

**FIFTH FIVE-YEAR REVIEW REPORT FOR
HRANICA LANDFILL SUPERFUND SITE
BUFFALO TOWNSHIP, BUTLER COUNTY, PENNSYLVANIA**



Prepared by

**U.S. Environmental Protection Agency
Region 3
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A handwritten signature in blue ink, reading "Karen Melvin", is positioned above a horizontal dashed line.

**Karen Melvin, Director
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MAR 16 2017

Date

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LIST OF ABBREVIATIONS & ACRONYMS

ALCOA	Aluminum Company of America
CCC	Criterion Continuous Concentrations
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CMC	Criterion Maximum Concentrations
EPA	United States Environmental Protection Agency
FYR	Five-Year Review
GPRA	Government Performance Results Act
GVS	Groundwater Verification Study
IC	Institutional Control
MCL	Maximum Contaminant Level
NPL	National Priorities List
O&M	Operations and Maintenance
OU	Operable Unit
PADEP	Pennsylvania Department of Environmental Protection
PCBs	Polychlorinated Biphenyls
PPG	PPG Industries, Inc.
PRP	Potentially Responsible Party
RAO	Remedial Action Objective
ROD	Record of Decision
RPM	Remedial Project Manager
RSL	Regional Screening Level
SVOC	Semi-Volatile Organic Compound
SWQC	Surface Water Quality Criteria
VOC	Volatile Organic Compound
µg/l	Micrograms per Liter

I. INTRODUCTION

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

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

This is the fifth FYR for the Hranica Landfill Superfund Site (the Site). The triggering action for this statutory FYR is the completion date of the previous FYR on April 16, 2012. This FYR has been prepared due to the fact that hazardous substances, pollutants, or contaminants remain at the site above levels that allow for unlimited use and unrestricted exposure.

The Site consists of two operable units (OUs). This FYR includes OU-1 that addresses soil and OU-2 that addresses groundwater.

The FYR team was led by John Epps and Aaron Mroz, EPA Remedial Project Managers (RPMs). Ryan Bower, EPA hydrogeologist, Kimberly Plank, EPA Biological Technical Assistance Group, Dawn Ioven, EPA toxicologist, Carrie Deitzel, EPA community involvement coordinator, Dr. Kathleen Patnode, U.S. Fish and Wildlife, and Richard Weber, Pennsylvania Department of Environmental Protection (PADEP) Environmental Protection Specialist comprised the remainder of the FYR team. The FYR was initiated on April 25, 2016 when EPA held a FYR scoping meeting. EPA notified the Potentially Responsible Party (PRP), PPG Industries, Inc. (PPG), of the initiation of the FYR.

Site Background

The Site is located in Buffalo Township, Butler County, Pennsylvania and consists of approximately 15 acres of undeveloped woodland and open space surrounded by a fence with a locking access gate (Figures 1 and 2). The Site was historically used as a mixed waste landfill, as discussed in additional detail in Section II., Response Action Summary.

The Site is west of Ekastown Road and south of Hranica Drive, situated at the western end of an east-northeast trending ravine. An unnamed tributary of Little Bull Creek originates near the northeast corner of the Site and flows west before discharging into Little Bull Creek which flows southerly along Ekastown Road. Agricultural land borders the Site to the south and west and wooded areas border the Site to the north and east. Land use surrounding the Site is primarily agricultural and limited residential, with the closest residences located along Ekastown Road, approximately 2,000 feet east of the Site.

Bedrock at the Site consists of three distinct units: the shallow Morgantown Sandstone, the intermediate Birmingham Shale/Pittsburgh Red Beds, and the deep Saltsburg/Buffalo Sandstone. The Morgantown Sandstone is breached on three sides at the Site and flows radially eastward (Figure 3), discharging onsite in the form of seeps and springs. Groundwater in the intermediate Birmingham Shale/Pittsburgh Red Beds and deep Saltsburg/Buffalo Sandstone also flows eastward towards Little Bull Creek, located approximately 2,000 feet from the Site. Groundwater in the Saltsburg/Buffalo Sandstone was historically utilized as a drinking water supply by area residents, however, residents are currently connected to a public water supply.

FIVE-YEAR REVIEW SUMMARY FORM

SITE IDENTIFICATION		
Site Name: Hranica Landfill		
EPA ID: PAD980829493		
Region: 3	State: PA	City/County: Buffalo Township, Butler County
SITE STATUS		
NPL Status: Deleted		
Multiple OUs? Yes	Has the site achieved construction completion? Yes	
REVIEW STATUS		
Lead agency: EPA		
Author name (Federal or State Project Manager): John Epps and Aaron Mroz		
Author affiliation: Remedial Project Manager		
Review period: 4/25/2016 - 4/16/2017		
Date of site inspection: 12/13/2016		
Type of review: Statutory		
Review number: 5		
Triggering action date: 4/16/2012		
Due date (five years after triggering action date): 4/16/2017		

II. RESPONSE ACTION SUMMARY

Basis for Taking Action

The Site was operated as a mixed waste landfill and drum disposal and incineration facility. Waste disposed at the Site consisted primarily of paint and solvent waste from PPG and plating waste, metal sludges, and waste oils from the Aluminum Company of America (ALCOA). Waste was treated onsite by a combination of open incineration both in large steel vats and in the open air and surface impoundment storage. Ash from the incineration was stored in unsecured piles and waste was staged in drums at various locations across the Site.

As a result of the historic facility operations described above, soil, surface water, and groundwater were impacted by volatile organic compounds (VOCs) and metals.

Response Actions

The Site was proposed to the National Priorities List (NPL) on December 30, 1982 and listed on the NPL on September 8, 1983. Subsequently, PPG and ALCOA conducted a Removal Action between 1983 and 1984 consisting primarily of offsite disposal of drums of waste and visually contaminated soil.

Additionally, the contents of three large storage vessels consisting of waste oil and paint sludge were incinerated at an offsite disposal facility. Ash resulting from the earlier incineration activities was consolidated in a 2.5-acre area on the southern portion of the Site, capped with clay, graded, and vegetated (Figure 2). This area is referred to as the ash pile cap.

Following the completion of the Removal Action, additional investigations indicated that soil contamination was present in the former drum storage area and along the site access road near the ash pile cap. The volume of impacted soil was estimated to be approximately 8,100 cubic yards. Also, groundwater contamination was primarily limited to the shallow perched aquifer in the Morgantown Sandstone near the ash pile cap area and that the intermediate and deep aquifers contained only low concentrations of contaminants. Based on these findings, EPA determined that response actions were necessary to address actual or threatened releases of hazardous substances from the Site.

OU-1 Soil

The Remedial Action Objective (RAO) for OU-1 was to prevent incidental dermal contact with or ingestion of contaminated soil. The Record of Decision (ROD) for OU-1 Soil was issued on June 29, 1990, and included the following remedy components:

- Installation of a low-permeability cap over soil containing lead concentrations exceeding 300 mg/kg;
- Repair of the damaged portion of the ash pile cap;
- Installation of a fence around the property boundary;
- Institutional controls (ICs) prohibiting onsite groundwater use, disturbance of the cap, and other use of the Site that might result in contact with contaminated soil;
- Continued monitoring of existing seep, spring, and surface water sampling locations;
- Performance of a Groundwater Verification Study (GVS) to further characterize groundwater and determine if groundwater remediation is necessary, to be addressed in a second ROD.

The OU-1 Remedial Design was completed in April 1992 and the OU-1 Remedial Action was conducted between June and September 1993. Additionally, on July 14, 1993, EPA and the former property owner entered into a Consent Decree to implement the ICs required by the OU-1 ROD. ICs are discussed in additional detail in Table 1, below.

OU-2 Groundwater

As indicated above, the OU-1 ROD required the performance of a GVS to determine if groundwater remediation was necessary. The GVS was conducted between April 1992 and January 1993 and consisted of quarterly sampling of onsite monitoring wells, onsite and offsite surface water, and offsite residential wells for a period of one year. The GVS indicated that contaminants were present onsite at concentrations exceeding Maximum Contaminant Levels (MCLs) only in the shallow perched groundwater in the vicinity of the ash pile cap. The intermediate and deep aquifers did not contain contaminants exceeding MCLs. The GVS also indicated that no contamination was present in the surface water or residential well samples exceeding MCLs.

Based on the data collected in the GVS, EPA issued a “No Action” ROD for OU-2 Groundwater on May 26, 1994. While no active remediation of groundwater was prescribed by the OU-2 ROD, continued biannual groundwater monitoring in accordance with the OU-1 ROD was required to confirm that groundwater contamination identified in the vicinity of the ash pile cap was not migrating offsite.

Institutional Controls

ICs were initially implemented via a Consent Decree between EPA and the estate of William Hranica and Joseph Hranica on July 14, 1993. During the second FYR, it was discovered that the property had been sold at a tax sale by Butler County and the deed restrictions required by the Consent Decree had not been transferred with the property as required. On February 4, 2003, a corrective deed was filed to transfer the deed restrictions to the current property owner. Institutional controls are described in detail in Table 1, below.

Table 1: Summary of Planned and/or Implemented ICs

Media	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date
Soil and Groundwater	Yes	Yes	Tax Parcel No. 040-1F79-12G-0000	Site access for EPA to perform response actions, including operations and maintenance; Prevention of interference with response actions; Notification of any future property owners of the restrictions. Restriction of the following activities: Development of wells for use as drinking water, bathing water, or other domestic uses that could expose people or animals to groundwater; Excavation or drilling of any type without prior written permission of EPA; Use of the property that may permit contact with soil containing lead in excess of 300 parts per million; Use of the property that would allow free public access.	Deed Restriction February 4, 2003

Operation & Maintenance

Operation and maintenance (O&M) for the remedy consists primarily of an annual Site inspection conducted by the PRP in accordance with the EPA-approved Post Closure Inspection and Maintenance Plan. During the inspection, the condition of the perimeter fence, low-permeability cap, drainage structures, embankments, and monitoring wells are evaluated and recommendations are made for repairs, as necessary. During the previous FYR, the locking well caps on four onsite monitoring wells, MW-3S, MW-3I, MW-4I, and MW-4D were observed to be damaged and in need of replacement. The well caps were replaced between January and March 2012. Since the previous FYR, no issues have been identified related to the condition of the drainage structures or embankments. As part of the annual site inspection in May of 2016, the security fencing was found to be damaged in two places and locks were missing on several monitoring wells and the site access gates. The locks were replaced in May of 2016 and the fencing was repaired in June of 2016. Additionally, the PRP performs annual groundwater, surface water, and residential well sampling in accordance with the EPA-approved August 1993 Long Term Groundwater Monitoring/Sampling Plan, as amended in 2008. O&M and monitoring results are presented in Section IV., Five-Year Review Process.

III. PROGRESS SINCE THE LAST REVIEW

This section includes the protectiveness determinations and statements from the last FYR as well as the

recommendations from the last FYR and the current status of those recommendations.

Table 2: Protectiveness Determinations/Statements from the 2012 FYR

OU	Protectiveness Determination	Protectiveness Statement
1	Protective	The remedy for OU-1 Soil at the Hranica Landfill Site is protective of human health and the environment in both the short and long term due to the installation of a low-permeability cap over contaminated soil, installation of a perimeter fence, and implementation of institutional controls providing notice that hazardous substances are present at the Site and prohibiting disturbance of the cap.
2	Protective	The remedy for OU-2 Groundwater at the Hranica Landfill Site is protective of human health and the environment in both the short and long term due to groundwater, surface water, and residential well monitoring and implementation of institutional controls providing notice that hazardous substances are present at the Site and prohibiting the installation of onsite wells. The protectiveness of the OU-2 remedy is enhanced by the connection of all nearby downgradient residences to public water.
Sitewide	Protective	The Site-wide remedy at the Hranica Landfill Site is protective of human health and the environment in both the short and long term. Physical construction of the remedy is complete, operation and maintenance is being conducted in accordance with the OU-1 and OU-2 RODs, and institutional controls have been implemented.

Table 3: Status of Recommendations from the 2012 FYR

OU	Issue	Recommendations	Current Status	Current Implementation Status Description	Completion Date (if applicable)
1	The locking well caps on monitoring wells MW-3S, MW-3I, MW-4I, and MW-4D are damaged and the wells cannot be locked.	Repair or replace the locking well caps.	Completed	Locking well caps were replaced.	3/1/2012

IV. FIVE-YEAR REVIEW PROCESS

Community Notification, Involvement & Site Interviews

A public notice was published in the Butler Eagle newspaper on January 20, 2017. The public notice explained the FYR process, contained the expected completion date of the FYR, provided point of contact information for EPA, and identified the location of the information repositories for the Site. No questions or comments were received as a result of the public notice. The public notice is included as Attachment 1.

Buffalo Township was contacted regarding public interest in the Site. The Land Development Coordinator indicated that she was not aware of any public interest or issues regarding the Site.

Data Review

A total of five sampling events have been conducted since the previous FYR.

Groundwater Sampling and Analysis

Groundwater samples were collected from monitoring wells MW-2I, MW-3S, MW-3I, MW-4I, MW-4D, MW-5S, and MW-5I on an annual basis and analyzed for VOCs, semi-volatile organic compounds (SVOCs), and inorganic metals. Because “No Action” was selected for OU-2 Groundwater, no cleanup standard was established by the OU-2 ROD. However, in order to evaluate the protectiveness of the “No Action” OU-2 Groundwater remedy, contaminant concentrations were compared to MCLs or EPA Regional Screening Levels (RSLs) if there is no corresponding MCL. The monitoring wells are screened in the three site aquifers and located within the site boundaries as shown on Figure 2.

Since the previous FYR, benzene and ethylbenzene were detected at concentrations exceeding MCLs in monitoring well MW-3S, which is located adjacent to the ash pile cap and within the low-permeability cap. No other VOCs were detected in Site monitoring wells at concentrations exceeding MCLs and/or RSLs. Sampling results from MW-3S are summarized in Table 4, below:

Table 4: VOC Concentrations in Shallow Groundwater

Compound	Unit	MCL	RSL	MW-3S				
				May 2012	May 2013	May 2014	May 2015	May 2016
Benzene	µg/L	5	N/A	140 J	100 J	110 J	380	97
Ethylbenzene	µg/L	700	N/A	4500	3500	4600	4500	2100

Limited SVOCs have been detected in onsite monitoring wells since the previous FYR at concentrations below MCLs and/or RSLs. Contaminant concentrations for naphthalene exceeded the RSL in MW-3S during multiple sampling events, as summarized in Table 5 below:

Table 5: SVOC Concentrations in Shallow Groundwater

Compound	Unit	MCL	RSL	MW-3S				
				May 2012	May 2013	May 2014	May 2015	May 2016
Naphthalene	µg/L	N/A	0.17	85	93	61	68	37

Total aluminum and manganese and dissolved manganese were detected at concentrations exceeding the respective secondary MCLs and/or RSLs in multiple monitoring wells since the previous FYR. However, the concentrations are consistent with historic sampling events, are likely due to naturally occurring metals present in the bedrock formation, and are not indicative of Site-related contamination. No other metals exceeded MCLs or RSLs at any Site monitoring well during the FYR period.

The groundwater monitoring results confirm that groundwater contamination in the vicinity of the ash pile cap is limited to the shallow perched aquifer in the Morgantown Sandstone and is not migrating offsite. The PRP performed a statistical analysis of groundwater monitoring data using the Mann-Kendall trend test during each annual monitoring event. The statistical analyses identified stable or decreasing trends for all VOCs detected in Site monitoring wells. However, although a decreasing groundwater contaminant trend was identified in MW-3S, multiple VOCs and SVOCs still exceeded MCLs and/or RSLs. Groundwater monitoring results for all sampling locations and the results of the 2016 statistical analysis are excerpted from the 2016 Annual Report and are presented in Attachment 2.

Surface Water Sampling and Analysis

Surface water samples were collected from one onsite seep location, Seep-2, and two offsite seep locations, SW-3 and SW-8, on an annual basis. During the 2015 and 2016 monitoring events a surface water sample was also collected from the offsite Palko spring (Seep-1), which is located near seep location SW-8 on a property north of the Site. Samples were analyzed for VOCs, inorganic metals, and polychlorinated biphenyls (PCBs). Contaminant concentrations were compared to EPA Surface Water Quality Criteria (SWQC) Criterion Continuous Concentrations (CCCs) and Criterion Maximum Concentrations (CMCs), secondary MCLs, and RSLs. Seep-2 is shown on Figures 2 and 4 and SW-3, SW-8, and the Palko spring are shown on Figure 4.

No VOCs or PCBs have been detected in any of the surface water samples since the previous FYR.

Since the previous FYR, total aluminum was detected in SW-3, SW-8 and Seep-2 at concentrations exceeding the EPA SWQC CCC and secondary MCL, but below the CMC, with the exception of Seep-2 during the 2012 monitoring event and SW-3, SW-8, and Seep-2 in 2016. Total manganese also exceeded the secondary MCL in SW-3, SW-8, and Seep-2. In 2016, total zinc was detected in SW-8 and Seep-2 at concentrations exceeding the EPA SWQC CCC and CMC. This sampling event was the only time zinc concentrations exceeded the EPA SWQC CCC and CMC.

The metals concentrations detected in the surface water samples from 2012 through 2015 are consistent with historic sampling events, are likely due to naturally occurring metals present in the bedrock formation; and are not indicative of Site-related contamination. The 2016 metals concentrations were above historic sampling events in onsite and offsite locations, and coincide with a new sampling contractor. Surface water sampling results excerpted from the 2016 Annual Report and are presented in Attachment 2.

Residential Well Sampling and Analysis

Residences in the vicinity of the Site are connected to public water. However, several inoperable residential wells were identified downgradient of the Site during the Additional Site Characterization in 2007. The PRP obtained access to sample one inoperable residential well during annual monitoring events, starting in 2008 and continuing through 2015, but permission for sampling was not obtained in 2016. Samples were collected from the inoperable residential well on an annual basis and analyzed for VOCs, SVOCs, and inorganic metals. Contaminant concentrations were compared to MCLs or EPA RSLs if there was no corresponding MCL. The residential well sampling location is shown on Figure 5.

In 2015, naphthalene was observed at a concentration of 0.46 J $\mu\text{g/L}$ which is above its respective RSL of 0.17 $\mu\text{g/L}$. No other VOCs or SVOCs were detected in the residential well samples, nor have VOCs or SVOCs historically been detected in residential well samples.

Total aluminum and manganese and dissolved manganese were detected in the residential well samples at concentrations exceeding the respective secondary MCLs throughout the FYR period. Secondary MCLs are non-enforceable guidelines and aluminum and manganese groundwater concentrations exceeding their respective secondary MCL are associated with aesthetic effects. However, as indicated above, the concentrations are consistent with those detected in surface water in the vicinity of the Site and are likely indicative of naturally occurring metals present in the bedrock formation. Additionally, total lead exceeded the MCL in the inoperable residential well during the 2012 monitoring event, however, dissolved lead was below the MCL.

Residential well sampling results excerpted from the 2016 Annual Report and are presented in Attachment 2.

Site Inspection

The Site Inspection was conducted on December 13, 2016 by Aaron Mroz, EPA RPM, Ryan Bower EPA Hydrogeologist, Dr. Kathleen Patnode, US Fish and Wildlife Environmental Contaminants Specialist, and Richard Weber, PADEP Environmental Protection Specialist to assess the protectiveness of the remedy. Thomas Ebbert, PPG Industries Remediation Manager and Matthew Valentine, Woodard & Curran Project Manager were present representing the PRP. The following observations were made during the Site Inspection:

- The fence surrounding the Site is in good condition and no repairs are necessary;
- No evidence of erosion of the low-permeability cap was observed and no repairs are necessary;
- Locking well caps were present on the monitoring wells;
- Flow was observed from surface water sampling location Seep-2;
- There was no flow observed from surface sampling location SW-3; and
- Surface water sampling locations SW-8 and Seep-1 are located on private property and were not investigated.

The Site Inspection Checklist is included as Attachment 3.

V. TECHNICAL ASSESSMENT

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

Question A Summary:

Yes. Based on a review of available documents, applicable or relevant and appropriate requirements, and the results of the Site inspection, the remedy is functioning as intended by the OU-1 and OU-2 RODs. Repair of the ash pile cap, construction of the low-permeability cap over contaminated soil, and installation of the perimeter fence have successfully eliminated exposure pathways associated with OU-1 Soil. Connection of nearby residents to a public water line and continued groundwater, surface water, and residential well monitoring have eliminated exposure pathways associated with OU-2 Groundwater. Additionally, ICs identifying contaminants present onsite and restricting the use of the capped area and onsite groundwater have been implemented, thereby preserving the long-term protectiveness of the remedy.

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

Question B Summary:

Yes. The exposure assumptions, toxicity data, and RAOs used to develop the remedy for both OU-1 Soil and OU-2 Groundwater remain valid and institutional controls are in place to ensure the remedy remains protective in the long-term.

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

Question C Summary:

No. The remedy continues to be protective of human health and the environment.

VI. ISSUES/RECOMMENDATIONS

Issues/Recommendations
OU(s) without Issues/Recommendations Identified in the Five-Year Review:
OU-1 Soil, OU-2 Groundwater

OTHER FINDINGS

In the 2016 sampling event, there were increases in the surface water metals concentrations. Due to this condition being the first increase in surface water metals concentrations and the increase occurring at onsite and offsite locations, the future data should be closely monitored to determine if this was a one time event.

VII. PROTECTIVENESS STATEMENT

Protectiveness Statement(s)		
<i>Operable Unit: 1, Soil</i>	<i>Protectiveness Determination:</i> Protective	<i>Planned Addendum Completion Date: N/A</i>
<i>Protectiveness Statement:</i> The remedy for OU-1 Soil is protective of human health and the environment in both the short and long-term due to the repair of the ash pile cap, installation of a low-permeability cap over contaminated soil, installation of a perimeter fence, and implementation of institutional controls providing notice that hazardous substances are present at the Site and prohibiting disturbance of the cap.		

Protectiveness Statement(s)		
<i>Operable Unit: 2, Groundwater</i>	<i>Protectiveness Determination:</i> Protective	<i>Planned Addendum Completion Date: N/A</i>
<i>Protectiveness Statement:</i> The remedy for OU-2 Groundwater is protective of human health and the environment in both the short and long-term due to groundwater, surface water, and residential well monitoring and implementation of institutional controls providing notice that hazardous substances are present at the Site and prohibiting the installation of onsite wells. The protectiveness of the OU-2 remedy is enhanced by the connection of all nearby downgradient residences to public water.		

Sitewide Protectiveness Statement	
<i>Protectiveness Determination:</i> Protective	<i>Planned Addendum Completion Date: N/A</i>
<i>Protectiveness Statement:</i> The Site-wide remedy is protective of human health and the environment in both the short and long-term. Physical construction of the remedy is complete, operation and maintenance is being conducted in accordance with the OU-1 and OU-2 RODs and EPA-approved plans, and institutional controls have been implemented.	

Government Performance Results Act (GPR) Measure Review

As part of this Five Year Review, the GPR Measures were evaluated. The GPR Measures and their status are provided as follows:

Environmental Indicators

Human Health: Current Exposure Controlled and Protective Remedy in Place

Groundwater Migration: Groundwater Migration Under Control

Sitewide Ready fo Anticipated Use

The Site was determined to be Sitewide Ready for Anticipated Use on May 13, 2009.

VIII. NEXT REVIEW

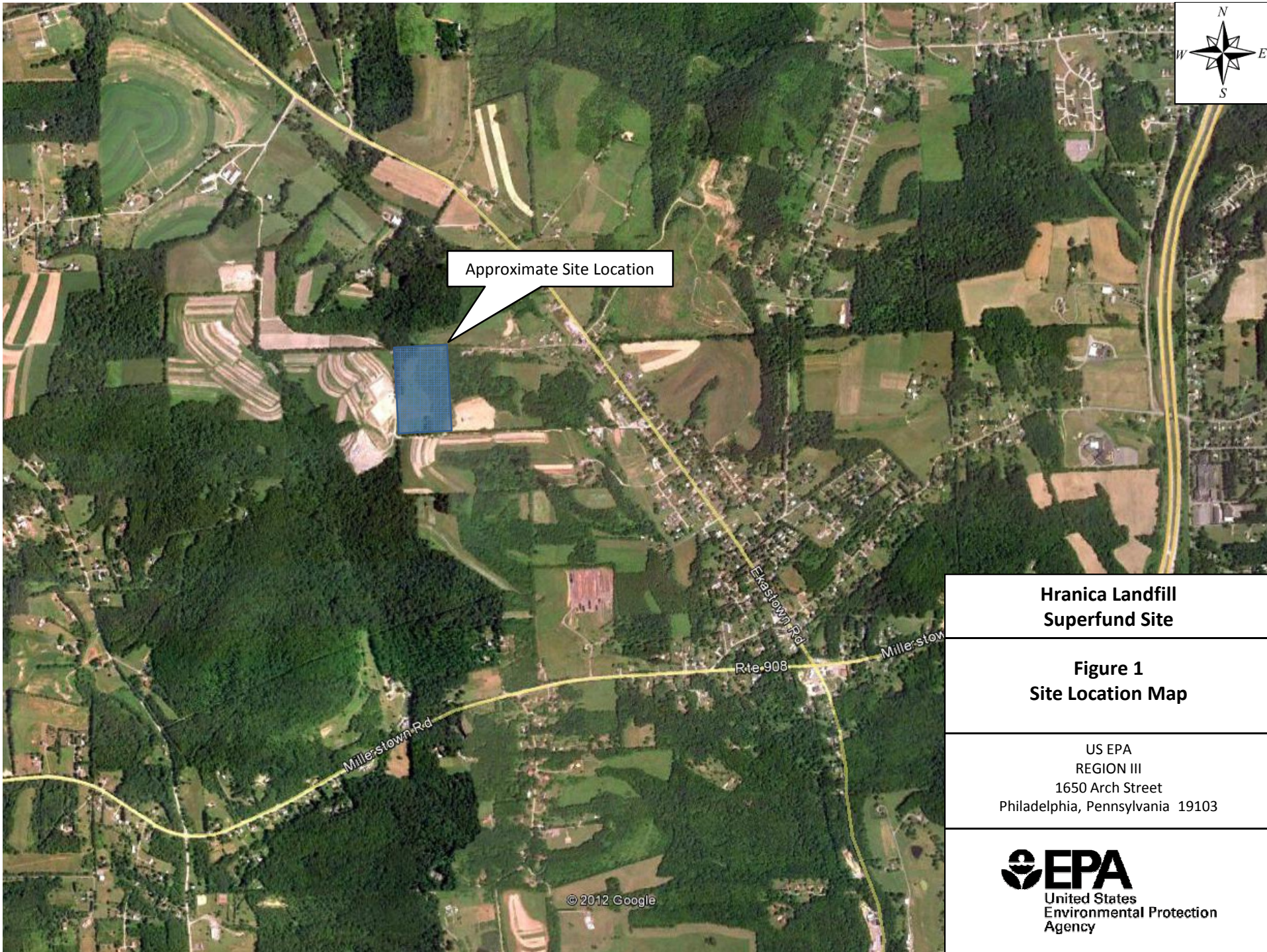
The next FYR report for the Hranica Landfill Superfund Site is required five years from the date of this review.

APPENDIX A – REFERENCE LIST

- Groundwater & Environmental Services (GES), 2008. Additional Site Characterization Report, Revision 01, Hranica Landfill Site. November.
- GES, 2012. 2012 Annual Report Groundwater and Surface Water Monitoring and Site Inspection, Hranica Landfill Superfund Site. August.
- GES, 2013. 2013 Annual Report Groundwater and Surface Water Monitoring and Site Inspection, Hranica Landfill Superfund Site. August.
- GES, 2014. 2014 Annual Report Groundwater and Surface Water Monitoring and Site Inspection, Hranica Landfill Superfund Site. August.
- GES, 2015. 2015 Annual Report Groundwater and Surface Water Monitoring and Site Inspection, Hranica Landfill Superfund Site. August.
- IT Corporation, 1993. Final As-Built Report, Hranica Landfill Site. October.
- Tetra Tech, 2016. 2016 Annual Report Groundwater and Surface Water Monitoring and Site Inspection, Hranica Landfill Superfund Site. October.
- U.S. Environmental Protection Agency (EPA), 1990. Record of Decision, Hranica Landfill Site.
- U.S. EPA, 1994. Record of Decision, Hranica Landfill Site.
- U.S. EPA, 2007. Third Five-Year Review Report for Hranica Landfill Superfund Site.
- U.S. EPA, 2009. Addendum to Hranica Landfill Superfund Site Five Year Review Report Dated May 23, 2007.
- U.S. EPA, 2012. Fourth Five-Year Review Report for Hranica Landfill Superfund Site.

APPENDIX B – CHRONOLOGY OF SITE EVENTS

Event	Date
Site operated as a municipal and industrial waste disposal facility.	1966 - 1974
Initial Site Investigation conducted by U.S. Environmental Protection Agency (EPA).	1981
Site proposed for the National Priorities List (NPL).	December 30, 1982
Site listed on the NPL.	September 8, 1983
Removal Action conducted by PPG Industries, Inc. (PPG) and Aluminum Company of America (ALCOA) removing drums, soil, and disposal vats from the Site and installing a clay cap.	1983 - 1984
Comprehensive Site Investigation conducted by PPG.	1984 - 1987
Consent Order between EPA and PPG to perform Remedial Investigation and Feasibility Study.	March 13, 1987
Remedial Investigation and Feasibility Study conducted by PPG.	1987 - 1990
Record of Decision (ROD) issued for Operable Unit 1 (OU-1), Soils.	June 29, 1990
Consent Decree between PPG, ALCOA and PPG to perform Remedial Design and Remedial Action	October 24, 1991
Groundwater Verification Study conducted by PPG.	April 1992 – January 1993
Remedial Action for OU-1 conducted.	June – September 1993
ROD issued for Operable Unit 2 (OU-2) and Site determined to be Construction Complete.	May 26, 1994
First Five-Year Review completed.	April 16, 1997
Site deleted from NPL.	September 18, 1997
Site purchased at sheriff's sale.	1997
Second Five-Year Review completed.	April 26, 2002
Corrected deed filed by Butler County Tax Claim Bureau identifying the new owner and including a notice stating that there is hazardous waste in place at the Site and notice of land use restrictions.	February 4, 2003
Third Five-Year Review completed.	May 23, 2007
Additional Site Investigation conducted.	June 2007 – December 2008
Five-Year Review Addendum issued addressing issues from Third Five-Year Review.	May 5, 2009
Site determined to be Sitewide Ready for Anticipated Use	May 13, 2009
Fourth Five-Year Review completed	April 16, 2012

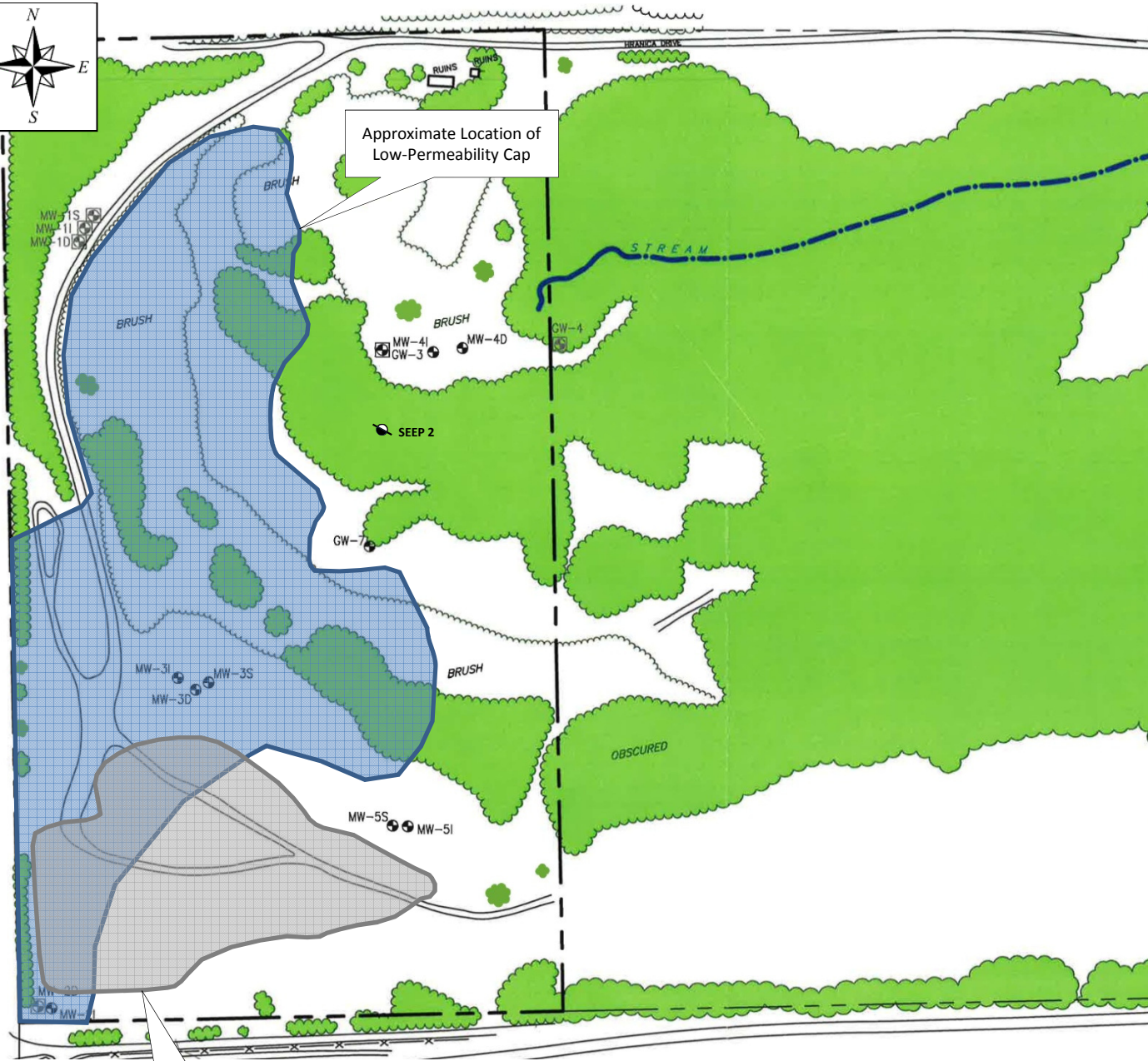
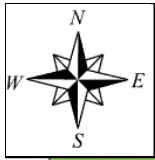


**Hranica Landfill
Superfund Site**

**Figure 1
Site Location Map**

US EPA
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103





LEGEND

- SITE BOUNDARY
- ... APPROXIMATE LIMITS OF PROPERTY LINE
- WOODED AREAS
- STREAM
- MONITORING WELL
- ⊗ ABANDONED MONITORING WELL
- ⊙ SEEP SAMPLING LOCATION

SCALE IN FEET (APPROXIMATE)



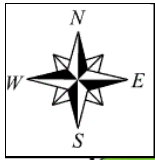
**Hranica Landfill
Superfund Site**

**Figure 2
Site Plan**

US EPA
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103



Adapted from GES O&M Report Figure 2-6



LEGEND

- SITE BOUNDARY
- - - APPROXIMATE LIMITS OF PROPERTY LINE
- WOODED AREAS
- STREAM
- MONITORING WELL
- ABANDONED MONITORING WELL
- GROUNDWATER FLOW
- 1,148 --- GROUNDWATER CONTOUR (feet)
- 1,148 - - - INFERRED GROUNDWATER CONTOUR (feet)
- (1,148.62) GROUNDWATER ELEVATION (feet)
- CONTOUR INTERVAL 1.0 (feet)

SCALE IN FEET (APPROXIMATE)
 0 120

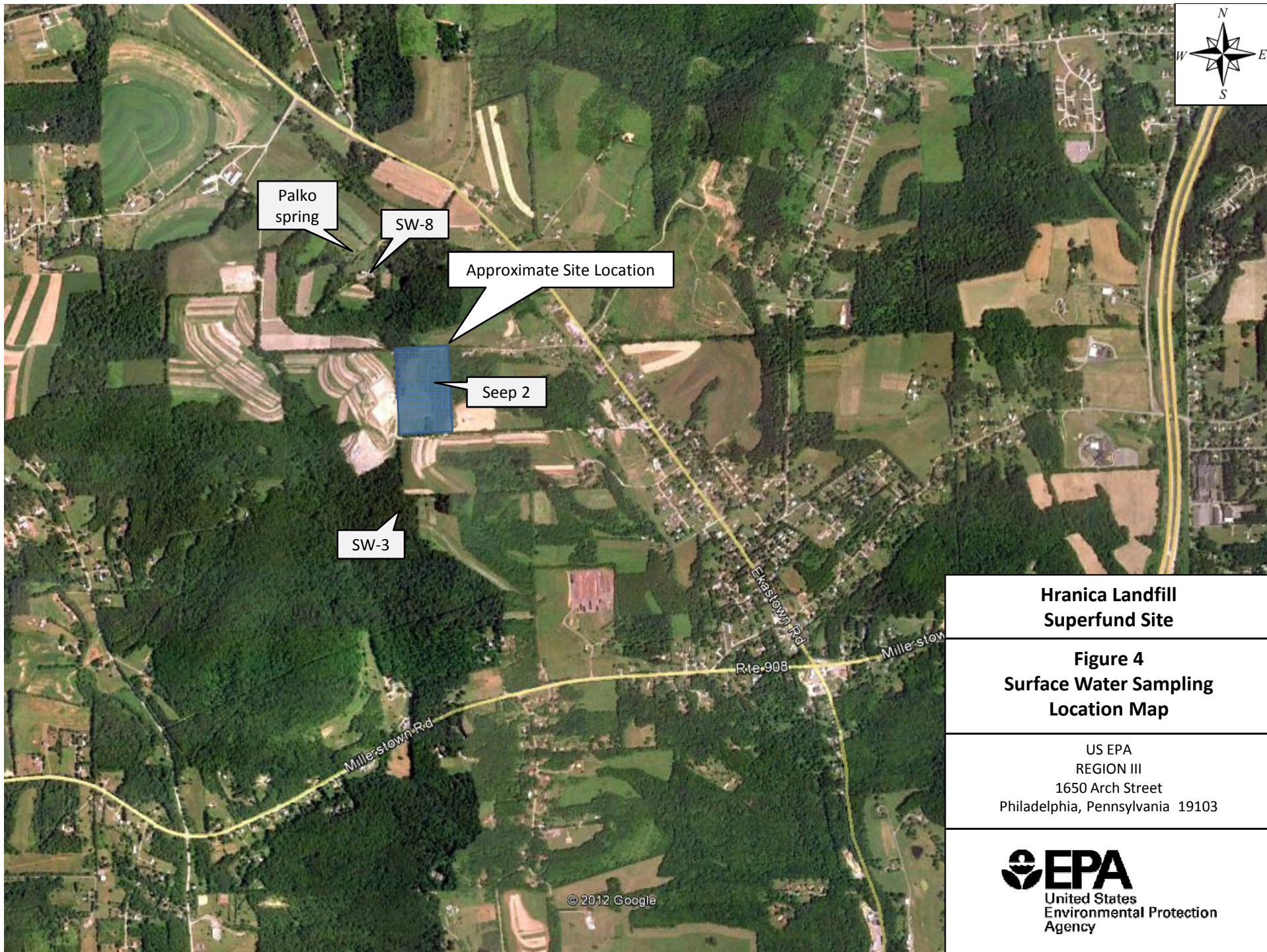
**Hranica Landfill
 Superfund Site**

**Figure 3
 Groundwater Flow
 Direction Map**

US EPA
 REGION III
 1650 Arch Street
 Philadelphia, Pennsylvania 19103



Adapted from GES O&M Report Figure 2-6



**Hranica Landfill
Superfund Site**

**Figure 4
Surface Water Sampling
Location Map**

US EPA
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103





LEGEND

- SITE BOUNDARY
- - - - - APPROXIMATE LIMITS OF PROPERTY LINE
- WOODED AREAS
- STREAM
- MONITORING WELL
- ⊗ ABANDONED MONITORING WELL
- GROUNDWATER SUPPLY WELL (LOCATION APPROXIMATE)
- GROUNDWATER WELL (OPERATIONAL - YES)
- GROUNDWATER WELL (OPERATIONAL - NO)
- NO GROUNDWATER WELL ON-SITE
- ⊗ SITE DID NOT RESPOND TO WELL SURVEY

GRAPHIC SCALE

120 0 60 120 240 480


(IN FEET)

1 inch = 100 ft (APPROXIMATE)

Hranica Landfill Superfund Site

Figure 5 Residential Well Location Map

US EPA
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103



United States Environmental Protection Agency

POLICE REPORT

ATTACHMENT 1

LC woman charged with check forgery

These items have been collected from various police departments.

Butler Police

10:59 a.m. Wednesday — Dominique M. Buzard, 23, of Butler was arrested after he allegedly tussled with police officers during an altercation at a home on Third Avenue.

Police were called to the home for a reported domestic dispute and found Buzard arguing with a woman. Officers three times told the defendant to stop "yelling and swearing," according to court documents, but he refused to listen.

When officers moved in to arrest Buzard, police said, he refused to be placed in handcuffs. The suspect was eventually taken to the ground and one of the officers placed his Taser but with no effect. A brief scuffle ensued before he was cuffed.

Police took him to the cruiser but again he acted up and refused to get into the car. Officers, documents said, had to force him into the car.

Buzard was arraigned on charges of resisting arrest and disorderly conduct, and later released on his own recognizance.

Wednesday — Police obtained a felony arrest warrant for Patrick Leroy Duncan, 38, of East Butler on charges he forged three checks from a city woman.

The alleged victim, who is related to Duncan through marriage, told police that the defendant had recently been staying at her home in the 300 block of Morton Avenue. She did not know that a check belonging to her and without her knowledge had been cashed for \$200, court documents said.

Once she received the check back from her bank, police said, she discovered that it had been made out to and endorsed by Duncan. He faces a felony charge of forgery.

Police in court papers noted that the suspect is also a fugitive who is wanted by state parole authorities.

Wednesday — Police charged Evan C. Parke, 22, of Butler with stealing from his employer. He is accused of taking a 50-dollar bill out of the cash drawer Jan. 5 while working a shift as a cashier at the Kmart store at Pullman Square.

The alleged theft was captured on store surveillance video, according to court documents. Police said Parke later admitted taking the money. He is charged with theft.

Wednesday — Joshua M. McBride, 25, of Butler was

charged with misdemeanor drug possession after police say they caught him last month with marijuana medication for which he did not have a prescription.

Police were investigating a stolen vehicle case about 12:45 p.m. Dec. 17 when they pulled over McBride during a traffic stop on West Wayne Street, court documents said. A subsequent search turned up a medicine bottle in his pants pocket.

The bottle, documents said, contained two Suboxone strips and marijuana. McBride is charged with possession of a controlled substance and a small amount of marijuana.

Tuesday — A felony arrest warrant was issued for a Warren County man accused of failing to return a rental car.

The suspect, Luke M. Sturdevant, 31, of Warren on Nov. 15 rented a 2015 Ford Fiesta from Hertz Rent A Car on North Monroe Street. In accordance with the lease agreement, police said, he was supposed to return it Nov. 22.

He didn't. The business made numerous attempts to contact Sturdevant, according to court documents, but with no luck. The attempts included a certified letter that was delivered to him Jan. 3.

Police eventually were able to reach the suspect by telephone. He told an officer he no longer had the car.

Sturdevant claimed he previously had asked a friend named "Brandon" to return the car. The defendant, however, did not know "Brandon's" last name, or his address, or his phone number, police said. He is charged with a felony count of theft of leased property.

Jan. 13 — Police charged Cameron D. Matteoni, 18, of Center Township with having drug contraband during a traffic stop about 9:40 a.m. Jan. 4 on Route 8 south. A search of the car, documents said, turned up a glass bong and two marijuana pipes.

Matteoni is charged with possession of drug paraphernalia, driving with a suspended license and a window screening violation.

12:21 a.m. Jan. 8 — Brandon A. Conti, 19, of New Castle was arrested for drunken driving after he crashed his vehicle in the 100 block of Morton Avenue.

Police eventually took the teenager for a breath test, which showed his blood-alcohol level was 0.166 percent, court documents said, or more than eight times the state's 0.02 per-

cent legal limit for someone under age 21.

Conti is charged with driving under the influence, DUI by a minor and underage drinking.

Butler Township Police

Thursday — Mark Dallen, 27, and Dakota Martinez, 26, both of Butler were charged in a Dec. 27 shoplifting incident at the Butler Commons' Walmart. The men are accused of trying to steal \$120 in merchandise from the store.

Dallen and Martinez are both charged with retail theft and conspiracy. 8:22 a.m. Wednesday — A 13-year-old student was caught with alcohol at the Butler Intermediate High School. Police said the student, who they did not identify, was cited for underage possession of alcohol.

State Police, Butler

7:58 a.m. Thursday — Lance A. Flowers, 27, of Butler was arrested for suspicion of driving under the influence of a controlled substance at Route 68 and South Duffy Road. Drugged driving charges are pending lab results.

Flowers' passenger, who police did not identify, was also arrested and placed in the Butler County Prison on an unspecified misdemeanor warrant.

Thursday — An unknown burglar made off with jewelry and currency from a couple's house on Main Street in West Sunbury. The break-in happened between 5:20 a.m. and 5 p.m. Anyone with information is asked to call police at 724-284-8100.

Wednesday — Alysha L. Malec, 25, of Butler was charged with drunken driving stemming from a Jan. 7 traffic stop in Center Township.

Police said they pulled over Malec about 1:05 a.m. at Route 8 and Glenwood Way after they saw her cross over the fog line and center line. She smelled strongly of alcohol, according to court documents.

She was arrested after failing field sobriety tests. A breath test showed her blood-alcohol level was 0.144 percent, documents said. A level of 0.08 percent is considered intoxicated under state law.

In addition to driving under the influence, Malec is charged with disregarding traffic lanes and careless driving.

Wednesday — Antoine R. Pollard, 27, of Butler was charged with having marijuana in connection with a Jan. 10 traffic stop on Route 8 at Mahood Road in Center Township. He was a passenger in the car.

Pollard is charged with possession of a small amount of marijuana.

Saturday — A pair of video game consoles and related accessories were stolen from a home in the 400 block of Oak Leaf Drive in Jefferson Township. The stolen property, belonging to a 17-year-old boy, includes a Nintendo Wii and a Sony PlayStation Vita.

The items are valued at \$1,000. A police report did not indicate if there are any suspects. Anyone with information is asked to call police.

State Police, Mercer

8:12 a.m. Jan. 10 — An upstate New York woman was hurt in the two-vehicle wreck in Plain Grove Township, Lawrence County.

The crash happened when car driven by Linda P. Laware, 68, of Attica, N.Y., and a sport utility vehicle driven by Joseph D. Ferraro, 56, of Pittsburgh collided on Interstate 79 south of Brent Road.

Ferraro, who was wearing a seat belt, was taken to Grove City Medical with apparent minor injuries. Police cited her for driving at an unsafe speed.

State Police, New Castle

4:55 a.m. Jan. 11 — Daniel D. Eberhardt, 54, of New Castle lost control of his pickup truck and struck a bridge rail on Route 422, just west of Old Butler Road in Slippery Rock Township, Lawrence County. Police said he was cited for driving at an unsafe speed.

By Amerigo Allegretto

Eagle Staff Writer

The victim had five starter checks in her purse and was waiting for new ones.

The victim said Rekasie, who according to the police report is the victim's cousin, had been at the victim's residence.

Two of the five starter checks went missing and were not given to Rekasie by the victim.

Rekasie faces a felony charge of forgery, and misdemeanor charges of theft and receiving stolen property.

She will be arraigned in county court on Feb. 28.

The bank alerted police to the possible crime and informed them the check was retained and not

COURTS

District Judge David Kovach

CRANBERRY TWP — These items have been collected from the office of District Judge David Kovach.

Douglas P. Frampton, 32, of Strattonville on Friday had his charges of bad checks held for county court.

Frampton allegedly wrote a bad check for \$5,383 in July 2016 to Groff Tractor & Equipment in Cranberry Township. After the check was returned to the company that same month, the company wrote a letter to Frampton demanding compensation. However, the letter was returned unclaimed. Frampton

will be arraigned in county court on Feb. 21.

Austin M. Edwards, 20, of Slippery Rock on Friday waived charges of driving under the influence, drug possession and retail theft stemming from an incident on Oct. 20. Edwards was allegedly found with marijuana in the Cranberry Township Walmart after driving erratically on Interstate 79 earlier in the day. Two triaxle trucks were forced to take evasive action onto the I-79 median with one of them getting stuck in the mud. Edwards also allegedly stole about \$35 worth of items from Walmart. He was arrested later that evening in Slippery Rock and charged with DUI.

ATTENTION TEACHERS!

Here at the Butler Eagle, we recognize how important it is that our youth is up-to-date on current events happening in our community, country and the world. We are EXCITED to be able to offer FREE copies of our paper to you for classroom use!

To arrange for your copies, just clip and send this form back to us. Wishing you and your class a year full of learning and fun!

EAGLE IN EDUCATION ORDER FORM

School Name _____

Address _____

City _____ Zip _____

Phone _____

Teacher's Name _____

Grade _____

Number of Newspapers Requested _____

Days of Week to Deliver (up to 3) _____

Mail to:
NIE c/o Butler Eagle
P.O. Box 1542
Butler, PA 16003

EPA REVIEWS CLEANUP Hranica Landfill

The U.S. Environmental Protection Agency (EPA) is conducting a Five-Year Review of the Hranica Landfill Superfund Site located in Buffalo Township. EPA inspects sites regularly to ensure that cleanups conducted remain fully protective of public health and the environment. This site's cleanup construction was completed in 1994, with several Five-Year Reviews following. The site was removed from the National Priorities List of the nation's most hazardous waste sites in 1997. EPA's most recent Five-Year Review in 2012 determined that the remedy continues to be protective in the long-term. Results of this current Five-Year Review will be available to the public by May 2017.

To access results of the review (starting May 2017):
<http://epa.gov/5yr>

To learn detailed site and contact information:
<http://go.usa.gov/x9gkN>

To ask questions or provide site related information:
Contact: Carrie Deitzel Phone: 215-814-5525
Email: deitzel.carrie@epa.gov

Protecting human health and the environment

ATTACHMENT 2

Table 4

GROUNDWATER ANALYTICAL RESULTS

Hranica Landfill Superfund Site
Butler County, Pennsylvania

Chemical Name	USEPA MCL/SMCL (µg/L)	Date	MW-1I (µg/L)	MW-1D (µg/L)	MW-2I (µg/L)	MW-3I (µg/L)	MW-3S (µg/L)	MW-4I (µg/L)	MW-4D (µg/L)	MW-5I (µg/L)	MW-5S (µg/L)	Field Blank (µg/L)	256 Ekastown Rd (µg/L)	
<i>Volatile Organic Compounds (USEPA SW-846 Method 8260B)</i>														
Acetone	---	5/23/2001	2.9 JB	3.0 JB	-	-	-	8.8 JB	-	-	-	-	-	
		5/24/2001	-	-	2.9 JB	1.9 J	590 B	-	5.0 JB	4.7 JB / 3.8 JB	3.7 JB	-	-	
		5/21/2002	3.0 JB / 2.5 JB	2.9 JB	-	-	-	-	-	-	-	-	-	-
		5/22/2002	-	-	1.7 JB	2.6 JB	740 JB	1.9 JB	3.0 JB	4.3 JB	3.2 JB	-	-	-
		5/13/2003	-	-	<10	<10	<500	<10 / <10	<10	<10	<10	<10	-	-
		6/2/2004	-	-	<10	<10 / <10	<500	<10	<10	<10	<10	<10	-	-
		5/31/2005	-	-	<10	<10	<10	<10	<10	<10	<10	<10	-	-
		5/31/05 dup	-	-	-	-	<10	-	-	-	-	-	-	-
		5/10/2006	-	-	<10	<10 / <10	41	<10	<10	<10	<10	<10	<10	-
		12/3/2008	-	-	<5.0	<5.0 / <5.0	-	-	-	-	-	-	<5.0	-
		12/4/2008	-	-	-	-	-	<5.0	6.9	<5.0	<5.0	<5.0	-	<5.0
		12/9/2008	-	-	-	-	-	200 E	-	-	-	-	-	-
		5/21/2009	-	-	<5.0	<5.0	<2,500	-	-	<5.0	<5.0	<5.0	<5.0	-
		5/22/2009	-	-	-	-	-	-	<5.0	<5.0	-	-	-	-
		5/25/2010	-	-	11	<5.0	<2,500	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		5/25/10 dup	-	-	-	-	-	-	-	-	-	-	-	<5.0
		5/10/2011	-	-	<5.0	<5.0	<500	<5.0	<5.0	<5.0	<5.0	23	<5	<5
		5/10/2011 dup	-	-	<5.0	<5.0	-	-	-	-	-	-	-	-
		5/1/2012	-	-	<5.0	<5.0	<1,300	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		5/2/2012 dup	-	-	-	-	-	-	<5.0	-	-	-	-	-
		5/13/2013 / 05/14/2013	-	-	<5.0	2.9 J	<1,300	<5.0	2.5 J	3.0 J	<5.0	<5.0	<5.0	<5.0
		5/13/2013 dup	-	-	-	-	<1,300	-	-	-	-	-	-	-
		5/19/2014 / 5/20/2014	-	-	<5.0	14	<1,300	2.9 J	<5.0	<5.0	<5.0	<5.0	3.1 J	<5.0
		5/20/2014 dup	-	-	-	-	<1,300	-	-	-	-	-	-	-
		5/7/2015 / 05/07/2015 dup	-	-	<5.0	3.2 J	<130	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		5/24/2016 / 05/24/2016 dup	-	-	<20	11 J	<500	<20	7 J	<20	<20	<20	<20	-
			-	-	<500	-	-	-	-	-	-	-		
Benzene	5	5/23/2001	<10	<10	-	-	-	210	-	-	-	-	-	
		5/24/2001	-	-	<10	<10	220	-	<10	<10 / <10	<10	-	-	
		5/21/2002	<10 / <10	<10	-	-	-	-	-	-	-	-	-	
		5/22/2002	-	-	<10	<10	290 J	<10	<10	<10	<10	<10	-	
		5/13/2003	-	-	<10	<10	200 J	<10 / <10	<10	<10	<10	<10	-	
		6/2/2004	-	-	<10	<10 / <10	160 J	<10	<10	<10	<10	<10	-	
		5/31/2005	-	-	<5.0	<5.0	290	<5.0	<5.0	<5.0	<5.0	<5.0	-	
		5/31/05 dup	-	-	-	-	310	-	-	-	-	-	-	

Table 4

GROUNDWATER ANALYTICAL RESULTS

Hranica Landfill Superfund Site
Butler County, Pennsylvania

Chemical Name	USEPA MCL/SMCL (µg/L)	Date	MW-1I (µg/L)	MW-1D (µg/L)	MW-2I (µg/L)	MW-3I (µg/L)	MW-3S (µg/L)	MW-4I (µg/L)	MW-4D (µg/L)	MW-5I (µg/L)	MW-5S (µg/L)	Field Blank (µg/L)	256 Ekastown Rd (µg/L)	
<i>Volatile Organic Compounds (USEPA SW-846 Method 8260B)</i>														
Benzene (continued)		5/10/2006	-	-	<5.0	<5.0 / <5.0	390	<5.0	<5.0	<5.0	<5.0	<5.0	-	
		12/3/2008	-	-	<1.0	<1.0 / <1.0	-	-	-	-	-	-	<1.0	-
		12/4/2008	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0
		12/9/2008	-	-	-	-	2,200 E	-	-	-	-	-	-	-
		5/21/2009	-	-	0.13 J	<1.0	310 J	-	-	<1.0	<1.0	<1.0	<1.0	-
		5/22/2009	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	-	-
		5/25/2010	-	-	<1.0	<1.0	280J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/25/2010 dup	-	-	-	-	-	-	-	-	-	-	-	<1.0
		5/10/2011	-	-	<1.0	<1.0	190	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/10/2011 dup	-	-	<1.0	<1.0	-	-	-	-	-	-	-	-
		5/1/2012	-	-	<1.0	<1.0	140 J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/2/2012 dup	-	-	-	-	-	<1.0	-	-	-	-	-	-
		5/13/2013 / 05/14/2013	-	-	<1.0	<1.0	100 J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/13/2013 dup	-	-	-	-	-	-	-	-	-	-	-	-
		5/19/2014 / 5/20/2014	-	-	<1.0	<1.0	110 J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/20/2014 dup	-	-	-	-	110 J	-	-	-	-	-	-	-
		5/7/2015 / 05/07/2015 dup	-	-	<1.0	<1.0	380	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/24/2016 / 05/24/2016 dup	-	-	<5	<5	97 J	<5	<5	<5	<5	<5	<5	<5
						96 J								
2-Butanone (Methyl Ethyl Ketone)	--	5/23/2001	<10	<10	<10	<10	-	<20	-	-	-	-	-	
		5/24/2001	-	-	<10	<10	1,600	-	<10	<10 / <10	<10	-	-	
		5/21/2002	<10 / <10	<10	-	-	-	-	-	-	-	-	-	-
		5/22/2002	-	-	<10	<10	580 J	<10	<10	<10	<10	<10	-	-
		5/13/2003	-	-	<10	<10	<500	<10 / <10	<10	<10	<10	<10	-	-
		6/2/2004	-	-	<10	<10 / <10	<500	<10	<10	<10	<10	<10	-	-
		5/31/2005	-	-	<10	<10	<10	<10	<10	<10	<10	<10	-	-
		5/31/05 dup	-	-	-	-	<10	-	-	-	-	-	-	-
		5/10/2006	-	-	<10	<10 / <10	100	<10	<10	<10	<10	<10	<10	-
		12/3/2008	-	-	<5.0	<5.0 / <5.0	-	-	-	-	-	-	<5.0	-
		12/4/2008	-	-	-	-	-	<5.0	<5.0	<5.0	<5.0	<5.0	-	<5.0
		12/9/2008	-	-	-	-	330 E	-	-	-	-	-	-	-
		5/21/2009	-	-	<5.0	<5.0	<2,500	-	-	<5.0	<5.0	<5.0	<5.0	-
		5/22/2009	-	-	-	-	-	<5.0	<5.0	<5.0	<5.0	<5.0	-	-
5/25/2010	-	-	<5.0	<5.0	<2500	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0		
5/25/10 dup	-	-	-	-	-	-	-	-	-	-	-	<5.0		

Table 4

GROUNDWATER ANALYTICAL RESULTS

Hranica Landfill Superfund Site
Butler County, Pennsylvania

Chemical Name	USEPA MCL/SMCL (µg/L)	Date	MW-1I (µg/L)	MW-1D (µg/L)	MW-2I (µg/L)	MW-3I (µg/L)	MW-3S (µg/L)	MW-4I (µg/L)	MW-4D (µg/L)	MW-5I (µg/L)	MW-5S (µg/L)	Field Blank (µg/L)	256 Ekastown Rd (µg/L)
<i>Volatile Organic Compounds (USEPA SW-846 Method 8260B)</i>													
2-Butanone (continued) (Methyl Ethyl Ketone)		5/10/2011	-	-	<5.0	<5.0	<500	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		5/10/2011 dup	-	-	<5.0	-	-	-	-	-	-	-	-
		5/1/2012	-	-	<5.0	<5.0	<1300	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		5/2/2012 dup	-	-	-	-	-	<5.0	-	-	-	-	-
		5/13/2013 / 05/14/2013	-	-	<5.0	<5.0	<1300	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		5/13/2013 dup	-	-	-	-	<1,300	-	-	-	-	-	-
		5/19/2014 / 5/20/2014	-	-	<5.0	<5.0	<1,300	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		5/20/2014 dup	-	-	-	-	<1,300	-	-	-	-	-	-
		5/7/2015 / 05/07/2015 dup	-	-	<5.0	<5.0	130	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		5/24/2016 / 05/24/2016 dup	-	-	<5	<5	<130	<5	<5	<5	<5	<5	<5
Chlorobenzene	100	5/23/2001	-	-	-	-	-	-	-	-	-	-	-
		5/24/2001	-	-	-	-	-	-	-	-	-	-	-
		5/21/2002	-	-	-	-	-	-	-	-	-	-	-
		5/22/2002	-	-	-	-	-	-	-	-	-	-	-
		5/13/2003	-	-	-	-	-	-	-	-	-	-	-
		6/2/2004	-	-	-	-	-	-	-	-	-	-	-
		5/31/2005	-	-	-	-	-	-	-	-	-	-	-
		5/31/05 dup	-	-	-	-	-	-	-	-	-	-	-
		5/10/2006	-	-	-	-	-	-	-	-	-	-	-
		12/3/2008	-	-	<1.0	<1.0 / <1.0	-	-	-	-	-	-	<1.0
		12/4/2008	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		12/9/2008	-	-	-	-	13	-	-	-	-	-	-
		5/21/2009	-	-	<1.0	<1.0	<500	-	-	<1.0	<1.0	<1.0	<1.0
		5/22/2009	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/25/2010	-	-	<1.0	<1.0	<500	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/25/10 dup	-	-	-	-	-	-	-	-	-	-	<1.0
		5/10/2011	-	-	<1.0	<1.0	<100	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/10/2011 dup	-	-	<1.0	-	-	-	-	-	-	-	-
		5/1/2012	-	-	<1.0	<1.0	<250	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/2/2012 dup	-	-	-	-	-	<1.0	-	-	-	-	-
5/13/2013 / 05/14/2013	-	-	<1.0	<1.0	<250	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		
5/13/2013 dup	-	-	-	-	<250	-	-	-	-	-	-		

Table 4

GROUNDWATER ANALYTICAL RESULTS

Hranica Landfill Superfund Site
Butler County, Pennsylvania

Chemical Name	USEPA MCL/SMCL (µg/L)	Date	MW-1I (µg/L)	MW-1D (µg/L)	MW-2I (µg/L)	MW-3I (µg/L)	MW-3S (µg/L)	MW-4I (µg/L)	MW-4D (µg/L)	MW-5I (µg/L)	MW-5S (µg/L)	Field Blank (µg/L)	256 Ekastown Rd (µg/L)
<i>Volatile Organic Compounds (USEPA SW-846 Method 8260B)</i>													
Chlorobenzene (continued)		5/19/2014 / 5/20/2014	-	-	<1.0	<1.0	<250	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/20/2014 dup	-	-	-	-	<250	-	-	-	-	-	-
		5/7/2015 / 05/07/2015 dup	-	-	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/24/2016 / 05/24/2016 dup	-	-	<5	<5	<130	<5	<5	<5	<5	<5	-
			-	-	-	-	<130	-	-	-	-	-	-
Chloroform	70 ^(c)	5/23/2001	<10	<10	-	-	-	<20	-	-	-	-	-
		5/24/2001	-	-	<10	<10	<200	-	<10	<10 / <10	<10	-	-
		5/21/2002	<10 / <10	<10	-	-	-	-	-	-	-	-	-
		5/22/2002	-	-	<10	<10	<1,000	<10	<10	<10	<10	-	-
		5/13/2003	-	-	<10	<10	<500	<10 / <10	<10	<10	<10	-	-
		6/2/2004	-	-	<10	<10 / <10	<500	<10	<10	<10	<10	-	-
		5/31/2005	-	-	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	-	-
		5/31/05 dup	-	-	-	-	<5.0	-	-	-	-	-	-
		5/10/2006	-	-	<5.0	<5.0 / <5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	-
		12/3/2008	-	-	<1.0	<1.0 / <1.0	-	-	-	-	-	<1.0	-
		12/4/2008	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	-	<1.0
		12/9/2008	-	-	-	-	<1.0	-	-	-	-	-	-
		5/21/2009	-	-	<1.0	<1.0	<500	-	<1.0	<1.0	<1.0	<1.0	-
		5/22/2009	-	-	-	-	-	<1.0	<1.0	-	-	-	-
		5/25/2010	-	-	<1.0	<1.0	<500	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/25/10 dupe	-	-	-	-	-	-	-	-	-	-	<1.0
		5/10/2011	-	-	<1.0	<1.0	<100	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/10/2011 dup	-	-	<1.0	<1.0	-	-	-	-	-	-	-
		5/1/2012	-	-	<1.0	<1.0	<250	<1.0	<1.0	<1.0	<1.0	11.0	<1.0
		5/2/2012 dup	-	-	-	-	-	<1.0	-	-	-	-	-
		5/13/2013 / 05/14/2013	-	-	<1.0	<1.0	<250	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/13/2013 dup	-	-	-	-	<250	-	-	-	-	-	-
		5/19/2014 / 5/20/2014	-	-	<1.0	<1.0	<250	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/20/2014 dup	-	-	-	-	<250	-	-	-	-	-	-
		5/7/2015 / 05/07/2015 dup	-	-	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/24/2016 / 05/24/2016 dup	-	-	<5	<5	<130	<5	<5	<5	<5	<5	-
			-	-	-	-	<130	-	-	-	-	-	-

Table 4

GROUNDWATER ANALYTICAL RESULTS

Hranica Landfill Superfund Site
Butler County, Pennsylvania

Chemical Name	USEPA MCL/SMCL (µg/L)	Date	MW-1I (µg/L)	MW-1D (µg/L)	MW-2I (µg/L)	MW-3I (µg/L)	MW-3S (µg/L)	MW-4I (µg/L)	MW-4D (µg/L)	MW-5I (µg/L)	MW-5S (µg/L)	Field Blank (µg/L)	256 Ekastown Rd (µg/L)	
<i>Volatile Organic Compounds (USEPA SW-846 Method 8260B)</i>														
1,4-Dichlorobenzene (p-Dichlorobenzene)	75	5/23/2001	-	-	-	-	-	-	-	-	-	-	-	
		5/24/2001	-	-	-	-	-	-	-	-	-	-	-	
		5/21/2002	-	-	-	-	-	-	-	-	-	-	-	-
		5/22/2002	-	-	-	-	-	-	-	-	-	-	-	-
		5/13/2003	-	-	-	-	-	-	-	-	-	-	-	-
		6/2/2004	-	-	-	-	-	-	-	-	-	-	-	-
		5/31/2005	-	-	-	-	-	-	-	-	-	-	-	-
		5/31/05 dup	-	-	-	-	-	-	-	-	-	-	-	-
		5/10/2006	-	-	-	-	-	-	-	-	-	-	-	-
		12/3/2008	-	-	<1.0	<1.0 / <1.0	-	-	-	-	-	-	<1.0	-
		12/4/2008	-	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	-	<1.0
		12/9/2008	-	-	-	-	-	0.54 J	-	-	-	-	-	-
		5/21/2009	-	-	<1.0	<1.0	<500	-	-	<1.0	<1.0	<1.0	<1.0	-
		5/22/2009	-	-	-	-	-	-	<1.0	<1.0	-	-	-	-
		5/25/2010	-	-	<1.0	<1.0	<500	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/25/10 dup	-	-	-	-	-	-	-	-	-	-	-	<1.0
		5/10/2011	-	-	<1.0	<1.0	<100	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/10/2011 dup	-	-	<1.0	<1.0	-	-	-	-	-	-	-	-
		5/1/2012	-	-	<1.0	<1.0	<250	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/2/2012 dup	-	-	-	-	-	-	<1.0	-	-	-	-	-
		5/13/2013 / 05/14/2013	-	-	<1.0	<1.0	<250	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/13/2013 dup	-	-	-	-	-	<250	-	-	-	-	-	-
		5/19/2014 / 5/20/2014	-	-	<1.0	<1.0	<250	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
5/20/2014 dup	-	-	-	-	-	<250	-	-	-	-	-	-		
5/7/2015 / 05/07/2015 dup	-	-	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		
5/24/2016 / 05/24/2016 dup	-	-	<5	<5	<130	<130	<5	<5	<5	<5	<5	<5		
Ethylbenzene	700	5/23/2001	<10	<10	-	-	-	220	-	-	-	-	-	
		5/24/2001	-	-	<10	<10	6,400 D	-	<10	<10 / <10	<10	-	-	
		5/21/2002	<10 / <10	<10	-	-	-	-	-	-	-	-	-	
		5/22/2002	-	-	<10	<10	13,000	<10	<10	4.2 J	4.6 J	-	-	
		5/13/2003	-	-	<10	<10	7,400	<10 / <10	<10	<10	<10	-	-	
		6/2/2004	-	-	<10	<10 / <10	6,800	<10	<10	<10	<10	-	-	
		5/31/2005	-	-	<5.0	<5.0	8,100	<5.0	<5.0	<5.0	<5.0	-	-	
		5/31/05 dup	-	-	-	-	9,600	-	-	-	-	-	-	

Table 4

GROUNDWATER ANALYTICAL RESULTS

Hranica Landfill Superfund Site
Butler County, Pennsylvania

Chemical Name	USEPA MCL/SMCL (µg/L)	Date	MW-1I (µg/L)	MW-1D (µg/L)	MW-2I (µg/L)	MW-3I (µg/L)	MW-3S (µg/L)	MW-4I (µg/L)	MW-4D (µg/L)	MW-5I (µg/L)	MW-5S (µg/L)	Field Blank (µg/L)	256 Ekastown Rd (µg/L)	
<i>Volatile Organic Compounds (USEPA SW-846 Method 8260B)</i>														
Ethylbenzene (continued)		5/10/2006	-	-	<5.0	<5.0 / <5.0	14,000	<5.0	<5.0	<5.0	<5.0	<5.0	-	
		12/3/2008	-	-	<1.0	<1.0 / <1.0	-	-	-	-	-	-	<1.0	-
		12/4/2008	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0
		12/9/2008	-	-	-	-	15,000 E	-	-	-	-	-	-	-
		5/21/2009	-	-	10	<1.0	9,900	-	-	<1.0	<1.0	<1.0	<1.0	-
		5/22/2009	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	-	-
		5/25/2010	-	-	<1.0	<1.0	1,000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/25/10 dup	-	-	-	-	-	-	-	-	-	-	-	<1.0
		5/10/2011	-	-	<1.0	<1.0	8,300	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/10/2011 dup	-	-	<1.0	<1.0	-	-	-	-	-	-	-	-
		5/1/2012	-	-	<1.0	<1.0	4,500	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/2/2012 dup	-	-	-	-	-	<1.0	-	-	-	-	-	-
		5/13/2013 / 05/14/2013	-	-	<1.0	<1.0	3,500	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/13/2013 dup	-	-	-	-	3,600	-	-	-	-	-	-	-
		5/19/2014 / 5/20/2014	-	-	<1.0	<1.0	4,600	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/20/2014 dup	-	-	-	-	4,800	-	-	-	-	-	-	-
		5/7/2015 / 05/07/2015 dup	-	-	<1.0	<1.0	4,500	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/24/2016 / 05/24/2016 dup	-	-	<5	<5	3,700	-	-	-	-	-	-	-
					2,100	<5	<5	<5	<5	<5	<5	<5	-	
					2,100	-	-	-	-	-	-	-	-	
Isopropylbenzene (Cumene)	--	5/23/2001	-	-	-	-	-	-	-	-	-	-	-	
		5/24/2001	-	-	-	-	-	-	-	-	-	-	-	
		5/21/2002	-	-	-	-	-	-	-	-	-	-	-	
		5/22/2002	-	-	-	-	-	-	-	-	-	-	-	
		5/13/2003	-	-	-	-	-	-	-	-	-	-	-	
		6/2/2004	-	-	-	-	-	-	-	-	-	-	-	
		5/31/2005	-	-	-	-	-	-	-	-	-	-	-	
		5/31/05 dup	-	-	-	-	-	-	-	-	-	-	-	
		5/10/2006	-	-	-	-	-	-	-	-	-	-	-	
		12/3/2008	-	-	<1.0	<1.0 / <1.0	-	-	-	-	-	-	<1.0	-
		12/4/2008	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0
		12/9/2008	-	-	-	-	490 E	-	-	-	-	-	-	
		5/21/2009	-	-	<1.0	<1.0	2,600	-	-	<1.0	<1.0	<1.0	<1.0	-
		5/22/2009	-	-	-	-	-	<1.0	<1.0	-	-	-	-	
5/25/2010	-	-	<1.0	<1.0	<500	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		
5/25/10 dup	-	-	-	-	-	-	-	-	-	-	-	<1.0		

Table 4

GROUNDWATER ANALYTICAL RESULTS

Hranica Landfill Superfund Site
Butler County, Pennsylvania

Chemical Name	USEPA MCL/SMCL (µg/L)	Date	MW-1I (µg/L)	MW-1D (µg/L)	MW-2I (µg/L)	MW-3I (µg/L)	MW-3S (µg/L)	MW-4I (µg/L)	MW-4D (µg/L)	MW-5I (µg/L)	MW-5S (µg/L)	Field Blank (µg/L)	256 Ekastown Rd (µg/L)
<i>Volatile Organic Compounds (USEPA SW-846 Method 8260B)</i>													
Isopropylbenzene (Cumene) (continued)		5/10/2011	-	-	<1.0	<1.0	<100	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/10/2011 dup	-	-	<1.0	-	-	-	-	-	-	-	-
		5/1/2012	-	-	<1.0	<1.0	<250	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/2/2012 dup	-	-	-	-	-	<1.0	-	-	-	-	-
		5/13/2013 / 05/14/2013	-	-	<1.0	<1.0	<250	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/13/2013 dup	-	-	-	-	<250	-	-	-	-	-	-
		5/19/2014 / 5/20/2014	-	-	<1.0	<1.0	<250	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/20/2014 dup	-	-	-	-	<250	-	-	-	-	-	-
		5/7/2015 / 05/07/2015 dup	-	-	<1.0	<1.0	54	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/24/2016 / 05/24/2016 dup	-	-	<5	<5	29 J	<5	<5	<5	<5	<5	<5
						30 J							
4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	---	5/23/2001	<10	<10	-	-	-	<20	-	-	-	-	-
		5/24/2001	-	-	<10	<10	7,300 D	-	<10	<10 / <10	2.0 J	-	-
		5/21/2002	<10 / <10	<10	-	-	-	-	-	-	-	-	-
		5/22/2002	-	-	<10	<10	5,000	<10	<10	<10	<10	<10	-
		5/13/2003	-	-	<10	<10	<500	<10 / <10	<10	<10	<10	<10	-
		6/2/2004	-	-	<10	<10 / <10	<500	<10	<10	<10	<10	<10	-
		5/31/2005	-	-	<10	<10	<10	<10	<10	<10	<10	<10	-
		5/31/05 dup	-	-	-	-	10	-	-	-	-	-	-
		5/10/2006	-	-	<10	<10 / <10	<1,000	<10	<10	<10	<10	<10	<10
		12/3/2008	-	-	<5.0	<5.0 / <5.0	-	-	-	-	-	-	<5.0
		12/4/2008	-	-	-	-	-	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		12/9/2008	-	-	-	-	9,300 E	-	-	-	-	-	-
		5/21/2009	-	-	0.59 J	<5.0	2,600	-	-	<5.0	<5.0	<5.0	<5.0
		5/22/2009	-	-	-	-	-	<5.0	<5.0	<5.0	<5.0	<5.0	-
		5/25/2010	-	-	<5.0	<5.0	<2500	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		5/25/10 dup	-	-	-	-	-	-	-	-	-	-	<5.0
		5/10/2011	-	-	<5.0	<5.0	<500	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		5/10/2011 dup	-	-	<5.0	-	-	-	-	-	-	-	-
		5/1/2012	-	-	<5.0	<5.0	<1300	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		5/2/2012 dup	-	-	-	-	-	<5.0	-	-	-	-	-
5/13/2013 / 05/14/2013	-	-	<5.0	<1.0	<1300	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0		
5/13/2013 dup	-	-	-	-	<1,300	-	-	-	-	-	-		

Table 4

GROUNDWATER ANALYTICAL RESULTS

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Butler County, Pennsylvania

Chemical Name	USEPA MCL/SMCL (µg/L)	Date	MW-1I (µg/L)	MW-1D (µg/L)	MW-2I (µg/L)	MW-3I (µg/L)	MW-3S (µg/L)	MW-4I (µg/L)	MW-4D (µg/L)	MW-5I (µg/L)	MW-5S (µg/L)	Field Blank (µg/L)	256 Ekastown Rd (µg/L)	
<i>Volatile Organic Compounds (USEPA SW-846 Method 8260B)</i>														
4-Methyl-2-pentanone (Methyl Isobutyl Ketone) (continued)		5/19/2014 / 5/20/2014	-	-	<5.0	<5.0	220 J	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
		5/20/2014 dup	-	-	-	-	250 J	-	-	-	-	-	-	
		5/7/2015 / 05/07/2015 dup	-	-	<5.0	<5.0	1700	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
		5/24/2016 / 05/24/2016 dup	-	-	<5	<5	290	<5	<5	<5	<5	<5	<5	
			-	-	-	-	310	-	-	-	-	-	-	
Toluene	1,000	5/23/2001	<10	<10	-	-	-	5.8 J	-	-	-	-	-	
		5/24/2001	-	-	<10	<10	1,300	-	<10	<10 / <10	<10	-	-	
		5/21/2002	<10 / <10	<10	-	-	-	-	-	-	-	-	-	-
		5/22/2002	-	-	<10	<10	3,500	<10	<10	<10	<10	<10	-	-
		5/13/2003	-	-	<10	<10	140 J	<10 / <10	<10	<10	<10	<10	-	-
		6/2/2004	-	-	<10	<10 / <10	<500	<10	<10	<10	<10	<10	-	-
		5/31/2005	-	-	<5.0	<5.0	78	<5.0	<5.0	<5.0	<5.0	<5.0	-	-
		5/31/05 dup	-	-	-	-	83	-	-	-	-	-	-	-
		5/10/2006	-	-	<5.0	<5.0 / <5.0	260	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	-
		12/3/2008	-	-	<1.0	<1.0 / <1.0	-	-	-	-	-	-	<1.0	-
		12/4/2008	-	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	-	<1.0
		12/9/2008	-	-	-	-	3,000 E	-	-	-	-	-	-	-
		5/21/2009	-	-	.064 J	<1.0	970	-	-	<1.0	<1.0	<1.0	<1.0	<1.0
		5/22/2009	-	-	-	-	-	-	<1.0	<1.0	-	-	-	-
		5/25/2010	-	-	<1.0	<1.0	<500	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.22 J
		5/25/10 dup	-	-	-	-	-	-	-	-	-	-	-	0.22J
		5/10/2011	-	-	<1.0	<1.0	<100	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/10/2011 dup	-	-	<1.0	<1.0	-	-	-	-	-	-	-	-
		5/1/2012	-	-	<1.0	<1.0	<250	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.23 J
		5/2/2012 dup	-	-	-	-	-	-	<1.0	-	-	-	-	-
		5/13/2013 / 05/14/2013	-	-	<1.0	<1.0	<250	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/13/2013 dup	-	-	-	-	<250	-	-	-	-	-	-	-
		5/19/2014 / 5/20/2014	-	-	<1.0	<1.0	250	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
5/20/2014 dup	-	-	-	-	270	-	-	-	-	-	-	-		
5/7/2015 / 05/07/2015 dup	-	-	<1.0	<1.0	750	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		
5/24/2016 / 05/24/2016 dup	-	-	<5	<5	200	<5	<5	<5	<5	<5	<5	<5		
			-	-	-	-	200	-	-	-	-	-	-	

Table 4

GROUNDWATER ANALYTICAL RESULTS

Hranica Landfill Superfund Site
Butler County, Pennsylvania

Chemical Name	USEPA MCL/SMCL (µg/L)	Date	MW-1I (µg/L)	MW-1D (µg/L)	MW-2I (µg/L)	MW-3I (µg/L)	MW-3S (µg/L)	MW-4I (µg/L)	MW-4D (µg/L)	MW-5I (µg/L)	MW-5S (µg/L)	Field Blank (µg/L)	256 Ekastown Rd (µg/L)	
<i>Volatile Organic Compounds (USEPA SW-846 Method 8260B)</i>														
Xylenes (total)	10,000	5/23/2001	<10	<10	-	-	-	340	-	-	-	-	-	
		5/24/2001	-	-	<10	<10	10,000	-	<10	<10 / <10	<10	-	-	
		5/21/2002	<10 / <10	<10	-	-	-	-	-	-	-	-	-	-
		5/22/2002	-	-	<10	1.5 JB	35,000	2.0 JB	<10	13	13	-	-	
		5/13/2003	-	-	<10	<10	11,000	<10 / <10	<10	<10	<10	-	-	
		6/2/2004	-	-	<10	<10 / <10	4,100	<10	<10	<10	<10	-	-	
		5/31/2005	-	-	<5.0	<5.0	9,900	<5.0	<5.0	<5.0	<5.0	-	-	
		5/31/05 dup	-	-	-	-	12,000	-	-	-	-	-	-	
		5/10/2006	-	-	<5.0	<5.0 / <5.0	22,000	<5.0	<5.0	<5.0	<5.0	<5.0	-	
		12/3/2008	-	-	<3.0	<3.0 / <3.0	-	-	-	-	-	<3.0	-	
		12/4/2008	-	-	-	-	-	<3.0	<3.0	<3.0	<3.0	-	<3.0	
		12/9/2008	-	-	-	-	19,000 E	-	-	-	-	-	-	
		5/21/2009	-	-	22	<3.0	19,000	-	<3.0	<3.0	<3.0	<3.0	-	
		5/22/2009	-	-	-	-	-	<3.0	<3.0	<3.0	<3.0	-	-	
		5/25/2010	-	-	<3.0	<3.0	16,000	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	
		5/25/10 dup	-	-	-	-	-	-	-	-	-	-	<3.0	
		5/10/2011	-	-	<3.0	<3.0	7,100	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	
		5/10/2011 dup	-	-	<3.0	<3.0	-	-	-	-	-	-	-	
		5/1/2012	-	-	<3.0	<3.0	2,400	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	
		5/2/2012 dup	-	-	-	-	-	<3.0	-	-	-	-	-	
		5/13/2013 / 05/14/2013	-	-	<3.0	<1.0	1,500	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	
		5/13/2013 dup	-	-	-	-	1,500	-	-	-	-	-	-	
5/19/2014 / 5/20/2014	-	-	<3.0	<3.0	4,500	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0			
5/20/2014 dup	-	-	-	-	4,700	-	-	-	-	-	-			
5/7/2015 / 05/07/2015 dup	-	-	<3.0	<3.0	4,400	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0			
5/24/2016 / 05/24/2016 dup	-	-	<10	<10	2,900	<10	<10	<10	<10	<10	<10			
Dichlorodifluoromethane (Freon 12)	--	5/23/2001	-	-	-	-	-	-	-	-	-	-		
		5/24/2001	-	-	-	-	-	-	-	-	-	-		
		5/21/2002	-	-	-	-	-	-	-	-	-	-		
		5/22/2002	-	-	-	-	-	-	-	-	-	-		
		5/13/2003	-	-	-	-	-	-	-	-	-	-		
		6/2/2004	-	-	-	-	-	-	-	-	-	-		
		5/31/2005	-	-	-	-	-	-	-	-	-	-		

Table 4

GROUNDWATER ANALYTICAL RESULTS

Hranica Landfill Superfund Site
Butler County, Pennsylvania

Chemical Name	USEPA MCL/SMCL (µg/L)	Date	MW-1I (µg/L)	MW-1D (µg/L)	MW-2I (µg/L)	MW-3I (µg/L)	MW-3S (µg/L)	MW-4I (µg/L)	MW-4D (µg/L)	MW-5I (µg/L)	MW-5S (µg/L)	Field Blank (µg/L)	256 Ekastown Rd (µg/L)	
<i>Volatile Organic Compounds (USEPA SW-846 Method 8260B)</i>														
Dichlorodifluoromethane (Freon 12) (continued)		5/31/05 dup	-	-	-	-	-	-	-	-	-	-	-	
		5/10/2006	-	-	-	-	-	-	-	-	-	-	-	
		12/3/2008	-	-	<1.0	<1.0 / <1.0	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		12/4/2008	-	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	-	<1.0
		12/9/2008	-	-	-	-	<1.0	-	-	-	-	-	-	-
		5/21/2009	-	-	<1.0	<1.0	<500	-	-	-	<1.0	<1.0	<1.0	-
		5/22/2009	-	-	-	-	-	<1.0	<1.0	<1.0	-	-	-	-
		5/25/2010	-	-	<1.0	<1.0	<500	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/25/10 dup	-	-	-	-	-	-	-	-	-	-	-	<1.0
		5/10/2011	-	-	<1.0	<1.0	<100	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/10/2011 dup	-	-	<1.0	-	-	-	-	-	-	-	-	-
		5/1/2012	-	-	<1.0	<1.0	<250	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/2/2012 dup	-	-	<1.0	-	-	-	<1.0	-	-	-	-	-
		5/13/2013 / 05/14/2013	-	-	<1.0	<1.0	<250	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/13/2013 dup	-	-	-	-	<250	-	-	-	-	-	-	-
		5/19/2014 / 5/20/2014	-	-	<1.0	<1.0	<250	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/20/2014 dup	-	-	-	-	<250	-	-	-	-	-	-	-
		5/7/2015 / 05/07/2015 dup	-	-	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		5/24/2016 / 05/24/2016 dup	-	-	<5	<5	<130	<5	<5	<5	<5	<5	<5	-
					-	-	-	-	<130	-	-	-	-	-
<i>Semi-Volatile Organic Compounds (USEPA SW-846 Method 8270C)</i>														
Di-n-butyl phthalate (Dibutyl phthalate)	--	5/23/2001	<10	<10	-	-	-	<10	-	-	-	-	-	
		5/24/2001	-	-	<10	<10	<50	-	<10	<10 / <10	<10	-	-	
		5/21/2002	<9.4 / <9.4	<9.4	-	-	-	-	-	-	-	-	-	-
		5/22/2002	-	-	<9.4	<9.4	7.8 J	<9.6	<9.8	<9.4	<9.8	<9.8	-	-
		5/13/2003	-	-	<9.5	<9.5	5.6 J	<9.5 / <9.7	<9.5	<10	<9.5	<9.5	-	-
		6/2/2004	-	-	<10	<9.6 / <9.8	3.8 J	<10	<9.5	<9.5	<9.4	<9.4	-	-
		5/31/2005	-	-	<10	<10	<10	<10	<10	<10	<10	<10	-	-
		5/31/05 dup	-	-	-	-	<10	-	-	-	-	-	-	-
		5/10/2006	-	-	<10	<10 / <10	<10	<10	<10	<10	<10	<10	<10	-
		12/3/2008	-	-	-	<9.4 / <9.5	9.9	-	<9.4	<9.4	<9.4	<9.4	<9.5	-
		12/4/2008	-	-	-	-	-	6.0 J	<9.4	<9.4	<9.4	<9.4	-	<9.4
		12/8/2008	-	-	<9.4	-	-	-	-	-	-	-	-	-
		5/21/2009	-	-	<9.4	0.59 J	<9.5	<9.5	-	-	<9.4	<9.4	<9.4	-

Table 4

GROUNDWATER ANALYTICAL RESULTS

Hranica Landfill Superfund Site
Butler County, Pennsylvania

Chemical Name	USEPA MCL/SMCL (µg/L)	Date	MW-1I (µg/L)	MW-1D (µg/L)	MW-2I (µg/L)	MW-3I (µg/L)	MW-3S (µg/L)	MW-4I (µg/L)	MW-4D (µg/L)	MW-5I (µg/L)	MW-5S (µg/L)	Field Blank (µg/L)	256 Ekastown Rd (µg/L)	
<i>Semi-Volatile Organic Compounds (USEPA SW-846 Method 8270C)</i>														
Di-n-butyl phthalate (Dibutyl phthalate) (continued)		5/22/2009	-	-	-	-	-	<9.4	<9.4	-	-	-	-	
		5/25/2010	-	-	<9.5	<9.4	8.8J	<9.4	<9.4	<9.5	<9.5	<9.4	<9.4	
		5/25/10 dup	-	-	-	-	-	-	-	-	-	-	<9.4	
		5/10/2011	-	-	<9.5	<9.5	2.3 J	<9.5	<9.5	<9.7	<9.6	<9.6	<9.5	
		5/10/2011 dup	-	-	<9.5	-	-	-	-	-	-	-	-	
		5/1/2012	-	-	<9.8	<9.5	2.5 J	<9.7	<9.6	<10	<9.6	<10	<10	
		5/2/2012 dup	-	-	-	-	-	<10	-	-	-	-	-	
		5/13/2013 / 05/14/2013	-	-	<11	<9.6	<9.6	<10	<9.6	<9.6	<9.6	<9.6	<10	<9.7
		5/13/2013 dup	-	-	-	-	<9.6	-	-	-	-	-	-	-
		5/19/2014 / 5/20/2014	-	-	<9.6	<9.6	<9.6	<9.3	<9.6	<9.6	<9.6	<9.6	<10	<9.6
		5/20/2014 dup	-	-	-	-	<9.6	-	-	-	-	-	-	
		5/7/2015 / 05/07/2015 dup	-	-	<9.6	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<10	<9.6
		5/24/2016 / 05/24/2016 dup	-	-	<9.3	<9.6	<9.3	<10	<10	<10	<10	<11	<9.3	-
				-	-	-	<9.6	-	-	-	-	-	-	-
	2,4-Dimethylphenol	---	5/23/2001	<10	<10	-	-	-	<10	-	-	-	-	-
5/24/2001			-	-	<10	<10	63	-	<10	<10 / <10	<10	-	-	-
5/21/2002			<9.4 / <9.4	<9.4	-	-	-	-	-	-	-	-	-	-
5/22/2002			-	-	<9.4	<9.4	45	<9.6	<9.8	<9.4	<9.8	-	-	-
5/13/2003			-	-	<9.5	<9.5	18 J	<9.5 / <9.7	<9.5	<10	<9.5	<9.5	-	-
6/2/2004			-	-	<10	<9.6 / <9.8	10 J	<10	<9.5	<9.5	<9.4	-	-	-
5/31/2005			-	-	<10	<10	24	<10	<10	<10	<10	<10	-	-
5/31/05 dup			-	-	-	-	28	-	-	-	-	-	-	-
5/10/2006			-	-	<10	<10 / <10	<10	<10	<10	<10	<10	<10	<10	-
12/3/2008			-	-	-	<9.4 / <9.5	18	-	-	-	-	-	<9.5	-
12/4/2008			-	-	-	-	-	<9.4	<9.4	<9.4	<9.4	<9.4	-	<9.4
12/8/2008			-	-	<9.4	-	-	-	-	-	-	-	-	-
5/21/2009			-	-	<9.4	<9.4	21	-	<9.4	<9.4	<9.4	<9.4	<9.4	-
5/22/2009			-	-	-	-	-	<9.4	<9.4	<9.4	-	-	-	-
5/25/2010			-	-	<9.5	<9.4	19	<9.4	<9.4	<9.5	<9.5	<9.5	<9.4	<9.4
5/25/10 dup			-	-	-	-	-	-	-	-	-	-	-	<9.4
5/10/2011			-	-	<9.5	<9.5	7.1 J	<9.5	<9.5	<9.7	<9.6	<9.6	<9.6	<9.5
5/10/2011 dup			-	-	<9.5	-	-	-	-	-	-	-	-	-
5/1/2012	-	-	<9.8	<9.5	<9.6	<9.7	<9.6	<10	<9.6	<10	<10	<10		
5/2/2012 dup	-	-	-	-	-	-	<9.7	-	-	-	-	-		

Table 4

GROUNDWATER ANALYTICAL RESULTS

Hranica Landfill Superfund Site
Butler County, Pennsylvania

Chemical Name	USEPA MCL/SMCL (µg/L)	Date	MW-1I (µg/L)	MW-1D (µg/L)	MW-2I (µg/L)	MW-3I (µg/L)	MW-3S (µg/L)	MW-4I (µg/L)	MW-4D (µg/L)	MW-5I (µg/L)	MW-5S (µg/L)	Field Blank (µg/L)	256 Ekastown Rd (µg/L)
<i>Semi-Volatile Organic Compounds (USEPA SW-846 Method 8270C)</i>													
2,4-Dimethylphenol (continued)		5/13/2013 / 05/14/2013	-	-	<11	<9.6	3.7 J	<10	<9.6	<9.6	<9.6	<10	<9.7
		5/13/2013 dup	-	-	-	-	3.1 J	-	-	-	-	-	-
		5/19/2014 / 5/20/2014	-	-	<9.6	<9.6	5.9 J	<9.3	<9.6	<9.6	<9.6	<10	<9.6
		5/20/2014 dup	-	-	-	-	8.1 J	-	-	-	-	-	-
		5/7/2015 / 05/07/2015 dup	-	-	<9.6	<9.3	7.8 J	<9.3	<9.3	<9.3	<9.3	<10	<9.6
		5/24/2016 / 05/24/2016 dup	-	-	<9.3	<9.6	<9.3	<10	<10	<10	<11	<9.3	-
			-	-	-	-	3.5 J	-	-	-	-	-	-
Naphthalene	--	5/23/2001	<10	<10	-	-	-	<10	-	-	-	-	-
		5/24/2001	-	-	<10	<10	190	-	<10	<10 / <10	<10	-	-
		5/21/2002	<9.4 / <9.4	<9.4	-	-	-	-	-	-	-	-	-
		5/22/2002	-	-	<9.4	<9.4	250	<9.6	<9.8	<9.4	<9.8	-	-
		5/13/2003	-	-	<9.5	<9.5	120	<9.5 / <9.7	<9.5	<10	<9.5	-	-
		6/2/2004	-	-	<10	<9.6 / <9.8	110	<10	<9.5	<9.5	<9.4	-	-
		5/31/2005	-	-	<10	<10	150	<10	<10	<10	<10	-	-
		5/31/05 dup	-	-	-	-	190	-	-	-	-	-	-
		5/10/2006	-	-	<10	<10 / <10	130	<10	<10	<10	<10	<10	-
		12/3/2008	-	-	-	<1.9 / <1.9	140	-	-	-	-	<1.9	-
		12/4/2008	-	-	-	-	-	<1.9	<1.9	<1.9	<1.9	<1.9	-
		12/8/08	-	-	<1.9	-	-	-	-	-	-	-	-
		5/21/2009	-	-	<1.9	<1.9	190	-	-	<1.9	<1.9	<1.9	-
		5/22/2009	-	-	-	-	-	<1.9	<1.9	-	-	-	-
		5/25/2010	-	-	<1.9	<1.9	220	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9
		5/25/10 dup	-	-	-	-	-	-	-	-	-	-	<1.9
		5/10/2011	-	-	<1.9	<1.9	80	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9
		5/10/2011 dup	-	-	<1.9	<1.9	-	-	-	-	-	-	-
		5/1/2012	-	-	<2.0	<1.9	85	<1.9	<1.9	<2.0	<1.9	<2.0	<2.0
		5/2/2012 dup	-	-	-	-	-	<2.1	-	-	-	-	-
		5/13/2013 / 05/14/2013	-	-	<2.1	<1.9	93	<2.0	<1.9	<1.9	<1.9	<2.1	<1.9
		5/13/2013 dup	-	-	-	-	79	-	-	-	-	-	-
		5/19/2014 / 5/20/2014	-	-	<1.9	<1.9	61	<1.9	<1.9	<1.9	<1.9	<2.0	<1.9
		5/20/2014 dup	-	-	-	-	68	-	-	-	-	-	-
		5/7/2015 / 05/07/2015 dup	-	-	<1.9	<1.9	68	<1.9	<1.9	<1.9	<1.9	<2.0	0.46 J
			-	-	-	-	62	-	-	-	-	-	-

Table 4

GROUNDWATER ANALYTICAL RESULTS

Hranica Landfill Superfund Site
Butler County, Pennsylvania

Chemical Name	USEPA MCL/SMCL (µg/L)	Date	MW-1I (µg/L)	MW-1D (µg/L)	MW-2I (µg/L)	MW-3I (µg/L)	MW-3S (µg/L)	MW-4I (µg/L)	MW-4D (µg/L)	MW-5I (µg/L)	MW-5S (µg/L)	Field Blank (µg/L)	256 Ekastown Rd (µg/L)
<i>Semi-Volatile Organic Compounds (USEPA SW-846 Method 8270C)</i>													
Naphthalene (continued)		5/24/2016 / 05/24/2016 dup	-	-	<1.9	<1.9	37	<2	<2	<2	<2.2	<1.9	-
			-	-	-	-	40	-	-	-	-	-	-
Phenol	--	5/23/2001	<10	<10	<10	<10	5.6 J	<10	<10	<10 / <10	<10	-	-
		5/24/2001	-	-	<10	<10	-	-	<10	-	<10	-	-
		5/21/2002	<9.4 / <9.4	<9.4	-	-	-	-	-	-	-	-	-
		5/22/2002	-	-	<9.4	<9.4	4.4 J	<9.6	<9.8	<9.4	<9.8	-	-
		5/13/2003	-	-	<9.5	<9.5	<38	<9.5 / <9.7	<9.5	<10	<9.5	-	-
		6/2/2004	-	-	<10	<9.6 / <9.8	<38	<10	<9.5	<9.5	<9.4	-	-
		5/31/2005	-	-	<10	<10	<10	<10	<10	<10	<10	-	-
		5/31/05 dup	-	-	-	-	<10	-	-	-	-	-	-
		5/10/2006	-	-	<10	<10 / <10	<10	<10	<10	<10	<10	<10	-
		12/3/2008	-	-	-	<1.9 / <1.9	<1.9	-	-	-	-	<1.9	-
		12/4/2008	-	-	-	-	-	0.42 J	<1.9	<1.9	<1.9	<1.9	-
		12/8/2008	-	-	<1.9	-	-	-	-	-	-	-	-
		5/21/2009	-	-	<1.9	<1.9	<1.9	-	-	<1.9	<1.9	<1.9	-
		5/22/2009	-	-	-	-	-	<1.9	<1.9	-	-	-	-
		5/25/2010	-	-	<1.9	<1.9	1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9
		5/25/10 dup	-	-	-	-	-	-	-	-	-	-	<1.9
		5/10/2011	-	-	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9
		5/10/2011 dup	-	-	<1.9	-	-	-	-	-	-	-	-
		5/1/2012	-	-	<2.0	<1.9	<1.9	<1.9	<1.9	<2.0	<1.9	<2.0	<2.0
		5/2/2012 dup	-	-	-	-	-	<2.1	-	-	-	-	-
		5/13/2013 / 05/14/2013	-	-	<2.1	<1.9	<1.9	<2.0	<1.9	<1.9	<1.9	<2.1	<1.9
		5/13/2013 dup	-	-	-	-	<1.9	-	-	-	-	-	-
		5/19/2014 / 5/20/2014	-	-	<9.6	<9.6	0.98 J	<9.3	<9.6	<9.6	<9.6	<10	<9.6
		5/20/2014 dup	-	-	-	-	<9.6	-	-	-	-	-	-
		5/7/2015 / 05/07/2015 dup	-	-	<9.6	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<10	<9.6
		5/24/2016 / 05/24/2016 dup	-	-	<9.3	<9.6	<9.3	<10	<10	<10	<11	<9.3	-
			-	-	-	-	<9.6	-	-	-	-	-	-
<i>Trace ICP Metals (Methods SE-846 6010 B, 7470A)</i>													
Aluminum	200 ^(a)	5/23/2001	289	802	-	-	-	294	-	-	-	-	-
		5/24/2001	-	-	1,470	714	122 J	-	16,000	859 / 611	592	-	-
		5/21/2002	105 J / <200	133 J	-	-	-	-	-	-	-	-	-
		5/22/2002	-	-	8,530	125 J	45 J	38.6 J	2,340	255	178 J	-	-

Table 4

GROUNDWATER ANALYTICAL RESULTS

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Chemical Name	USEPA MCL/SMCL (µg/L)	Date	MW-1I (µg/L)	MW-1D (µg/L)	MW-2I (µg/L)	MW-3I (µg/L)	MW-3S (µg/L)	MW-4I (µg/L)	MW-4D (µg/L)	MW-5I (µg/L)	MW-5S (µg/L)	Field Blank (µg/L)	256 Ekastown Rd (µg/L)
<i>Trace ICP Metals (Methods SE-846 6010 B, 7470A)</i>													
Aluminum (continued)		5/13/2003	-	-	18,400	4,330	<11.1	<11.1 / <11.1	72.9 J	<11.1	<11.1	-	-
		6/2/2004	-	-	12,700	1,310 / 618	78.2 J	38.6 J	3,740	44.9 J	83.5 J	-	-
		5/31/2005	-	-	<50	<50	<50	<50	<50	<50	<50	-	-
		5/31/05 dup	-	-	-	-	<50	-	-	-	-	-	-
		5/10/2006	-	-	<50	<50	<50	<50	<50	<50	<50	<50	-
		12/3/2008	-	-	2,140	513 / 122 B	50.2	-	-	-	-	<200	-
		12/4/2008	-	-	-	-	-	<200	6,580	60.6 B	2,090	-	2,370
		5/21/2009	-	-	837	141 B	47.7 B	-	-	25.4 B	16.4 B	<200	-
		5/22/2009	-	-	-	-	-	21.8 B	1,010	-	-	-	-
		5/25/2010	-	-	4,210 J	152 BJ	139 BJ	23.3 BJ	412 J	50.8 BJ	32 J	14.6 BJ	188 BJ
		5/25/10 dup	-	-	-	-	-	-	-	-	-	-	95.4 BJ
		5/10/2011	-	-	800 J	39.4 BJ	94.4 BJ	177 BJ	233 J	59 BJ	46BJ	25.9 BJ	357 J
		5/10/2011 dup	-	-	4630 J	-	-	-	-	-	-	-	-
		5/1/2012	-	-	6300 B	84 BJ	53 BJ	2000 B	82 BJ	36 BJ	64 BJ	28 BJ	6300 B
		5/2/2012 dup	-	-	-	-	-	1600 B	-	-	-	-	-
		5/13/2013 / 05/14/2013	-	-	300	52 J	450	130 J	80 J	500	25 J	<200	590
		5/13/2013 dup	-	-	-	-	480	-	-	-	-	-	-
		5/19/2014 / 5/20/2014	-	-	1,800	190 J	58 J	150 J	160J	130 J	190 J	<200	880
		5/20/2014 dup	-	-	-	-	50 J	-	-	-	-	-	-
		5/7/2015 / 05/07/2015 dup	-	-	1,900	<200	<200	57 J	550	80 J	<200	<200	310
5/24/2016 / 05/24/2016 dup	-	-	1,100	71 J	46 J	79 J	520	430	<200	<200	-		
			-	-	-	38 J	-	-	-	-	-	-	
Arsenic	10	5/23/2001	<10	<10	-	-	-	<10	-	-	-	-	-
		5/24/2001	-	-	<10	<10	4.9 J	-	8.4 J	3.0 J / <10	<10	-	-
		5/21/2002	<10 / <10	<10	-	-	-	-	-	-	-	-	-
		5/22/2002	-	-	4.1 J	<10	2.3 J	<10	<10	<10	<10	<10	-
		5/13/2003	-	-	4.8 J	2.2 J	<1.6	<1.6 / <1.6	3.1 J	<1.6	<1.6	-	-
		6/2/2004	-	-	2.2 J	<10 / 2.2 J	<10	<10	2.5 J	<10	<10	-	-
		5/31/2005	-	-	<5	<5	<5	5.9	<5	<5	<5	-	-
		5/31/05 dup	-	-	-	-	<5	-	-	-	-	-	-
		5/10/2006	-	-	<5	<5.0 / <5.0	<5	<5	<5	<5	<5	<5	-
		12/3/2008	-	-	<10.0	2.8 B / <10.0	<10.0	-	-	-	-	<10.0	-
		12/4/2008	-	-	-	-	-	2.5 B	8.1 B	<10.0	<10.0	-	5.5 B
		5/21/2009	-	-	<10.0	<10.0	<10.0	-	-	<10.0	<10.0	<10.0	-

Table 4

GROUNDWATER ANALYTICAL RESULTS

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Chemical Name	USEPA MCL/SMCL (µg/L)	Date	MW-1I (µg/L)	MW-1D (µg/L)	MW-2I (µg/L)	MW-3I (µg/L)	MW-3S (µg/L)	MW-4I (µg/L)	MW-4D (µg/L)	MW-5I (µg/L)	MW-5S (µg/L)	Field Blank (µg/L)	256 Ekastown Rd (µg/L)	
<i>Trace ICP Metals (Methods SE-846 6010 B, 7470A)</i>														
Arsenic (continued)		5/22/2009	-	-	-	-	-	<10.0	5.2 B	-	-	-	-	
		5/25/2010	-	-	<10	5.3 B	<10	<10	5.4 B	<10	<10	<10	<10	
		5/25/10 dup	-	-	-	-	-	-	-	-	-	-	<10	
		5/10/2011	-	-	<10	<10	<10	<10	5.7 B	<10	<10	<10	<10	
		5/10/2011 dup	-	-	<10	-	-	-	-	-	-	-	-	
		5/1/2012	-	-	<10	<10	<10	<10	4.6 J	<10	<10	<10	5.3 J	
		5/2/2012 dup	-	-	-	-	-	<10	-	-	-	-	-	
		5/13/2013 / 05/14/2013	-	-	<10	3.1 J	3.1 J	<10	7.4 J	<10	<10	<10	<10	
		5/13/2013 dup	-	-	-	-	3.1 J	-	-	-	-	-	-	
		5/19/2014 / 5/20/2014	-	-	6.9 J	<10	<10	<10	5.6 J	<10	<10	<10	3.4 J	
		5/20/2014 dup	-	-	-	-	<10	-	-	-	-	-	-	
		5/7/2015 / 05/07/2015 dup	-	-	7.4 J	<10	<10	3.1 J	7.9 J	<10	<10	<10	<10	
		5/24/2016 / 05/24/2016 dup	-	-	<10	<10	<10	5.2 J	6.4 J	<10	<10	<10	-	
				-	-	-	<10	-	-	-	-	-	-	
	Beryllium	4	5/23/2001	0.15 J	0.25 J	-	-	-	0.12 J	-	-	-	-	-
5/24/2001			-	-	0.40 J	0.15 J	0.24 J	-	1.1 J	0.14 J / 0.15 J	0.22 J	-	-	
5/21/2002			<5 / <5	<5	-	-	-	-	-	-	-	-	-	-
5/22/2002			-	-	0.72 J	0.070 J	0.060 J	0.070 J	0.20 J	<5	<5	-	-	-
5/13/2003			-	-	0.92 J	0.91 J	0.34 J	0.92 J / 0.83 J	0.92 J	<0.26	<0.26	-	-	-
6/2/2004			-	-	1.1 J	0.56 J / 0.60 J	0.45 J	0.50 J	0.70 J	0.67 J	0.51 J	-	-	-
5/31/2005			-	-	<1	<1	<1	<1	<1	<1	<1	-	-	-
5/31/05 dup			-	-	-	-	<1	-	-	-	-	-	-	-
5/10/2006			-	-	<1	<1 / <1	<1	<1	<1	<1	<1	<1	<1	-
12/3/2008			-	-	<4.0	<4.0 / <4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	-
12/4/2008			-	-	-	-	-	-	<4.0	<4.0	<4.0	<4.0	-	0.22 B
5/21/2009			-	-	<4.0	<4.0	<4.0	<4.0	-	<4.0	<4.0	<4.0	<4.0	-
5/22/2009			-	-	-	-	-	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	-
5/25/2010			-	-	0.32 J	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
5/25/10 dup			-	-	-	-	-	-	-	-	-	-	-	<4.0
5/10/2011			-	-	-	0.58 BJ	0.46 BJ	0.40 BJ	0.47 BJ	0.39 BJ	0.44 BJ	0.37 BJ	0.47 BJ	0.49 BJ
5/10/2011 dup			-	-	-	0.69 BJ	-	-	-	-	-	-	-	-
5/1/2012	-	-	-	0.93 BJ	0.49 BJ	0.52 BJ	0.68 BJ	0.52 BJ	0.61 BJ	0.59 BJ	0.55 BJ	1.0 BJ		
5/2/2012 dup	-	-	-	-	-	-	0.71 BJ	-	-	-	-	-		

Table 4

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Chemical Name	USEPA MCL/SMCL (µg/L)	Date	MW-1I (µg/L)	MW-1D (µg/L)	MW-2I (µg/L)	MW-3I (µg/L)	MW-3S (µg/L)	MW-4I (µg/L)	MW-4D (µg/L)	MW-5I (µg/L)	MW-5S (µg/L)	Field Blank (µg/L)	256 Ekastown Rd (µg/L)		
<i>Trace ICP Metals (Methods SE-846 6010 B, 7470A)</i>															
Beryllium (continued)		5/13/2013 / 05/14/2013	-	-	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0		
		5/13/2013 dup	-	-	-	-	<4.0	-	-	-	-	-	-		
		5/19/2014 / 5/20/2014	-	-	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0		
		5/20/2014 dup	-	-	-	-	<4.0	-	-	-	-	-	-		
		5/7/2015 / 05/07/2015 dup	-	-	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0		
		5/24/2016 / 05/24/2016 dup	-	-	<4	<4	<4	<4	<4	<4	<4	<4	<4		
	Cadmium	5	5/23/2001	<5	4.6 J	-	-	-	<5	-	-	-	-	-	
			5/24/2001	-	-	<5	<5	<5	-	<5	<5 / <5	<5	-	-	
5/21/2002			<5 / <5	<5	-	-	-	-	-	-	-	-	-	-	
5/22/2002			-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	-	
5/13/2003			-	-	<0.3	<0.30	<0.3	<0.3 / <0.3	<0.3	<0.3	<0.3	<0.3	-	-	
6/2/2004			-	-	<5	<5 / <5	<5	<5	<5	<5	<5	<5	-	-	
5/31/2005			-	-	<1	<1	<1	<1	<1	<1	<1	<1	-	-	
5/31/05 dup			-	-	-	-	<1	<1	-	-	-	-	-	-	
5/10/2006			-	-	<1	<1 / <1	<1	<1	<1	<1	<1	<1	<1	-	
12/3/2008			-	-	<5.0	<5.0 / <5.0	0.55 B	-	-	-	-	-	<5.0	-	
12/4/2008			-	-	-	-	-	<5.0	<5.0	<5.0	<5.0	0.58 B	-	<5.0	
5/21/2009			-	-	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	-	
5/22/2009			-	-	-	-	-	<5.0	<5.0	<5.0	-	-	-	-	
5/25/2010			-	-	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
5/25/10 dup			-	-	-	-	-	-	-	-	-	-	-	<5.0	
5/10/2011			-	-	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
5/10/2011 dup			-	-	<5.0	<5.0	-	-	-	-	-	-	-	-	
5/1/2012			-	-	0.16 J	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	4.1 J
5/2/2012 dup			-	-	-	-	-	<5.0	-	-	-	-	-	-	
5/13/2013 / 05/14/2013			-	-	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
5/13/2013 dup			-	-	-	-	-	<5.0	-	-	-	-	-	-	
5/19/2014 / 5/20/2014			-	-	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
5/20/2014 dup			-	-	-	-	-	<5.0	-	-	-	-	-	-	
5/7/2015 / 05/07/2015 dup			-	-	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
5/24/2016 /			-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-

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Chemical Name	USEPA MCL/SMCL (µg/L)	Date	MW-1I (µg/L)	MW-1D (µg/L)	MW-2I (µg/L)	MW-3I (µg/L)	MW-3S (µg/L)	MW-4I (µg/L)	MW-4D (µg/L)	MW-5I (µg/L)	MW-5S (µg/L)	Field Blank (µg/L)	256 Ekastown Rd (µg/L)	
<i>Trace ICP Metals (Methods SE-846 6010 B, 7470A)</i>														
Cadmium (continued)		05/24/2016 dup	-	-	-	-	<5	-	-	-	-	-	-	
Chromium	100	5/23/2001	<10	<10	-	-	-	<10	-	-	-	-	-	
		5/24/2001	-	-	4.4 J	3.0 J	4.9 J	-	27.1	2.6 J / <5	7.1 J	-	-	
		5/21/2002	<10 / <10	<10	-	-	-	-	-	-	-	-	-	-
		5/22/2002	-	-	22	<10	3.4 J	<10	5.8 J	<10	2.3 J	-	-	-
		5/13/2003	-	-	29.7	7.7 J	5.3 J	<1.4 / <1.4	<1.4	<1.4	1.4 J	-	-	-
		6/2/2004	-	-	19.4	2.1 J / 1.3 J	5.7 J	<10	5.4 J	<10	<10	-	-	-
		5/31/2005	-	-	<5	<5	<5	<5	<5	<5	<5	-	-	-
		5/31/05 dup	-	-	-	-	<5	-	-	-	-	-	-	-
		5/10/2006	-	-	<5	<5.0 / <5.0	<5	<5	<5	<5	<5	<5	<5	-
		12/3/2008	-	-	3.8 B	<5.0 / <5.0	5.0	-	-	-	-	-	<5.0	-
		12/4/2008	-	-	-	-	-	<5.0	9.8	<5.0	6.5	-	-	4.0 B
		5/21/2009	-	-	1.0 B	<5.0	1.9 B	-	-	<5.0	<5.0	<5.0	<5.0	-
		5/22/2009	-	-	-	-	-	<5.0	1.9 B	-	-	-	-	-
		5/25/2010	-	-	6.6	<5.0	3.2 B	<5.0	0.85 B	<5.0	<5.0	<5.0	<5.0	<5.0
		5/25/10 dup	-	-	-	-	-	-	-	-	-	-	-	<5.0
		5/10/2011	-	-	1.1 B	<5.0	3.1 B	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	0.61 B
		5/10/2011 dup	-	-	8.4	-	-	-	-	-	-	-	-	-
		5/1/2012	-	-	11	0.93 J	1.8 J	3.1 J	1.0 J	1.3 J	<5.0	0.78 J	-	17.0
		5/2/2012 dup	-	-	-	-	-	2.5 J	-	-	-	-	-	-
		5/13/2013 / 05/14/2013	-	-	0.83 J	1.2 J	5.9	<5.0	<5.0	1.8 J	<5.0	<5.0	<5.0	0.82 J
5/13/2013 dup	-	-	-	-	-	6.2	-	-	-	-	-	-		
5/19/2014 / 5/20/2014	-	-	3.5 J	<5.0	1.7 J	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0		
5/20/2014 dup	-	-	-	-	-	1.6 J	-	-	-	-	-	-		
5/7/2015 / 05/07/2015 dup	-	-	3.5 J	<5.0	1.0 J	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0		
5/24/2016 / 05/24/2016 dup	-	-	5.1	1.2 J	1.2 J	<5	4.6 J	1.4 J	<5	<5	<5	-		
Lead	15 ^(b)	5/23/2001	<3	2.3 J	-	-	-	<3	-	-	-	-	-	
		5/24/2001	-	-	6.1	4	6.2	-	26	2.4 J / <3	<3	-	-	
		5/21/2002	<3 / <3	<3	-	-	-	-	-	-	-	-	-	
		5/22/2002	-	-	13.8	<3	4.6	<3	5	<3	<3	-	-	
		5/13/2003	-	-	18.2	6.0	4.8	<1.6 / <1.6	<1.6	<1.6	<1.6	-	-	
		6/2/2004	-	-	8.0	<3 / <3	3.7	<3	2.8 J	<3	<3	-	-	
		5/31/2005	-	-	<2	<2	<2	<2	<2	<2	<2	-	-	

Table 4

GROUNDWATER ANALYTICAL RESULTS

Hranica Landfill Superfund Site
Butler County, Pennsylvania

Chemical Name	USEPA MCL/SMCL (µg/L)	Date	MW-1I (µg/L)	MW-1D (µg/L)	MW-2I (µg/L)	MW-3I (µg/L)	MW-3S (µg/L)	MW-4I (µg/L)	MW-4D (µg/L)	MW-5I (µg/L)	MW-5S (µg/L)	Field Blank (µg/L)	256 Ekastown Rd (µg/L)		
<i>Trace ICP Metals (Methods SE-846 6010 B, 7470A)</i>															
Lead (continued)		5/31/05 dup	-	-	-	-	2.4	-	-	-	-	-	-		
		5/10/2006	-	-	<2	<2 / <2	<2	<2	<2	<2	<2	<2	-		
		12/3/2008	-	-	4.1	<3.0 / <3.0	12.9	-	-	-	-	-	<3.0	-	
		12/4/2008	-	-	-	-	-	-	<3.0	5.8	<3.0	8.2	-	15.4	
		5/21/2009	-	-	<3.0	1.4 B	5.6	-	-	-	<3.0	<3.0	<3.0	-	
		5/22/2009	-	-	-	-	-	<3.0	<3.0	<3.0	-	-	-	-	
		5/25/2010	-	-	3.7	<3.0	10.2	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	
		5/25/10 dup	-	-	-	-	-	-	-	-	-	-	-	<3.0	
		5/10/2011	-	-	4.4	<3.0	3.9	2.2 B	<3.0	<3.0	<3.0	<3.0	<3.0	3.6	
		5/10/2011 dup	-	-	11.5	-	-	-	-	-	-	-	-	-	
		5/1/2012	-	-	11	<3.0	2.1 J	1.9 J	<3.0	<3.0	<3.0	<3.0	<3.0	39.0	
		5/2/2012 dup	-	-	-	-	-	1.8 J	-	-	-	-	-	-	
		5/13/2013 / 05/14/2013	-	-	<3.0	<3.0	14	<3.0	<3.0	1.4 J	<3.0	<3.0	<3.0	2.1 J	
		5/13/2013 dup	-	-	-	-	-	15	-	-	-	-	-	-	
		5/19/2014 / 5/20/2014	-	-	4.9 J	2.3 J	2.6 J	1.5 J	1.9 J	1.7 J	2.5 J	<10	<10	6.9 J	
		5/20/2014 dup	-	-	-	-	-	3.2 J	-	-	-	-	-	-	
		5/7/2015 / 05/07/2015 dup	-	-	4.7 J	1.5 J	2.1 J	2.5 J	3.2 J	1.7 J	1.5 J	<20	<20	4.1 J	
		5/24/2016 / 05/24/2016 dup	-	-	<10	21	<10	<10	<10	<10	<10	<10	<10	<10	
		Manganese	50 ^(a)	5/23/2001	43.6	25.7	-	-	-	278	-	-	-	-	-
				5/24/2001	-	-	60.4	151	2,430	-	315	29.7 / 23.7	193	-	-
5/21/2002	36.9 / 17.7			5.7 J	-	-	-	-	-	-	-	-	-		
5/22/2002	-			-	94.7	39.2	1,860	529	58.2	11.4 J	98.6	-	-		
5/13/2003	-			-	213 E	63.9 E	1,600 E	1,050 E/883 E	18.0 E	8.5 JE	9.5 JE	-	-		
6/2/2004	-			-	206 E	19.8 E / 19.7 E	1,490 E	618 E	17.6 E	9.8 JE	17.7 E	-	-		
5/31/2005	-			-	<5	<5	2,200	<5	19	7.9	<5	-	-		
5/31/05 dup	-			-	-	-	2,300	-	-	-	-	-	-		
5/10/2006	-			-	25	<5.0 / <5.0	2,400	11	28	7.8	19	<5	-		
12/3/2008	-			-	228	28.3 / 12.7 B	2,570	-	-	-	-	<15.0	-		
12/4/2008	-			-	-	-	-	993	82.5	8.8 B	172	-	972		
5/21/2009	-			-	168	76.5	2,480	-	-	7.9 B	46.9	<15.0	-		
5/22/2009	-			-	-	-	-	55.4	32	-	-	-	-		
5/25/2010	-			-	52.5	52.5	2,170	293	26	9.7 B	6.0 B	<15.0	420		
5/25/10 dup	-			-	-	-	-	-	-	-	-	-	-	443	

Table 4

GROUNDWATER ANALYTICAL RESULTS

Hranica Landfill Superfund Site
Butler County, Pennsylvania

Chemical Name	USEPA MCL/SMCL (µg/L)	Date	MW-1I (µg/L)	MW-1D (µg/L)	MW-2I (µg/L)	MW-3I (µg/L)	MW-3S (µg/L)	MW-4I (µg/L)	MW-4D (µg/L)	MW-5I (µg/L)	MW-5S (µg/L)	Field Blank (µg/L)	256 Ekastown Rd (µg/L)
<i>Trace ICP Metals (Methods SE-846 6010 B, 7470A)</i>													
Manganese (continued)		5/10/2011	-	-	108	7.7 B	1,130	55.5	23.6	14.9 B	63.1	<15.0	196
		5/10/2011 dup	-	-	274	-	-	-	-	-	-	-	-
		5/1/2012	-	-	130	32	1,000	340	14 J	11 J	50	<15.0	1000
		5/2/2012 dup	-	-	-	-	-	420	-	-	-	-	-
		5/13/2013 / 05/14/2013	-	-	26	26	900	33	19	34	5.8 J	<15	620
		5/13/2013 dup	-	-	-	-	940	-	-	-	-	-	-
		5/19/2014 / 5/20/2014	-	-	100	590	820	50	12 J	15	38	<15	1200
		5/20/2014 dup	-	-	-	-	810	-	-	-	-	-	-
		5/7/2015 / 05/07/2015 dup	-	-	120	11 J	860	15	24	14 J	8.0 J	0.18 J	710
		5/24/2016 / 05/24/2016 dup	-	-	110	22	730	1200	20	22	1.3 J	<15	-
			-	-	-	-	710	-	-	-	-	-	-
Zinc	5,000 ^(a)	5/23/2001	15.2 J	27.5	-	-	-	13.2 J	-	-	-	-	-
		5/24/2001	-	-	16.9 J	13.2 J	22.8	-	96.8	19.9 J / 20.7	21.5	-	-
		5/21/2002	8.6 J / 8.0 J	7.8 J	-	-	-	-	-	-	-	-	-
		5/22/2002	-	-	65.8	8.6 J	15.0 J	6.8 J	23	13.4 J	19.9 J	-	-
		5/13/2003	-	-	63.2	64	0.99 J	<0.83 / 13.8	<0.83	<0.83	<0.83	-	-
		6/2/2004	-	-	43.2	5.3 J / 4.2 J	5.4 J	4.1 J	18.0 J	1.2 J	4.4 J	-	-
		5/31/2005	-	-	<10	<10	<10	<10	<10	<10	<10	-	-
		5/31/05 dup	-	-	-	-	<10	-	-	-	-	-	-
		5/10/2006	-	-	<10	<10 / <10	<10	<10	<10	<10	<10	<10	-
		12/3/2008	-	-	19.3 BJ	14.4 BJ / 7.7 BJ	12.6 BJ	-	-	-	-	3.6 BJ	-
		12/4/2008	-	-	-	-	-	5.5 BJ	27.1 J	9.0 BJ	77.0 J	-	36.6 J
		5/21/2009	-	-	9.3 BJ	5.3 BJ	8.0 BJ	-	-	6.0 BJ	7.5 BJ	6.8 B, B	-
		5/22/2009	-	-	-	-	-	5.8 BJ	12.1 BJ	-	-	-	-
		5/25/2010	-	-	14.8 B	5.6 B	9.7 B	5.2 B	5.8 B	2.8 B	11.6 B	2.6 B	10.3 B
		5/25/10 dup	-	-	-	-	-	-	-	-	-	-	3.9 B
		5/10/2011	-	-	13.7 B	4.9 B	9.0 B	5.3 B	3.2 B	3.6 B	7.3 B	<20.0	10.4 B
		5/10/2011 dup	-	-	29.4	-	-	-	-	-	-	-	-
		5/1/2012	-	-	32 B	7.4 BJ	7.3 BJ	11 BJ	5.3 BJ	9.5 BJ	12 BJ	3.1 BJ	140 B
		5/2/2012 dup	-	-	-	-	-	8.4 BJ	-	-	-	-	-
		5/13/2013 / 05/14/2013	-	-	4.2 J	3.3 J	15 J	9.5 J	3.0 J	16.0 J	8.0 J	2.7 J	11 J
		5/13/2013 dup	-	-	-	-	17 J	-	-	-	-	-	-
		5/19/2014 / 5/20/2014	-	-	8.7 J	<20	<20	<20	<20	<20	<20	<20	8.5 J

Table 4

GROUNDWATER ANALYTICAL RESULTS

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Chemical Name	USEPA MCL/SMCL (µg/L)	Date	MW-1I (µg/L)	MW-1D (µg/L)	MW-2I (µg/L)	MW-3I (µg/L)	MW-3S (µg/L)	MW-4I (µg/L)	MW-4D (µg/L)	MW-5I (µg/L)	MW-5S (µg/L)	Field Blank (µg/L)	256 Ekastown Rd (µg/L)
<i>Trace ICP Metals (Methods SE-846 6010 B, 7470A)</i>													
Zinc (continued)		5/20/2014 dup	-	-	-	-	<20	-	-	-	-	-	-
		5/7/2015 /	-	-	20	<20	<20	8.6 J	12 J	<20	<20	<20	<20
		05/07/2015 dup	-	-	-	-	<20	-	-	-	-	-	-
		5/24/2016 /	-	-	8.9 J	<20	<20	<20	<20	8.9 J	<20	<20	-
		05/24/2016 dup	-	-	-	-	<20	-	-	-	-	-	-
<i>Trace ICP Dissolved Metals (USEPA SW-846 Methods 6010B, 7470A)</i>													
Aluminum	200 ^(a)	5/23/2001	<200	<200	-	-	-	<200	-	-	-	-	-
		5/24/2001	-	-	<200	34.5 J	<200	-	146 J	50.4 J / 39.2 J	<200	-	-
		5/21/2002	<200 / <200	<200	-	-	-	-	-	-	-	-	-
		5/22/2002	-	-	<200	<200	<200	<200	<200	<200	<200	-	-
		5/13/2003	-	-	<11.1	<11.1	<11.1	<11.1 / <11.1	<11.1	<11.1	<11.1	-	-
		6/2/2004	-	-	4,380	31.2 J / 27.7 J	13.3 J	22.7 J	31.5 J	17.3 J	<200	-	-
		5/31/2005	-	-	<50	<50	<50	<50	<50	<50	<50	-	-
		5/31/05 dup	-	-	-	-	<50	-	-	-	-	-	-
		5/10/2006	-	-	<50	<50	<50	<50	<50	<50	<50	<50	-
		12/3/2008	-	-	<200	17.7 B / <200	<200	-	-	-	-	<200	-
		12/4/2008	-	-	-	-	<200	<200	<200	<200	<200	-	<200
		5/21/2009	-	-	12.8 B,J	36.2 B,J	23.6 B,J	-	-	12.1 B,J	21.9 B,J	24.0 B,J	-
		5/22/2009	-	-	-	-	-	30.9 B,J	50.1 B,J	-	-	-	-
		5/25/2010	-	-	31.4 BJ	19.4 BJ	19.4 BJ	<200	<200	14.7 BJ	14.6 BJ	<200	15.1 BJ
		5/25/10 dup	-	-	-	-	-	-	-	-	-	-	13.2 BJ
		5/10/2011	-	-	18.1 BJ	65.9 BJ	24.9 BJ	19.7 BJ	18.3 BJ	20.7 BJ	15.1 BJ	14.8 BJ	22.1 BJ
		5/10/2011 dup	-	-	17.8 BJ	-	-	-	-	-	-	-	-
		5/1/2012	-	-	65.0 J	<200	17.0 J	<200	<200	<200	18.0 J	<200	15.0 J
		5/2/2012 dup	-	-	-	-	-	<200	-	-	-	-	-
		5/13/2013 /	-	-	<200	<200	<200	<200	<200	14 J	<200	<200	57 J
		05/14/2013	-	-	-	-	<200	-	-	-	-	-	-
		5/13/2013 dup	-	-	-	-	<200	-	-	-	-	-	-
		5/19/2014 /	-	-	<200	<200	<200	<200	<200	<200	<200	<200	<200
		5/20/2014	-	-	-	-	-	-	-	-	-	-	-
		5/20/2014 dup	-	-	-	-	<200	-	-	-	-	-	-
		5/7/2015 /	-	-	<200	<200	<200	<200	<200	<200	<200	<200	<200
		05/07/2015 dup	-	-	-	-	<200	-	-	-	-	-	-
		5/24/2016 /	-	-	1300	120 J	<200	<200	500	240	<200	<200	-
		05/24/2016 dup	-	-	-	-	<200	-	-	-	-	-	-
Arsenic	10	5/23/2001	<10	<10	-	-	-	<10	-	-	-	-	-
		5/24/2001	-	-	<10	<10	3.6 J	-	<10	<10 / <10	<10	-	-

Table 4

GROUNDWATER ANALYTICAL RESULTS

Hranica Landfill Superfund Site
Butler County, Pennsylvania

Chemical Name	USEPA MCL/SMCL (µg/L)	Date	MW-1I (µg/L)	MW-1D (µg/L)	MW-2I (µg/L)	MW-3I (µg/L)	MW-3S (µg/L)	MW-4I (µg/L)	MW-4D (µg/L)	MW-5I (µg/L)	MW-5S (µg/L)	Field Blank (µg/L)	256 Ekastown Rd (µg/L)	
<i>Trace ICP Dissolved Metals (USEPA SW-846 Methods 6010B, 7470A)</i>														
Arsenic (continued)		5/21/2002	<10 / <10	<10	-	-	-	-	-	-	-	-	-	
		5/22/2002	-	-	<10	2.0 J	<10	<10	2.0 J	<10	<10	-	-	
		5/13/2003	-	-	<1.6	<1.6	<1.6	<1.6 / <1.6	2.7 J	<1.6	<1.6	-	-	
		6/2/2004	-	-	<10	<10 / 2.0 J	<10	<10	<10	<10	<10	-	-	
		5/31/2005	-	-	<5	<5	<5	<5	5.6	<5	<5	-	-	
		5/31/05 dup	-	-	-	-	<5	-	-	-	-	-	-	
		5/10/2006	-	-	<5	<5.0 / <5.0	<5	<5	<5	<5	<5	<5	<5	-
		12/3/2008	-	-	<10.0	3.3 B / <10.0	<10.0	<10.0	-	-	-	-	<10.0	-
		12/4/2008	-	-	-	-	-	<10.0	6.4 B	<10.0	<10.0	<10.0	-	<10.0
		5/21/2009	-	-	<10.0	<10.0	<10.0	<10.0	-	<10.0	<10.0	<10.0	<10.0	-
		5/22/2009	-	-	-	-	-	<10.0	5.2 B	-	-	-	-	-
		5/25/2010	-	-	<10	6.3 B	<10	<10	5.2 B	<10	<10	<10	<10	<10
		5/25/10 dup	-	-	-	-	-	-	-	-	-	-	-	<10
		5/10/2011	-	-	<10.0	<10.0	<10.0	<10.0	5.5 B	<10.0	<10.0	<10.0	<10.0	<10.0
		5/10/2011 dup	-	-	<10.0	-	-	-	-	-	-	-	-	-
		5/1/2012	-	-	<10.0	<10.0	<10.0	<10.0	5.2 J	<10.0	<10.0	<10.0	<10.0	<10.0
		5/2/2012 dup	-	-	-	-	-	<10.0	-	-	-	-	-	-
		5/13/2013 / 05/14/2013	-	-	<10	<10	<10	<10	6.3 J	<10	<10	<10	<10	<10
		5/13/2013 dup	-	-	-	-	<10	-	-	-	-	-	-	-
		5/19/2014 / 5/20/2014	-	-	4.3 J	<10	<10	<10	5.9 J	<10	<10	<10	<10	<10
5/20/2014 dup	-	-	-	-	<10	-	-	-	-	-	-	-		
5/7/2015 / 05/07/2015 dup	-	-	6.7 J	<10	<10	<10	7.7 J	<10	<10	<10	<10	<10		
5/24/2016 / 05/24/2016 dup	-	-	<10	<10	<10	<10	6.8 J	<10	<10	<10	<10	<10		
Beryllium	4	5/23/2001	0.21 J	0.12 J	-	-	-	0.16 J	-	-	-	-	-	
		5/24/2001	-	-	0.31 J	0.15 J	0.24 J	-	0.22 J	0.22 J / 0.27 J	0.21 J	-	-	
		5/21/2002	<5 / <5	<5	-	-	-	-	-	-	-	-	-	
		5/22/2002	-	-	0.070 J	<5	<5	<5	0.060 J	<5	<5	-	-	
		5/13/2003	-	-	0.98 J	1.3 J	1.2 J	1.3 J / 1.3 J	1.2 J	1.2 J	1.2 J	-	-	
		6/2/2004	-	-	0.59 J	0.36 J / 0.37 J	0.29 J	0.44 J	0.43 J	0.24 J	0.19 J	-	-	
		5/31/2005	-	-	<1	<1	<1	<1	<1	<1	<1	<1	-	
		5/31/05 dup	-	-	-	-	<1	-	-	-	-	-	-	
		5/10/2006	-	-	<1	<1 / <1	<1	<1	<1	<1	<1	<1	<1	-
		12/3/2008	-	-	<4.0	<4.0 / <4.0	<4.0	<4.0	-	-	-	-	<4.0	-

Table 4

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Chemical Name	USEPA MCL/SMCL (µg/L)	Date	MW-1I (µg/L)	MW-1D (µg/L)	MW-2I (µg/L)	MW-3I (µg/L)	MW-3S (µg/L)	MW-4I (µg/L)	MW-4D (µg/L)	MW-5I (µg/L)	MW-5S (µg/L)	Field Blank (µg/L)	256 Ekastown Rd (µg/L)	
<i>Trace ICP Dissolved Metals (USEPA SW-846 Methods 6010B, 7470A)</i>														
Beryllium (continued)		12/4/2008	-	-	-	-	-	<4.0	<4.0	<4.0	<4.0	-	<4.0	
		5/21/2009	-	-	<4.0	<4.0	<4.0	-	-	<4.0	<4.0	0.24 B	-	
		5/22/2009	-	-	-	-	-	<4.0	<4.0	<4.0	<4.0	-	-	
		5/25/2010	-	-	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	
		5/25/10 dup	-	-	-	-	-	-	-	-	-	-	<4.0	
		5/10/2011	-	-	0.35 BJ	0.36 BJ	0.41 BJ	0.47 BJ	0.38 BJ	0.37 BJ	0.28 BJ	0.30 BJ	0.38 BJ	
		5/10/2011 dup	-	-	0.42 BJ	-	-	-	-	-	-	-	-	
		5/1/2012	-	-	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	0.25 J
		5/2/2012 dup	-	-	-	-	-	-	<4.0	-	-	-	-	-
		5/13/2013 / 05/14/2013	-	-	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
		5/13/2013 dup	-	-	-	-	<4.0	-	-	-	-	-	-	
		5/19/2014 / 5/20/2014	-	-	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
		5/20/2014 dup	-	-	-	-	<4.0	-	-	-	-	-	-	
		5/7/2015 / 05/07/2015 dup	-	-	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
		5/24/2016 / 05/24/2016 dup	-	-	<4	<4	<4	<4	<4	<4	<4	<4	<4	-
		Cadmium	5	5/23/2001	<5	<5	-	-	-	<5	<5	-	-	-
5/24/2001	-			-	<5	<5	<5	-	<5	<5	<5 / <5	-	-	
5/21/2002	<5 / <5			<5	-	-	-	-	-	-	-	-	-	
5/22/2002	-			-	<5	<5	<5	<5	<5	<5	<5	<5	-	
5/13/2003	-			-	<0.3	<0.3	<0.3	<0.3 / <0.3	<0.3	<0.3	<0.3	<0.3	-	
6/2/2004	-			-	<5	<5 / <5	<5	<5	<5	<5	<5	<5	-	
5/31/2005	-			-	<1	<1	<1	<1	<1	<1	<1	<1	-	
5/31/05 dup	-			-	-	-	<1	<1	-	-	-	-	-	
5/10/2006	-			-	<1	<1 / <1	<1	<1	<1	<1	<1	<1	<1	-
12/3/2008	-			-	<5.0	<5.0 / <5.0	<5.0	-	-	-	-	-	<5.0	
12/4/2008	-			-	-	-	-	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
5/21/2009	-			-	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
5/22/2009	-			-	-	-	-	<5.0	<5.0	<5.0	<5.0	<5.0	-	
5/25/2010	-			-	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
5/25/10 dup	-			-	-	-	-	-	-	-	-	-	<5.0	
5/10/2011	-			-	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
5/10/2011 dup	-	-	<5.0	-	-	-	-	-	-	-	-			
5/1/2012	-	-	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	0.45 J		

Table 4

GROUNDWATER ANALYTICAL RESULTS

Hranica Landfill Superfund Site
Butler County, Pennsylvania

Chemical Name	USEPA MCL/SMCL (µg/L)	Date	MW-1I (µg/L)	MW-1D (µg/L)	MW-2I (µg/L)	MW-3I (µg/L)	MW-3S (µg/L)	MW-4I (µg/L)	MW-4D (µg/L)	MW-5I (µg/L)	MW-5S (µg/L)	Field Blank (µg/L)	256 Ekastown Rd (µg/L)	
<i>Trace ICP Dissolved Metals (USEPA SW-846 Methods 6010B, 7470A)</i>														
Cadmium (continued)		5/2/2012 dup	-	-	-	-	-	<5.0	-	-	-	-	-	
		5/13/2013 / 05/14/2013	-	-	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
		5/13/2013 dup	-	-	-	-	<5.0	-	-	-	-	-	-	
		5/19/2014 / 5/20/2014	-	-	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
		5/20/2014 dup	-	-	-	-	<5.0	-	-	-	-	-	-	
		5/7/2015 / 05/07/2015 dup	-	-	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
		5/24/2016 / 05/24/2016 dup	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	
			-	-	-	-	<5	-	-	-	-	-	-	
Chromium	100	5/23/2001	<10	<10	-	-	-	<10	-	-	-	-	-	
		5/24/2001	-	-	<10	<10	<10	<10	<10	<10	<10	<10	-	
		5/21/2002	<10 / <10	<10	-	-	-	-	-	-	<10 / 3.5 J	-	-	-
		5/22/2002	-	-	<10	<10	<10	<10	<10	<10	<10	<10	-	-
		5/13/2003	-	-	<1.4	<1.4	<1.4	<1.4	<1.4 / <1.4	<1.4	<1.4	<1.4	-	-
		6/2/2004	-	-	6.5 J	<10 / <10	1.7 J	<10	<10	<10	0.60 J	-	-	-
		5/31/2005	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	-
		5/31/05 dup	-	-	-	-	<5	-	-	-	-	-	-	-
		5/10/2006	-	-	<5	<5.0 / <5.0	<5	<5	<5	<5	<5	<5	<5	-
		12/3/2008	-	-	<5.0	<5.0 / <5.0	2.5 B	-	-	-	-	-	<5.0	-
		12/4/2008	-	-	-	-	-	<5.0	<5.0	<5.0	<5.0	<5.0	-	<5.0
		5/21/2009	-	-	<5.0	<5.0	0.85 B	-	-	<5.0	<5.0	<5.0	<5.0	-
		5/22/2009	-	-	-	-	-	<5.0	<5.0	<5.0	-	-	-	-
		5/25/2010	-	-	<5.0	<5.0	1.9 B	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		5/25/10 dup	-	-	-	-	-	-	-	-	-	-	-	<5.0
		5/10/2011	-	-	<5.0	<5.0	0.92 B	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		5/10/2011 dup	-	-	<5.0	<5.0	-	-	-	-	-	-	-	-
		5/1/2012	-	-	<5.0	<5.0	0.64 J	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		5/2/2012 dup	-	-	-	-	-	<5.0	-	-	-	-	-	-
		5/13/2013 / 05/14/2013	-	-	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	0.74 J	<5.0	<5.0
		5/13/2013 dup	-	-	-	-	-	0.76 J	-	-	-	-	-	-
		5/19/2014 / 5/20/2014	-	-	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		5/20/2014 dup	-	-	-	-	-	<5.0	-	-	-	-	-	-
5/7/2015 / 05/07/2015 dup	-	-	<5.0	<5.0	<5.0	1.0 J	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0		
	-	-	-	-	-	<5.0	-	-	-	-	-	-		

Table 4

GROUNDWATER ANALYTICAL RESULTS

Hranica Landfill Superfund Site
Butler County, Pennsylvania

Chemical Name	USEPA MCL/SMCL (µg/L)	Date	MW-1I (µg/L)	MW-1D (µg/L)	MW-2I (µg/L)	MW-3I (µg/L)	MW-3S (µg/L)	MW-4I (µg/L)	MW-4D (µg/L)	MW-5I (µg/L)	MW-5S (µg/L)	Field Blank (µg/L)	256 Ekastown Rd (µg/L)
<i>Trace ICP Dissolved Metals (USEPA SW-846 Methods 6010B, 7470A)</i>													
Chromium (continued)		5/24/2016 / 05/24/2016 dup	-	-	4.8 J	2.2 J	<5	<5	3.5 J	2.5 J	<5	<5	-
			-	-	-	-	2.6 J	-	-	-	-	-	-
Lead	15 ^(b)	5/23/2001	<3	<3	-	-	-	<3	-	-	-	-	-
		5/24/2001	-	-	<3	<3	<3	-	<3	<3 / <3	<3	-	-
		5/21/2002	<3 / <3	<3	-	-	-	-	-	-	-	-	-
		5/22/2002	-	-	<3	<3	<3	<3	<3	<3	<3	-	-
		5/13/2003	-	-	<1.6	<1.4	<1.6	<1.6 / <1.6	<1.6	<1.6	<1.6	-	-
		6/2/2004	-	-	3.0 J	<3 / <3	<3	<3	<3	<3	<3	-	-
		5/31/2005	-	-	<2	<2	<2	<2	<2	<2	<2	-	-
		5/31/05 dup	-	-	-	-	<2	-	-	-	-	-	-
		5/10/2006	-	-	<2	<2 / <2	<2	<2	<2	<2	<2	<2	-
		12/3/2008	-	-	<3.0	<3.0 / <3.0	<3.0	-	-	-	-	<3.0	-
		12/4/2008	-	-	-	-	-	<3.0	<3.0	<3.0	<3.0	-	<3.0
		5/21/2009	-	-	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	-
		5/22/2009	-	-	-	-	-	<3.0	<3.0	-	-	-	-
		5/25/2010	-	-	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
		5/25/10 dup	-	-	-	-	-	-	-	-	-	-	<3.0
		5/10/2011	-	-	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
		5/10/2011 dup	-	-	<3.0	-	-	-	-	-	-	-	-
		5/1/2012	-	-	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
		5/2/2012 dup	-	-	-	-	-	<3.0	-	-	-	-	-
		5/13/2013 / 05/14/2013	-	-	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
		5/13/2013 dup	-	-	-	-	<3.0	-	-	-	-	-	-
		5/19/2014 / 5/20/2014	-	-	<10	<10	<10	<10	<10	<10	<10	<10	<10
		5/20/2014 dup	-	-	-	-	1.7 J	-	-	-	-	-	-
		5/7/2015 / 05/07/2015 dup	-	-	<10	1.5 J	1.5 J	<10	3.2 J	<10	1.7 J	<10	<10
		5/24/2016 / 05/24/2016 dup	-	-	<10	<10	<10	<10	<10	<10	<10	<10	-
			-	-	-	-	<10	-	-	-	-	-	-
Manganese	50 ^(a)	5/23/2001	24.4	4.8 J	-	-	-	119	-	-	-	-	-
		5/24/2001	-	-	5.6 J	2.4 J	2,530	-	12.4 J	7.8 J / 7.5 J	167	-	-
		5/21/2002	26.4 / 25.8	1.9 J	-	-	-	-	-	-	-	-	-
		5/22/2002	-	-	15.5	3.3 J	1,970	355	13.9 J	6.2 J	51.9	-	-
		5/13/2003	-	-	8.5 JE	7.8 JE	1,670 E	196 E / 207 E	17.2 E	7.5 JE	0.9 JE	-	-
		6/2/2004	-	-	77.1 E	7.0 JE / 7.1 JE	1,420 E	91.8 E	2.6 JE	8.3 JE	3.0 JE	-	-

Table 4

GROUNDWATER ANALYTICAL RESULTS

Hranica Landfill Superfund Site
Butler County, Pennsylvania

Chemical Name	USEPA MCL/SMCL (µg/L)	Date	MW-1I (µg/L)	MW-1D (µg/L)	MW-2I (µg/L)	MW-3I (µg/L)	MW-3S (µg/L)	MW-4I (µg/L)	MW-4D (µg/L)	MW-5I (µg/L)	MW-5S (µg/L)	Field Blank (µg/L)	256 Ekastown Rd (µg/L)
<i>Trace ICP Dissolved Metals (USEPA SW-846 Methods 6010B, 7470A)</i>													
Manganese (continued)		5/31/2005	-	-	<5	<5	2,100	<5	19	8.1	<5	-	-
		5/31/05 dup	-	-	-	-	2,300	-	-	-	-	-	-
		5/10/2006	-	-	24	<5.0 / <5.0	2,400	12	27	7.5	16	<5	-
		12/3/2008	-	-	57.6	18 / 6.6 B	2,640	-	-	-	-	<15.0	-
		12/4/2008	-	-	-	-	-	443	25.6	6.5 B	114	-	421
		5/21/2009	-	-	159	9.0 B	2,440.0	-	-	7.2 B	34.4	<15.0	-
		5/22/2009	-	-	-	-	-	40.3	20.3	-	-	-	-
		5/25/2010	-	-	11.2 B	52.1	2160	51.9	21	7.4 B	3.8 B	<15.0	412
		5/25/10 dup	-	-	-	-	-	-	-	-	-	-	421
		5/10/2011	-	-	4.8 B	27.2	1210	5.0 B	21.7	9.5 B	39.8	<15.0	171
		5/10/2011 dup	-	-	4.6 B	-	-	-	-	-	-	-	-
		5/1/2012	-	-	64.0	24.0	980	2.6 J	13.0 J	9.5 J	42.0	<15.0	440
		5/2/2012 dup	-	-	-	-	-	2.4 J	-	-	-	-	-
		5/13/2013 / 05/14/2013	-	-	5.0 J	<15	920	6.2 J	17	8.0 J	2.3 J	<15	690
		5/13/2013 dup	-	-	-	-	910	-	-	-	-	-	-
		5/19/2014 / 5/20/2014	-	-	96	0.11 J	770	1.3 J	11 J	7.4 J	12 J	0.81 J	1,100
		5/20/2014 dup	-	-	-	-	780	-	-	-	-	-	-
		5/7/2015 / 05/07/2015 dup	-	-	110	1.1 J	810	0.45 J	15	8.1 J	7.6 J	<15	730
		5/24/2016 / 05/24/2016 dup	-	-	94	64	760	45	17	44	1.9 J	<15	-
			-	-	-	-	770	-	-	-	-	-	-
Zinc	5,000 ^(a)	5/23/2001	38.6	23.2	-	-	-	20.2	-	-	-	-	-
		5/24/2001	-	-	11.0 J	8.6 J	9.4 J	-	13.6 J	10.6 J / 17.6 J	8.3 J	-	-
		5/21/2002	7.2 J / 3.8 J	2.3 J	-	-	-	-	-	-	-	-	-
		5/22/2002	-	-	3.1 J	5.7 J	2.0 J	6.0 J	8.5 J	3.6 J	16.2 J	-	-
		5/13/2003	-	-	<0.83	<0.83	<0.83	<0.83 / <0.83	<0.83	1.4 J	<0.83	-	-
		6/2/2004	-	-	10.1 J	2.4 J / <20	2.3 J	19 J	3.9 J	0.99 J	3.6 J	-	-
		5/31/2005	-	-	<10	<10	<10	<10	<10	<10	<10	-	-
		5/31/05 dup	-	-	-	-	<10	-	-	-	-	-	-
		5/10/2006	-	-	<10	<10 / <10	<10	<10	<10	<10	<10	<10	-
		12/3/2008	-	-	8.3 BJ	12.0 BJ / 4.5 BJ	6.7 BJ	-	-	-	-	6.8 BJ	-
		12/4/2008	-	-	-	-	-	7.1 BJ	5.4 BJ	6.0 BJ	26.5 J	-	7.6 BJ
		5/21/2009	-	-	4.2 BJ	5.3 BJ	4.2 BJ	-	-	6.4 BJ	13.8 BJ	17.4 BJ	-
		5/22/2009	-	-	-	-	-	5.8 BJ	6.0 BJ	-	-	-	-
		5/25/2010	-	-	6.6 B	4.6 B	2.8 B	6.2 B	6.6 B	5.5 B	6.1 B	3.6 B	4.7 B

Table 4

GROUNDWATER ANALYTICAL RESULTS

Hranica Landfill Superfund Site
Butler County, Pennsylvania

Chemical Name	USEPA MCL/SMCL (µg/L)	Date	MW-1I (µg/L)	MW-1D (µg/L)	MW-2I (µg/L)	MW-3I (µg/L)	MW-3S (µg/L)	MW-4I (µg/L)	MW-4D (µg/L)	MW-5I (µg/L)	MW-5S (µg/L)	Field Blank (µg/L)	256 Ekastown Rd (µg/L)
<i>Trace ICP Dissolved Metals (USEPA SW-846 Methods 6010B, 7470A)</i>													
Zinc (continued)		5/25/10 dup	-	-	-	-	-	-	-	-	-	-	5.0 B
		5/10/2011	-	-	6.4 B	4.4 B	<20.0	7.0 B	3.0 B	5.5 B	8.0 B	<20.0	8.7 B
		5/10/2011 dup	-	-	5.0 B	-	-	-	-	-	-	-	-
		5/1/2012	-	-	3.9 J	<20	<20	<20	<20	<20	3.0 J	<20	7.0 J
		5/2/2012 dup	-	-	-	-	-	<20	-	-	-	-	-
		5/13/2013 /	-	-	5.9 JB	9.1 JB	6.6 JB	5.1 JB	9.2 JB	7.1 JB	9.3 JB	5.6 JB	12.0 JB
		05/14/2013	-	-	-	-	4.7 JB	-	-	-	-	-	-
		5/13/2013 dup	-	-	-	-	-	-	-	-	-	-	-
		5/19/2014 /	-	-	<20	<20	<20	<20	<20	<20	<20	<20	<20
		5/20/2014	-	-	-	-	<20	-	-	-	-	-	-
		5/20/2014 dup	-	-	-	-	<20	-	-	-	-	-	-
		5/7/2015 /	-	-	<20	17 J	<20	<20	<20	<20	<20	<20	<20
		05/07/2015 dup	-	-	-	-	<20	-	-	-	-	-	-
		5/24/2016 /	-	-	9 J	<20	<20	<20	7.2 J	10 J	<20	<20	-
		05/24/2016 dup	-	-	-	-	<20	-	-	-	-	-	-

Notes:

- Not analyzed
- No standard
- (a) This value represents a secondary maximum contaminant level (SMCL).
- (b) Value represents the target value for drinking water after treatment.
- (c) This value represents a maximum contaminant level goal (MCLG).
- duplicate sample collected
- < x Result is less than detection limit "x".
- B The associated method blank contains the compound at a reportable concentration.
- Bold** Result exceeds USEPA MCL standards.
- Dup Duplicate sample
- E Diluted sample; the serial dilution percent difference is not within limits.
- J Result is less than the reporting limit but greater than or equal to the MDL and the concentration is an approximate value.
- MCL/SMCL Maximum Contaminant Level/Secondary Maximum Contaminant Level
- µg/L micrograms per Liter

Table 5

SURFACE WATER ANALYTICAL RESULTS

Hranica Landfill Superfund Site
Butler County, Pennsylvania

Chemical Name	USEPA MCL (µg/L)	USEPA FRESH WATER AWQCs		Date	SW-3 (µg/L)	SW-8 (µg/L)	SEEP-2 (µg/L)	SEEP-1 (PALKO) (µg/L)
		CMC (µg/L)	CCC (µg/L)					
<i>Volatile Organic Compounds (USEPA SW-846 Method 8260B)</i>								
Acetone	---	---	---	5/21/2009	<5.0	<5.0 ⁽¹⁾	<5.0	NS
				5/24/2010	<5.0	<5.0 ⁽¹⁾	<5.0	NS
				5/10/2011	<5.0	<5.0 ⁽¹⁾	<5.0	NS
				5/2/2012	<5.0	<5.0 ⁽¹⁾	<5.0	NS
				5/13/2013	<5.0	<5.0 ⁽¹⁾	<5.0	NS
				5/19/2014	<5.0	<5.0 ⁽¹⁾	<5.0	NS
				5/6/2015	<5.0	<5.0 ⁽¹⁾	<5.0	<5.0
5/24/2016	<20	<20	<20	<20				
Benzene	5	---	---	5/21/2009	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/24/2010	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/10/2011	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/2/2012	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/13/2013	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/19/2014	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/6/2015	<1.0	<1.0 ⁽¹⁾	<1.0	<1.0
5/24/2016	<5.0	<5.0	<5.0	<5.0				
2-Butanone (Methyl Ethyl Ketone)	---	---	---	5/21/2009	<5.0	<5.0 ⁽¹⁾	<5.0	NS
				5/24/2010	<5.0	<5.0 ⁽¹⁾	<5.0	NS
				5/10/2011	<5.0	<5.0 ⁽¹⁾	<5.0	NS
				5/2/2012	<5.0	<5.0 ⁽¹⁾	<5.0	NS
				5/13/2013	<5.0	<5.0 ⁽¹⁾	<5.0	NS
				5/19/2014	<5.0	<5.0 ⁽¹⁾	<5.0	NS
				5/6/2015	<5.0	<5.0 ⁽¹⁾	<5.0	<5.0
5/24/2016	<5.0	<5.0	<5.0	<5.0				
Chlorobenzene	100	---	---	5/21/2009	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/24/2010	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/10/2011	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/2/2012	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/13/2013	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/19/2014	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/6/2015	<1.0	<1.0 ⁽¹⁾	<1.0	<1.0
5/24/2016	<5.0	<5.0	<5.0	<5.0				
Chloroform	100	---	---	5/21/2009	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/24/2010	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/10/2011	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/2/2012	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/13/2013	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/19/2014	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/6/2015	<1.0	<1.0 ⁽¹⁾	<1.0	<1.0
5/24/2016	<5.0	<5.0	<5.0	<5.0				
1,4-Dichlorobenzene (p-Dichlorobenzene)	75	---	---	5/21/2009	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/24/2010	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/10/2011	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/13/2013	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/19/2014	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/6/2015	<1.0	<1.0 ⁽¹⁾	<1.0	<1.0
				5/24/2016	<5.0	<5.0	<5.0	<5.0

Table 5

SURFACE WATER ANALYTICAL RESULTS

Hranica Landfill Superfund Site
Butler County, Pennsylvania

Chemical Name	USEPA MCL (µg/L)	USEPA FRESH WATER AWQCs		Date	SW-3 (µg/L)	SW-8 (µg/L)	SEEP-2 (µg/L)	SEEP-1 (PALKO) (µg/L)
		CMC (µg/L)	CCC (µg/L)					
<i>Volatile Organic Compounds</i>								
Ethylbenzene	700	---	---	5/21/2009	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/24/2010	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/10/2011	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/2/2012	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/13/2013	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/19/2014	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/6/2015	<1.0	<1.0 ⁽¹⁾	<1.0	<1.0
				5/24/2016	<5.0	<5.0	<5.0	<5.0
Isopropylbenzene (Cumene)	---	---	---	5/21/2009	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/24/2010	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/10/2011	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/2/2012	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/13/2013	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/19/2014	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/6/2015	<1.0	<1.0 ⁽¹⁾	<1.0	<1.0
				5/24/2016	<5.0	<5.0	<5.0	<5.0
4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	---	---	---	5/23/2009	<5.0	<5.0 ⁽¹⁾	<5.0	NS
				5/24/2010	<5.0	<5.0 ⁽¹⁾	<5.0	NS
				5/10/2011	<5.0	<5.0 ⁽¹⁾	<5.0	NS
				5/2/2012	<5.0	<5.0 ⁽¹⁾	<5.0	NS
				5/13/2013	<5.0	<5.0 ⁽¹⁾	<5.0	NS
				5/19/2014	<5.0	<5.0 ⁽¹⁾	<5.0	NS
				5/6/2015	<5.0	<5.0 ⁽¹⁾	<5.0	<5.0
				5/24/2016	<5.0	<5.0	<5.0	<5.0
Toluene	1,000	---	---	5/25/2009	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/24/2010	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/10/2011	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/2/2012	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/13/2013	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/19/2014	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/6/2015	<1.0	<1.0 ⁽¹⁾	<1.0	<1.0
				5/24/2016	<5.0	<5.0	<5.0	<5.0
Xylenes (total)	10,000	---	---	5/27/2009	<3.0	<3.0 ⁽¹⁾	<3.0	NS
				5/24/2010	<3.0	<3.0 ⁽¹⁾	<3.0	NS
				5/10/2011	<3.0	<3.0 ⁽¹⁾	<3.0	NS
				5/2/2012	<3.0	<3.0 ⁽¹⁾	<3.0	NS
				5/13/2013	<3.0	<3.0 ⁽¹⁾	<3.0	NS
				5/19/2014	<3.0	<3.0 ⁽¹⁾	<3.0	NS
				5/6/2015	<3.0	<3.0 ⁽¹⁾	<3.0	<3.0
				5/24/2016	<10.0	<10.0	<10.0	<10.0
Dichlorodifluoromethane (Freon 12)	---	---	---	5/29/2009	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/24/2010	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/10/2011	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/2/2012	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/13/2013	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/19/2014	<1.0	<1.0 ⁽¹⁾	<1.0	NS
				5/6/2015	<1.0	<1.0 ⁽¹⁾	<1.0	<1.0
				5/24/2016	<5.0	<5.0	<5.0	<5.0

Table 5

SURFACE WATER ANALYTICAL RESULTS

Hranica Landfill Superfund Site
Butler County, Pennsylvania

Chemical Name	USEPA MCL (µg/L)	USEPA FRESH WATER AWQCs		Date	SW-3 (µg/L)	SW-8 (µg/L)	SEEP-2 (µg/L)	SEEP-1 (PALKO) (µg/L)
		CMC (µg/L)	CCC (µg/L)					
<i>Polychlorinated Biphenyl (PCB) Compounds (USEPA SW-846 Method 8082)</i>								
Aroclor 1254	0.5	---	---	5/23/2001	<1	<1	NS	NS
				5/21/2002	<1	<1	NS	NS
				5/13/2003	NA	NA	NS	NS
				6/2/2004	NA	NA	NS	NS
				5/31/2005	NA	NA	NS	NS
				5/9/2006	NA	NA	NS	NS
				12/3/2008	NS	NS	NS	NS
				5/21/2009	<0.38	<0.38 ⁽¹⁾	0.48	NS
				5/24/2010	<0.38	<0.38 ⁽¹⁾	0.48	NS
				5/10/2011	<0.38	<0.38 ⁽¹⁾	<0.38	NS
				5/2/2012	<0.38	<0.38 ⁽¹⁾	<0.38	NS
				5/13/2013	<0.38	<0.38 ⁽¹⁾	<0.38	NS
				5/19/2014	<0.42	<0.42 ⁽¹⁾	<0.42	NS
				5/6/2015	<0.42	<0.42 ⁽¹⁾	<0.42	<0.42
				5/24/2016	<0.42	<0.42	<0.42	<0.42
<i>Trace ICP Metals (Methods SW-846 6010B)</i>								
Aluminum	200 ⁽⁶⁾	750	87	5/23/2001	204	<200	NS	NS
				5/21/2002	125J	<200	NS	NS
				5/13/2003	1,430	<11.1	NS	NS
				6/2/2004	894	32.1J	NS	NS
				5/31/2005	<50	650	NS	NS
				5/9/2006	87	500	NS	NS
				12/3/2008	NS	NS	NS	NS
				5/21/2009	93.0B	393⁽¹⁾	460	NS
				5/24/2010	532 J	473 J⁽¹⁾	1,320 J	NS
				5/10/2011	48 BJ	255 J⁽¹⁾	309 J	NS
				5/2/2012	750 B	250 B⁽¹⁾	890 B	NS
				5/13/2013	96 J	170 J ⁽¹⁾	43 J	NS
				5/19/2014	84 J	270⁽¹⁾	330	NS
				5/6/2015	<200	81 J ⁽¹⁾	60 J	210
				5/24/2016	2700	5000	830	<200
Arsenic	10	340	150	5/23/2001	<10	<10	NS	NS
				5/21/2002	<10	<10	NS	NS
				5/13/2003	<1.6	<1.6	NS	NS
				6/2/2004	<10	<10	NS	NS
				5/31/2005	<5	<5	NS	NS
				5/9/2006	<5	<5	NS	NS
				12/3/2008	NS	NS	NS	NS
				5/21/2009	<10	<10 ⁽¹⁾	<10	NS
				5/24/2010	<10.0	<10 ⁽¹⁾	<10.0	NS
				5/10/2011	<10.0	<10 ⁽¹⁾	<10.0	NS
				5/2/2012	<10.0	<10 ⁽¹⁾	<10.0	NS
				5/13/2013	<10	<10 ⁽¹⁾	<10	NS
				5/19/2014	<10	<10 ⁽¹⁾	<10	NS
				5/6/2015	<10	<10 ⁽¹⁾	<10	<10
				5/24/2016	5.1 J	6.0 J	10	<10

Table 5

SURFACE WATER ANALYTICAL RESULTS

Hranica Landfill Superfund Site
Butler County, Pennsylvania

Chemical Name	USEPA MCL (µg/L)	USEPA FRESH WATER AWQCs		Date	SW-3 (µg/L)	SW-8 (µg/L)	SEEP-2 (µg/L)	SEEP-1 (PALKO) (µg/L)
		CMC (µg/L)	CCC (µg/L)					
<i>Trace ICP Metals (Methods SW-846 6010B)</i>								
Beryllium	4	---	---	5/23/2001	<5	<5	NS	NS
				5/21/2002	<5	<5	NS	NS
				5/13/2003	<0.26	<0.26	NS	NS
				6/2/2004	0.65J	0.49J	NS	NS
				5/31/2005	<1	<1	NS	NS
				5/9/2006	<1	<1	NS	NS
				12/3/2008	NS	NS	NS	NS
				5/21/2009	<4.0	<4.0 ⁽¹⁾	<4.0	NS
				5/24/2010	0.25 BJ	0.25 BJ ⁽¹⁾	<4.0	NS
				5/10/2011	0.40 BJ	0.48 BJ ⁽¹⁾	0.47 BJ	NS
				5/2/2012	0.73 BJ	0.58 BJ ⁽¹⁾	0.60 BJ	NS
				5/13/2013	<4.0	<4.0 ⁽¹⁾	<4.0	NS
				5/19/2014	<4.0	<4.0 ⁽¹⁾	<4.0	NS
				5/6/2015	<4.0	<4.0 ⁽¹⁾	<4.0	<4.0
5/24/2016	<4.0	0.45 J	0.94 J	<4.0				
Cadmium	5	2.0	0.25	5/23/2001	<5	<5	NS	NS
				5/21/2002	<5	<5	NS	NS
				5/13/2003	<0.3	<0.3	NS	NS
				6/2/2004	<5	<5	NS	NS
				5/31/2005	<1	<1	NS	NS
				5/9/2006	<1	<1	NS	NS
				12/3/2008	NS	NS	NS	NS
				5/21/2009	<5.0	0.24B ⁽¹⁾	0.17B	NS
				5/24/2010	<5.0	<5.0 ⁽¹⁾	0.23 B	NS
				5/10/2011	<5.0	<5.0 ⁽¹⁾	<5.0	NS
				5/2/2012	<5.0	<5.0 ⁽¹⁾	0.16 J	NS
				5/13/2013	<5.0	<5.0 ⁽¹⁾	<5.0	NS
				5/19/2014	<5.0	<5.0 ⁽¹⁾	<5.0	NS
				5/6/2015	<5.0	<5.0 ⁽¹⁾	<5.0	<5.0
5/24/2016	<5.0	<5.0	3.6 J	<5.0				
Chromium	100	570	740	5/23/2001	<10	<10	NS	NS
				5/21/2002	<10	<10	NS	NS
				5/13/2003	1.7J	<1.4	NS	NS
				6/2/2004	1.1J	<10	NS	NS
				5/31/2005	<5	6.7	NS	NS
				5/9/2006	<5	<5	NS	NS
				12/3/2008	NS	NS	NS	NS
				5/21/2009	<5.0	<5.0 ⁽¹⁾	<5.0	NS
				5/24/2010	<5.0	0.58 B ⁽¹⁾	2.0 B	NS
				5/10/2011	<5.0	<5.0 ⁽¹⁾	0.83 B	NS
				5/2/2012	1.6 J	0.7 J ⁽¹⁾	1.5 J	NS
				5/13/2013	<5.0	0.83 J ⁽¹⁾	<5.0	NS
				5/19/2014	<5.0	<5.0 ⁽¹⁾	<5.0	NS
				5/6/2015	<5.0	<5.0 ⁽¹⁾	<5.0	<5.0
5/24/2016	3.4 J	7.1	15	<5.0				

Table 5

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Butler County, Pennsylvania

Chemical Name	USEPA MCL (µg/L)	USEPA FRESH WATER AWQCs		Date	SW-3 (µg/L)	SW-8 (µg/L)	SEEP-2 (µg/L)	SEEP-1 (PALKO) (µg/L)
		CMC (µg/L)	CCC (µg/L)					
<i>Trace ICP Metals (Methods SW-846 6010B)</i>								
Lead	15 ^(b)	65	2.5	5/23/2001	<3	<3	NS	NS
				5/21/2002	<3	<3	NS	NS
				5/13/2003	2.2J	<1.6	NS	NS
				6/2/2004	<3	<3	NS	NS
				5/31/2005	<2	2.4	NS	NS
				5/9/2006	<2	<2	NS	NS
				12/3/2008	NS	NS	NS	NS
				5/21/2009	<3.0	3.4 ⁽¹⁾	1.5B	NS
				5/24/2010	1.6 B	<3.0 ⁽¹⁾	4.6	NS
				5/10/2011	<3.0	<3.0 ⁽¹⁾	2.6 B	NS
				5/2/2012	<3.0	<3.0 ⁽¹⁾	2.7 J	NS
				5/13/2013	<3.0	<3.0 ⁽¹⁾	<3.0	NS
				5/19/2014	<10	2.0 J ⁽¹⁾	2.8 J	NS
				5/6/2015	<10	<10 ⁽¹⁾	<10	2.0 J
5/24/2016	12		6.2 J	<10.0				
Manganese	50 ^(b)	---	---	5/23/2001	37.9	1.1J	NS	NS
				5/21/2002	23.3	1.2J	NS	NS
				5/13/2003	261E	<0.13B	NS	NS
				6/2/2004	127E	<1.5E	NS	NS
				5/31/2005	100	360	NS	NS
				5/9/2006	5.6	72	NS	NS
				12/3/2008	NS	NS	NS	NS
				5/21/2009	8.1B	298⁽¹⁾	269	NS
				5/24/2010	52.7	133⁽¹⁾	654	NS
				5/10/2011	22.4	46.7 ⁽¹⁾	294	NS
				5/2/2012	65.0	92 (1)	210	NS
				5/13/2013	120	170⁽¹⁾	26	NS
				5/19/2014	12 J	88⁽¹⁾	120	NS
				5/6/2015	18 B	78 B⁽¹⁾	130 B	44 B
5/24/2016	170	320	3700	<15				
Zinc	5,000 ^(b)	120	120	5/23/2001	11.0J	7.8J	NS	NS
				5/21/2002	2.1J	1.1J	NS	NS
				5/13/2003	3.6J	<0.83	NS	NS
				6/2/2004	14.6J	1.4J	NS	NS
				5/31/2005	<10	16	NS	NS
				5/9/2006	24	33	NS	NS
				12/3/2008	NS	NS	NS	NS
				5/21/2009	10.2BJ	22.4J ⁽¹⁾	14.5BJ	NS
				5/24/2010	6.0 B	20.7 ⁽¹⁾	34.6	NS
				5/10/2011	3.0 B	2.7 B ⁽¹⁾	28.3 B	NS
				5/2/2012	11.0 BJ	6.6 BJ ⁽¹⁾	33.0 B	NS
				5/13/2013	11 J	2.6 J ⁽¹⁾	4.7 J	NS
				5/19/2014	<20	<20 ⁽¹⁾	<20	NS
				5/6/2015	<20	13 J ⁽¹⁾	<20	<20
5/24/2016	35	160	530	<20				

Notes:

USEPA MCL	United States Environmental Protection Agency established Maximum Contaminant Level
USEPA AWQC	United States Environmental Protection Agency established Aquatic Water Quality Criteria
---	No standard
(a)	This value represents a secondary maximum contaminant level (SMCL)
(b)	This value represents the target value for drinking water after treatment
(µg/L)	micrograms per Liter
CMC	Criteria Maximum Concentration
CCC	Criteria Continuous Concentration
<x	Concentration less than the laboratory reporting limit of "x"
BOLD	Result exceeds standards
B	Compounds detected in blank and sample
J	Result is less than the reporting limit but greater than or equal to the MDL and the concentration is an approximate value
NA	Not Analyzed
NS	Not Sampled
(1)	Samples collected from location (PDB-2110) shown in GES 2008 Additional Site Characterization Report

ATTACHMENT 3

Five-Year Review Site Inspection Checklist

I. SITE INFORMATION			
Site name: Hranica Landfill	Date of inspection: December 13, 2006		
Location and Region: PA, Region 3	EPA ID: PAD 980829493		
Agency, office, or company leading the five-year review: EPA	Weather/temperature: 20's and cloudy		
Remedy Includes: (Check all that apply) <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input checked="" type="checkbox"/> Landfill cover/containment <input type="checkbox"/> Access controls <input checked="" type="checkbox"/> Institutional controls <input type="checkbox"/> Groundwater pump and treatment <input type="checkbox"/> Surface water collection and treatment <input type="checkbox"/> Other _____ _____ </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Monitored natural attenuation <input type="checkbox"/> Groundwater containment <input type="checkbox"/> Vertical barrier walls </td> </tr> </table>		<input checked="" type="checkbox"/> Landfill cover/containment <input type="checkbox"/> Access controls <input checked="" type="checkbox"/> Institutional controls <input type="checkbox"/> Groundwater pump and treatment <input type="checkbox"/> Surface water collection and treatment <input type="checkbox"/> Other _____ _____	<input type="checkbox"/> Monitored natural attenuation <input type="checkbox"/> Groundwater containment <input type="checkbox"/> Vertical barrier walls
<input checked="" type="checkbox"/> Landfill cover/containment <input type="checkbox"/> Access controls <input checked="" type="checkbox"/> Institutional controls <input type="checkbox"/> Groundwater pump and treatment <input type="checkbox"/> Surface water collection and treatment <input type="checkbox"/> Other _____ _____	<input type="checkbox"/> Monitored natural attenuation <input type="checkbox"/> Groundwater containment <input type="checkbox"/> Vertical barrier walls		
Attachments: <input type="checkbox"/> Inspection team roster attached <input type="checkbox"/> Site map attached			
II. INTERVIEWS			
Site Inspection Team: Aaron Mroz, USEPA, Remedial Project Manager Ryan Bower, USEPA, Hydrogeologist Kathleen Patnode, USFWS, Environmental Contaminants Specialist Thomas Ebbert, PPG Industries, Remediation Manager Matthew Valentine, Woodard & Curran, Project Manager Rick Weber, PADEP, Environmental Protection Specialist			

III. ON-SITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)

1.	O&M Documents <input type="checkbox"/> O&M manual <input type="checkbox"/> As-built drawings <input type="checkbox"/> Maintenance logs Remarks _____ _____	<input type="checkbox"/> Readily available <input type="checkbox"/> Readily available <input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date <input type="checkbox"/> Up to date <input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A
2.	Site-Specific Health and Safety Plan <input type="checkbox"/> Contingency plan/emergency response plan Remarks _____ _____	<input type="checkbox"/> Readily available <input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date <input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A
3.	O&M and OSHA Training Records Remarks _____ _____	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
4.	Permits and Service Agreements <input type="checkbox"/> Air discharge permit <input type="checkbox"/> Effluent discharge <input type="checkbox"/> Waste disposal, POTW <input type="checkbox"/> Other permits _____ Remarks _____ _____	<input type="checkbox"/> Readily available <input type="checkbox"/> Readily available <input type="checkbox"/> Readily available <input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date <input type="checkbox"/> Up to date <input type="checkbox"/> Up to date <input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A <input type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A
5.	Gas Generation Records Remarks _____ _____	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
6.	Settlement Monument Records Remarks _____ _____	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
7.	Groundwater Monitoring Records Remarks _____ _____	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
8.	Leachate Extraction Records Remarks _____ _____	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
9.	Discharge Compliance Records <input type="checkbox"/> Air <input type="checkbox"/> Water (effluent) Remarks _____ _____	<input type="checkbox"/> Readily available <input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date <input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A
10.	Daily Access/Security Logs Remarks _____ _____	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A

IV. O&M COSTS

1. O&M Organization

- | | |
|--|--|
| <input type="checkbox"/> State in-house | <input 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 type="checkbox"/> Other _____ | |

2. O&M Cost Records

- Readily available Up to date
 Funding mechanism/agreement in place
Original O&M cost estimate _____ Breakdown attached

Total annual cost by year for review period if available

From _____	To _____	_____	<input type="checkbox"/> Breakdown attached
Date	Date	Total cost	
From _____	To _____	_____	<input type="checkbox"/> Breakdown attached
Date	Date	Total cost	
From _____	To _____	_____	<input type="checkbox"/> Breakdown attached
Date	Date	Total cost	
From _____	To _____	_____	<input type="checkbox"/> Breakdown attached
Date	Date	Total cost	
From _____	To _____	_____	<input type="checkbox"/> Breakdown attached
Date	Date	Total cost	

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

Describe costs and reasons: _____

V. ACCESS AND INSTITUTIONAL CONTROLS Applicable N/A

A. Fencing

- 1. Fencing damaged** Location shown on site map Gates secured N/A
Remarks _____

B. Other Access Restrictions

- 1. Signs and other security measures** Location shown on site map N/A
Remarks _____

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) Inspection

Frequency Yearly

Responsible party/agency PRP

Contact _____

Name Title Date Phone no.

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

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

Remarks _____

D. General

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

Remarks _____

2. **Land use changes on site** N/A

Remarks _____

3. **Land use changes off site** N/A

Remarks _____

VI. GENERAL SITE CONDITIONS

A. Roads Applicable N/A

1. **Roads damaged** Location shown on site map Roads adequate 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) Areal extent _____ Depth _____ Remarks _____ _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> Depth _____	<input checked="" type="checkbox"/> Settlement not evident
2.	Cracks Lengths _____ Widths _____ Depths _____ Remarks _____ _____	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> Cracking not evident
3.	Erosion Areal extent _____ Remarks _____ _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> Depth _____	<input checked="" type="checkbox"/> Erosion not evident
4.	Holes Areal extent _____ Remarks _____ _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> Depth _____	<input checked="" type="checkbox"/> Holes not evident
5.	Vegetative Cover <input type="checkbox"/> Trees/Shrubs (indicate size and locations on a diagram) Remarks _____ _____	<input type="checkbox"/> Grass <input checked="" type="checkbox"/> Cover properly established	<input checked="" type="checkbox"/> No signs of stress
6.	Alternative Cover (armored rock, concrete, etc.) Remarks _____ _____		<input checked="" type="checkbox"/> N/A
7.	Bulges Areal extent _____ Remarks _____ _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> Height _____	<input type="checkbox"/> Bulges not evident

8.	Wet Areas/Water Damage <input type="checkbox"/> Wet areas <input type="checkbox"/> Ponding <input type="checkbox"/> Seeps <input type="checkbox"/> Soft subgrade Remarks _____	<input type="checkbox"/> Wet areas/water damage not evident <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Location shown on site map	Areal extent _____ Areal extent _____ Areal extent _____ Areal extent _____
9.	Slope Instability Areal extent _____ Remarks _____	<input type="checkbox"/> Slides <input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of slope instability
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 Remarks _____	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> N/A or okay
2.	Bench Breached Remarks _____	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> N/A or okay
3.	Bench Overtopped Remarks _____	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> N/A or okay
C. Letdown Channels <input type="checkbox"/> Applicable <input 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 Areal extent _____ Remarks _____	<input type="checkbox"/> Location shown on site map Depth _____	<input type="checkbox"/> No evidence of settlement
2.	Material Degradation Material type _____ Remarks _____	<input type="checkbox"/> Location shown on site map Areal extent _____	<input type="checkbox"/> No evidence of degradation
3.	Erosion Areal extent _____ Remarks _____	<input type="checkbox"/> Location shown on site map Depth _____	<input type="checkbox"/> No evidence of erosion

4.	Undercutting	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of undercutting
	Areal extent_____	Depth_____	
	Remarks_____		
5.	Obstructions	Type_____	<input type="checkbox"/> No obstructions
	<input type="checkbox"/> Location shown on site map	Areal 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	Areal extent_____	
	Remarks_____		
D. Cover Penetrations <input type="checkbox"/> Applicable <input checked="" 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"/> Evidence of leakage at penetration	<input type="checkbox"/> Needs Maintenance	<input type="checkbox"/> Good condition
	<input type="checkbox"/> N/A		
	Remarks_____		
2.	Gas Monitoring Probes	<input type="checkbox"/> Routinely sampled	<input type="checkbox"/> Good condition
	<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning	<input type="checkbox"/> Needs Maintenance
	<input type="checkbox"/> Evidence of leakage at penetration	<input type="checkbox"/> N/A	
	Remarks_____		
3.	Monitoring Wells (within surface area of landfill)	<input type="checkbox"/> Routinely sampled	<input type="checkbox"/> Good condition
	<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning	<input type="checkbox"/> Needs Maintenance
	<input type="checkbox"/> Evidence of leakage at penetration	<input type="checkbox"/> N/A	
	Remarks_____		
4.	Leachate Extraction Wells	<input type="checkbox"/> Routinely sampled	<input type="checkbox"/> Good condition
	<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning	<input type="checkbox"/> Needs Maintenance
	<input type="checkbox"/> Evidence of leakage at penetration	<input type="checkbox"/> N/A	
	Remarks_____		
5.	Settlement Monuments	<input type="checkbox"/> Located	<input type="checkbox"/> Routinely surveyed
	<input type="checkbox"/> N/A		
	Remarks_____		

E. Gas Collection and Treatment <input type="checkbox"/> Applicable <input 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 (<i>e.g.</i> , 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 Areal extent _____ Depth _____	<input type="checkbox"/> N/A	
	<input type="checkbox"/> Siltation not evident		
	Remarks _____ _____		
2.	Erosion Areal 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 type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1.	Siltation	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Siltation not evident
	Areal extent_____	Depth_____	
	Remarks_____		

2.	Vegetative Growth	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> N/A
	<input type="checkbox"/> Vegetation does not impede flow		
	Areal extent_____	Type_____	
	Remarks_____		

3.	Erosion	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Erosion not evident
	Areal extent_____	Depth_____	
	Remarks_____		

4.	Discharge Structure	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
	Remarks_____		

VIII. VERTICAL BARRIER WALLS		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1.	Settlement	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Settlement not evident
	Areal extent_____	Depth_____	
	Remarks_____		

2.	Performance Monitoring	Type of monitoring_____	
	<input type="checkbox"/> Performance not monitored		
	Frequency_____	<input type="checkbox"/> Evidence of breaching	
	Head differential_____		
	Remarks_____		

IX. GROUNDWATER/SURFACE WATER REMEDIES <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A	
A. Groundwater Extraction Wells, Pumps, and Pipelines <input type="checkbox"/> Applicable <input checked="" 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 checked="" type="checkbox"/> N/A	
1.	Collection Structures, Pumps, and Electrical <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____ _____
2.	Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____ _____
3.	Spare Parts and Equipment <input type="checkbox"/> Readily available <input type="checkbox"/> Good condition <input type="checkbox"/> Requires upgrade <input type="checkbox"/> Needs to be provided Remarks _____ _____

C. Treatment System		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1.	Treatment Train (Check components that apply) <input type="checkbox"/> Metals removal <input type="checkbox"/> Oil/water separation <input type="checkbox"/> Bioremediation <input type="checkbox"/> Air stripping <input type="checkbox"/> Carbon adsorbers <input type="checkbox"/> Filters _____ <input type="checkbox"/> Additive (<i>e.g.</i> , 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 checked="" type="checkbox"/> Is routinely submitted on time <input checked="" type="checkbox"/> Is of acceptable quality		
2.	Monitoring data suggests: <input checked="" type="checkbox"/> Groundwater plume is effectively contained <input checked="" type="checkbox"/> Contaminant concentrations are declining		

D. 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"/> All required wells located	<input type="checkbox"/> Needs Maintenance	<input type="checkbox"/> Good condition
	Remarks _____		<input type="checkbox"/> N/A
X. OTHER REMEDIES			
If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.			
XI. OVERALL OBSERVATIONS			
A. Implementation of the Remedy			
Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.).			
The remedy is functioning as designed. The landfill cap is in good condition, the fence is being maintained, and institutional controls are in place to restrict onsite land and groundwater use. Groundwater monitoring indicates that onsite groundwater concentrations have declined from historic levels and contaminated groundwater is not migrating offsite.			
B. Adequacy of O&M			
Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.			
The site is inspected on an annual basis to confirm the protectiveness of the remedy.			
C. Early Indicators of Potential Remedy Problems			
Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs, that suggest that the protectiveness of the remedy may be compromised in the future.			
No early indicators of potential remedy problems observed.			
D. Opportunities for Optimization			
Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.			
The responsible party has considered optimization options for the remaining groundwater contamination, but the possible options are not feasible at this time with the trend in groundwater concentrations decreasing.			