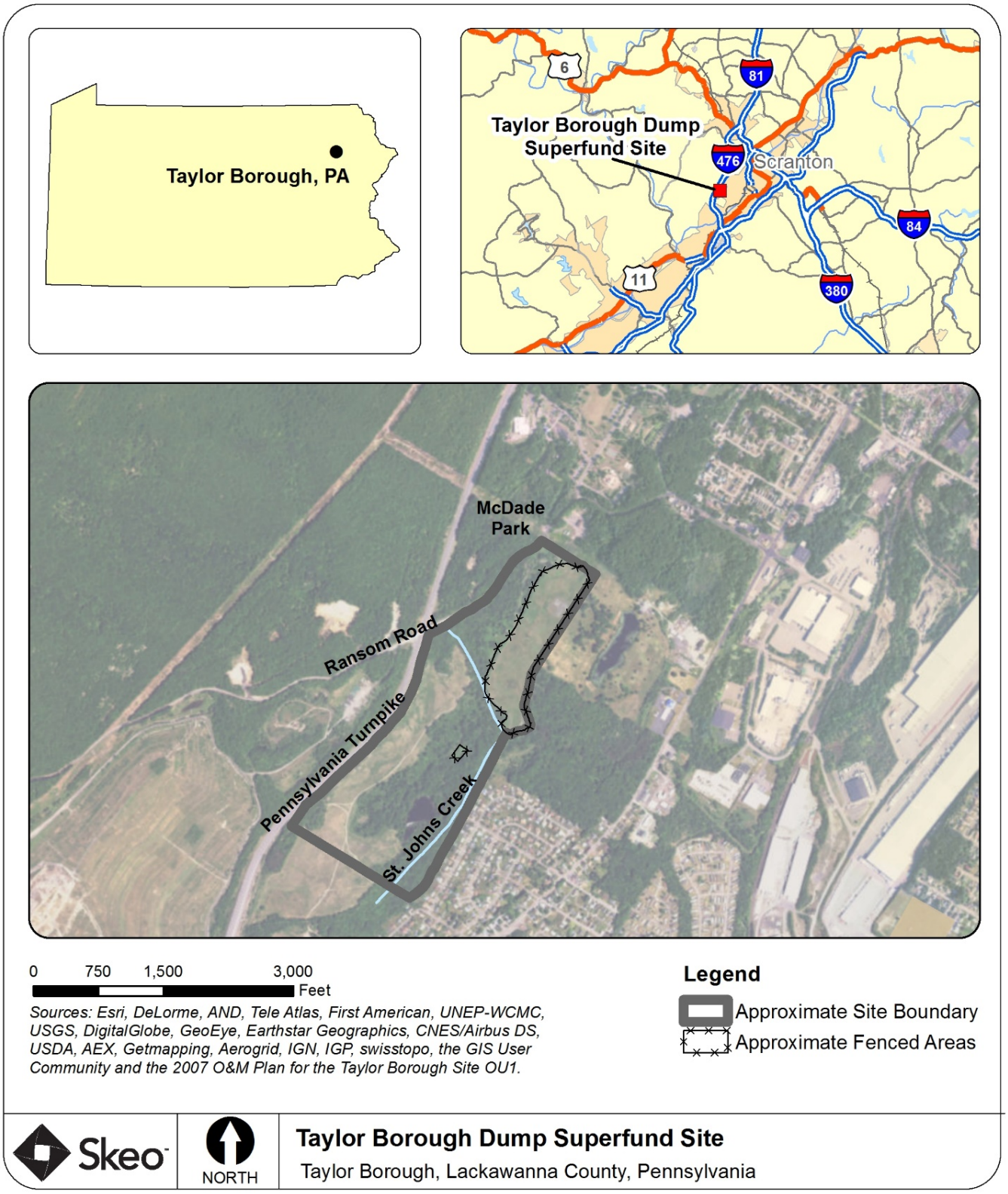
Name	Position	Agency
Rombel Arquines	Remedial Project Manager	EPA
Ryan Bower	Hydrogeologist	EPA
Dawn Ioven	Toxicologist	EPA
Alexander Mandell	Community Involvement Coordinator (CIC)	EPA
Katie Matta	Biological Technical Assistance Group (BTAG)	EPA
Jonathan Ulanoski	Project Officer	PADEP

Site Background

The Site is located in Taylor Borough, Lackawanna County, Pennsylvania, about three miles south of the City of Scranton. The Site encompasses approximately 125 acres, including two fenced remediation areas covering 18 acres and 2 acres respectively (Figure 1). The rest of the Site is forested except for 30 acres in the northwest part of the Site which was cleared and regraded by PADEP as part of an unrelated mine reclamation project. A county recreational area and maintenance property border the Site to the northeast and the Pennsylvania turnpike borders the Site to the northwest. A residential development and an inactive municipal landfill border the Site to the southwest.

The Lackawanna Valley was historically extensively mined for anthracite coal. A series of underground mine voids underlie the Site. Following mining operations at the Site, the City of Scranton used the un-reclaimed strip mine pits as a municipal landfill from approximately 1967 through 1968. Due to the extensive strip and underground mining, the groundwater aquifers closest to the surface have significantly reduced quality and yield. Residences and businesses in the area obtain water from the municipal water supply, which relies on a surface water reservoir system located 4.5 miles from the Site.

Figure 1: Site Vicinity Map



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

There is no reported use of groundwater for drinking purposes within one mile of the Site. Surface water bodies within the Site boundary include an unnamed pond located outside of the chain-link fenced remediation areas in the southwestern part of the property and St. John's Creek, an intermittent stream that flows through the Site and eventually discharges to the Lackawanna River (Figure 2). A more detailed description of the site background and hydrogeology can be found in the 1985 Remedial Investigation (RI) report (Appendix A).

Five-Year Review Summary Form

The FYR Summary Form provides a quick reference to basic administrative information about this FYR.

SITE IDENTIFICATION		
Site Name: Taylor Borough Dump		
EPA ID: PAD980693907		
Region: 3	**State:** Pennsylvania	**City/County:** Taylor Borough/Lackawanna
SITE STATUS		
NPL Status: Deleted		
Multiple OUs? Yes (2)		**Has the site achieved construction completion?** Yes (December 31, 1988)
REVIEW STATUS		
Lead agency: EPA		
Author name: Rombel Arquines, with additional contract support provided by Skeo		
Author affiliation: EPA Region 3		
Review period: 7/11/2017 – 6/24/2018		
Date of site inspection(s): 8/10/2017, 1/10/2018		
Type of review: Policy		
Review number: 6		
Triggering action date: 6/24/2013		
Due date *(five years after triggering action date)*: 6/24/2018		

II. RESPONSE ACTION SUMMARY

Appendix B includes a summarized site chronology for quick reference to key site dates and events.

Basis for Taking Action

Records from the Pennsylvania Department of Environmental Resources (PADER), predecessor to PADEP, documented the disposal of industrial wastes at the Site during its two-year operation as a municipal landfill by the City of Scranton. In 1981, EPA and PADER identified drums on the surface of the Site. Most of the drums were open and many had spilled their contents onto the ground or been punctured by bullets. Sampling identified volatile organic compounds (VOCs) in ambient air. The drum and drum spill sampling analysis identified benzene, toluene, phthalate acid esters, polycyclic aromatic hydrocarbons (PAHs), trichloroethene (TCE),

chloroform and other organic chemicals. In 1983, a fire occurred on the surface of the Site, engulfing some of the drums. Mine spoil was pushed over the burning areas to extinguish the fire and partially buried some of the drums, prompting EPA to initiate an emergency removal action to remove the bulk of the remaining drums.

This information plus additional documentation by PADER of larger quantities of potentially hazardous substances led to a Hazard Ranking System (HRS) score high enough to qualify the Site for placement onto the National Priorities List (NPL) in September 1984. EPA conducted the RI for soil, surface water and sediment between March 1984 and May 1985. The RI report documented soil contamination in five of six surface drum disposal areas (Figure 2), surface water and sediment contamination in two small ponds (Figure C-1), and about 125 crushed or intact drums and remnants on the surface or partially buried.

EPA concluded that contaminated soil, surface water and sediment, and organic vapors could pose a public health and environmental concern if not addressed. Potential pathways of concern included direct contact, ingestion, and inhalation threats to trespassers. Additionally, soil contamination and intact and damaged drums in the drum disposal areas could also be contributing to contamination of the ponds.

Response Actions

1983 Removal Action

On September 11 through 13 1983, a fire occurred on the surface of the Site. Mine spoils were pushed over the burning areas to extinguish the flames and some drums were partially buried. The fire prompted EPA to conduct an emergency removal action. Between September and November 1983, EPA removed about 1,100 drums from the Site.

1985 ROD

EPA selected a remedy for OU1 surface media in the June 28, 1985 Record of Decision (ROD). The OU1 ROD did not identify specific remedial action objectives (RAOs). However, a primary objective of the remedial action was to mitigate or eliminate environmental contamination through inhalation of organic vapors and direct contact with or ingestion of contaminated soils, sediment and surface water. The OU1 selected remedy included the following major components:

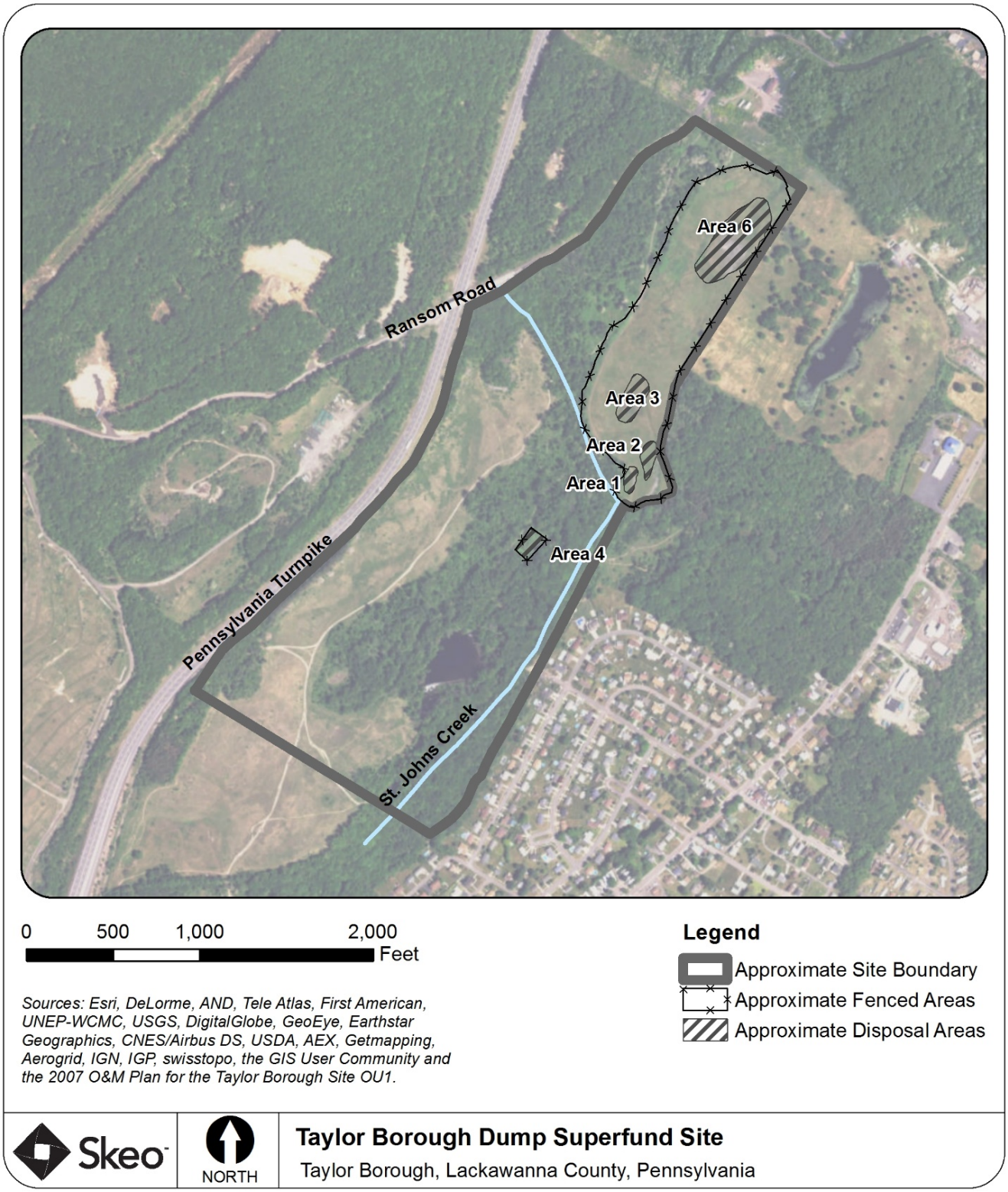
- Removal and off-site disposal of approximately 125 drums and drum remnants.
- Collection and treatment of contaminated water in Ponds 1 and 2.
- Excavation and off-site disposal of contaminated soils and waste from former Drum Storage Areas 1 and 2 and sediments in Ponds 1 and 2.
- Backfilling and placement of a 24-inch soil cover over and between former Drum Storage Areas 3 and 6, and a 24-inch soil cover over Drum Storage Area 4.
- Installation of a fence around both soil cover areas.
- Annual sampling of surface water and sediments in St. John’s Creek and Ponds 1 and 2 for at least five years.

The OU1 ROD deferred the selection of a groundwater remedy pending further investigation at the Site.

1986 ROD

EPA selected a groundwater monitoring remedy for OU2 in the ROD dated March 17, 1986. The OU2 ROD stated that based on groundwater sampling results, no release to groundwater had occurred at the Site. However, the OU2 ROD required semiannual monitoring of nine monitoring wells for VOCs and metals for a minimum of five years after completion of the surface remedial action. Sampling was to be conducted in early spring and late summer with results compared to background levels. Consistent with the NCP, the monitoring period could be extended if necessary to protect public health or the environment.

Figure 2: Detailed Site Map



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

1997 FYR Addendum

EPA issued a FYR Addendum in February of 1997 because the first FYR indicated that a suitable location where background groundwater data could be obtained was never identified. The FYR Addendum documented that post-remediation groundwater results were, therefore, compared to EPA primary drinking water maximum contaminant levels (MCLs) and PADEP drinking water human health standards, although groundwater was not used for drinking water. Vinyl chloride exceeded the MCL and PADEP drinking water human health standard in one well during one monitoring event. Metals exceeded MCLs and PADEP drinking water human health standards in multiple wells during multiple sampling events. However, the metals contamination is likely due to local mining operations and not attributable to the Site. Additionally, the aquifer underlying the Site is classified as a Class 3 aquifer and is therefore not considered a potential drinking water source. The 1997 FYR Addendum concluded that the remedial action at the Site was meeting the objectives of the OU1 and OU2 RODs.

2007 Explanation of Significant Differences (ESD)

EPA issued an ESD in 2007 that modified the OU1 and OU2 RODs by clearly defining the institutional controls (ICs) required at the Site and documenting EPA's decision that no further groundwater monitoring was necessary. The ICs were necessary to restrict future land use and maintain the integrity of the soil covers and are fully outlined in the Institutional Control section of this FYR. Following the ROD-specified five years of groundwater sampling, EPA determined that no further groundwater monitoring was necessary. The ESD cited a single on-site detection of low-level VOCs in ten rounds of sampling and concluded that there was no risk to residents from groundwater. The ESD also noted that the metals detected during the five years of sampling were those commonly associated with local mining operations, and not attributable to the Site.

Performance Standards

While decision documents did not identify specific numeric cleanup goals for contaminants of concern (COCs) in any media, COCs were identified in the 1985 RI. The OU1 ROD specified, however, that soils and waste from former Drum Storage Areas 1 and 2 and sediments from Pond 1 and 2 would be excavated to background levels. The OU2 ROD also indicated that groundwater sampling results would be compared to background levels to determine if a release had occurred. The COCs for the Site are presented in Table 2, below:

Table 2: Site COCs, by Media

Contaminants of Concern[a, b]	Media
Methylene chloride, toluene, carbon disulfide, bis(2-ethylhexyl) phthalate, inorganic lead	Surface water
Methylene chloride, toluene, 4,4'-dichlorodiphenyltrichloroethane (4,4'-DDT), polychlorinated biphenyl-1254 (PCB-1254), inorganic lead	Sediment
Methylene chloride, toluene, PCB-1254, inorganic lead	Test pit soil

Notes:

a) Source: Table 6-2 of the 1985 RI

b) Table 6-2 of the 1985 RI also included groundwater COCs (methylene chloride, 1,4-dichlorobenzene, 2,4-dinitrotoluene, bis(2-ethylhexyl)phthalate and n-nitrosodipropylamine). However, the March 1986 OU2 ROD determined that groundwater sampling results from the RI were of questionable accuracy. Two subsequent sampling events did not identify any contamination.

Status of Implementation

On May 29, 1987, a Consent Decree (CD) was signed between the EPA and five settling PRPs. In the agreement, the five PRPs agreed to implement or pay for the specific remedial actions called for in the 1985 and 1986 RODs. A sixth identified PRP, the City of Scranton, declined to settle or participate in the 1987 CD, but was later judged to be responsible for response costs in a November 1995 court ruling. In 2008, a CD was entered into between EPA and the City of Scranton to implement the remedial actions called for in the 1985 and 1986 RODs. In this CD, the PRP agreed to pay a portion of the past response costs and take over responsibility for any current and future operation and maintenance (O&M) at the Site.

Appendix C contains a map that depicts historic conditions, including previous land use and former pond locations. The following sections provide a summary of response actions completed at the Site:

OU1 Remedial Action

The primary OU1 remedial action at the Site was performed by the PRPs in accordance with the 1987 CD from July 1987 through May 1988. The OU1 remedial action consisted of the following components:

- Removed and disposed off-site 10 intact drums containing solvents from Drum Storage Areas 1 and 2 as well as crushed drums and scattered drum remnants.
- Collected and treated contaminated water from Ponds 1 and 2 at an off-site Resource Conservation and Recovery Act (RCRA)-approved facility.
- Excavated and disposed to an off-site RCRA-approved facility 5,000 cubic yards of contaminated soils and waste materials from former Drum Storage Areas 1 and 2.
- Off-site disposal of sediment from Ponds 1 and 2 was unnecessary because pre-construction sampling indicated the sediments were not contaminated. Instead, the sediments were mixed with kiln dust for solidification, compacted in place, and the solidified material was covered with clean fill, which resulted in elimination of the ponds.
- Backfilled the excavated areas, installed a 2-foot soil cover over and between former Drum Storage Areas 3 and 6, installed a 2-foot soil cover over former Drum Storage Area 4, and seeded both soil covers.
- Installed 6-foot-high chain-link fences with locking gates around the two respective remediated areas.
- Graded and installed swales and a gravel-covered infiltration basin to control surface water runoff.
- The OU1 Remedial Action Report was completed in May 1988 and EPA issued the Final Close-out Report (FCOR) in December 1988.

Agency for Toxic Substances and Disease Registry (ATSDR) Health Assessment

EPA performed additional post-remedial action activities at the Site in response to concerns from ATSDR. In a 1989 health assessment for the Site, ATSDR recommended further investigation of two off-site ponds (Ponds 7 and 8), evaluation of any exposure to contaminants via inhalation of ambient air on site and off site at nearby residences, lateral migration of methane gas to nearby residences, and off-site migration of contaminants via stormwater runoff. Between 1992 and 1993, EPA conducted surface water, sediment and biota sampling in Ponds 7 and 8, installed 10 landfill gas monitoring wells, conducted ambient air monitoring on site and in adjacent residences, and conducted stormwater and sediment sampling. Surface water and biota sampling results in Pond 8 showed no organic or inorganic compounds exceeding federal or state criteria. Air monitoring results indicated no migration of methane into the residences sampled. Due to lack of stormwater, EPA was not able to sample stormwater; however, sediment sampling at the stormwater culvert yielded concentrations similar to the ponds and St. John's Creek.

OU1 & OU2 Monitoring

The OU1 and OU2 RODs collectively required annual sampling of surface water and sediments from St. John's Creek and Ponds 1 and 2 for at least five years and semiannual groundwater sampling for at least five years. Ponds 1 and 2 were eliminated during the OU1 remedial action and were therefore never sampled. Sampling of St. John's Creek and the groundwater ended in 1996 after the completion of five years of monitoring required by the RODs. A 1997 FYR Addendum to the 1993 FYR summarized the monitoring activities and concluded that, based upon the results from the five years of O&M post-remediation groundwater, surface water and sediment monitoring, the remedial action at the Site appeared to be meeting the objectives of the OU1 and OU2 RODs. EPA deleted the Site from the NPL in September 1999 and in 2007, EPA issued an ESD determining that no further groundwater monitoring was necessary at the Site.

Borehole Closure

Prior to transitioning the Site's O&M responsibilities to the City of Scranton, per a 2008 CD, PADEP voiced concerns regarding an open borehole previously used to assist surface water drainage at the Site. In January 2011, EPA properly abandoned the borehole and replaced it with a graveled surface water infiltration area. EPA also

replaced faded signage, removed woody scrub from the soil cover and fence line, and made minor repairs to one of the soil covers, a drainage trench, the access road and the fence.

United States Geological Survey (USGS) Remote Sensing Project

As an independent research project targeting eleven deleted Superfund sites in Pennsylvania, the United States Geological Survey (USGS), conducted soil screening at the Site (outside of the remediation areas) in May 2012 and the activities were described in the 2013 FYR (Appendix A). The research team compared the results with information previously collected via remote sensing equipment during a flyover by the United States Civil Air Patrol. No significant residual contamination was found at the deleted sites. The 2014 final report entitled "An Evaluation of Remote Sensing Technologies for the Detection of Fugitive Contamination at Selected Superfund Hazardous Waste Sites in Pennsylvania" presented the results of the USGS research effort (Appendix A).

Institutional Controls

ICs are in place for all parcels that make up the Site. The Site consists of one larger property (parcel 15501-020-001-01) and portions of three other properties (parcel 15501-020-004, parcel 15501-020-017 and parcel 15501-020-018) (Figure 3). Only 1.6 acres of parcel 15501-020-004, which falls within the fenced remediation area, is considered part of the Site. Parcel 15501-020-017 and parcel 15501-020-018 constitute an abandoned railroad right-of-way that dated back to the original mining activities, portions of which fall within the boundary of the larger Site property (parcel 15501-020-001-01).

The 2007 ESD clearly defined the required ICs for the Site to restrict future land use and maintain the integrity of the soil covers (Table 3). The 512 Orders that PADEP issued to document the ICs for parcel 15501-020-001-01 and parcel 15501-020-004 can be found attached to the respective property titles recorded with the Lackawanna County Recorder of Deeds (Appendix A).

EPA determined that an informational IC for the abandoned railway right-of-way would fulfill the statutory requirements of Section 121 of CERCLA, as amended, 42 U.S.C. § 9621. The owners of parcels 15501-020-017 and 15501-020-018 were sent an informational IC letter (Appendix A) on March 19, 2018, informing the owners of the history of the contamination at the Site and describing the use restrictions that were defined in the 2007 ESD. In the informational IC letter, EPA also reminded the owners that they were non-settling defendants/owners identified in the 1987 CD for the Site, which stipulated that owners cannot interfere with or disturb the work or O&M activities at the Site nor convey any titles, easements or other interests in the Site unless such conveyance includes a covenant as described in the 1987 CD. Finally, although the Informational IC letter fulfilled the IC requirements for the parcels, EPA requested that the owners consider implementing additional IC vehicles, such as an environmental covenant, to more permanently address the potential short and long-term use of the properties.

To evaluate the effectiveness of the ICs placed on all the parcels, EPA and PADEP perform regular inspections of the Site, including routine inspections following any O&M activities performed by the PRP. The O&M Plan requires the PRP to report on any non-compliance of institutional or engineering controls.

Figure 3: Institutional Control Map

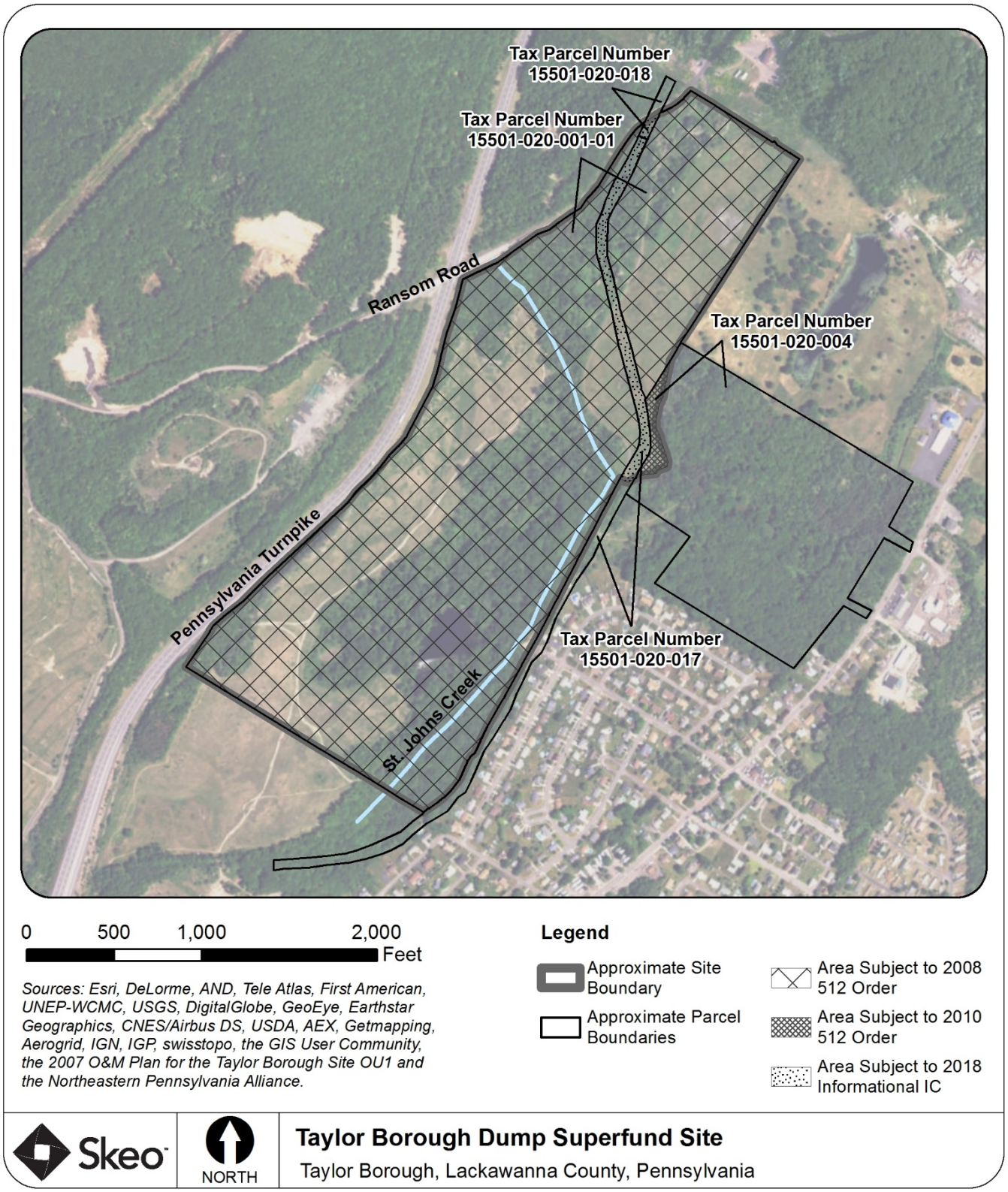


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Table 3: Summary of Institutional Controls (ICs)

Media, Engineered Controls, and Areas that Do Not Support UU/UE Based on Current Conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objectives	Title of IC Instrument Implemented and Date
Soil: 18-acre fenced and capped area; 2-acre fenced and capped area; remaining 125-acre area outside of the remediation (fenced) areas	Yes	Yes	Parcel 15501-020-001-01 1.6 acres of Parcel 15501-020-004 Portion of Parcel 15501-020-017 Portion of Parcel 15501-020-018	1) Restricts use of the Site that would interfere with or adversely affect the implementation, integrity or protectiveness of the remedy. 2) Prohibits structures, subsurface utilities and storage tanks on and beneath the capped areas. 3) Prohibits disturbance of the land by filling, drilling, excavation, removal of rock or minerals or otherwise changing the topography of the land within the capped areas. 4) Restricts driving or parking vehicles on the capped areas. 5) Prohibits disposal or storage of hazardous substances or waste materials at the Site. 6) Prohibits activities that obstruct or damage the site's drainage structures. 7) Prohibits any new development that EPA determines may affect the integrity of the caps.	Parcel 15501-020-001-01: Section 512 Order filed March 19, 2008 1.6 acres of Parcel 15501-020-004: Section 512 Order filed October 12, 2010 Portion of Parcel 15501-020-017: Informational IC letter sent March 19, 2018 Portion of Parcel 15501-020-018: Informational IC letter sent March 19, 2018

Operation & Maintenance

The 2008 CD requires the PRP, the City of Scranton, to conduct O&M activities at the Site in accordance with the 2012 O&M Work Plan (O&M Plan) (Appendix A).

O&M activities include:

- Soil and Vegetative Cover Inspection and Maintenance
  - Documenting activities and issues on a bi-monthly basis from April to October each year.
  - Backfilling low areas with soil loam, seeding and mulching (as required).
  - Mowing (once in spring and once in fall).
  - Seeding and fertilizing.
  - Removing excess vegetation.
  - Abatement of vectors/rodents.
- Stormwater Management Structures Inspection and Maintenance
  - Documenting activities and issues on a bi-monthly basis from April to October each year.
  - Clearing debris and sediment from surface water control structures.
- Security Systems Inspection and Maintenance
  - Documenting activities and issues on a bi-monthly basis from April to October each year.
  - Repairing damaged sections of the fencing or portions impacted by vegetation or vandalism.
  - Replacing damaged, broken or missing locks (filing police complaint if appropriate).

As described in detail in Section IV of this FYR, the PRP has performed routine O&M activities, such as mowing, removing excess vegetation, and seeding and fertilization, on a regular basis. Mowing of vegetation within the main fenced area occurs at least monthly between April and October by a PRP contractor. However, damage to fencing observed during the first site inspection had not been repaired at the time of this FYR, approximately ten months after the damage was identified. The PRP must perform all O&M activities required by the 2008 CD and 2012 O&M Plan in a timely manner to ensure that the selected remedy is protective of human health and the environment.

Additionally, Section IX of the 2008 CD requires the PRP to submit quarterly progress reports to document actions taken toward achieving compliance with the CD, including O&M activities outlined in the 2012 O&M Plan. During this FYR period, the PRP has not consistently submitted the required quarterly progress reports, although they have been informed of the requirement by the EPA RPM. Regular inspections are performed by EPA and PADEP to confirm that O&M activities are being performed as stated.

The 1985 FS estimated the annual O&M costs for the selected remedy at $162,000, which included costs for sampling and analysis of groundwater, surface water and sediment. Groundwater, surface water and sediment sampling are no longer required per the 2007 ESD. Annual costs for the O&M of the soil cover alone were estimated at $15,000 in the 1985 FS. The PRP representative indicated that the city currently budgets $16,000 a year for O&M of the Site.

III. PROGRESS SINCE THE PREVIOUS REVIEW

Table 4 includes the protectiveness determination and statement from the 2013 FYR. There were no issues, recommendations or follow-up actions identified during the 2013 FYR:

Table 4: Protectiveness Determinations/Statements from the 2013 FYR

OU #	Protectiveness Determination	Protectiveness Statement
Sitewide	Protective	The assessment of this FYR Report for the Taylor Borough Dump Superfund Site found that the remedy was constructed in accordance with the requirements of its two Records of Decision, dated June 28, 1985 and March 17, 1986, and is functioning as designed. Contaminated soil, surface water, drums and drum shards were removed off site. Sediment was solidified on site and soil covers were placed over the remediated areas. All groundwater, surface water and sediment monitoring required by the RODs has been completed. Groundwater in the area is not potable because mining operations affected the aquifer's yield and quality. Use restrictions are in place, the remediated areas are fenced to protect the soil cover, and signs are posted to prevent trespass. Therefore, the remedy is protective of human health and the environment because there is no evidence of current unacceptable exposure to site contaminants and institutional controls are in place to prevent potential future exposure. Ongoing monitoring of site conditions and maintenance activities should continue to be performed to ensure the remedy remains protective.

IV. FIVE-YEAR REVIEW PROCESS

Community Notification, Involvement & Site Interviews

EPA published a public notice in *The Times Tribune* newspaper on February 16, 2018. The notice stated that the FYR was underway and invited the public to submit any comments to EPA. The results of the review and the report will be available online and at the Site's information repository, located at the Taylor Borough Building, located at 122 Union Street, Taylor, Pennsylvania 18517. Appendix D includes a copy of the public notice.

During the FYR process, EPA conducted interviews to document any perceived problems or successes with the remedy that has been implemented to date. The results of these interviews are summarized below. Appendix E includes the completed interview forms.

EPA conducted an in-person interview with the PADEP project officer during the FYR site inspection on August 10, 2017. The PADEP project officer indicated that the remedy is currently performing as designed. He stated that the Site had been cleaned up, is being maintained, and that the PRP is mowing the Site more often than required. The project officer noted that trespassing had been an issue in the past, but it is occurring less frequently than in past years. The project officer's primary concern was to keep trespassers off the soil cover areas. He confirmed that ICs in the form of Section 512 Orders are in place. PADEP was unaware of any changes in projected land use or changes to state laws that might affect the protectiveness of the remedy.

EPA conducted an in-person interview with a representative of the PRP, the City of Scranton, on August 10, 2017. He stated that grassed areas within the larger fenced area are mowed regularly by a contractor between May and October. The representative noted that trespassing was an ongoing issue at the Site and that all-terrain vehicle (ATV) users were trespassing on the Site, but most often outside of the fenced areas. He also mentioned that, in the past, trespassers have damaged the gates to gain access to areas within the fence. The PRP planned to remove any downed trees and repair damaged fencing that was observed during the FYR site inspection. The

representative stated that he felt well-informed about the Site's activities and remedial progress and was unaware of any complaints or inquiries from nearby residents.

EPA conducted a phone interview with the Borough Manager of Taylor Borough on December 14, 2017. The Borough Manager indicated that his impression of the Site was that it was quiet and that the remedy was performing well. He recalled one instance when damage to the fence was repaired. He stated that EPA kept him well informed regarding current activities at the Site and was satisfied with the ability to access Site information online. The Borough Manager was unaware of any complaints or inquiries from any residents but did mention that the large unused portion of the Site outside of the fence could be used to the community's benefit as long as it does not impact the remedy.

Data Review

EPA discontinued the monitoring program for groundwater, surface water and sediment in 1996 after completing five years of monitoring, as required by decision documents. Following the analysis of that data, EPA concluded that no further groundwater monitoring was necessary at the Site. No new long-term monitoring data were collected or required since the previous FYR.

Site Inspections

Appendix F includes the Site Inspection Checklist (Table F-1), which provides a detailed account of the observed site conditions during the two FYR site inspections. Appendix F also contains the comprehensive site participant list for each site inspection (Tables F-2 and F-3). Appendix G includes photographs taken at both site inspections.

August 2017 Site Inspection

A site inspection was conducted on August 10, 2017. The purpose of the site inspection was to assess the protectiveness of the remedy. RPM Rombel Arquines represented the EPA as the lead agency, Project Officer Jonathan Ulanoski represented PADEP as the support agency, and Scranton Department of Public Works Director Dennis Gallagher represented the City of Scranton as the PRP for the Site. Other attendees included the EPA hydrogeologist, EPA CIC and two Skeo contract support members (Table F-2).

Site inspection participants walked the inside perimeter of the main 18-acre fenced area. The mile-long 6-foot-high chain link fence, the two locked access gates (Photo G-1; Photo G-2), and the "No Trespassing/Superfund Site" signs (Photo G-3) all appeared to be in good condition. The grass within the capped 18-acre fenced area was well-established and appeared to have been recently mowed (Photo G-4). Minor damage to the fence was observed at three locations because of fallen or leaning trees (Photo G-5) and participants also observed one fence line breach along the eastern perimeter, where the chain-link had been rolled back by trespassers (Photo G-7). The PRP representative noted that although some trespasser damage to the rear gate was recently repaired, overall, the frequency of issues related to trespassing had gone down significantly in recent years. The EPA RPM informed the PRP representative that prompt removal of fallen trees and repairs to the fence were required by the 2008 CD 2012 O&M Plan.

Site inspection participants observed that the drainage trench in the southern portion of the main fenced area (Photo G-9) contained woody vegetation but that it did not appear to affect drainage and appeared to be functioning as designed. Likewise, the graveled infiltration basin at the northern area (Photo G-10) seemed to be providing adequate infiltration to prevent surface water runoff from leaving the Site, with no evidence of ponding. The drainage pipe outlet extending to the north appeared unobstructed and the headwall was in good condition (Photo G-11). The drainage borehole that was decommissioned prior to the last FYR was undisturbed. Animal burrows were observed at three locations in the northern portion of the Site, two of which were identified with wooden stakes (Photo G-12). The EPA RPM informed the PRP representative that prompt identification and backfilling of animal burrows to maintain the integrity of the soil cap is required by the 2008 CD and 2012 O&M Plan.

The smaller 2-acre fenced area to the southwest of the main remediated area was inaccessible due to a heavy rain event that overflowed St. John's Creek (Photo G-13), creating large areas of pooled water and muddy conditions. It was agreed that a follow-up inspection of the area would be performed by EPA and PADEP with the EPA BTAG biologist, who was unable to attend the first inspection.

January 2018 Site Inspection

A second site inspection was performed on January 10, 2018. The purpose of the site inspection was to confirm whether the O&M repairs identified in the first inspection were completed by the PRP and to inspect the second capped and fenced area that was inaccessible during the first inspection. It also allowed the EPA BTAG biologist the opportunity to comment on the cap and trench vegetation, and any other ecological issues. In addition to the EPA BTAG biologist, the site inspection participants included the EPA RPM and PADEP Project Officer (Table F-3).

None of the O&M repairs identified in the first inspection were completed by the time of the second inspection. This included the breaches to the fences due to fallen trees (Photo G-5) and trespassers (Photo G-7), as well as the identified animal burrows (Photo G-12). Inspection participants noted, however, that significant snowfall covered all areas of the 18-acre fenced area and that there was no evidence of recent trespass at any of the minor fence breaches nor animal activity at the identified burrows. The EPA RPM again informed the PRP representative that prompt performance of O&M activities is required by the 2008 CD and 2012 O&M Plan.

June 2018 Site Inspection

On June 8, 2018, PADEP performed a follow-up inspection to determine if the O&M issues identified in the August 2017 and January 2018 Site Inspections had been addressed. The inspection indicated that one portion of damaged fencing had been repaired (Photo G-6) and no animal burrows were noted. However, multiple portions of damaged fencing had not been addressed (Photo G-8 and Photo G-16) and large ruts were noted on the cap, likely from mowing operations (Photo G-15). The remaining fencing repairs must be completed and the ruts on the cap must be repaired by the PRP as required by the 2008 CD and 2012 O&M Plan.

Information Repository

Skeo staff visited the designated site repository, the Taylor Borough Building, located at 122 Union Street, Taylor, Pennsylvania 18517. Files for the Site were not available for review at that time. Taylor Borough staff indicated the files were in long-term storage but could be available for viewing within five days of a request. Taylor Borough staff also requested that any new documents be sent on a compact disc. On December 15, 2017, EPA sent the information repository an updated information packet and directions for online access to the Administrative Record and other documents.

V. TECHNICAL ASSESSMENT

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

Yes. The remedy is functioning as intended by the decision documents. The objectives of the remedial actions required by the OU1 and OU2 RODs have been achieved.

Remedial Action Performance

EPA removed drums, excavated contaminated soil and waste materials, and properly disposed of them off site. The PRPs collected and treated contaminated pond water and stabilized the sediment in the ponds, which resulted in the elimination of the ponds. The PRPs installed soil covers, which effectively eliminate the risk of direct exposure to remaining contaminated soil. Per the OU1 and OU2 RODs, groundwater, surface water and sediment were sampled for five years and EPA determined that further sampling at the Site was not needed. Groundwater

near the Site is considered an unpotable Class 3 aquifer due to contamination from mine drainage, and is not a potential source of drinking water. There is no current exposure to groundwater at the Site.

Operation and Maintenance

O&M issues identified during the August 10, 2017 FYR site inspection and January 10, 2018 and June 8, 2018 follow-up inspections were not addressed at the time of this FYR and the PRP has not been submitting regular progress reports to EPA. The PRP must address all O&M issues in a timely manner and submit the required regular progress reports to EPA as required by the 2008 CD and 2012 O&M Plan. The soil cover areas are vegetated and well-maintained, and drainage features are functioning as designed. Damaged fencing around the larger capped area must be promptly repaired to deter access to the capped area. Woody vegetation in the southern drainage trench does not appear to affect drainage, but should be removed to ensure the integrity of the soil cap in surrounding areas is not compromised. Holes created by burrowing animals must be backfilled and excess vegetation along the fence and access road into the Site should be removed (Appendix A).

Institutional Controls

ICs are in place for all parcels that make up the Site in the form of either Section 512 Orders attached to the property deeds or an Informational IC letter sent to the property owner (Table 3). Site inspection participants did not observe damage to the caps. Fencing around the remediation areas limits access to the soil covers and signs deter trespassing. Occasional trespassing is still occurring at the Site, but the frequency of trespassing appears to have decreased in the past five years. If the frequency of trespass increases, potential solutions may include informational campaigns, less frequent mowing, reducing the fenced area or physical deterrents like boulders.

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?

Yes. The exposure assumptions, cleanup levels and RAOs used at the time of remedy selection are still valid. Changes to toxicity data and risk assessment methods have occurred since selection of the remedy but they do not affect the protectiveness of the remedy. Decision documents did not select specific numeric cleanup levels for site COCs. However, contaminated soil, sediment and surface water were either removed from the Site or covered with a cap. Groundwater monitoring was performed for a period of five years in accordance with the OU1 and OU2 RODs. The 1997 FYR Addendum concluded that groundwater was not a concern at the Site and groundwater monitoring has been discontinued in accordance with the 2007 ESD. No changes to groundwater cleanup goals that would impact the protectiveness of the remedy have occurred. There are no complete exposure pathways for contaminated soil, sediment, surface water and groundwater.

Exposure assumptions used at the time of remedy selection have not changed substantially since EPA issued the RODs. However, the potential for vapor intrusion to indoor air was not evaluated in the 1985 risk assessments. The only site-related VOC detected was vinyl chloride at an estimated concentration of 5 µg/L during the April 1993 sampling. Vinyl chloride was not detected during any subsequent sampling events; therefore, the potential for vapor intrusion is not an issue of concern at the Site. Additionally, there are no buildings on site. There are no anticipated changes to site use in the future.

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

No. 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 Five-Year Review:
OU1, OU2

Issues and Recommendations Identified in the FYR:				
OU(s): OU1	**Issue Category:** Operations and Maintenance			
	Issue: The PRP has not consistently performed O&M activities at the Site to address breaches of the fencing and minor damage to the capped areas.			
	Recommendation: The PRP must consistently perform O&M activities as required by the 2008 CD and 2012 O&M Plan in a timely manner.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party**	**Milestone Date**
No	Yes	PRP	EPA	9/30/2018

Other Findings
The following are recommendations that were identified during the FYR but do not affect current and/or future protectiveness:

- The PRP does not consistently submit required reporting on O&M performance. The PRP should consistently report on O&M activities as required by the 2008 CD and 2012 O&M Plan.

- Due to the decrease in trespass occurrences, no additional trespass deterrents beyond the current engineering controls are necessary at this time. If the frequency of trespass at the Site increases, potential solutions to decrease future occurrences of trespass should be considered.

VII. GOVERNMENT PERFORMANCE AND RESULTS ACT MEASURES

As part of this FYR, the Government Performance and Results Act (GPRA) Measures have also been reviewed. The GPRA Measures and their status are provided as follows:

Environmental Indicators
Human Health: Human Exposure Under Control
Groundwater Migration: Groundwater Migration Under Control

Sitewide Ready for Anticipated Use (SWRAU)
The Site achieved SWRAU status on December 20, 2011.

VIII. PROTECTIVENESS STATEMENTS

OU1 Protectiveness Statement	
Operable Unit: OU1	*Protectiveness Determination:* Short-Term Protective
Protectiveness Statement: The remedy at OU1 is protective of human health and the environment in the short-term because there are no complete exposure pathways between contamination and human or ecological receptors. The remedial action removed contaminated soil, surface water and waste off site and covered remaining contamination with soil covers. The remediation areas are fenced to protect the soil covers, institutional controls are in place for all parcels comprising the Site. For the OU1 remedy to be protective of human health in the long-term, the PRP must perform all O&M activities and repairs in a timely manner as required the 2008 CD and 2012 O&M Plan.	

OU2 Protectiveness Statement	
Operable Unit: OU2	*Protectiveness Determination:* Protective
Protectiveness Statement: The remedy at OU2 is protective of human health and the environment because the five years of required groundwater monitoring did not identify a site-related release to groundwater. EPA has determined that no additional monitoring at the Site is necessary. The aquifer at the Site is a Class 3 aquifer due to mining-related impacts; therefore, groundwater is not a source of drinking water at or near the Site.	

Sitewide Protectiveness Statement
Protectiveness Determination: Short-Term Protective
Protectiveness Statement: The remedial action at the Site is protective of human health and the environment in the short-term. For the OU1 remedy to be protective of human health in the long-term, the PRP must perform all O&M activities and repairs in a timely manner as required the 2008 Consent Decree (CD) and 2012 O&M Plan.

IX. NEXT REVIEW

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

APPENDIX A – REFERENCE LIST

Addendum to the 5-Year Review Report for the Taylor Borough Site, Taylor Borough, Lackawanna County, Pennsylvania. EPA Region 3. February 1997.

An Evaluation of Remote Sensing Technologies for the Detection of Fugitive Contamination at Selected Superfund Hazardous Waste Sites in Pennsylvania. E. Terrence Slonecker and Gary B. Fisher, USGS. Open-File Report 2014–1081. 2014. https://pubs.usgs.gov/of/2014/1081/pdf/ofr2014-1081.pdf.

Close-out Report, Taylor Borough Site, Lackawanna County, PA. EPA Region 3. December 1988.

Consent Decree, United States of America versus the City of Scranton. Civil Action No. CV-86-1591. March 5, 2008.

Explanation of Significant Differences for the Taylor Borough Dump Superfund Site, Taylor Borough, Lackawanna County, Pennsylvania. EPA Region 3. September 2007.

Fifth Five-Year Review Report for Taylor Borough Dump Superfund Site, Taylor Borough, Lackawanna County, PA. EPA Region 3. June 2013.

Fourth Five-Year Review Report for Taylor Borough Dump Superfund Site, Taylor, Lackawanna County, PA. EPA Region 3. September 2008.

Lackawanna County Assessor's Office. http://www.lackawannacounty.org/index.php/lackawanna-county-assessors-office, accessed October 20, 2017.

Post Closure Operation and Maintenance Work Plan for Taylor Borough Dump Superfund Site, CECO Associates, Inc. and Blazonsky Associates, Inc., May 2012 (revised June 2012).

Record of Decision, Remedial Alternative Selection, Taylor Borough Site, Lackawanna County, Pennsylvania. EPA Region 3. March 1986.

Remedial Investigation Report for Taylor Borough Dump Superfund Site, Taylor Borough, Lackawanna County, Pennsylvania. EPA Region 3. May 1985.

Superfund Record of Decision, Taylor Borough, PA. EPA Region 3. June 1985.

The 5-Year Review Report for the Taylor Borough Site, Taylor Borough, Lackawanna County, Pennsylvania. EPA Region 3. March 1993.

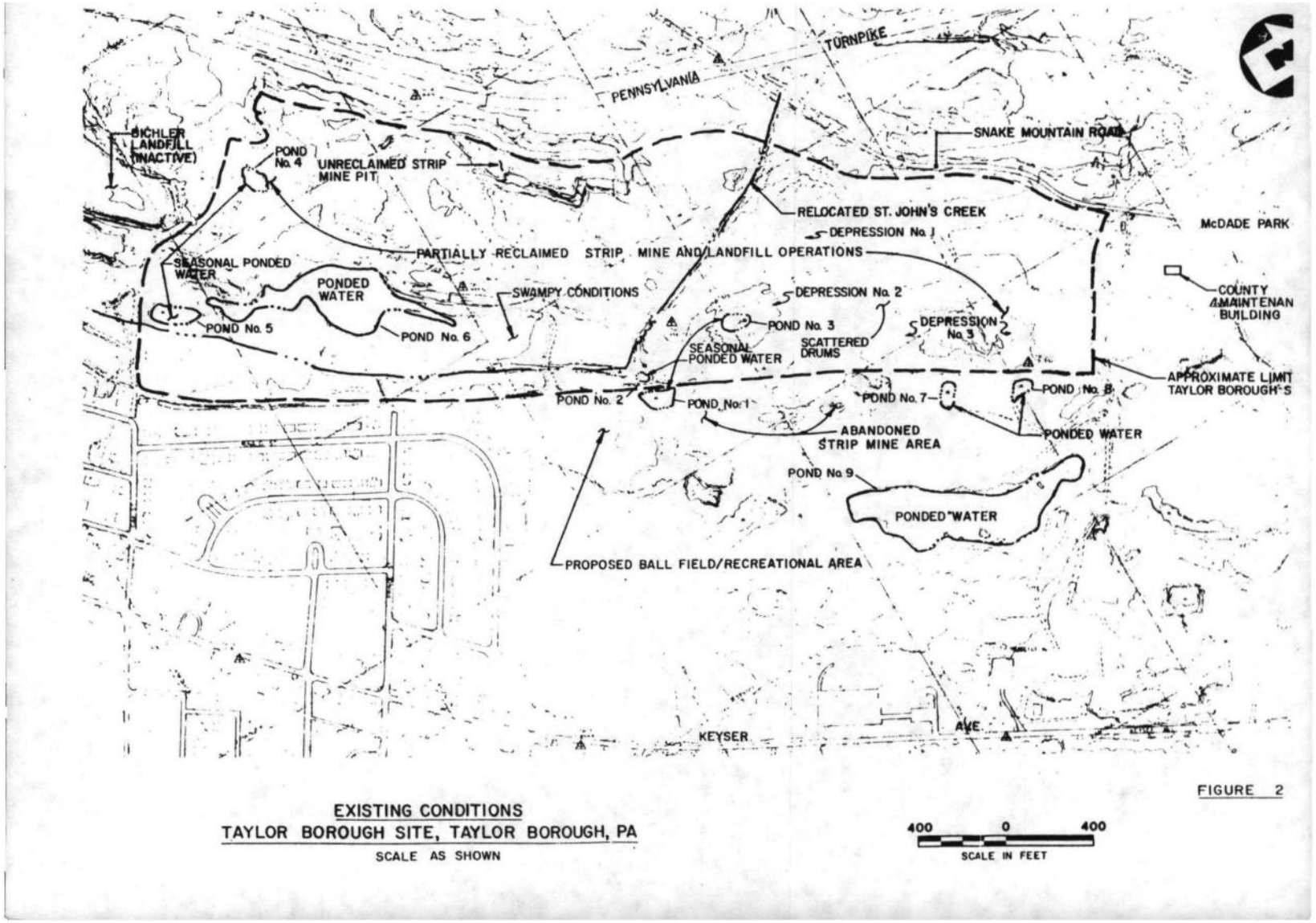
Third Five-Year Review Report for Taylor Borough Superfund Site, Taylor Borough, Lackawanna County, Pennsylvania. EPA Region 3. September 2003.

APPENDIX B – SITE CHRONOLOGY

Event	Date
EPA and PADEP inspected the Site	June 1981
EPA and PADEP sampled air, soil, sediment, surface water, groundwater and drummed waste; results identified organic and inorganic contamination	1981 to 1982
EPA proposed the Site for listing on the NPL; EPA began a removal action following a fire on the landfill surface	September 1983
EPA completed the removal action; EPA removed 1,141 drums and partially-buried drums from the Site	November 1983
EPA began the RI/FS	March 1984
EPA listed the Site on the NPL	September 1984
EPA completed the RI for surface water, sediment and soil	May 1985
EPA issued the OU1 ROD to address surface water, sediment and soil	June 1985
EPA finalized the RI/FS; EPA issued the OU2 ROD for groundwater	March 1986
EPA and five PRPs signed a Consent Decree for design and implementation of the remedial action; PRPs began the remedial action	July 1987
PRPs completed the remedial action; O&M period begins	May 1988
EPA issued the FCOR	December 1988
First O&M activities began	June 1991
EPA conducted additional sampling in response to ATSDR concerns	1992 to 1993
EPA issued the first FYR	March 1993
EPA issued an addendum to the first FYR	February 1997
EPA issued the second FYR	September 1998
EPA deleted the Site from the NPL	September 1999
EPA issued the third FYR	September 2003
EPA issued an ESD to suspend groundwater monitoring and to require institutional controls for the Site	September 2007
EPA and the City of Scranton signed a Consent Decree requiring the City of Scranton to conduct O&M at the Site	March 2008
PADEP implemented institutional controls for one of four site properties by recording a Section 512 Order with the Lackawanna County Recorder of Deeds	March 2008
EPA issued the fourth FYR	September 2008
PADEP filed a second Section 512 Order for the second of four site properties with the Lackawanna County Recorder of Deeds	October 2010
EPA closed an open borehole at the Site	January 2011
The City of Scranton formally took responsibility for site O&M	July 2011
EPA issued a Designation of Representative for the Purpose of Access to allow the City of Scranton to access the Site; USGS, in cooperation with the EPA Office of Inspector General, collected soil samples at the Site as part of a remote sensing research project	May 2012
EPA issued the fifth FYR	June 2013
EPA implemented ICs for two of four site properties in the form of an Informational IC letter sent to the owner of both properties	March 19, 2018

APPENDIX C – HISTORIC SITE CONDITIONS MAP

Figure C-1: Historic Site Conditions



Source: 1985 ROD

APPENDIX D – FIVE-YEAR REVIEW PUBLIC NOTICE

Figure D-1: Five-Year Review Public Notice in *The Times Tribune* Newspaper on January 16, 2018

A10 THE TIMES-TRIBUNE LOCAL FRIDAY, FEBRUARY 16, 2018

PRISON: 'We want to hear from you'

FROM PAGE A1

information to come forward now.

"We've heard from people in positions of power. We want to hear from others," Shapiro said. "And those that we want to hear from probably know that they have something to tell us, or something they need to get off their chest right about now."

No county officials attended Thursday's news conference. Andy Wallace, the county's chief of staff, said they had not been notified of a time and place.

The attorney general's statement came one day after teams of state police and state attorney general agents arrested more than a half dozen current and former guards.

They are former correctional officer John Shnipes Jr., 42, 115 Simpson St., Archbald, and current officers James J. Walsh, 51, 209 Mosswood Road, Roaring Brook Twp.; Mark Johnson, 53, 2213 Golden Ave., Scranton; George T. McHale, 50, 513 Florin St., Scranton; Jeffrey T. Staff, 42, 459 Wyoming Ave. Apt. 4, Wyoming; Paul J. Voglino, 45, 4 Rear Orchard St., Carbondale; and George R. Efthimiou, 50, 1121 Loomis Ave., Taylor.

"These correctional officers repeatedly used their positions of power to solicit sex and abuse female inmates," Shapiro said. "They had nowhere to go."

The Times-Tribune does not identify victims of sexual assault.

Allegations against the seven men were made by more than a dozen women whose incarcerations at the jail stretch over a span of about 10 years. Many of the allegations were corroborated by other witnesses, according to the grand jury's presentment.

Shapiro said his office believes there may be more victims and witnesses. He urged them to call 570-846-4074, a new hotline set up for them.

"You do not have to be afraid any more," the attorney general said. "We want to hear from you. ... You do not have to fear these men."

Shapiro declined to discuss potential charges his office could pursue against those who knew of sexual abuse at the jail and did nothing. The grand jury's presentment makes mention of a few instances where this seems to have happened.

On one occasion, a female correctional officer's report documenting an inmate complaint that she'd been assaulted by Shnipes went unheeded.

Additionally, guards in a control room would "click" the woman's cell door lock using a control panel to give Shnipes advance warning about someone approaching as he received oral sex from inmates.

Asked Thursday if those in the control room who warned Shnipes could face charges, Shapiro replied, "That's a good question."

Lackawanna County Commissioner Patrick O'Malley, chairman of the board of commissioners, did not return a phone message seeking comment. Neither did Commissioner Laureen Cummings.

Commissioner Jerry Notarianni said it "certainly appears" that a culture of abuse had taken root at the jail but noted that the allegations stem from years-old incidents and a series of recent reforms at the jail had done much to suppress that culture.

"I think it's in better shape (now) than it was then," Notarianni said.

However, the commissioner said it would not surprise him to hear of a few cases where jail officials had obstructed justice.

For the second day, the county released a terse statement on the still-unfolding scandal. This time, it addressed one question posed to the attorney general during the news conference, which he directed to county officials: Is the jail safe?

"The prison is safe," the statement read. "Many of the allegations have occurred many, many years ago. The Prison Board together with the Lackawanna County Commissioners have worked diligently over the years to insure (sic) the safety of the prisoners. That is our job, that is our responsibility and we take them both seriously."

Notarianni said the guards arrested will be on paid administrative leave until a due process hearing, which will likely happen early next week.

A message left for the jail's warden, Tim Betti, was not returned.

Walsh, Johnson and McHale were among nine guards who were placed on paid administrative leave once allegations of abuse were raised in a federal civil lawsuit filed by Scranton attorney Matt Comerford. McHale and Johnson were allowed to return to work in March.

Comerford said Thursday that he is pleased to see results from the attorney general's investigation.

"I can say at the heart of my civil case, I am most concerned with the culture of silence that allowed this to happen for decades," Comerford said. "The authority figures at that jail that said nothing bear much of the responsibility. As you can see, it's not as simple as one bad apple."

All seven defendants posted bail after Magisterial District Judge Paul J. Ware arraigned them Wednesday. Their preliminary hearings are scheduled for 11:15 a.m. Feb. 23.

TERRIE MORGAN-BESECKER, staff writer, contributed to this report.

Contact the writer: jkohut@timesshamrock.com; 570-348-9144; @jkohutTT on Twitter

JAKE DANNA STEVENS / STAFF PHOTOGRAPHER

State Attorney General Josh Shapiro speaks Thursday at Pennsylvania State Police headquarters in Dunmore.

Current/former guards charged

George R. Efthimiou: Institutional sexual assault (1 count)
Mark Johnson: Involuntary deviate sexual intercourse (2 counts), institutional sexual assault (2 counts), indecent assault (1 count), harassment (1 count)
George T. McHale: Institutional sexual assault (1 count), indecent assault (2 counts)
John Shnipes Jr.: Involuntary deviate sexual intercourse (8 counts), aggravated indecent assault (4 counts), institutional sexual assault (2 counts), harassment (2 counts)
Jeffrey T. Staff: Institutional sexual assault (1 count)
Paul J. Voglino: Involuntary deviate sexual intercourse (2 counts)
James J. Walsh: Involuntary deviate sexual intercourse (8 counts)

PLANT: In design, permit process

FROM PAGE A3

Citizens for Healthy Jessup, a group that formed in opposition to the natural gas-fired Lackawanna Energy Center power plant now under construction in Jessup — asked Holmes how he can be confident the gas produced by Meadowbrook will be used to fuel vehicles and not by power-generating facilities.

It's a net concept, Holmes said, meaning a customer in California can sign a contract with Meadowbrook to buy fuel for compressed natural gas vehicles, but the fuel they use won't necessarily be the same gas the company injects into the pipeline in Pennsylvania.

"If the good renewable (natural gas) fuel goes into the system and is used somewhere, that is thought to be a good thing," Holmes said. "You are of course correct that the actual molecule that we put in a pipeline doesn't have a little tag on it that says 'produced by Meadowbrook.'"

Others asked if Meadowbrook is banking on the landfill being approved for an expansion allowing it to operate for about 45 more years.

"No, we will build this project whether or not the landfill gets an expansion," Holmes said.

The facility is currently in the design and permitting process, but Meadowbrook expects construction to start in the third quarter of 2018 and last for 15 to 18 months.

Contact the writer: jhorvath@timesshamrock.com; 570-348-9141; @jhorvathTT on Twitter

VICTIM: Was popular

FROM PAGE A3

Gail Ercoli of Jessup knew Wasilchak for about 30 years. Wasilchak had a penchant for positivity and showered the people she met with kind words, Ercoli said.

"She could make your day," Ercoli said.

Besides Andy's, Wasilchak was a regular at other borough businesses, like Pop Pop's Minit Mart. She stopped by almost daily for a coffee, hot chocolate or newspaper, employee Darlene Hartwick said.

Wasilchak was a friendly customer and often talked of her family or time as a teacher, Hartwick said.

"It's sad," Hartwick said of her death.

Contact the writer: dsingleton@timesshamrock.com, 570-348-9132; cover@timesshamrock.com, 570-348-9011 x5363, @ClaytonOver on Twitter

EPA REVIEWS CLEANUP
TAYLOR BOROUGH DUMP

The U.S. Environmental Agency is reviewing the cleanup that was conducted at the Taylor Borough Dump Superfund Site located in Taylor Borough. EPA inspects sites regularly to ensure that cleanups conducted remain protective of public health and the environment. EPA's previous review of the site in 2013 determined that the remedy was working as designed and was protective. Findings from the current review that is being conducted will be available June 2018.

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

Contact:

Alex Mandell, *Community Involvement Coordinator*

Phone: 215-814-5517

Email: mandell.alexander@epa.gov

To access detailed site information including the Review Report once finalized:

https://www.epa.gov/superfund/taylorborough

Protecting human health and the environment

APPENDIX E – INTERVIEW FORMS

TAYLOR BOROUGH DUMP SUPERFUND SITE FIVE-YEAR REVIEW INTERVIEW FORM	
Site Name: Taylor Borough Dump	
EPA ID: PAD980693907	
Interviewer name: Rombel Arquines	**Interviewer affiliation/title:** EPA remedial project manager
Subject name: Jonathan Ulanoski	**Subject affiliation/title:** PADEP project officer
Subject contact information:	
Interview date: 08/10/2017	**Interview time:** 1:00 pm
Interview location: Taylor Borough Dump Superfund Site (conducted during the FYR site inspection)	
Interview format (circle one): (In Person) Phone Mail Email Other:	
Interview category: State Agency	

1. What is your overall impression of the project, including cleanup, maintenance and reuse activities?

   The Site has been cleaned up and is being maintained. The PRP is mowing more often than required.

2. What is your assessment of the current performance of the remedy in place at the Site?

   The current performance of the remedy is good. There have been slight trespassing issues, but recently trespassing has occurred only about twice a year, which is better than previous years.

3. Are you aware of any complaints or inquiries regarding site-related environmental issues or remedial activities from residents in the past five years?

   No.

4. Has your office conducted any site-related activities or communications in the past five years? If so, please describe the purpose and results of these activities.

   I stop at the Site every six weeks or so.

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

   No.

6. Are you comfortable with the status of the institutional controls at the Site?

   Yes. 512 Orders are in place.

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

   No.

8. Do you have any comments or recommendations regarding the management or operation of the remedy?

   The primary concern is to keep trespassers off the cap.

TAYLOR BOROUGH DUMP SUPERFUND SITE FIVE-YEAR REVIEW INTERVIEW FORM	
Site Name: Taylor Borough Dump	
EPA ID: PAD980693907	
Interviewer name: Rombel Arquines	**Interviewer affiliation:** EPA Region 3
Subject name: Dennis Gallagher	**Subject affiliation:** City of Scranton Department of Public Works (PRP representative)
Subject contact information: (570) 348-4180	
Interview date: 08/10/2017	**Interview time:** 12 pm
Interview location: Taylor Borough Dump Superfund Site (conducted during the FYR site inspection)	
Interview format (circle one): (In Person) Phone Mail Email Other:	
Interview category: Potentially Responsible Party (PRP)	

1. What is your overall impression of the remedial activities at the Site?

   My impression of the Site is good. Mowing is done regularly now from May through October with cuts usually about once per month. The contractor avoids cutting the wet marshy areas.

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

   There are still issues with ATV users trespassing at the Site, but most often outside of the fenced area. In the past, the gates have been ripped off, which required repairs. There are no issues with dumping.

3. What is your assessment of the current performance of the remedy in place at the Site?

   There have been breaches at the gates from trespassers, which required repairs, but otherwise things are good. The City of Scranton will deal with the downed trees and get the fence repaired.

4. Are you aware of any complaints or inquiries regarding environmental issues or the remedial action from residents since implementation of the cleanup?

   No.

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

   Yes. The inspections help.

6. Do you have any comments, suggestions or recommendations regarding the management or operation of the Site's remedy?

   While the Site looks better with cut grass, leaving the Site more overgrown might deter trespassing.

TAYLOR BOROUGH DUMP SUPERFUND SITE FIVE-YEAR REVIEW INTERVIEW FORM	
Site Name: Taylor Borough Dump	
EPA ID: PAD980693907	
Interviewer name: Rombel Arquines	**Interviewer affiliation:** EPA Region 3
Subject name: Daniel Zeleniak	**Subject affiliation/Title:** Taylor Borough/Borough Manager
Subject contact information: (570) 562-1400	
Interview date: 12/14/2017	**Interview time:** 2:30 pm
Interview location: Phone interview call to Taylor Borough Municipal Office	
Interview format (circle one): In Person (Phone) Mail Email Other:	
Interview category: Local Government	

1. What is your overall impression of the remedial activities at the Site?

   The Site is quiet. Nothing bad to report. Very quiet, no one really goes back there. No instances of anything other than occasional trespassers and the damage to the fence by ATVers five or six years ago.

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

   The only real effect on the community is that the property that the Superfund site is on has not had taxes paid on it for years. The 20 acres or so of the Site that is fenced is surrounded by a large piece, 100 acres or so, that is abandoned. That vacant land could be used for something that could benefit the community, as long as there is no impact to the Site.

3. What is your assessment of the current performance of the remedy in place at the Site?

   EPA did a good job. I remember when EPA came in and cleared all the scrub and fixed the fence that was damaged.

4. Are you aware of any complaints or inquiries regarding environmental issues or the remedial action from residents since implementation of the cleanup?

   No.

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

   Yes, EPA keeps us well informed when things go on at the Site. With the advent of the EPA websites, everything can be found online now.

6. Do you have any comments, suggestions or recommendations regarding the management or operation of the Site's remedy?

   With the interest in the Site from the Lackawanna County Land Bank Program, any assistance EPA can give in redevelopment of the Site would be helpful.

   Following the interview, the EPA RPM provided the Borough Manager with contact information for the EPA's Land Revitalization Action Team, which provides assistance with Superfund site reuse.

APPENDIX F – SITE INSPECTION CHECKLIST & TEAM ROSTERS

Table F-1: Five-Year Review Site Inspection Checklist

FIVE-YEAR REVIEW SITE INSPECTION CHECKLIST

NOTE: Checklist answers apply to both 08/10/17 and 01/10/2018 inspections except where differences are distinguished using the respective dates of the inspections.

I. SITE INFORMATION

Site Name: Taylor Borough Dump	**Date of Inspection(s):** 08/10/17; 01/10/2018
Location and Region: Taylor Borough, Pennsylvania; EPA Region 3	**EPA ID:** PAD980693907
Agency, Office or Company Leading the Five-Year Review: EPA Region 3	**Weather/Temperature:** 08/10/17 - sunny, approx. 80 degrees F; 01/10/18 - sunny with snow on ground, approx. 40 degrees F

Remedy Includes: (Check all that apply)

- ☒ Landfill cover/containment
- ☒ Access controls (fence)
- ☒ Institutional controls
- ☐ Groundwater pump and treatment
- ☒ Surface water collection and treatment
- ☐ Other: _____
- ☐ Monitored natural attenuation
- ☐ Groundwater containment
- ☐ Vertical barrier walls

Attachments: ☒ Inspection team roster attached **(Table F-2; Table F-3)**
☐ Site map attached

II. INTERVIEWS (check all that apply)

1. **O&M Site Manager** Dennis Gallagher (Name) | Scranton Public Works Department Head (Title) | 08/10/2017 (Date)
   Interviewed ☒ at site ☐ at office ☐ by phone Phone: _____
   Problems, suggestions ☐ Report attached: See Appendix E

2. **O&M Staff** N/A (Name) | _____ (Title) | _____ (Date)

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 PADEP
   Contact Jonathan Ulanoski (Name) | Project Officer (Title) | 08/10/2017 (Date) | _____ (Phone No.)
   Problems/suggestions ☐ Report attached: See Appendix E

   Agency Taylor Borough
   Contact Daniel P. Zeleniak (Name) | Borough Manager (Title) | 12/14/2017 (Date) | _____ (Phone No.)
   Problems/suggestions ☐ Report attached: See Appendix E

4. **Other Interviews** (optional) ☐ Report attached: N/A

III. ON-SITE DOCUMENTS AND RECORDS VERIFIED (check all that apply)

1. **O&M Documents**

☒ O&M manual	☒ Readily available	☐ Up to date	☐ N/A
☒ As-built drawings	☒ Readily available	☐ Up to date	☐ N/A
☒ Maintenance logs	☐ Readily available	☐ Up to date	☐ N/A

Remarks: O&M documents and as-builts are not kept on site but are readily available; required recordkeeping of maintenance activities by PRP has not been submitted regularly

2. **Site-Specific Health and Safety Plan**	☒ Readily available	☐ Up to date	☐ N/A
☐ Contingency plan/emergency response plan	☐ Readily available	☐ Up to date	☒ N/A

Remarks: _____

3. **O&M and OSHA Training Records**	☐ Readily available	☐ Up to date	☒ N/A

Remarks: _____

4. **Permits and Service Agreements**

☐ Air discharge permit	☐ Readily available	☐ Up to date	☒ N/A
☐ Effluent discharge	☐ Readily available	☐ Up to date	☒ N/A
☐ Waste disposal, POTW	☐ Readily available	☐ Up to date	☒ N/A
☐ Other permits: _____	☐ Readily available	☐ Up to date	☒ N/A

Remarks: _____

5. **Gas Generation Records**	☐ Readily available	☐ Up to date	☒ N/A

Remarks: _____

6. **Settlement Monument Records**	☐ Readily available	☐ Up to date	☒ N/A

Remarks: _____

7. **Groundwater Monitoring Records**	☐ Readily available	☐ Up to date	☒ N/A

Remarks: The 2007 ESD documented EPA's decision that groundwater monitoring was no longer required for the Site.

8. **Leachate Extraction Records**	☐ Readily available	☐ Up to date	☒ N/A

Remarks: _____

9. **Discharge Compliance Records**

☐ Air	☐ Readily available	☐ Up to date	☒ N/A
☐ Water (effluent)	☐ Readily available	☐ Up to date	☒ N/A

Remarks: _____

10. **Daily Access/Security Logs**	☐ Readily available	☐ Up to date	☒ N/A

Remarks: _____

IV. O&M COSTS

1. **O&M Organization**

☐ State in-house ☐ Contractor for state

☒ PRP in-house ☐ Contractor for PRP

☐ Federal facility in-house ☐ Contractor for Federal facility

☐ _____

2. **O&M Cost Records**

☒ Readily available ☐ Up to date

☒ Funding mechanism/agreement in place ☐ Unavailable

Original O&M cost estimate: $162,000 (presented in Table 4-2 of the FS). The original estimate included costs for groundwater, sediment and surface water sampling, which is no longer required. The PRP noted that the City of Scranton budgets $16,000 per year for O&M.

3. **Unanticipated or Unusually High O&M Costs during Review Period**

Describe costs and reasons: N/A

V. ACCESS AND INSTITUTIONAL CONTROLS ☒ Applicable ☐ N/A

A. Fencing

1. **Fencing Damaged** ☐ Location shown on site map ☒ Gates secured ☐ N/A

Remarks: 08/10/17 - Damaged fencing caused by downed trees observed in southern and western areas and additional damaged fencing along the eastern boundary; 01/10/18 - Trees not removed nor fences repaired by time of second inspection

B. Other Access Restrictions

1. **Signs and Other Security Measures** ☐ Location shown on site map ☐ N/A

Remarks: Signs posted along all fences appeared in fair to good condition

C. Institutional Controls (ICs)

1. **Implementation and Enforcement**

Site conditions imply ICs not properly implemented ☐ Yes ☒ No ☐ N/A

Site conditions imply ICs not being fully enforced ☒ Yes ☐ No ☐ N/A

Type of monitoring (e.g., self-reporting, drive by): site visits

Frequency: PRP visits the Site at least monthly from May to October during cutting season; EPA and PADEP also visit the Site several times a year

Responsible party/agency: PRP

Contact	Dennis Gallagher	Scranton Public Works Department Head	08/10/2017
	Name	Title	Date

Reporting is up to date ☐ Yes ☒ No ☐ N/A

Reports are verified by the lead agency ☒ Yes ☐ No ☐ N/A

Specific requirements in deed or decision documents have been met ☒ Yes ☐ No ☐ N/A

Violations have been reported ☒ Yes ☐ No ☐ N/A

Other problems or suggestions: ☐ Report attached

Trespassers have reportedly used the larger fenced area for riding ATVs, but frequency is significantly lower in recent years. Locked gates and fences have occasionally been breached, but promptly repaired. Institutional controls are in place for all site parcels. PRP performs regular O&M but has not consistently fulfilled O&M reporting requirements per the CD and current O&M Plan.

2. **Adequacy** ☒ ICs are adequate ☐ ICs are inadequate ☐ N/A

Remarks: Administrative ICs are in place on all Site parcels. Existing ICs are being enforced by effecting prompt repairs following occasional damage or trespass. Engineering controls are adequate as the constructed fences and gates prevent all but occasional trespass.

D. General

1. **Vandalism/Trespassing** ☐ Location shown on site map ☐ No vandalism evident

Remarks: Site has a history of trespassing for ATV use; gates are breached about two times/year, which is significantly less frequent than years prior.

2. **Land Use Changes On Site** ☐ N/A

Remarks: None

3. **Land Use Changes Off Site** ☐ N/A

Remarks: None

VI. GENERAL SITE CONDITIONS

A. Roads ☒ Applicable ☐ N/A

1. **Roads Damaged** ☐ Location shown on site map ☒ Roads adequate ☐ N/A

Remarks: 08/10/17 - Vegetation observed to encroach upon the edges of the access road into the Site. 01/10/18 - Vegetation receded from the edges of the access road to the Site due to colder weather.

B. Other Site Conditions

Remarks: N/A

VII. LANDFILL COVERS ☒ Applicable ☐ N/A

Note: The 2-acre capped and fenced area was not inspected during the 2017 site inspection of the 18-acre capped and fenced area due to significant ponding from prior days' rain on the trails that lead to the 2-acre area. The 2-acre area was instead inspected during the 2018 site inspection. Checklist below refers to both 18-acre and 2-acre capped areas unless distinguished by use of the respective dates of the inspections.

A. Landfill Surface

1. **Settlement** (low spots) ☐ Location shown on site map ☒ Settlement not evident

2. **Cracks** ☐ Location shown on site map ☒ Cracking not evident

3. **Erosion** ☐ Location shown on site map ☒ Erosion not evident

4. **Holes** ☐ Location shown on site map ☐ Holes not evident

Arial extent: _____ Depth: _____

Remarks: 08/10/17 - Animal burrows observed in three locations (two of which were marked with wooden stakes); 01/10/18 - Burrows not filled in by time of second inspection.

5. **Vegetative Cover** ☒ Grass ☒ Cover properly established

☒ No signs of stress ☒ Trees/shrubs (indicate size and locations on a diagram)

Remarks: 08/10/17 - 18-Acre: Cover well established in most areas; woody vegetation observed in drainage areas; 01/10/18 - 2-Acre: Fenced area heavily vegetated by design to prevent erosion on steep slope.

6. **Alternative Cover** (e.g., armored rock, concrete) ☒ N/A

7. **Bulges** ☐ Location shown on site map ☒ Bulges not evident

8. **Wet Areas/Water Damage** ☒ Wet areas/water damage not evident

Remarks: No significant water damage within the two fenced areas, but St. John's Creek can intermittently overflow during heavy rain events and make access to the 2-acre area difficult with ponded water and muddy conditions.

9. **Slope Instability** ☐ Slides ☐ Location shown on site map

☒ No evidence of slope instability

B. Benches ☐ Applicable ☒ 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.)

C. Letdown Channels ☐ Applicable ☒ 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.)

D. Cover Penetrations ☐ Applicable ☒ N/A

E. Gas Collection and Treatment ☐ Applicable ☒ N/A

F. Cover Drainage Layer ☒ Applicable ☐ N/A

1. **Outlet Pipes Inspected** ☒ Functioning ☐ N/A

Remarks: _____

2. **Outlet Rock Inspected** ☒ Functioning ☐ N/A

Remarks: _____

G. Detention/Sedimentation Ponds ☐ Applicable ☒ N/A

H. Retaining Walls ☐ Applicable ☒ N/A

I. Perimeter Ditches/Off-Site Discharge ☒ Applicable ☐ N/A

1. **Siltation** ☐ Location shown on site map ☒ Siltation not evident

2. **Vegetative Growth** ☐ Location shown on site map ☐ N/A

☒ Vegetation does not impede flow

3. **Erosion** ☐ Location shown on site map ☒ Erosion not evident

4. **Discharge Structure** ☒ Functioning ☐ N/A

Remarks: _____

VIII. VERTICAL BARRIER WALLS ☐ Applicable ☒ N/A

IX. GROUNDWATER/SURFACE WATER REMEDIES ☒ Applicable ☐ N/A

A. Groundwater Extraction Wells, Pumps and Pipelines ☐ Applicable ☒ N/A

Remarks: Following the five years of sampling that the RODs required, the monitoring well system was abandoned.

B. Surface Water Collection Structures, Pumps and Pipelines ☐ Applicable ☒ N/A

Remarks: Open drainage borehole was properly abandoned and replaced with a graveled infiltration area

C. Treatment System ☐ Applicable ☒ N/A

D. Monitoring Data ☐ Applicable ☒ N/A

1. **Monitoring Data** Remarks: Following the ROD-specified five years of groundwater sampling, EPA determined that no further groundwater monitoring was necessary.	
2. **Monitoring Data Suggests:** Remarks: EPA determined that the analysis of the ROD-required five years of monitoring data indicated no site-related risk to residents from the groundwater.	
E. Monitored Natural Attenuation ☐ Applicable ☒ N/A	
X. OTHER REMEDIES ☐ Applicable ☒ N/A	
XI. OVERALL OBSERVATIONS	
A.	**Implementation of the Remedy**
	The remedy is effective and functioning as designed. The purpose of the remedy was to mitigate or eliminate environmental contamination through inhalation of organic vapors and direct contact with or ingestion of contaminated soils, sediment and surface water. Remedial actions included removal of drums and contaminated soil and waste materials; collection and treatment of contaminated pond water and stabilization of the sediment in the ponds; and installation of a cap and perimeter fencing. The soil cap is effective and functioning as designed. The grass cover is well-established and maintained regularly. Drainage areas appear to be working as designed. Fencing is present around the capped areas and signs are posted on the fence to deter trespassing, although trespassing still occurs occasionally. The heavy overgrowth on the 2-acre fenced area continues to prevent erosion of the steep slope. The ROD-specified five years of monitoring was completed and EPA determined that no further monitoring was necessary.
B.	**Adequacy of O&M**
	The PRP regularly mows the vegetative cover during the growing season and makes repairs to the fencing and gates when needed. Several animal burrows were observed throughout the fenced area during the site inspection. EPA reminded the City of Scranton representative that the holes need to be backfilled, fallen trees removed and fencing repaired as part of O&M. The City is not currently providing O&M logs or reports to EPA. EPA informed the PRP representative that the CD and O&M Plan require regular recordkeeping.
C.	**Early Indicators of Potential Remedy Problems**
	None at this time.
D.	**Opportunities for Optimization**
	Reducing the frequency of mowing may assist erosion control and deter trespassers, particularly those with ATVs.

Table F-2: August 10, 2017 Five-Year Review Inspection Team Participants

Name	Position	Agency
Rombel Arquines	Remedial Project Manager	EPA
Jill Billus	EPA Contractor	Skeo
Ryan Bower	Hydrogeologist	EPA
Ali Cattani	EPA Contractor	Skeo
Dennis Gallagher	Director, Department of Public Works	City of Scranton
Alexander Mandell	Community Involvement Coordinator (CIC)	EPA
Jonathan Ulanoski	Project Officer	PADEP

Table F-3: January 10, 2018 Five-Year Review Inspection Team Participants

Name	Position	Agency
Rombel Arquines	Remedial Project Manager	EPA
Katie Matta	Biological Technical Assistance Group (BTAG)	EPA
Jonathan Ulanoski	Project Officer	PADEP

APPENDIX G – SITE INSPECTION PHOTOS

Photo G-1: 08/10/17 – Intact northern access gate (unlocked for inspection access) for 18-acre fenced area

Photo G-2: 08/10/17 – Intact southern access gate (locked) for 18-acre fenced area

Photo G-3: 08/10/2017 – Intact “No Trespassing/Superfund Site” sign for 18-acre fenced area


Photo G-4: 08/10/17 – Mowed grass cover of capped 18-acre fenced area

Photo G-5: 08/10/17 (top); 01/10/18 (bottom) – Fence damage due to a fallen tree in 18-acre fenced area

Photo G-6: 06/08/18 – Fence damage repaired

Photo G-7: 08/10/17 (left); 01/10/18 (right) – Fence damage due to trespass in 18-acre fenced area

Photo G-8: 06/08/18 – Fence damage not repaired

Photo G-9: 08/10/17 – Vegetation along drainage trench in southern portion of 18-acre fenced area

Photo G-10: 08/10/17 – Intact gravel infiltration area in northern portion of 18-acre fenced area

Photo G-11: 08/10/17 – Intact drainage headwall in northern portion of 18-acre fenced area

Photo G-12: 08/10/17 (left); 01/10/18 (right) – Staked animal burrow identified in 18-acre fenced area

Photo G-13: 08/10/17 – Creek overflow and muddy conditions outside of the 2-acre fenced area

Photo G-14: 01/10/18 – Intact gate, intact signage and vegetated slope of the 2-acre fenced area

Photo G-15: 06/08/18 – Ruts on capped area

Photo G-16: 06/08/18 – Tree leaning on fence