FOURTH FIVE-YEAR REVIEW REPORT FOR INDUSTRIAL EXCESS LANDFILL (IEL) SUPERFUND SITE UNIONTOWN, STARK COUNTY, OHIO

Prepared by

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Date

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LIST OF ABBREVIATIONS & ACRONYMS

CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
DCA	1,2-Dichloroethane
DCE	cis-1,2-Dichloroethene
EPA	United States Environmental Protection Agency
ERT	Emergency Response Team
FYR	Five-Year Review
ICs	Institutional Controls
IEL	Industrial Excess Landfill
MCL	Maximum Contaminant Level
MNA	Monitored Natural Attenuation
MVS	Methane Venting System
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
O&M	Operation and Maintenance
Ohio EPA	Ohio Environmental Protection Agency
OU	Operable Unit
PRG	Preliminary Remediation Goal
PRPs	Potentially Responsible Parties
QAPP	Quality Assurance Project Plan
RAO	Remedial Action Objectives
ROD	Record of Decision
RPM	Remedial Project Manager
RSL	Regional Screening Level
Site	Industrial Excess Landfill
TCE	Trichloroethylene
UAO	Unilateral Administrative Order
ug/L	microgram/liter
UU/UE	Unlimited Use and Unrestricted Exposure
VOC	Volatile Organic Compounds
WHC	Wildlife Habitat Council

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

This is the fourth FYR for the Industrial Excess Landfill (IEL) Superfund Site (Site). The triggering action for this statutory review is the completion date of the previous FYR. The 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 (UU/UE).

The Site consists of one operable unit (OU), which will be addressed in this FYR. OU1 addresses the landfill materials, groundwater and landfill gas at the Site.

The IEL Superfund Site FYR was led by Karen Cibulskis, EPA Remedial Project Manager (RPM). Participants included Keith Fusinski, EPA Toxicologist; Amy Gahala, United States Geological Survey Hydrogeologist; Ruth Muhtsun, EPA Community Involvement Coordinator; Larry Antonelli, Ohio Environmental Protection Agency (Ohio EPA) Site Manager; and Paul Depasquale, Director of Environmental Health, Stark County Health Department. The potentially responsible parties (PRPs) were notified of the initiation of the FYR. The review began on 9/29/2015.

Site Background

IEL is a privately-owned, 30-acre mixed-waste landfill located at 12646 Cleveland Avenue in Uniontown, Ohio (Figure 1 in Appendix B). Uniontown is located in Stark County and is governed by Lake Township. The landfill is located in a mixed residential, agricultural, commercial and light industrial area, approximately 10 miles southeast of Akron. The landfill is fenced and vacant.

EPA purchased 14.82 acres of land adjacent to the north, south and west boundaries of the landfill in 1990 to construct a low-permeability landfill cap at the Site required by a 1989 Record of Decision (ROD). In 2002, EPA issued a ROD Amendment modifying the remedy to an augmented vegetative cover. The low-permeability cap was never built. The portion of the Site that EPA owns (EPA's Site property) is unfenced and vacant. EPA is working with the State of Ohio to transfer this part of the Site to the State. The property transfer is required by CERCLA Section 104(j)(2) and the 1/29/1990 Amended Superfund State Contract between EPA and Ohio EPA.

The landfill is covered with grasses, small trees, and thick woody vegetation, and slopes down from the northwest to the east and southeast. EPA's Site property around the landfill is heavily wooded, with some open areas of grass. Homes are located to the north, west and southwest of the Site, across residential and major streets. A sod farm is located east of the Site, across from a narrow stream called Metzger's Ditch.

The Site is located between Akron and Canton, in an area that has become increasingly residential with many new homes being built nearby. According to the 2010 Census, the population of Uniontown increased from 2,802 people in 2000 to 3,309 people in 2010. The population of Lake Township increased from 25,892 in 2000 to 29,961 in 2010.

The 30-acre landfill property was used for sand and gravel mining prior to 1966. In 1966, the mining and excavation pit was converted into a landfill, which operated until 1980. During this time, IEL received industrial waste, primarily from the rubber industries in Akron, Ohio. An estimated 780,000 tons of solid waste and 1,000,000 gallons of liquid waste were dumped on the ground and into an on-Site evaporation lagoon. In 1972, the Stark County Board of Health ordered IEL to stop dumping chemical wastes. The landfill also accepted waste from hospitals, septic tank cleaning firms, and the general public. The landfill ceased operations in 1980. The landfill owners covered the landfill with two (2) feet of soil in accordance with the 1976 Ohio EPA landfill closure requirements and regulations.

EPA's Site property consists of 20 parcels of land that contained 12 residences and two businesses. EPA razed the homes and businesses in the 1990s. An Environmental Covenant prohibits residential development at the landfill property and any access or land use that is not supported by a risk assessment and approved by EPA. EPA and Ohio EPA expect the Environmental Covenants that will be recorded on the government owned property as part of the property transfer to be similar to the restrictions on the landfill property.

The projected land use for Site in the 2002 ROD Amendment is a nature preserve with possible public access and recreational use if additional risk assessment supports those activities. Lake Township developed a Reclamation Master Plan/Proposed Land Use Plan for the Site in 2003. The township's plan proposes using the landfill area as a nature preserve, with access and hiking trails on EPA's property around the landfill.

Additional information about the IEL Site can be found in the documents listed in Appendix A.

FIVE-YEAR REVIEW SUMMARY FORM

SITE IDENTIFICATION		
Site Name: Industrial Excess Landfill (IEL)		
EPA ID: OHD000377911		
Region: 5	**State:** OH	**City/County:** Uniontown, Stark County
SITE STATUS		
NPL Status: Final		
Multiple OUs? No	**Has the Site achieved construction completion?** Yes	
REVIEW STATUS		
Lead agency: EPA ***[If "Other Federal Agency", enter Agency name]*:**		

Author name (Federal or State Project Manager): Karen Cibulskis
Author affiliation: EPA, Region 5, Superfund
Review period: 9/29/2015 - 3/31/2016
Date of Site inspection: 11/17/2015
Type of review: Statutory
Review number: 4
Triggering action date: 5/11/2011
Due date *(five years after triggering action date)*: 5/11/2016

II. RESPONSE ACTION SUMMARY

Basis for Taking Action

EPA conducted several investigations at IEL from 1984-1988. Based on these investigations, EPA determined:

- The landfill contains an estimated 780,000 tons of solid waste. An estimated 1,000,000 gallons of liquid waste, including spent latex and solvents, were dumped on the ground and into an on-Site evaporation lagoon.
- Groundwater was contaminated with volatile organic compounds (VOCs) including 1,2-dichloroethane (1,2-DCE), cis-1,2-dichloroethene (DCE), benzene, chloroethane and vinyl chloride; and metals including arsenic, chromium, lead, nickel and thallium.
- The groundwater contaminants extended approximately 600 feet downgradient of the Site and were above drinking water standards in 10 residential wells.
- Landfill gas contained methane and non-methane VOCs, and was moving off-Site beyond the passive venting system installed by the landfill owner.

Response Actions

EPA's Emergency Response Team (ERT) installed an active methane venting system (MVS) to control landfill gas at the Site in 1985-1986. The ERT uncovered 53 drums of suspected industrial waste during the MVS construction. The ERT removed the drums and disposed of them at a permitted off-Site disposal facility. The ERT installed air strippers at seven homes west of the landfill in 1987 to remove vinyl chloride from the residents' well water.

EPA issued a ROD in 1987 to connect 100 homes downgradient of the landfill to an alternate water supply. The PRPs implemented the alternate water supply project under a 1988 Unilateral Administrative Order. The PRPs connected the residents to the North Canton water supply in 1989-1991. Stark County expanded the water supply to other areas in the vicinity of the Site in 1991-1995. The extent of the municipal water supply is shown on Figure 2 in Appendix B.

EPA issued a second ROD for the Site in 1989. The ROD required additional groundwater data to be collected to design a groundwater pump and treat remedy. EPA installed 30 new groundwater

monitoring wells at the Site in 1991. EPA collected seven quarterly groundwater samples from the Site in 1992-1993. The PRPs collected additional groundwater samples at the Site in 1997 and 1998. The PRPs completed additional actions at the Site in 2000. The PRPs:

- Sampled the contents of remaining drums at the Site and inside the remaining buildings. The drums primarily contained investigation-derived wastes from previous Site investigations;
- Checked for the presence of asbestos in the buildings;
- Disposed of all trash, debris, and debris-like wastes found inside the buildings and around the landfill; and
- Conducted geophysical surveys around the buildings and adjacent areas to determine what underground structures were present and required potential further investigation.

The PRPs demolished three remaining buildings at the Site, and removed eight underground storage tanks from one of EPA's Site properties.

EPA amended the 1989 ROD in 2000 and 2002. EPA Amended the ROD based on the 1992-1993 and 1997-1998 groundwater data, and the willingness of Ohio EPA and the local government to accept an alternative containment remedy. The groundwater data indicated that there was no longer a plume of off-Site groundwater contamination. The data also showed that the number and concentration of groundwater contaminants decreased.

EPA updated the remedial action objectives (RAOs) for the Site in the 2002 ROD Amendment. The RAOs in the 2002 ROD Amendment are to:

- Reduce the migration of contaminants in waste to groundwater;
- Prevent potential future exposure to contaminants by ingestion and through dermal contact;
- Return groundwater to beneficial use wherever practicable, within a reasonable time frame, given the circumstances of the Site; and
- Ensure continued protection of the community from undue risks posed by landfill gas.

EPA's selected remedy in the 2002 ROD Amendment is intended to be the final action for the Site. The remedy in the 2002 ROD Amendment addresses all contaminated media including: contaminated soil and groundwater, landfill waste, and landfill gas emissions.

The selected remedy consists of the following major components:

- Augmenting the existing vegetative cover on the landfill with the selected planting of trees and other plants;
- Natural attenuation of groundwater contaminants both off-Site and on-Site;
- Groundwater and landfill gas monitoring;
- Upgrading the existing monitoring well network by installing new wells, upgrading and/or abandoning other wells, as needed;
- Perimeter fencing;
- Deed Restrictions;
- Maintaining the alternate water supply; and
- Additional design studies.

The 2000 ROD Amendment replaced the groundwater pump and treat system required by the 1989 ROD with a monitored natural attenuation (MNA) remedy. The 2002 ROD Amendment replaced the low-permeability landfill cap required in the 1989 ROD and the 2000 ROD Amendment with an augmented vegetative cover over the landfill.

The cleanup standards for the Site in the 2002 ROD Amendment are for groundwater. The cleanup standards are in Table 1.

TABLE 1: IEL Cleanup Standards in 2002 ROD Amendment (Groundwater)

Chemical	2002 Cleanup Levels (ug/L)	Basis
1,2 Dichlorethane (DCA)	5	Maximum Contaminant Level (MCL)
cis-1,2-dichloroethene (DCE)	70	MCL
Acetone	610	EPA Region 9 Preliminary Remediation Goal (PRG)
Benzene	5	MCL
Chloroethane	4.6	EPA Region 9 PRG
Methylene Chloride	43	EPA Region 9 PRG
Vinyl Chloride	2	MCL
Arsenic	10	MCL
Chromium	100	MCL
Lead	15	MCL
Nickel	730	EPA Region 9 PRG
Thallium	2	MCL

Status of Implementation

EPA issued a Unilateral Administrative Order (UAO) to the PRPs in 2003. The UAO required the PRPs to design the remedy in the 2002 ROD Amendment. The PRPs complied with the UAO and conducted the remedial design. EPA approved the PRPs' revised, final Remedial Design Plan in 2003.

The PRPs completed the remedial action in 2004. The PRPs:

- Upgraded Site security by repairing damaged sections of the perimeter fence around the landfill;
- Constructed a vegetative cover by planting 8,424 trees and shrubs on the landfill;
- Rid the Site of various invasive species;
- Installed artificial nesting structures, including brush piles, ten bluebird boxes, and two bat box pairs at the landfill;
- Constructed the final groundwater monitoring network by installing new wells where necessary and abandoning wells that were no longer required for long-term monitoring; and
- Installed additional landfill gas monitoring wells in areas of the Site perimeter that did not have adequate coverage for monitoring.

The PRPs submitted a Construction Completion Report to EPA and Ohio EPA in 2004. EPA issued a Preliminary Closeout Report documenting that the PRPs completed all construction activities required by the 2002 ROD Amendment at the Site in 2005. The PRPs entered into a Consent Decree agreement with EPA to implement, maintain and monitor the remedy in the 2002 ROD Amendment in 2005.

Groundwater Monitoring

The final groundwater monitoring network for the IEL Site consists of 29 wells completely encircling the Site, with the majority of the wells located along the western (downgradient) side of the landfill. A map depicting the location of the monitoring wells is shown on Figure 3 in Appendix B.

The groundwater monitoring well network consists of:

- Two (2) wells to monitor groundwater below the landfill (MW-13i and MW-14i);
- Eight (8) on-Site sentinel wells immediately downgradient of the landfill (MW-1s, MW-1i, MW-7i, MW-21s, MW-11s, MW-11i, MW-29 and MW-31);
- Seven (7) on-Site wells (MW-3i, MW-18i, MW-18s, MW-22i, MW-16, MW-17) and two (2) off-Site wells (MW-10i and MW-23s) around the perimeter of the landfill to provide coverage of the uppermost aquifer in all directions;
- Four (4) off-Site downgradient wells in the residential area west of the Site (MW-24i, MW-25s, MW-26s and MW-27i);
- Two (2) background wells east and northeast of the Site (MW-12i and MW-30); and
- Five (5) on-Site contingency wells along the western/southern boundary of the landfill that are sampled only if warranted based on the other groundwater results (MW-1d, MW-7d, MW-9i, MW-11d and MW-27i).

The wells are sampled according to the approved schedule in the 2003 Remedial Design Plan for the Site, included in Tables 9 and 10 of Appendix C of this FYR. The wells are currently sampled biennially (every 2 years). The PRPs collected groundwater samples in 2011, 2013 and 2015.

Landfill Gas Monitoring

The landfill gas monitoring network is shown on Figure 4 in Appendix B. The PRPs and Ohio EPA shut down the MVS in 2004 because the landfill was not generating enough methane to operate the system. The PRPs left the former extraction wells open to act as passive vents with the other passive vents at the Site.

The PRPs conducted five (5) years of methane and VOC monitoring at former extraction wells, passive vents, and in outdoor ground surface air from 2004 to 2008. The data indicated that VOC concentrations in outdoor air were decreasing. In 2008, benzene was the only contaminant detected in outdoor air slightly above risk-based screening levels.

The maximum concentration of benzene in ambient air in 2008 was 7.7 ug/m^3. This concentration corresponded to a risk of 1 additional case of cancer for every 1 million people similarly exposed under recreational and on-Site worker exposure scenarios. These risks were within EPA's acceptable risk range. Ohio EPA conducted punch bar testing and confirmed that methane was not moving toward the Site boundary. The MVS was kept off-line and VOC monitoring was discontinued.

The PRPs monitored methane at the Site in 2011, 2013 and 2015. The 2015 monitoring indicates that Site conditions have changed. Due to recent detections of methane in December 2015, the PRPs increased the monitoring frequency for methane; are developing an Explosive Gas Monitoring Plan for the Site; and are evaluating what modifications to the venting and monitoring system are warranted.

Ecological Habitat Monitoring

The PRPs conduct ecological habitat monitoring at the landfill two (2) to four (4) times a year. The PRPs walk around the perimeter and the interior of the landfill. The PRPs check the condition of the bird houses, bat boxes, trees, plantings and invasive species. The PRPs perform weed-whacking, cut down invasive species, and perform other repairs. The PRPs document wildlife observations and conduct bird monitoring. The Site is inspected by a Conservation Specialist from the Wildlife Habitat Council (WHC) every year. WHC makes additional recommendations and certifies that the Site meets WHC's conservation criteria every two (2) years.

Institutional Controls

Institutional controls (ICs) are non-engineered instruments, such as administrative and legal controls that help minimize potential exposure to contamination and protect the integrity of a remedy. ICs are required to assure long-term protectiveness for any areas which do not allow for UU/UE.

The 2002 ROD Amendment requires ICs at the Site to prohibit drinking water wells and residential development within the Site boundaries until it is shown that there are no risks associated with these uses. The status of the ICs at the IEL Site is shown in Table 2.

Maps showing the areas in which the ICs apply are on Figures 5 and 6 of Appendix B.

IC Summary Table

TABLE 2: Summary of Planned and/or Implemented ICs

Media, engineered controls, and areas that do not support UU/UE based on current conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date (or planned)
Landfill (fenced area of Site) and owner's adjacent lot	Yes	Yes	2200248 2204130	Prohibit residential development and any access or land use that is not supported by a risk assessment and approved by EPA. Prohibit any excavation at the Site that is not approved by EPA. Prohibit any activities that would interfere with the protectiveness and performance of the remedy. Prohibit the installation of drinking water wells until there are no risks from groundwater.	Ohio Uniform Environmental Covenant Instruments Nos. 200905050017746 and 200905050017747 filed with the Stark County Recorder 5/5/2009.

Media, engineered controls, and areas that do not support UU/UE based on current conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date (or planned)
EPA's Site property around the landfill	Yes	Yes	2280103 2280104 2280105 2280106 2280107 2280108 2280109 2280110 2280111 2280112 2280113 2280114 2280115 2280116 2280117 2280120 2280121 2280122 2280123 2280126	Prohibit residential development. Prohibit any land use until potential risks from subsurface methane and soil vapor at the Site are characterized and mitigated. Prohibit the installation of drinking water wells until there are no risks from groundwater. Prohibit any activities that would interfere with the protectiveness and performance of the remedy. Future construction may require slab-on-grade construction with vapor barriers, above ground utilities and explosive gas alarms.	To be finalized and implemented as part of the EPA-Ohio EPA property transfer. Estimated to be complete in 2017.

Status of Access Restrictions and ICs: ICs for the landfill property (the fenced area of the Site) and the landfill operator's adjacent Site lot are complete. The landfill owner filed Ohio Uniform Environmental Covenant Instruments Nos. 200905050017746 and 200905050017747 restricting land and groundwater use at these properties with the Stark County Recorder on 5/5/2009. A copy of the restrictions is in Appendix D.

EPA and Ohio EPA will finalize and implement Environmental Covenants for EPA's Site property around the landfill perimeter as part of the EPA-Ohio EPA property transfer. EPA expects the Environmental Covenants on EPA's property to be similar to the other Site restrictions. EPA estimates the covenants on the government-owned property at the Site will be recorded in 2017.

Current Compliance: Annual inspections and the FYR Site inspection in November 2015 confirm that the landfill property and the surrounding Site properties remain vacant, and that there is no development or groundwater use at the Site. The landfill is fenced and the landfill owner will not permit any outside parties to access the landfill. The EPA RPM interviewed the landfill owner's legal representative on 11/30/2015. The landfill owner's representative stated that they will continue to deny access as required by the Environmental Covenants.

EPA's Site property around the landfill is federally owned and controlled. The U.S. government has not permitted any land or groundwater use on the property.

Long Term Stewardship: Since compliance with ICs is necessary to assure the protectiveness of the remedy, planning for long-term stewardship is required to ensure that the ICs are maintained, monitored and enforced so that the remedy continues to function as intended. Long-term stewardship involves assuring effective procedures are in place to properly maintain and monitor the Site. The PRPs' 2012 Operation &Maintenance (O&M) Plan does not contain adequate provisions for monitoring, reporting and certifying compliance with Site ICs. The O&M Plan does not require any inspection or reporting on land and groundwater use on EPA's Site property around the landfill.

EPA will work with the PRPs to update the O&M Plan to include procedures to ensure long-term stewardship such as regular inspection of the engineering controls and access controls at the Site and review of the ICs at the Site. The O&M Plan will also include a requirement for annual ICs reports with review of and certification by the PRPs to EPA that ICs are in place and effective. Finally, development of a communications plan and use of the State's one-call system will be explored.

IC Follow up Actions Needed: EPA and Ohio EPA will finalize and implement Environmental Covenants on EPA's Site property around the landfill perimeter as part of the EPA-Ohio EPA property transfer. EPA expects to have Environmental Covenants on its Site property in 2017.

The O&M Plan will be updated to incorporate long-term stewardship procedures which should include the mechanisms and procedures for inspecting and monitoring compliance with the ICs as well as communications procedures. An annual report should be submitted to EPA to demonstrate: that the Site was inspected to ensure no inconsistent uses have occurred; that ICs remain in place and are effective; and that any necessary contingency actions have been executed. Results of IC reviews should be provided to EPA in an annual ICs report and with a certification that the ICs remain in-place and are effective.

Systems Operations/Operation & Maintenance

There are no active operating systems at the Site. O&M conducted during 2011-2016 included quarterly and semi-annual wildlife and vegetation assessments, annual Site inspections, biennial (every two years) groundwater monitoring according to the schedule in the 2003 Remedial Design Plan, and landfill gas monitoring. The PRPs conducted groundwater and landfill gas monitoring at the Site in 2011, 2013 and 2015.

The O&M sampling team was not able to collect groundwater samples from all of the wells in the MNA groundwater monitoring network. The PRPs reported that downgradient well MW-24i was covered by a gravel road in 2010. MW-24i was last sampled in 2009. The team also did not sample background monitoring well MW-12i or downgradient monitoring well MW-10i in 2015. The team reported that MW-12i is paved over and could not be located, and that MW-10i is damaged due to subsidence and could not be sampled.

The Stark County Health Department located MW-12i during a February 2016 inspection. The county used a metal detector and located MW-24i during a March 2016 inspection. MW-24i was covered by one inch of soil and gravel and is in a grassy parking area adjacent to the gravel road. The wells appear to be usable, but MW-24i will need to be inspected. EPA sent a letter to the PRPs on 2/25/2016 requiring the PRPs to sample MW-12i. EPA sent an email to the PRPs on 4/02/2016 requiring them to inspect and sample MW-24i.

MW-10i is a component of a comprehensive monitoring well network designed to provide adequate spatial coverage of groundwater conditions at and downgradient of the Site to monitor the natural attenuation remedy. MW-10i is an off-Site downgradient well that allows the extent of contamination to be determined if contaminants are detected in the on-Site sentinel wells (2003 Remedial Design Work Plan).

Groundwater contaminants were detected in the on-Site sentinel wells in 2011, 2013 and 2015. The 2011-2015 groundwater data indicates that MW-10i needs to be replaced. It also must be properly abandoned if the structural integrity of the well is compromised. EPA will require the PRPs to replace MW-10i so that groundwater conditions in this downgradient area of the Site can continue to be monitored.

The PRPs and Ohio EPA noted an area of iron deposit staining during the May, 2015 annual Site inspection. The stain is in the interior of the Site, near groundwater monitoring well MW-14NEW. The stain is approximately 9 feet by 9 feet square. The stain is located at the top of the slope and does not appear to be from leachate. There is no vegetative cover in this area, and the soil at this location does not appear to be conducive to plant growth. Additional maintenance such as soil amendments (e.g., mulch, fertilizer) and planting or seeding is required to re-establish the vegetative cover in this area.

The PRPs detected methane above potentially explosive levels in 2015 in some on-Site gas vents, former extraction wells, and landfill gas monitoring wells. The methane is only inside the gas vents and subsurface gas monitoring locations at the Site. It is not in outdoor air. The PRPs did not detect, or only detected methane in a few gas vents and subsurface monitoring locations in 2011 and 2013. The few concentrations of methane the PRPs detected in 2011 and 2013 were below any levels of concern (0.7 to 19 percent of the lower explosive limit).

EPA notified Lake Township and the Stark County Health Department about the 2015 methane concentrations. EPA sent a letter to the PRPs on 2/25/2016 requiring the PRPs to initiate weekly methane monitoring at the Site and to develop an Explosive Gas Monitoring Plan consistent with the regulations in Ohio Administrative Code 3745-27-12. EPA, Ohio EPA, the Stark County Health Department and the PRPs are also evaluating what modifications to the venting system are warranted.

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 3: Protectiveness Determinations/Statements from the 2011 FYR

OU #	Protectiveness Determination	Protectiveness Statement
Sitewide	Short-term Protective	The Industrial Excess Landfill (IEL) remedial action is protective in the short term. The remedy is functioning as intended, ICs are in place, and there are no current unacceptable human or ecological exposures to hazardous substances from the Site. Long-term protectiveness will be achieved when proper maintenance of the perimeter fencing and monitoring wells is conducted; the cleanup goals for the contaminated groundwater have been reached; and stewardship measures are put in place for the implemented institutional controls.

TABLE 4: Status of Recommendations from the 2011 FYR					
OU #	**Issue**	**Recommendations**	**Current Status**	**Current Implementation Status Description**	**Completion Date (if applicable)**
01/ Sitewide	Perimeter fence and certain monitoring wells are in need of repair	Perform maintenance to fence and monitoring wells.	Ongoing	Fence and gate repairs, and groundwater monitoring well repairs identified in the 2011 FYR are complete. All landfill gas vents and gas monitoring locations are being inventoried and evaluated to determine what maintenance or other measures are needed as part of the Explosive Gas Monitoring Plan development.	Not Applicable
01/ Sitewide	There is no provision for long term stewardship of ICs.	Modify O&M Plan to include long-term stewardship of ICs.	Ongoing	The updated measures for long-term stewardship in the PRPs' 2012 O&M Plan do not require certifying compliance with Site ICs. The O&M Plan does not require inspection or reporting on land and groundwater use on EPA's Site property around the landfill. EPA will work with the PRPs to update the O&M Plan to include appropriate provisions for long term stewardship of the Site.	Not Applicable

Recommendation # 1 – Perform Maintenance to Fence and Monitoring Wells

The perimeter fence and gate repairs, and the repairs to the groundwater monitoring wells identified in the 2011 FYR are complete. The PRPs repaired the perimeter fence and gate in 2011 and 2012. The PRPs made additional repairs to the fence in 2013 when trespassers cut the fence to steal the electrical components of the MVS. The PRPs repaired the groundwater monitoring wells identified in the 2011 FYR in 2011 and 2012. The PRPs made repairs to additional groundwater monitoring wells in 2013 after the 2013 Site inspection.

The PRPs did not repair the landfill gas vents and gas monitoring wells identified in the 2011 FYR. The PRPs proposed to fill the broken landfill gas vents and gas monitoring wells without replacing them. EPA did not approve this work. The PRPs are currently inventorying all landfill gas vents and gas monitoring well locations at the Site to determine what repair, abandonment, removal, replacement or other measures are needed as part of the Explosive Gas Monitoring Plan development.

Recommendation # 2 – Modify O&M Plan to Include Long-Term Stewardship of ICs

The PRPs updated the provisions for long-term stewardship in the 2012 O&M Plan, but the provisions are inadequate. The O&M Plan does not require certifying compliance with Site ICs. The O&M Plan does not require inspection or reporting on land and groundwater use on EPA's Site property around the landfill. EPA will work with the PRPs to update the O&M Plan to include appropriate provisions for long term stewardship of the Site.

IV. FIVE-YEAR REVIEW PROCESS

Community Notification, Involvement & Site Interviews

EPA sent a letter to Ohio EPA and the PRPs notifying them that the FYR was starting on 9/29/2015. A public notice was made available by newspaper, in the Akron Beacon Journal, on 1/23/2016, stating that there was a FYR and inviting the public to submit any comments to EPA. The results of the review and

the report will be made available at www.epa.gov/superfund/industrial-excess-landfill and at the Site information repositories located at:

Lake Community Branch
Stark County District Library
565 Market Avenue S.W.
Uniontown, OH 44685

Lake Township Clerk's Office
12360 Market Avenue North
Hartville, OH 44632

Residents: During the FYR process, EPA spoke with local residents who contacted EPA about accessing the Site for hunting and for dog training. EPA did not allow the residents to access the Site due to the recent methane concentrations that were detected at the Site. EPA explained that additional testing and evaluation would be conducted, and that EPA would update the residents when the evaluation was complete.

EPA spoke with a resident who wanted to know if her husband's cancer could be Site-related. EPA provided the resident with additional information about the Site; a copy of Stark County's 2005 Analysis of Cancer Incidence Report indicating that the incidence of cancer in Lake Township from the years 1996-2001 was statistically less than expected; and Health Department contacts for additional information.

Reporters: EPA provided additional information about the Site to two reporters publishing on-line articles about the Site.

Site Owner: EPA contacted the landfill property owner's legal representative to notify them of the FYR and the recent methane concentrations detected at the Site. The owner's representative provided EPA with updated contact information, and confirmed that they have, and will continue, to deny requests for access to the property consistent with the Environmental Covenants.

Stark County Health Department: EPA contacted the Stark County Health Department to notify them about the FYR. The Stark County Health Department gets calls about the Site, and wanted to review the groundwater and methane data. EPA provided the county with copies of the groundwater and methane data and other background information. EPA asked the county to provide EPA with any comments or recommendations.

The county went to the Site and was able to locate background well MW-12i and downgradient well MW-24i. The county agrees that MW-12i and MW-24i should be sampled; that no groundwater monitoring wells should be abandoned; and that MW-10i should be replaced.

The Stark County Health Department compared water bill records to street addresses in 2016. The county identified nine properties outside of EPA's water supply area that may not be connected to the municipal water supply (Figure 7 in Appendix B). The county investigated and confirmed that there are no wells at the two properties closest to the Site (Properties 3 and 7). Property 3 is a storage unit business. The property used to have a well, but the property owner informed the county there is no longer a well at this property. EPA requested a copy of the well abandonment record for this well. Property 7 had a well, but the county found a well abandonment record for this well.

The county confirmed that there are wells at Properties 1, 2, 4, 5, 6 and 9. These wells are being used for household use. These wells are located about 800 to 1,800 feet north and northwest of the Site. The county is still investigating whether there is a well at Property 8.

Additional data and evaluation is needed to determine if the residential wells are downgradient of the Site. Regional groundwater flow is from east to west. The 2003 Remedial Design Plan and the August 2004 Groundwater Sampling Event Summary Report state that past the Site, groundwater flows to the northwest under the influence of a bedrock depression. It is not clear how far the northwest influence on groundwater flow from IEL extends.

EPA tested three (3) residential wells that are now sealed 500 to 1,500 feet northwest of the Site in 1998. EPA did not detect any contaminants in any of the wells above drinking water standards. Residential well sampling in northwest Uniontown by EPA and Ohio EPA in 1988-1994 identified tetrachloroethylene (PCE) contamination in this area that was not related to the IEL Site. This indicates that any contaminants found in residential wells outside EPA's water supply area may not be Site-related.

Current groundwater elevation data collected during a one-day event, including data from groundwater monitoring wells MW-10i, MW-12i and MW-24i, is needed to evaluate current groundwater flow at and downgradient of the Site, and whether any of the remaining residential wells should be tested.

The county inspected the passive methane venting system and gas monitoring network, and provided oversight during the 3/3/2016 methane monitoring event. The county agreed that several vents need to be repaired or replaced, or retrofit to vent higher off the ground. The county is working with EPA, Ohio EPA and the PRPs to address the December 2015 methane concentrations detected above potentially explosive levels inside some of the gas vents and gas monitoring wells at the Site, which will include a comprehensive inventory of the current system with point-by-point recommendations for additional actions or measures, and the development of an Explosive Gas Monitoring Plan.

Lake Township: EPA notified Lake Township about the FYR and the methane concentrations at the Site. The township is concerned that appropriate measures be taken to make sure that the methane does not pose a risk to any on-Site trespassers or move off-Site. Lake Township participated in a call with EPA, Ohio EPA, the Stark County Health Department and the PRPs on 3/8/2016 to discuss the methane and the next steps to be taken. The township requested that EPA keep them updated on what is being done at the Site, and to continue to be involved in the process.

Other Comments: EPA received 20 emails from three citizens about the Site as of 4/04/2016. The emails expressed concerns with potential risks from VOCs through subsurface vapor intrusion; the increased toxicity of TCE; concerns about chromium; concerns with EPA's low-flow sampling procedures; concerns with the data EPA used to select the MNA remedy; concerns about sealing 33 groundwater monitoring wells as part of the MNA remedy; concerns with Site-related radiation; concerns with laboratory filtering of the 2000-2001 groundwater samples for radiation analysis; and concerns with how the 2000-2001 groundwater samples for radiation analysis were preserved.

The commenters' concerns about potential risks from VOCs through subsurface vapor intrusion, the increased toxicity of TCE, chromium and EPA's low-flow groundwater sampling procedures are addressed in the Data Review and Questions A and B sections of this FYR.

EPA sent responses back to the commenters with additional information and reports to address the other issues. The reports included:

- 2004 Office of Inspector General Ombudsman Report, *Review of Actions at Industrial Excess Landfill Superfund Site.* This report explains and addresses concerns about Site-related radiation; the laboratory filtering of groundwater samples for radiation analysis; and concerns with how the groundwater samples for radiation analysis were preserved. Concerning radiation, the report concludes (page 5):

  > *We believe EPA properly discounted radionuclides as contaminants of concern at IEL. Although some radiation was found at the site in the early 1990s, the low levels were not expected to cause harm to people's health. At the request of local citizens in 2000, the Responding Companies agreed to again test groundwater for radiation. According to the radiation expert retained by the OIG, the resulting 2000-2001 groundwater analyses were sufficient to declare that site groundwater in 2000 and 2001 met the requirements of the drinking water standards with respect to radioactive elements and isotopes. Thus, the radionuclides do not pose an unacceptable health risk that needs to be addressed by EPA under CERCLA, and do not require cleanup actions.*

- *Industrial Excess Landfill (IEL) 2000-2001 Radiation Data.* The 2000-2001 data confirms that both the filtered and suspended fractions of the groundwater samples collection for radiation analysis were analyzed.

- 2001 United States District Court *Case No. 5:89CV1988 and Case No. 5:91CV2559 Memorandum of Opinion* concerning allegations that plutonium-238 (P-238) was buried at the Site. In summary:

  > *The Court concludes that the Government has complied fully with its Order to investigate Kittinger's allegations completely. Both the Government's investigation and the Revised Report are exhaustive. Based on a review of Kittinger's allegations, the Government's Initial and Revised Reports, and all comments, other testimony, and documents relating thereto, the Court concludes that Kittinger's allegations regarding the presence of stainless steel eggs containing P-238 at IEL are not credible, and that no further investigation or proceedings are warranted as to such allegations.*

- 2003 *Summary Report on an Assessment of Individual Groundwater Monitoring Wells at the Industrial Excess Landfill Site and the Regional Hydrogeologic Setting* and Section 5, Tables 6-10 and Figures 17-19 of the 2003 *Remedial Design Plan.* These reports explain how the groundwater monitoring well network for the MNA remedy is designed, and why groundwater monitoring wells were replaced or abandoned.

EPA also reviewed two additional documents containing additional information about radiation at the IEL Site. They are:

- 1994 Science Advisory Board's report: *Review of EPA's Approach to Screening for Radioactive Waste Materials at a Superfund Site in Uniontown, Ohio,* referenced in several comments. This report concluded:

> *Historical evidence for the presence of radioactive materials is limited to anecdotal reports of "midnight dumping" at the site by vehicles alleged to have been marked with radiation symbols. Disposal records and a search of the records of the identified landfill users have not indicated the probability of disposal of radioactive materials. In addition, the available analytical data do not indicate that radioactive contamination is present at the I EL site as a result of disposal at the site. While there are a small number of analytical values that are unexpectedly high relative to the associated uncertainty estimates, the occurrence of such high values follows a pattern that is more characteristic of analytical errors or accidental contamination in the laboratory than of a positive identification of the occurrence of radioactivity at a field site.*
>
> *Based on all the evidence presented to the ad hoc Panel, we judge it to be highly unlikely that radioactive contamination is, or was, present. Of course it is not (and never will be) possible to unequivocally establish the absence of contamination. Nonetheless, as noted in the response to the Panel Charge, the tests performed were appropriate and adequate to detect the occurrence of radionuclides that might be expected based on experience at sites that are contaminated with the most common radionuclides. Thus, the current weight of evidence argues that the issue of radioactive contamination should not be pursued further and the confirmed issue of chemical hazards and remediation thereof should proceed expeditiously.*

- 2005 Letter from EPA's Acting National Ombudsman, Office of Congressional and Public Liaison concerning the IEL Site. This letter states:

> *...our report dated September 29,2004, about that Superfund site covered the radiation testing at the site in 2000 and 2001. The plutonium testing was specifically addressed in Appendix C of this report. We provided our independent radiation expert with all of the laboratory reports for the radiation testing in 2000 and 2001, including those related to the plutonium analyses. Therefore, he had access to the information included in the October 2001 document, and considered it when preparing the report that became Appendix C. Because of this, we do not consider the October 2001 material new information that would warrant another review by the Office of Inspector General.*
>
> *The older plutonium analyses was beyond the scope of our review, but was covered by the Science Advisory Board panel. Consequently, it is not new information either. As we stated in our letter to you, that transmitted our report, the Office of Inspector General will not open another review of the Industrial Excess Landfill Superfund site unless there are new issues related to the site.*

Based on the Site record, EPA considers the issues concerning radiation, groundwater sampling, and the abandonment and replacement of groundwater monitoring wells at the Site to be addressed. EPA does not agree these issues warrant further evaluation.

Data Review

Groundwater: EPA reviewed the groundwater data collected from the Site in 2011, 2013 and 2015. The groundwater data indicates that the MNA remedy is working for VOCs. Additional assessment and data collection is needed to evaluate whether the MNA is working for metals.

Groundwater data is available for 17 on-Site wells, five (5) off-Site wells and two (2) background wells. A map of the groundwater monitoring network is shown on Figure 3 in Appendix B. A complete set of the groundwater monitoring data for 2011-2015 is in Appendix E.

Groundwater data is not available from off-Site downgradient well MW-24i from 2011-2015. The O&M sampling team could not locate MW-24i after a gravel road was constructed in the area in 2009-2010. The Stark County Health Department located MW-24i with a metal detector in March 2016. EPA requested the PRPs to inspect and sample MW-24i.

Groundwater data is not available for off-Site perimeter well MW-10i and background well MW-12i in 2015. MW-10i is damaged and could not be sampled. MW-10i needs to be replaced. MW-12i could not be located during the 2015 sampling event. The Stark County Health Department located MW-12i during their February 2016 Site inspection. The PRPs will sample MW-12i in 2016. The contingency wells were not sampled in 2011-2015.

VOCs: The 2011-2015 VOC groundwater data is summarized in Table 5. The data indicates that VOCs are slightly above cleanup standards at a few on-Site locations. VOCs are either not detected, or detected well below cleanup standards at one location beyond the Site boundary (cross-gradient perimeter well MW-23s).

Acetone, benzene and methylene chloride meet the cleanup standards in the 2002 ROD Amendment at all on-Site and off-Site sampling locations. Chloroethane (also called ethyl chloride), was above the cleanup level in the 2002 ROD Amendment at some on-Site locations and at one (1) off-Site location.

TABLE 5: VOC Concentrations Above Cleanup Standards in Groundwater at IEL 2011-2015 (ug/L)

Chemical	2002 Target Cleanup Levels	On-Site			Off-Site	
		Concentrations Above Cleanup Level 2011-2015	Wells Above Cleanup Level 2011-2015	Location	Concentrations in Off-Site Downgradient Wells	Location
1,2 Dichlorethane (DCA)	5	5.9 - 6.3	MW-21s	On-Site Downgradient	Not Detected	
		18 - 19	MW-29			
cis-1,2-dichloroethene (DCE)	70	64 - 86	MW-29	On-Site Downgradient	2.7 – 3.3	MW-23s (Off-Site Cross-Gradient - South)
Acetone	610	< Cleanup Level				

TABLE 5: VOC Concentrations Above Cleanup Standards in Groundwater at IEL 2011-2015 (ug/L)

Chemical	2002 Target Cleanup Levels	On-Site			Off-Site	
		Concentrations Above Cleanup Level 2011-2015	Wells Above Cleanup Level 2011-2015	Location	Concentrations in Off-Site Downgradient Wells	Location
Benzene	5	< Cleanup Level				
Chloroethane	4.6[(1)]	6.3	MW-1i	On-Site Downgradient	5.3	MW-23s (Off-Site Cross Gradient – South in 2015)
		7.6 - 7.8	MW-11i			
		11 - 36	MW-21s			
		24 - 37	MW-29			
Methylene Chloride	43[(2)]	< Cleanup Level and Current MCL of 5 ug/L				
Vinyl Chloride	2	2.2 - 2.5	MW-1i	On-Site Downgradient	Not Detected	
		2.2 – 2.9	MW-11i			
		2.2 – 2.4	MW-21s			
		1.6 – 5.0	MW-29			

NOTES:

(1) There is no MCL for chloroethane (also called ethyl chloride). The current EPA RSL for chloroethane is 21,000 ug/L. All concentrations of chloroethane detected at IEL on-Site and off-Site are below the RSL.
(2) The current MCL for methylene chloride is 5 ug/L. The MCL is lower than the cleanup standard in the 2002 ROD Amendment, however, methylene chloride was not detected in any of the 2011-2015 groundwater samples.

There is no MCL for chloroethane. The detections of chloroethane are well below the current EPA Regional Screening Level (RSL) for chloroethane of 21,000 ug/L. This FYR recommends that EPA consider updating the cleanup level for chloroethane for the Site based on the most current toxicity information.

VOCs are present above cleanup levels in four on-Site wells: MW-1i and MW-11i (vinyl chloride); MW-21s (vinyl chloride and DCA); and MW-29 (vinyl chloride, DCA and DCE). VOCs were either not-detected, or were detected below cleanup standards and MCLs in all off-Site wells. Groundwater data needs to be collected from off-Site downgradient well MW-24i and off-Site perimeter well MW-10i, which needs to be replaced. Based on the other VOC data, EPA expects VOC concentrations at these locations to be non-detect or below cleanup standards. Table 6 shows that the concentrations of DCA, DCE and vinyl chloride continue to decline over time.

TABLE 6: Maximum Concentrations of VOCs Above Cleanup Standards in Groundwater at IEL from Before 2000 to 2015

Chemical	Cleanup Level in 2002 ROD Amendment (ug/L)	Maximum Concentration (ug/L)				
		Prior to 2000	2000-2001	2002-2005	2006-2010	2011-2015
1,2 Dichlorethane (DCA)	5	100	14	25[(1)]	24	19
cis-1,2-dichloroethene (DCE)	70	960	34	91[(1)]	94	86
Chloroethane[(2)]	4.6	31	73	60 – 85[(3)]	40	37

TABLE 6: Maximum Concentrations of VOCs Above Cleanup Standards in Groundwater at IEL from Before 2000 to 2015

Chemical	Cleanup Level in 2002 ROD Amendment (ug/L)	Maximum Concentration (ug/L)				
		Prior to 2000	2000-2001	2002-2005	2006-2010	2011-2015
Vinyl Chloride	2	32	7	11(1)	8.3	5

NOTES:
(1) Apparent increase in DCA, DCE and vinyl chloride due to detections in MW-29 which was installed in 2004.
(2) The current EPA RSL for chloroethane is 21,000 ug/L. This FYR recommends evaluating whether the cleanup level for chloroethane should be updated based on the most current toxicity information.
(3) Duplicate samples from MW-21s.

Metals: The 2011-2015 metals groundwater data is summarized in Table 7. The data indicates that metals concentrations at the Site may be increasing (Table 8). Metals were above cleanup standards in seven (7) to eight (8) on-Site groundwater monitoring wells and in two (2) to three (3) off-Site groundwater monitoring wells in 2011 and 2013. The metals detected above cleanup standards are arsenic, chromium and lead.

The extent of the metals contamination decreased in 2015. In 2015, four (4) on-Site wells and two (2) off-Site wells contained one (1) or more of the metals above cleanup standards. Additional data collection and evaluation is needed to determine if the metals concentrations in groundwater are Site-related, or if they are due to excessive levels of suspended sediment in the groundwater samples or background groundwater quality.

Arsenic was above the cleanup standard in five (5) to (6) six on-Site wells and one (1) off-Site well in the 2011 and 2013 sampling events. The concentrations of arsenic above the cleanup standard ranged

TABLE 7: Metals Concentrations Above Cleanup Standards in Groundwater at IEL 2011-2015 (ug/L)

Chemical	2002 Cleanup Level	On-Site				Off-Site			Background(2)
		Concentration Above Cleanup Level 2011-2015	Wells Above Cleanup Level	Year	Location	Concentration in Off-Site Wells Above Cleanup Level 2011-2015	Location	Year	
Arsenic	10	22	MW-14i NEW	2011	On-Site Under Landfill	**17** **11**	MW-23s (Off-Site Cross-Gradient South)	2011 2013	MW-12i: **13 – 67** MW-30: **24 - 30**
		61(1) **67**(1)	MW-11s	2011 2013	On-Site Downgradient	**23**	MW-25s (Off-Site Downgradient)	2015	
		13	MW-21s	2011		**20**	MW-27i (Off-Site Downgradient)	2015	
		17 15	MW-29	2011 2013					
		41 **160**	MW-16 NEW	2011 2013	On-Site Cross-Gradient				
		29	MW-17 NEW	2013					
		27 **13** **20**	MW-18s	2011 2013 2015					

TABLE 7: Metals Concentrations Above Cleanup Standards in Groundwater at IEL 2011-2015 (ug/L)

Chemical	2002 Cleanup	On-Site				Off-Site			Background[2]
Chromium	100	**5200**[1] **4300**[1] **900**	MW-11s	2011 2013 2015	On-Site Downgradient	**470**	MW-23s (Off-Site Cross-Gradient South)	2013	MW-12i: **220 – 3100** MW-30: **9 - 62**
		540	MW-21s	2011		**120**	MW-25s (Off-Site Downgradient)	2013	
		430 350	MW-29	2011 2013		**798** **280** **380**	MW-27i (Off-Site Downgradient)	2011 2013 2015	
		190	MW-16 NEW	2013	On-Site Cross-Gradient				
		1400 **730** **670**	MW-18i	2011 2013 2015					
		180 **170** **240**	MW-18s	2011 2013 2015					
		180 **620** **1300**	MW-22i	2011 2013 2015					
Lead	15	32	MW-14i NEW	2011	On-Site Under Landfill	**17**	MW-23s (Off-Site Cross-Gradient South)	2013	MW-12i: **4.6 – 89** MW-30: **4.6 - 32**
		17[1]	MW-11s	2013	On-Site Downgradient				
		31	MW-29	2013					
		150 **48**	MW-16 NEW	2011 2013	On-Site Cross-Gradient				
		43	MW-17 NEW	2013					
		25 **22**	MW-18s	2011 2015					
Nickel	730	**1100**[1] **1300**[1]	MW-11s	2011 2013	On-Site Downgradient	< Cleanup Level			Mw-12i: **100 – 700** MW-30: **11 - 53**
Thallium	2	< Cleanup Level							

NOTES:
Chemical concentrations from samples with levels of suspended sediment > 5 NTUs, including background samples, shown in **bold**.
(1) MW-11s was purged dry and sampled with a bailer. Initial level of suspended sediment was 49.2 NTUs in 2011 and 129 NTUs in 2013. Level of suspended sediment in sample collected from bucket after laboratory samples collected was 0.
(2) Background well MW-12i was not sampled in 2015.

from 13 to 160 ug/L in the on-Site wells and 11 to 17 ug/L in the off-Site well in 2011 and 2013. The cleanup standard and MCL for arsenic is 10 ug/L. In 2015, arsenic was above the cleanup standard in one (1) on-Site well at a concentration of 20 ug/L, and in two (2) off-Site wells at concentrations of 20 and 23 ug/L.

Chromium was above the cleanup standard in six (6) to seven (7) on-Site wells and in one (1) to three (3) off-Site wells in the 2011and 2013 sampling events. The concentrations of chromium were 170 to 5200 ug/L in the on-Site wells, and 120 to 798 ug/L in the off-Site wells. The cleanup standard and MCL for chromium is 100 ug/L. In 2015, chromium was above the cleanup standard in four (4) on-Site wells at concentrations of 240 to 1300 ug/L, and in one (1) off-Site well at a concentration of 380 ug/L.

Lead was above the cleanup standard in three (3) to four (4) on-Site wells and in one (1) off-Site well in 2011-2013. The 2011-2013 concentrations of lead above the cleanup standard were 17 to 150 ug/L in the on-Site wells and 17 ug/L in the off-Site well. The cleanup standard and action level for lead in drinking water is 15 ug/L. Lead was above the cleanup standard in one (1) on-Site well in 2015. The concentration of lead in the on-Site well in 2015 was 22 ug/L. Lead was not detected in any off-Site wells in 2015.

Thallium and Nickel: Thallium meets the cleanup standard in the 2002 ROD Amendment at all on-Site and off-Site groundwater sampling locations. Nickel was above the cleanup standard in one (1) on-Site groundwater monitoring well (MW-11i) in 2011 and 2013, but was below the cleanup standard at all off-Site groundwater sampling locations in 2011, 2013 and 2015. (NOTE: off-Site wells MW-10i and MW-24i were not sampled during all of the groundwater monitoring events and require sampling).

Metals Concentrations from Before 2000 to 2015 – A preliminary evaluation of arsenic, chromium and lead concentrations in groundwater indicates that metals concentrations may be increasing (Table 8). Additional assessment is warranted to evaluate whether the MNA remedy is working for metals.

TABLE 8: Maximum Concentrations of Metals Above Cleanup Standards in Groundwater at IEL From < 2000 to 2015[(1)(2)] (ug/L)

Chemical	Prior to 2000	2000 to 2001	2002 and 2004		2006		2011 and 2013		2015	
			Conc.	Wells Above Cleanup Levels	Conc.	Wells Above Cleanup Levels	Conc.	Wells Above Cleanup Levels	Conc.	Wells Above Cleanup Levels
Arsenic	139	73	14.3 – 70.8	5 On-Site Wells	13.1	1 On-Site Well	13 - 160	5-6 On-Site Wells 1 Off-Site Well	20 -23	1 On-Site Well 2 Off-Site Wells
Chromium	739	244	334	1 Off-Site Well	180	1 On-Site Well	120 - 5200	6-7 On-Site Wells 1-3 Off-Site Wells	380 - 1300	4 On-Site Wells 1 Off-Site Well
Lead	268	24	< Cleanup Level	0	< Cleanup Level	0	17 - 150	3-4 On-Site Wells 1 Off-Site Well	22	1 On-Site Well

NOTES:
(1) Groundwater samples collected after 2000 were unfiltered and collected using low-flow sampling methods.
(2) Groundwater samples were analyzed for metals in 2002, 2004, 2006, 2011, 2013 and 2015 per approved RD Plan.

Background concentrations are: arsenic - 13 to 67 ug/L; chromium - 9 to 3100 ug/L; lead - 4.6 to 89 ug/L. Maximum background concentrations of metals in 2013 samples from MW-12i, which had high levels of suspended sediment at the time of sampling (768 NTUs). MW-12i was not sampled in 2015.

Metals were above cleanup standards in seven (7) to eight (8) on-Site monitoring wells and in two (2) to three (3) off-Site monitoring wells in 2011 and 2013. Metals concentrations decreased in 2015, but the 2015 concentrations of arsenic, chromium and lead were still higher than the 2006 concentrations of these metals. In 2002 and 2004, metals were only above cleanup standards in six (6) groundwater monitoring wells. In 2006, metals concentrations were lower, and were only above cleanup standards in two (2) on-Site wells.

The maximum concentrations of arsenic in 2013 (160 ug/L) and chromium in 2011, 2013 and 2015 (5,300 ug/L, 4,200 ug/L and 1,300 ug/L) were higher than the 2002-2006 concentrations of these metals. These concentrations were also higher than any previously detected concentrations of these metals at the Site. The previously highest concentration of these metals was 139 ug/L for arsenic and 738 ug/L for chromium, prior to 2000. The maximum concentrations of arsenic and chromium at the time of the 2002 ROD Amendment were 73 ug/L for arsenic and 244 ug/L for chromium.

Lead was below the cleanup standard in 2002-2006, but was above the cleanup standard in three (3) to four (4) wells in 2011 and 2013.

Additional data collection and evaluation is needed to determine if the metals concentrations in groundwater at the Site are increasing, or if they are due to excessive levels of suspended sediment in the samples or represent background groundwater quality.

Background Wells and Suspended Sediment – High levels of suspended sediment in the background wells (45 to 768 NTUs) and in the on-Site and off-Site wells (as high as 800 NTUs – see Table 9) lends some uncertainty as to the representativeness of the background groundwater data and some metals data. Groundwater samples with metals concentrations above cleanup standards and suspended sediment in the sample above 5 NTUs are shown in Table 7 and Table 9 in **bold**.

TABLE 9: Levels of Suspended Sediment at Locations with Metals in Groundwater Above Cleanup Standards at IEL2011-2015 (NTU)

Year	ON-SITE									OFF-SITE			BACKGROUND	
	MW-11s	MW-14i	MW-16 New	MW-17 New	MW-18i	MW-18s	MW-21s	MW-22i	MW-29	MW-23	MW-25s	MW-27i	MW-12i	MW-30
2011	**49.2-0**(1)	**3.25**	**0**	0.002	**81.7**	**0**	**1.05**	**0**	**185**	**83**	45	**349**	**45**	**83**
2013	**124-0**(1)	800	**243**	**0**	**122**	**800**	234	**43.9**	**0**	**133**	**217**	**138**	**768**	**232**
2015	**9.4**	110	149	144	**130**	**490**	28.5	**15.3**	64.5	132	**104**	**104**	NS	**227**

NOTES:
NS – Not Sampled.
(1) MW-11s was purged dry and sampled with a bailer. Initial level of suspended sediment was 49.2 NTUs in 2011 and 129 NTUs in 2013. The level of suspended sediment in sample collected from bucket after laboratory samples collected was 0.

The background wells contained arsenic, chromium and lead at concentrations above MCLs in some of the 2011-2015 background groundwater samples. The background concentrations of arsenic ranged from 13 to 67 ug/L. Chromium was in background samples at concentrations of 9 to 3100 ug/L. The concentration of lead in the background wells was 4.6 to 89 ug/L.

This FYR recommends that the PRPs evaluate actions that can be taken to minimize the level of suspended sediment in groundwater samples during subsequent sampling events (e.g., do wells need to be redeveloped, would other sampling equipment or methods reduce the level of suspended sediment). Background groundwater monitoring well MW-12i was not sampled in 2015 and needs to be sampled. The PRPs need to replace and resume sampling at off-Site perimeter well MW-10i and at off-Site downgradient well MW-24i.

EPA expects these issues to be resolved in advance of the next groundwater monitoring event in May 2017. The Field Sampling Plan should be reviewed and updated as needed (e.g., stabilization parameters should be collected no less than five minutes apart; longer stabilization times or different sampling equipment may be needed to minimize the level of suspended sediment in the sample; minimum purge volumes may need to be required; groundwater elevation data should be collected over a one-day event).

If metals concentrations in the groundwater are confirmed to be above the cleanup standards in the 2002 ROD Amendment and background levels during the May 2017 monitoring event, or subsequent monitoring events, a detailed MNA study is needed to evaluate the effectiveness of the MNA remedy for metals. The evaluation should be a thorough MNA evaluation consistent with EPA guidance. The evaluation should include a detailed assessment of all groundwater chemistry and conditions at the Site that may be the cause of the metals concentrations above cleanup standards at and downgradient of the Site. These conditions include, but are not limited to, changes in chloride levels, redox values and groundwater elevation.

The MNA evaluation must include contingency provisions to address Site-related concentrations of metals above cleanup standards (e.g., increased monitoring frequency, the installation of additional downgradient monitoring wells). Other contingency measures in the Remedial Action Contingency Plan for Groundwater Monitoring included in the 2003 Remedial Design Plan may also need to be implemented.

Landfill Gas: The PRPs conducted landfill gas monitoring in 2011, 2013 and 2015. The 2015 methane monitoring indicates that Site conditions changed since 2011-2013 (Table 10 and Appendix F).

The PRPs detected methane in 23 of the 38 gas vents in the venting system in 2015. The PRPs also detected methane in seven (7) of the 17 landfill gas monitoring wells that monitor gas beyond the system in 2015. The methane is inside subsurface gas vents and monitoring locations at the Site. It is not in outdoor air. The PRPs did not detect, or only detected methane in a few gas vents and subsurface monitoring locations in 2011 and 2013. The few concentrations of methane the PRPs detected in 2011 and 2013 were well below any levels of concern (5% methane).

TABLE 10: Summary of Landfill Gas Sampling at IEL 2011-2015 (% Methane by Volume)

Location	2011		2013		2015		
	Frequency of Methane Detection	Methane Concentrations	Frequency of Methane Detection	Methane Concentrations	Frequency of Methane Detection	Methane Concentrations	Frequency of Detection Above 5 Percent
Extraction Wells, Passive Vents and Other Vents	3/25	0.8 – 0.95	1/5	0.035	23/38	0.1 – 76	12/38
Landfill Gas Monitoring Wells	3/15	0.05 – 0.3	2/6	0.06	7/17	0.1 - 26.6	5/17

NOTE: Methane is potentially explosive at concentrations between 5 and 15 percent by volume.

Methane concentrations in 2015 were higher than the methane concentrations detected in 2011-2013. Methane was above potentially explosive levels in 12 landfill gas vents and in five (5) gas monitoring wells in 2015. The highest concentration of methane was 76 percent in a groundwater piezometer acting as a vent in the center of the landfill. The highest concentration of methane in a subsurface gas monitoring well was 26.6 percent. A copy of the 2015 methane data is in Appendix F. A map of the 2015 methane monitoring locations is shown on Figure 4 in Appendix B.

EPA notified Lake Township and the Stark County Health Department about the 2015 methane concentrations. EPA sent a letter to the PRPs on 2/25/2016 requiring the PRPs to initiate weekly methane monitoring at the Site and to develop an Explosive Gas Monitoring Plan consistent with the regulations in Ohio Administrative Code 3745-27-12. EPA, Ohio EPA, the Stark County Health

Department and the PRPs are also evaluating what modifications to the venting and monitoring systems are warranted.

The PRPs conducted weekly monitoring 3/3/2016, 3/11/2016 and 3/17/2016. The data for these monitoring events is in Appendix F. The data indicates that methane is still above potentially explosive levels in gas vents and gas monitoring wells at the Site. The data also indicates that methane concentrations are not consistent at the same location (e.g., non-detect during one event, above potentially explosive levels during the next sampling event). The PRPs will continue to monitor methane concentrations until methane is not detected above potentially explosive levels for four (4) consecutive events, or until EPA and Ohio EPA approve the Explosive Gas Monitoring Plan for the Site. The PRPs are also conducting punch bar sampling to evaluate methane concentrations along the Site boundary.

Site Inspection

EPA conducted a Site inspection on 11/17/2015. In attendance were Karen Cibulskis, EPA, Larry Antonelli, Site Manager for Ohio EPA, and David Richardson and Anka Wiencek of EarthCon, the PRPs' technical consultants. The purpose of the inspection was to assess the protectiveness of the remedy. Photographs from the Site inspection and other photographs of the Site are in Appendix G.

The perimeter fence around the landfill is intact. In some areas, the fence is only four feet high. The access gates are in good condition and were locked. The vegetative cover on the landfill is thick and well-established and prevents receptors from coming into direct contact with the landfill waste. The iron deposit staining in the interior of the landfill near MW-14NEW requires soil amendments (e.g., mulching, fertilizer) and plantings or seeding to re-establish the vegetative cover in this area.

The thick, woody, thorny vegetation makes access on the landfill difficult and may deter trespassing. The warning signs around the landfill are intact but need to be updated with current contact information. There is no evidence of land or groundwater use at the landfill. There is no evidence of groundwater use on EPA's property. Several hunting stands and a lost arrow indicate that EPA's property on the north side of the landfill is used for hunting. A hunting stand found on the landfill in 2014 was removed. There was no evidence of recent trespassing on the landfill.

The groundwater monitoring well network, the landfill gas venting system and the landfill gas monitoring network require maintenance. The majority of the groundwater monitoring wells, passive vents, extraction wells, gas monitoring wells and other venting locations are unlabeled. Some venting locations and three groundwater piezometers in the interior of the Site acting as passive vents are not on any Site maps and are of unknown construction.

Many passive vents are tilted, are in poor condition, and vent two to four feet off the ground. The open extraction wells vent gas through two-inch diameter holes within six inches of the ground surface. Many of the open extraction wells venting high levels of gas are within three to five feet of the fence bordering the Site and EPA's unfenced property.

Some of the landfill gas monitoring wells cannot be locked. Off-Site groundwater monitoring well MW-10i is damaged and needs to be replaced. Off-Site downgradient groundwater monitoring well MW-24i cannot not be located. Landfill gas monitoring wells LFG-5 and LFG-6 on EPA's property could not be located. Other landfill gas monitoring wells could not be located and may have been abandoned (LFG-1, LFG-8, LFG-10, LFG-11).

V. TECHNICAL ASSESSMENT

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

Question A Summary:

No. Some aspects of the remedy are functioning as intended and other components are not.

Vegetative Cover, Perimeter Fence, Institutional Controls and Alternate Water Supply: The vegetative cover, perimeter fence, ICs and alternate water supply are functioning as intended. The vegetative cover on the landfill is thick and well-established and prevents receptors from coming into direct contact with the landfill waste. There are no signs of erosion. The iron deposit staining in the interior of the landfill near MW-14NEW requires soil amendments (e.g., mulching, fertilizer) and plantings or seeding to re-establish the vegetative cover in this area.

The thick, woody, thorny vegetation makes access on the landfill difficult and may deter trespassing. The warning signs around the landfill are intact but need to be updated with current contact information. Trespassers use EPA's Site property outside the landfill for hunting, but are not in contact with any waste. There was no evidence of recent trespassing on the landfill during the 2015 FYR Site inspection.

ICs are in place and effective. The landfill owner's legal representative denies all requests for access. Environmental covenants are recorded on the landfill property and the landfill owner's adjacent Site property. The U.S. government has not permitted any access to or development on EPA's Site property around the landfill. EPA and Ohio EPA are working to implement environmental covenants on EPA's Site property as part of the EPA-Ohio EPA property transfer. There is no evidence of land or groundwater use at the landfill. There is no evidence of land or groundwater use on EPA's Site property.

The area is supplied with water by the North Canton Municipal Water Supply. The Stark County Health Department compared water bill records to street addresses in 2016. The county confirmed that all properties within EPA's water supply area are connected to the municipal water supply, and that there are no water supply wells in this area.

MNA Groundwater Remedy: The MNA groundwater remedy is working for VOCs but may not be working for metals. The 2011-2015 groundwater monitoring indicates that arsenic, chromium and lead concentrations in groundwater are above the cleanup standards in the 2002 ROD Amendment and MCLs in on-Site and off-Site wells. Additional data collection and evaluation is needed to determine if these increases are real, or if they are due to excessive levels of suspended sediment in the groundwater samples. The background groundwater data may not be representative. The Quality Assurance Project Plan (QAPP) is from 1991. This document should be reviewed to determine whether any updates are needed.

This FYR recommends that the PRPs evaluate actions that can be taken to minimize the level of suspended sediment in groundwater samples during subsequent sampling events (e.g., do wells need to be redeveloped, would other sampling equipment or methods reduce the level of suspended sediment). Background groundwater monitoring well MW-12i was not sampled in 2015 and needs to be sampled. The PRPs need to replace and resume sampling at off-Site perimeter well MW-10i and off-Site downgradient well MW-24i. Many of the groundwater monitoring wells are not labelled.

EPA expects these issues to be resolved in advance of the next groundwater monitoring event in May 2017. The Field Sampling Plan should be reviewed and updated (e.g., stabilization parameters should be collected no less than five (5) minutes apart; longer stabilization times or different sampling equipment may be needed to minimize the level of suspended sediment in the sample; minimum purge volumes may need to be required; groundwater elevation data should be collected during a one-day event).

If metals concentrations in the groundwater are confirmed to be above the cleanup standards in the 2002 ROD Amendment and background levels during the May 2017 monitoring event, or subsequent monitoring events, a detailed MNA study is needed to evaluate the effectiveness of the MNA remedy for metals. The evaluation should be a thorough MNA evaluation consistent with EPA guidance. The evaluation should include a detailed assessment of all groundwater chemistry and conditions at the Site that may be the cause of the metals concentrations above cleanup standards at and downgradient of the Site. These conditions include, but are not limited to, changes in chloride levels, redox values and groundwater elevation.

The MNA evaluation must include contingency provisions to address Site-related concentrations of metals above cleanup standards (e.g., increased monitoring frequency, the installation of additional downgradient monitoring wells). Other contingency measures in the Remedial Action Contingency Plan for Groundwater Monitoring included in the 2003 Remedial Design Plan may also need to be implemented.

Landfill Gas: The 2002 ROD Amendment and the 2004-2008 landfill gas investigations expected that the concentration of landfill gas at the Site would continue to diminish over time. Recent methane monitoring, however, indicates that landfill gas concentrations increased in 2015. Methane was above potentially explosive levels in 12 landfill gas vents in 2015, and in five (5) gas monitoring wells installed to detect the movement of subsurface gas beyond the venting system. The highest concentration of methane was 76 percent in a groundwater piezometer acting as a vent in the center of the landfill. The highest concentration of methane in a subsurface gas monitoring well was 26.6 percent. Methane is potentially explosive at concentrations between 5 and 15 percent by volume.

The PRPs initiated weekly methane monitoring in March 2016. Three rounds of weekly follow-up methane monitoring conducted in 2016 confirm that methane is in on-Site gas vents and subsurface gas monitoring wells above potentially explosive levels. The data also indicates that methane concentrations are not consistent at the same location (e.g., non-detect during one event, above potentially explosive levels during the next sampling event). The PRPs will continue to monitor methane concentrations until methane is not detected above potentially explosive levels for four consecutive events, or until EPA and Ohio EPA approve for implementation an Explosive Gas Monitoring Plan for the Site.

The PRPs are conducting punch bar sampling to evaluate methane concentrations along the Site boundary. EPA, Ohio EPA, the Stark County Health Department and the PRPs are also evaluating what modifications to the venting and monitoring systems are warranted.

The landfill gas venting system and gas monitoring well network require maintenance. The majority of passive vents, extraction wells, gas monitoring wells and other venting locations are not labelled. Many passive vents are tilted, are in poor condition, and vent two (2) to four (4) feet off the ground surface. Some of the landfill gas monitoring wells cannot be locked. The open extraction wells vent gas through two-inch diameter holes within six inches of the ground surface. Many of the open extraction wells

venting high levels of gas are within three to five feet of the fence bordering the Site and EPA's unfenced property.

Pipes and tubes of unknown construction are venting gas at the Site. Some of the locations are not on any Site maps. Landfill gas monitoring wells LFG-5 and LFG-6 on EPA's property could not be located. Other landfill gas monitoring wells could not be located and may have been abandoned (LFG-1, LFG-8, LFG-10, LFG-11). EPA is working with the PRPs to inspect and inventory all gas venting locations, make repairs, and retrofit vents with higher piping so gas vents 8 to 10 feet above the ground surface and poses less of a risk to trespassers.

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

Question B Summary:

No. Updated toxicity data for TCE, chromium, acetone, chloroethane, methylene chloride and nickel is available. Additional evaluation is needed to determine if six (6) to seven (7) residential wells 800 to 1,800 feet north and northwest of the Site are downgradient of the Site. Methane concentrations in landfill gas vents and subsurface gas monitoring wells increased in 2015. Current VOC concentrations in subsurface soil gas beyond the venting system, and in outdoor air are unknown.

TCE: EPA updated the toxicity factor for TCE in 2014. The updated toxicity factor considers noncancer risks from TCE. The 2002 ROD Amendment did not consider TCE to be a contaminant of concern in groundwater and did not establish a cleanup level for TCE. The PRPs monitor TCE concentrations in groundwater with the other groundwater contaminants at the Site. TCE was in on-Site well MW-21s and in off-Site well MW-23s during all three 2011-2015 groundwater sampling events.

The maximum concentration of TCE in groundwater was 0.89 ug/L in MW-21 in 2015. This concentration is below the MCL for TCE, which is 5 ug/L. The maximum detected concentration of TCE in 2011-2015 is below the noncancer hazard level for TCE in residential groundwater, which is 2.8 ug/L. The maximum concentration of TCE in groundwater corresponds to a potential cancer risk of two (2) additional cases of cancer for every one (1) million people similarly exposed, which is within EPA's acceptable risk range. The maximum concentration of TCE in groundwater is also below levels that would pose any unacceptable risks through vapor intrusion. TCE is not in groundwater above unacceptable levels, but TCE concentrations should continue to be monitored.

The PRPs detected TCE in outdoor air slightly above the current noncancer risk level for workers in a 2006 air sample. The concentration of TCE was 11 ug/m^3. This concentration is slightly above the current noncancer hazard level for TCE for workers in air, which is 8.8 ug/m^3. This concentration corresponds to a cancer risk of four (4) additional cases of cancer for every one (1) million people similarly exposed, which is within EPA's acceptable risk range. TCE concentrations in outdoor air were lower in 2007 (maximum concentration of 2.7 ug/m^3), and TCE was not in any outdoor air samples in 2004, 2005 or 2008. Current TCE concentrations in outdoor air and in subsurface landfill gas should be evaluated using the most updated toxicity information for TCE.

Chromium: Chromium commonly occurs in two forms, trivalent chromium, which is associated with noncancer risks, and the more toxic, hexavalent form of chromium, which is associated with cancer and noncancer risks at significantly lower levels. Chromium frequently switches back and forth between

trivalent chromium and hexavalent chromium in groundwater and in the human body based on environmental conditions.

The cleanup standard for chromium in groundwater in the 2002 ROD Amendment is 100 ug/L. This cleanup standard is based on the MCL and was designed to protect against both forms of chromium. EPA is currently reviewing the toxicity data for hexavalent chromium. EPA's current Regional Screening Levels (RSLs) recommend a do not exceed concentration of 3.5 ug/L for hexavalent chromium to protect against unacceptable cancer risks (corresponding to a risk of 1 additional case of cancer for every 10,000 people similarly exposed) and noncancer hazards.

This FYR recommends that the PRPs analyze groundwater samples for both forms of chromium to determine if the chromium detected at and downgradient of IEL is hexavalent chromium, and whether the cleanup standards in the 2002 ROD Amendment should be updated to include a cleanup level for hexavalent chromium.

Nickel: The 2002 ROD Amendment established a cleanup level for nickel in groundwater of 730 ug/L. There is no MCL for nickel. EPA's current RSL to protect against noncancer risks from nickel soluble salts is 390 ug/L. This is the form of nickel expected to be in groundwater.

The only concentrations of nickel above EPA's current RSL were in on-Site groundwater monitoring well MW-11s in 2011 and 2013. Nickel was not detected in any wells above the current RSL in 2015. This FYR recommends that subsequent reports evaluate whether nickel concentrations in groundwater exceed the current RSL for nickel soluble salts, in addition to the cleanup standard for nickel in the 2002 ROD Amendment. These evaluations will assist EPA in determining whether the cleanup standard for nickel in the 2002 ROD Amendment should be updated.

Methylene Chloride: The cleanup level for methylene chloride (also called dichloromethane) in the 2002 ROD Amendment is based on the EPA Region 9 Preliminary Remediation Goal, which was 43 ug/L. The current MCL for methylene chloride is 5 ug/L. This FYR recommends evaluating whether the cleanup standard for methylene chloride should be updated based on the current MCL. However, methylene chloride was not detected in any groundwater samples during any of the 2011-2015 sampling events.

Acetone and Chloroethane: The 2002 ROD Amendment established cleanup levels for acetone and chloroethane (also called ethyl chloride) based on EPA Region 9 Preliminary Remediation Goals. EPA's current RSLs for acetone (14,000 ug/L) and chloroethane (21,000 ug/L) are significantly higher than the cleanup standards for these chemicals in the 2002 ROD Amendment. This FYR recommends evaluating whether the cleanup standards for these chemicals should be updated based on the most current toxicity information.

Residential Wells North and Northwest of Site: The Stark County Health Department identified six properties outside of EPA's water supply connection area that are not connected to the municipal water supply. The wells are 800 to 1,800 feet north and northwest of the Site. These wells use groundwater for household use. The county is investigating whether another property located 1,500 feet northwest of the Site uses well water.

Additional data and evaluation is needed to determine if the residential wells are downgradient of the Site and if they should be tested. EPA testing in three (3) residential wells that are now sealed in this

area in 1998 did not detect any contaminants above drinking water standards. Residential well sampling in northwest Uniontown by EPA and Ohio EPA in 1988-1994 also identified tetrachloroethylene (PCE) contamination in this area that was not related to the IEL Site. Any contaminants found in wells outside of EPA's water supply area may not be Site-related.

Potential Risks to Residents from Vapor Intrusion and Outdoor Air Are Uncertain: The 2002 ROD Amendment and the 2004-2008 landfill gas investigations expected that the concentration of landfill gas at the Site would continue to diminish over time. Recent methane monitoring, however, indicates that landfill gas concentrations increased in 2015. Methane was above potentially explosive levels in 12 landfill gas vents in 2015, and in five (5) gas monitoring wells installed to detect the movement of subsurface gas beyond the venting system. The highest concentration of methane was 76 percent in a groundwater piezometer acting as a vent in the center of the landfill. The highest concentration of methane in a subsurface gas monitoring well was 26.6 percent. Methane is potentially explosive at concentrations between 5 and 15 percent by volume.

VOC sampling in 2004-2008 indicated that VOC concentrations in outdoor air were decreasing. The 2004-2008 concentrations of VOCs in passive vents and former extraction wells, however, were still high. Also, the landfill gas monitoring wells between the passive venting system and residential homes were not sampled for VOCs. This FYR recommends that the PRPs conduct a follow-up vapor intrusion and outdoor air investigation to evaluate whether current methane and VOC concentrations pose a risk to residents living near the Site. The investigation should also evaluate whether recreational use of EPA's property is appropriate.

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

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

Commenters' concerns about potential risks from VOCs through subsurface vapor intrusion, the increased toxicity of TCE, chromium and EPA's low-flow groundwater sampling procedures are addressed in the Data Review and Questions A and B sections of this FYR. Issues concerning radiation, groundwater sampling, and the abandonment and replacement of groundwater monitoring wells at the Site are addressed by the 1994 Science Advisory Board Report; the 2000-2001 radiation data; the 2001 District Court case; the 2003 Monitoring Well Assessment; the 2003 Remedial Design Plan; the 2004 Ombudsman Report and the 2005 letter from EPA's Acting National Ombudsman.

VI. ISSUES/RECOMMENDATIONS

Issues/Recommendations
OU(s) without Issues/Recommendations Identified in the Five-Year Review:
None.

Issues and Recommendations Identified in the Five-Year Review:				
OU(s): 01/Sitewide	**Issue Category: Changed Site Conditions**			
	Issue: Recent methane monitoring indicates that landfill gas concentrations increased in 2015 with methane above potentially explosive levels in 12 landfill gas vents and in five (5) gas monitoring wells installed to detect the movement of subsurface gas beyond the venting system. The landfill gas venting system and gas monitoring well network require maintenance.			
	Recommendation: Inspect, inventory, label and map all gas venting and gas monitoring locations; make repairs, retrofit vents with higher piping so gas vents 8 to 10 feet above the ground surface; evaluate what modifications to the venting system are warranted; develop and submit an Explosive Gas Monitoring Plan and implement upon approval.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party**	**Milestone Date**
Unknown	Yes	PRP	EPA/State	12/31/2016
OU(s): 01/Sitewide	**Issue Category: Changed Site Conditions**			
	Issue: Landfill gas concentrations and the extent of landfill gas at the Site increased in 2015. Current VOC concentrations in subsurface soil gas and ambient air are unknown. Current risks to residents living near the Site from subsurface vapor intrusion and from ambient air are not characterized. It is not clear if recreational use at EPA's Site property is appropriate.			
	Recommendation: Implement a vapor intrusion and outdoor air investigation. This involves developing for Agency approval a Field Sampling Plan and a Quality Assurance Project Plan for a vapor intrusion and outdoor air investigation to evaluate: 1) whether methane and VOC concentrations pose a current or potential risk to residents living near the Site, and 2) whether recreational use of EPA's Site property is acceptable; conducting the investigation; and submitting a report evaluating and detailing the results of the investigation.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party**	**Milestone Date**
Unknown	Yes	PRP	EPA/State	12/31/2018
OU(s): 01/Sitewide	**Issue Category: Remedy Performance**			
	Issue: On-site and off-Site groundwater monitoring wells contain metals above cleanup standards. It is not clear if the MNA remedy is working for metals.			
	Recommendation: Update the O&M Plan to include contingency provisions to address metal detections above cleanup standards (e.g., additional evaluation, confirmation sampling, increased monitoring frequency, install additional downgradient monitoring wells), in addition to the contingency measures in the 2003 Remedial Design Plan. Update the O&M Plan to require a detailed MNA study to evaluate the effectiveness of the MNA remedy for metals if Site-related metals concentrations are confirmed above the cleanup standards in the 2002 ROD Amendment and background levels.			

Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party	Milestone Date
No	Yes	PRP	EPA/State	12/31/2016
OU(s): 01/Sitewide	**Issue Category: Institutional Controls**			
	Issue: There is no provision for long-term stewardship of ICs.			
	Recommendation: Modify O&M Plan to include long-term stewardship of ICs.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party**	**Milestone Date**
No	Yes	PRP	EPA/State	12/31/2016

OTHER FINDINGS

In addition, EPA identified the following recommendations during the FYR. These recommendations will improve the monitoring component of the MNA remedy; minimize the potential for trespassers to come into contact with landfill gas; and address O&M issues:

1. EPA will request that the PRPs update the O&M Plan to include: annual inspection and reporting on land and groundwater use on EPA's Site property around the landfill; ecological monitoring and maintenance activities, including monitoring the vegetative cover in the iron deposit staining area; and annual point-by-point inspection and maintenance records for all on-Site and off-Site groundwater monitoring wells, landfill gas monitoring wells and venting components, and all sides of the perimeter fence, and gates. The O&M Plan should be updated to include global positioning system data for all monitoring and vent locations so they can be relocated, and all locations should be labeled.

2. EPA will request that the PRPs update the O&M Plan to require subsequent groundwater monitoring reports to summarize data for all chemicals with cleanup standards in the 2002 ROD Amendment, in addition to chemicals above MCLs. The reports should include current RSLs for chemicals with cleanup standards in the ROD (i.e., chloroethene, acetone, methylene chloride and nickel soluble salts).

3. EPA should consider updating the cleanup level for chloroethane, acetone, methylene chloride and nickel soluble salts) based on the most current toxicity information.

4. EPA will request that the PRPs submit a plan for properly abandoning and replacing MW-10i.

5. EPA will request that the PRPs evaluate actions that can be taken to minimize the level of suspended sediment in groundwater samples during subsequent sampling events (e.g., do wells need to be redeveloped, would other sampling equipment or methods reduce the level of suspended sediment).

6. EPA will request that the PRPs inspect and sample background well MW-12i and off-Site groundwater monitoring well MW-24i.

7. EPA will request that the PRPs submit an updated Field Sampling Plan, including applicable Standard Operating and Calibration Procedures, for low-flow groundwater sampling and equipment for the groundwater MNA remedy. The updated Field Sampling Plan should follow current low-flow groundwater sampling and groundwater elevation measurement procedures (e.g., stabilization parameters should be collected no less than five minutes apart; longer stabilization times or different sampling equipment may be needed to minimize the level of suspended sediment in the sample; minimum purge volumes may need to be required; groundwater elevation data should be collected over a one-day event).

8. EPA will request that the PRPs submit an updated Quality Assurance Project Plan for the groundwater monitoring component of the MNA remedy consistent with current EPA Region 5 requirements (the current QAPP is from 1991).

9. EPA will request the PRPs to collect groundwater elevation data from all on-Site and off-Site groundwater monitoring wells, including replaced monitoring well MW-10i, following the approved procedures in the updated Field Sampling Plan. The PRPs then need to submit a report evaluating current groundwater flow direction at the Site, including whether the residential wells north and northwest of the Site are downgradient of the Site. The report should evaluate both horizontal and vertical groundwater flow.

10. EPA will request the PRPs to submit a plan, including a Quality Assurance Project Plan, to conduct an investigation to determine whether any of the chromium detected in on-Site and off-Site groundwater is hexavalent chromium.

11. EPA will instruct the PRPs that they need to maintain the groundwater monitoring well network and make repairs as needed.

12. EPA will instruct the PRPs to add soil amendments (e.g., mulch, fertilizer) to the iron deposit staining area near groundwater monitoring well MW-14NEW, and plant or seed this area to re-establish the vegetative cover in this area.

VII. PROTECTIVNESS STATEMENT

Sitewide Protectiveness Statement	
Protectiveness Determination: Protectiveness Deferred	*Planned Addendum Completion Date:* 6/30/2019
Protectiveness Statement: A protectiveness determination of the remedy at the IEL Site cannot be make at this time until further information is obtained. Further information will be obtained by taking the following actions: retro-fit, repair and replace the venting system and gas monitoring components as warranted; develop and implement an Explosive Gas Monitoring Plan; conduct a vapor intrusion and outdoor air investigation; and modify the O&M Plan to incorporate long-term stewardship of ICs. It is expected that these actions will take approximately three (3) years to complete, at which time a protectiveness determination will be made.	

VIII. NEXT REVIEW

The next five-year review report for the IEL Superfund Site is required five years from EPA's signature date of this review.

APPENDICES

APPENDIX A – REFERENCES
APPENDIX B – FIGURES
- Figure 1 – Site Location
- Figure 2 – Municipal Water Supply, IEL Site
- Figure 3 – Groundwater Monitoring Well Network
- Figure 4 – Landfill Gas Vents and Gas Monitoring Wells
- Figure 5 – Landfill Property and Owner's Site Lot Requiring Institutional Controls
- Figure 6 – EPA's Site Property Requiring Institutional Controls
- Figure 7 – Residential Properties without Water Bills

APPENDIX C – GROUNDWATER MONITORING SCHEDULE AND WELL DESIGNATIONS
APPENDIX D – ENVIRONMENTAL COVENANTS
APPENDIX E – 2011–2015 GROUNDWATER MONITORING DATA
APPENDIX F – 2011-2016 METHANE MONITORING DATA
APPENDIX G – SITE PHOTOGRAPHS

APPENDIX A

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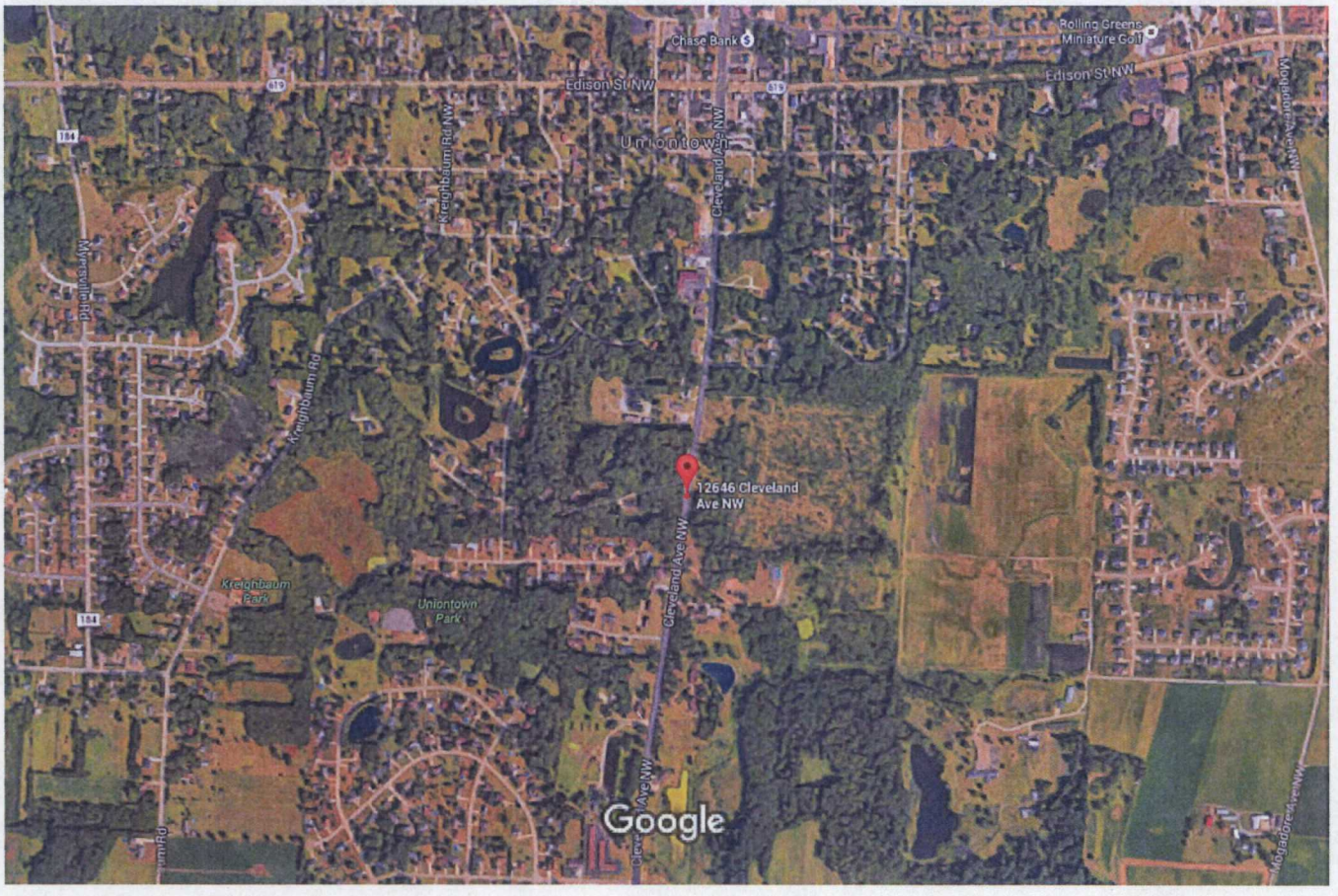
2015 Groundwater Monitoring Report, Industrial Excess Landfill (IEL) Site, Uniontown, Ohio, 44685. EarthCon, October 26, 2015. SEMS Document 489077.

APPENDIX B

FIGURES

Google Maps 12646 Cleveland Ave NW

INDUSTRIAL EXCESS LANDFILL SITE



Imagery ©2016 Google, Map data ©2016 Google 500 ft

12646 Cleveland Ave NW
Uniontown, OH 44685

Google Maps

FIGURE 1

Industrial Excess Landfill
Uniontown, OH

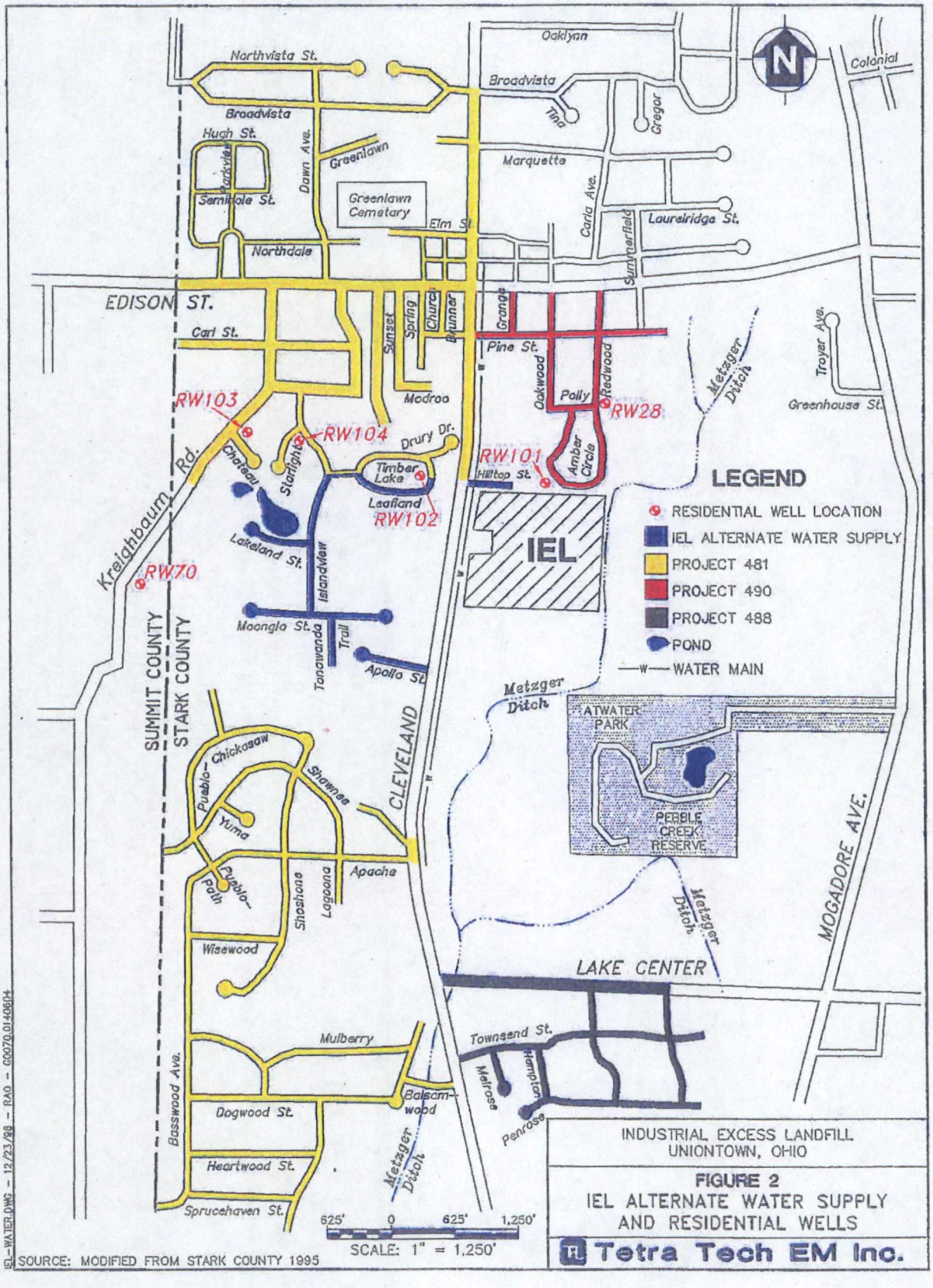


FIGURE 2

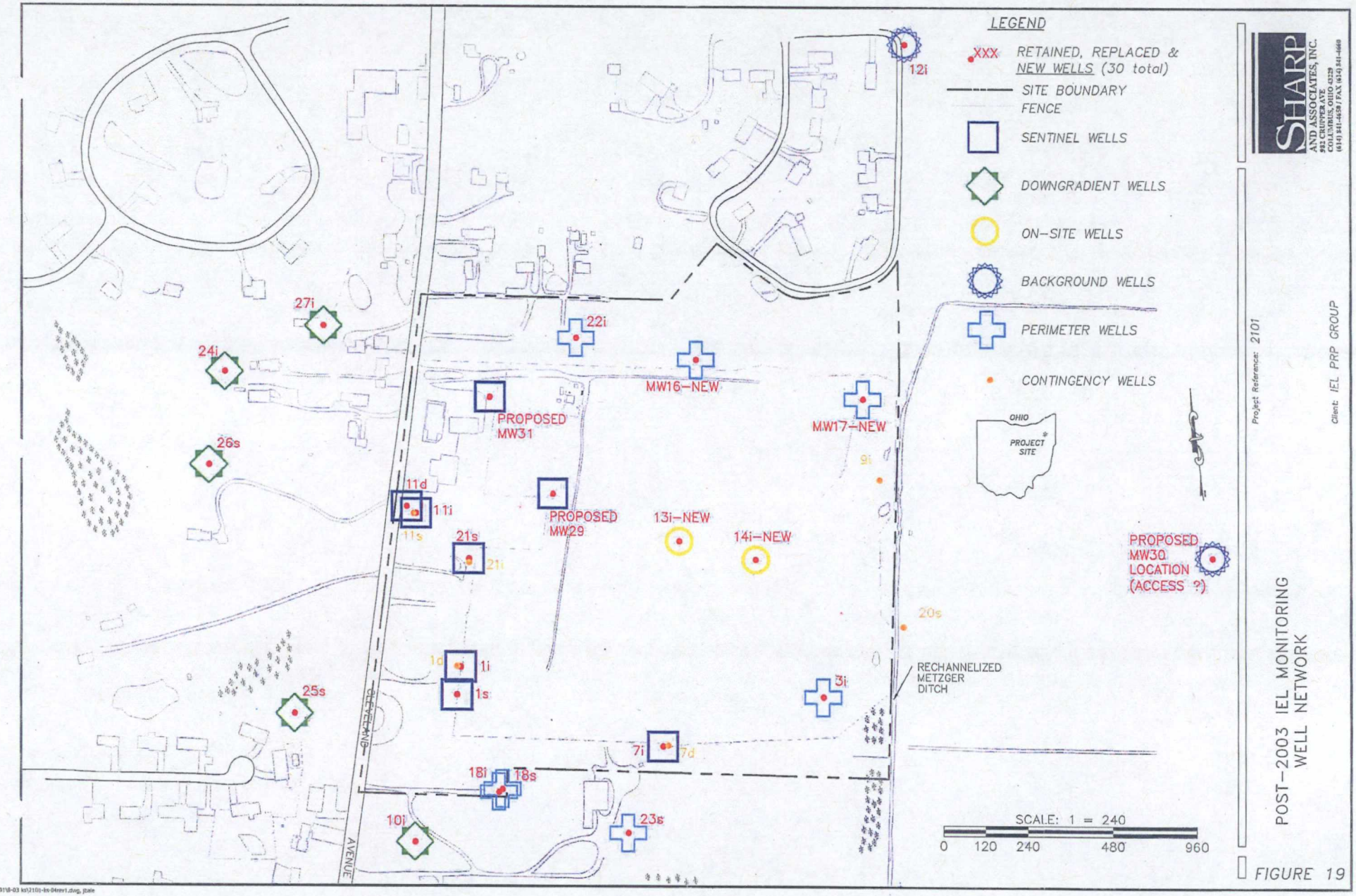

LEGEND
XXX RETAINED, REPLACED & NEW WELLS (30 total)
SITE BOUNDARY
FENCE
SENTINEL WELLS
DOWNGRADIENT WELLS
ON-SITE WELLS
BACKGROUND WELLS
PERIMETER WELLS
CONTINGENCY WELLS
OHIO
PROJECT SITE
SHARP AND ASSOCIATES, INC.
921 CHATHAM AVE
COLUMBUS, OHIO 43229
(614) 841-4638 / FAX (614) 841-4669
Project Reference: 2101
Client: IEL PRP GROUP
POST-2003 IEL MONITORING WELL NETWORK
FIGURE 19
SCALE: 1 = 240
0 120 240 480 960
12i
27i
24i
22i
MW16-NEW
MW17-NEW
PROPOSED MW31
26s
11d
11i
11s
PROPOSED MW29
13i-NEW
14i-NEW
21s
21i
9i
PROPOSED MW30 LOCATION (ACCESS ?)
20s
1d
1i
1s
3i
RECHANNELIZED METZGER DITCH
25s
7i
7d
18i
18s
23s
10i
CLEVELAND AVENUE

FIGURE 3

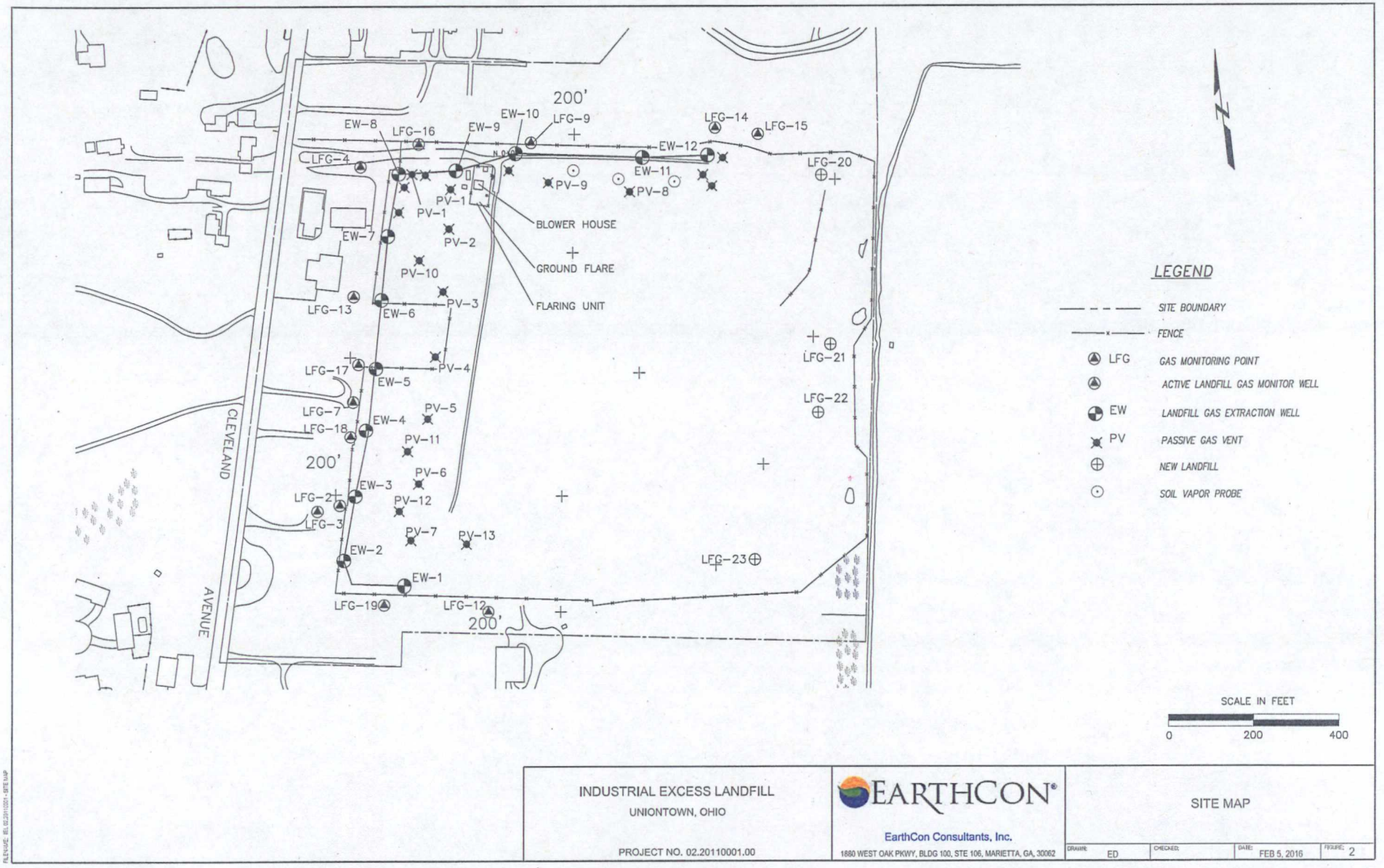

200'
EW-8
LFG-16
EW-9
EW-10
LFG-9
LFG-14
LFG-15
EW-12
LFG-4
EW-11
LFG-20
PV-9
PV-8
PV-1
PV-1
BLOWER HOUSE
EW-7
PV-2
GROUND FLARE
PV-10
FLARING UNIT
LFG-13
EW-6
PV-3
LFG-21
LFG-17
EW-5
PV-4
LFG-22
LFG-7
PV-5
EW-4
LFG-18
PV-11
200'
PV-6
EW-3
LFG-2
PV-12
LFG-3
PV-7
PV-13
EW-2
LFG-23
EW-1
LFG-19
LFG-12
200'
CLEVELAND
AVENUE
LEGEND
SITE BOUNDARY
FENCE
LFG
GAS MONITORING POINT
ACTIVE LANDFILL GAS MONITOR WELL
EW
LANDFILL GAS EXTRACTION WELL
PV
PASSIVE GAS VENT
NEW LANDFILL
SOIL VAPOR PROBE
SCALE IN FEET
0
200
400
INDUSTRIAL EXCESS LANDFILL
UNIONTOWN, OHIO
PROJECT NO. 02.20110001.00
EARTHCON
EarthCon Consultants, Inc.
1880 WEST OAK PKWY, BLDG 100, STE 106, MARIETTA, GA, 30062
SITE MAP
DRAWN: ED
CHECKED:
DATE: FEB 5, 2016
FIGURE: 2

FIGURE 4

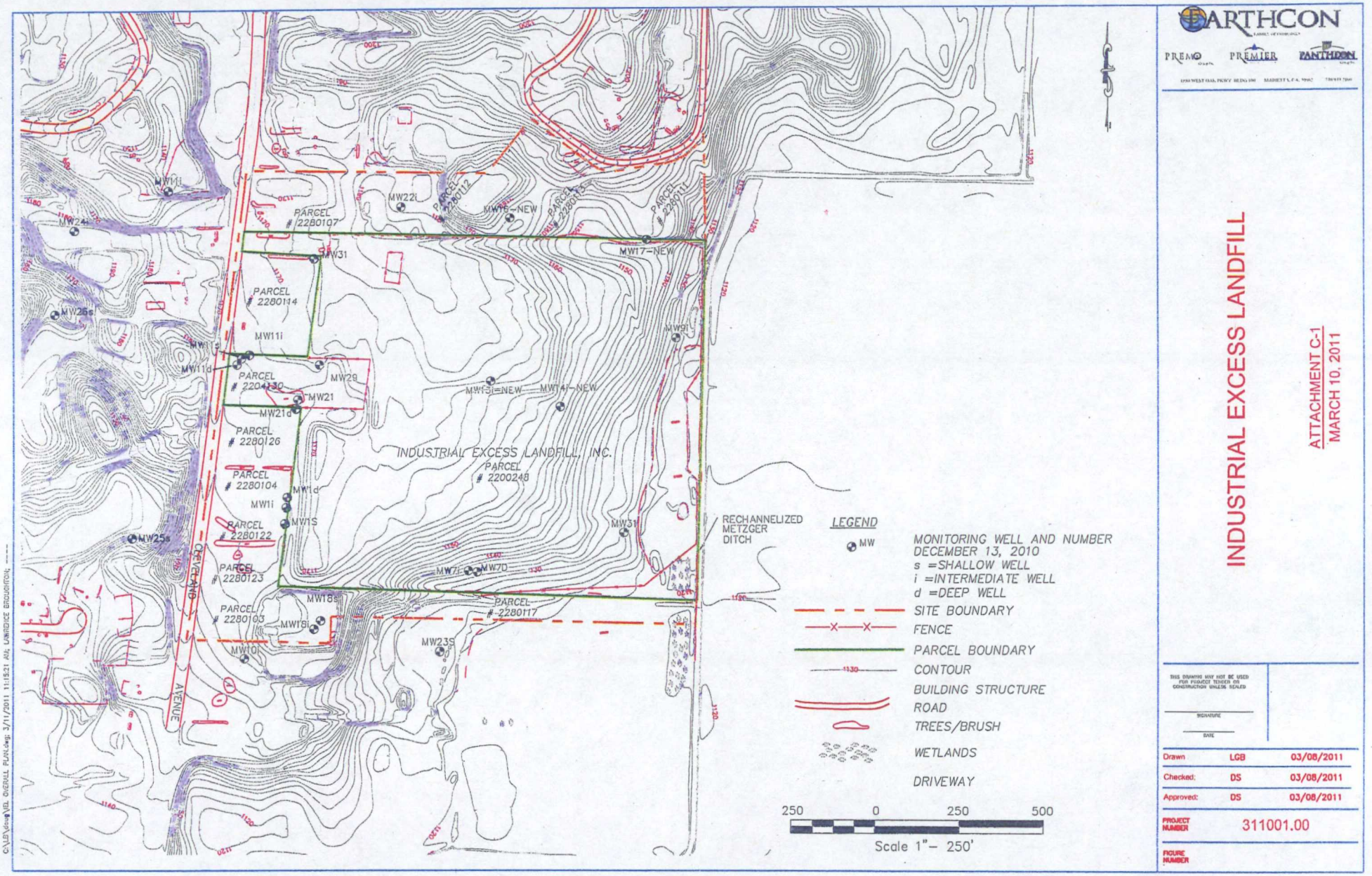

INDUSTRIAL EXCESS LANDFILL
ATTACHMENT C-1
MARCH 10, 2011
EARTHCON
PREMIER
PANTHEON
INDUSTRIAL EXCESS LANDFILL, INC.
PARCEL # 2200248
PARCEL # 2280107
PARCEL # 2280114
PARCEL # 2280130
PARCEL # 2280126
PARCEL # 2280104
PARCEL # 2280122
PARCEL # 2280123
PARCEL # 2280103
PARCEL # 2280117
PARCEL # 2280112
PARCEL # 2280113
PARCEL # 2280111
MW11i
MW24i
MW22i
MW16-NEW
MW17-NEW
MW31
MW26s
MW11s
MW11d
MW29
MW21
MW21d
MW13i-NEW
MW14i-NEW
MW9i
MW1d
MW1i
MW1s
MW25s
MW7i
MW7D
MW18s
MW18i
MW10i
MW23s
CHEVELAND AVENUE
RECHANNELIZED METZGER DITCH
LEGEND
MW
MONITORING WELL AND NUMBER DECEMBER 13, 2010
s =SHALLOW WELL
i =INTERMEDIATE WELL
d =DEEP WELL
SITE BOUNDARY
FENCE
PARCEL BOUNDARY
CONTOUR
BUILDING STRUCTURE
ROAD
TREES/BRUSH
WETLANDS
DRIVEWAY
250 0 250 500
Scale 1"= 250'
THIS DRAWING MAY NOT BE USED FOR PERMIT TENDER OR CONSTRUCTION UNLESS SEALED
SIGNATURE
DATE
Drawn LGB 03/08/2011
Checked: DS 03/08/2011
Approved: DS 03/08/2011
PROJECT NUMBER 311001.00
FIGURE NUMBER

FIGURE 5

Industrial Excess Landfill
Government Owned Properties
with geolocated monitoring points

Monitoring unit	Property Parcel
mw 31	2280114
mw 22i	2280105
mw 21s	2280126
mw 21i	2280126
mw 18s	2280120
mw 18i	2280120
mw 16	2280112
Lfg 2	2280123
Lfg 3	2280123
Lfg 7	2280104
Lfg 9	2280109
LFG 12	2280117
Lfg 14	2280113
Lfr 15	2280113
Lfg 17	2204130
LFG 18	2280104
Lfg 19	2280120
Budoff lfg, BD	2204130 / 2280115
Est LFG 5	2280110
Est LFG 6	2280103
Est LFG 8	2280115

Legend

- Survey_Section_Corner_Control_Monuments
- alt_first
- Quarter-Sections
- parcel_Owned_USA
- parcels_stark
- Landfill gas monitoring
- Monitoring wells
- Monitor well not observed Estimate of location

0 75 150 300 450 600 Feet

N

Observations and data collected by NEDO DERR, Antonelli, Bolas July-August 2015

Ohio Environmental Protection Agency

FIGURE 6

LAKE TOWNSHIP WATER CUSTOMERS

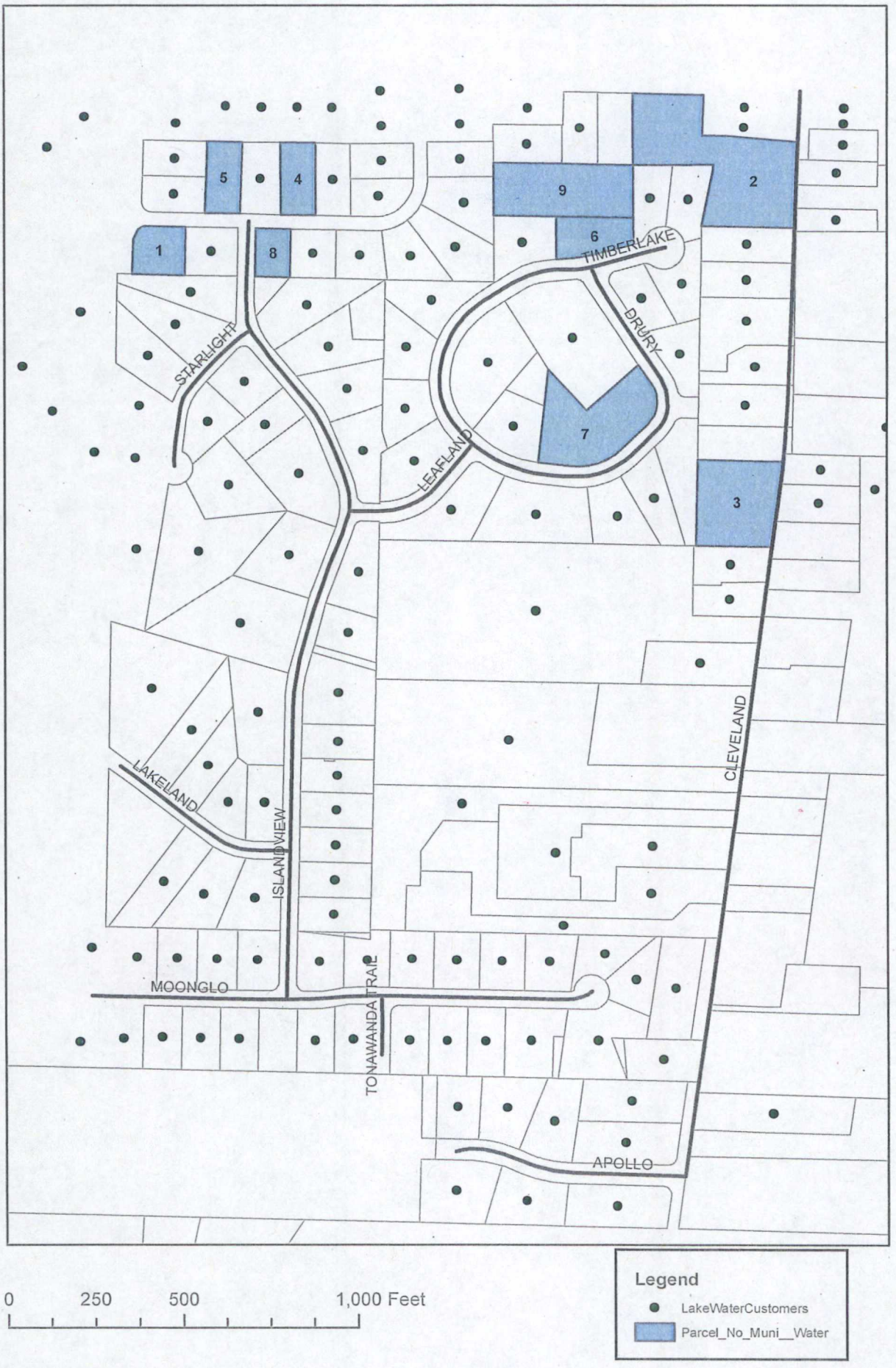


FIGURE 7

APPENDIX C

CURRENT
GROUNDWATER MONITORING SCHEDULE and
WELL DESIGNATIONS

2003 REMEDIAL DESIGN PLAN

Table 9. Tier Summary, Post-2003

#	Well ID	Tier	Location	Dedicated Pump?	Notes
1	MW-01I	Sentinel	ON-SITE	YES	
2	MW-01D	Contingency	ON-SITE	YES	Deep well on western boundary
3	MW-01S	Sentinel	ON-SITE	YES	Shallow well (straddles water table)
4	MW-03I	Perimeter	ON-SITE	YES	
5	MW-07I	Sentinel	ON-SITE	YES	
6	MW-07D	Contingency	ON-SITE	YES	Deep well on southern boundary
7	MW-09I	Contingency	ON-SITE	YES	Extra background well
8	MW-10I	Perimeter	OFF-SITE	YES	
9	MW-11I	Sentinel	ON-SITE	YES	
10	MW-11D	Contingency	ON-SITE	YES	Deep well on western boundary
11	MW-11S	Sentinel	ON-SITE	YES	Shallow well (straddles water table)
12	MW-12I	Background	OFF-SITE	YES	
13	MW-13i New	On-Site	ON-SITE	YES	replacement well, 2002
14	MW-14i New	On-Site	ON-SITE	YES	replacement well, 2002
15	MW-16 New	Perimeter/New	ON-SITE	YES	replacement well, outside waste
16	MW-17 New	Perimeter/New	ON-SITE	YES	replacement well, outside waste
17	MW-18S	Perimeter	ON-SITE	YES	
18	MW-18I	Perimeter	ON-SITE	YES	
19	MW-20S	Contingency	OFF-SITE	YES	Extra background well
20	MW-21S	Sentinel	ON-SITE	YES	
21	MW-21I	Contingency	ON-SITE	YES	Deep well on western boundary
22	MW-22I	Perimeter	ON-SITE	YES	
23	MW-23S	Perimeter	OFF-SITE	YES	
24	MW-24I	Downgradient	OFF-SITE	YES	
25	MW-25S	Downgradient	OFF-SITE	YES	
26	MW-26S	Downgradient	OFF-SITE	YES	
27	MW-27I	Downgradient	OFF-SITE	YES	
28	MW-29 New	Sentinel/New	ON-SITE	YES	new sentinel well
29	MW-30 New	Background/New	OFF-SITE	YES	new background well
30	MW-31 New	Sentinel/New	ON-SITE	YES	new sentinel well

Tier Summary

Tier Designation	Well Description	Monitoring Purpose / Approach
Sentinel Wells: 8 wells: 1s, 1i, 7i, 21s, 11s, 11i, 29, 31	Located along western boundary of landfill	Will detect migration downgradient from landfill if it occurs
On-Site Wells: 2 wells: 13i and 14i	Double-cased new wells installed through waste	Provide early indications of migration from landfill contents
Background: 2 wells: 12i, 30	Upgradient.	Identify regional changes; monitor naturally-occurring constituents
Perimeter Wells: 7 Wells: 3i, 18i, 18s, 22i, 16, 17, 23s	Along landfill perimeter but cross-gradient	Provide coverage of uppermost aquifer in all compass directions
Downgradient Wells: 5 24i, 25s, 26s, 27i, 10i	Further downgradient than sentinel wells	Allow measurement of extent should sentinel wells show detects
Contingency Wells: 6 9i, 1d, 20s, 11d, 21i, 7d	Western/southern boundary wells retained	Sampled only if results in 1i, 11i, 21s, 7i, and 30 warrant
New Wells: 5 16, 17, 29, 30, 31	Replacement: 16, 17 Background: 30 Sentinel 29, 31	Northside boundary coverage Better Sentinel well coverage Better background location

Table 10. Proposed 30-year IEL Sampling Event Matrix

as of 9/22/2003

Notes: Seven monitoring events conducted prior to August 2000. Remedy "in-place" since 1980

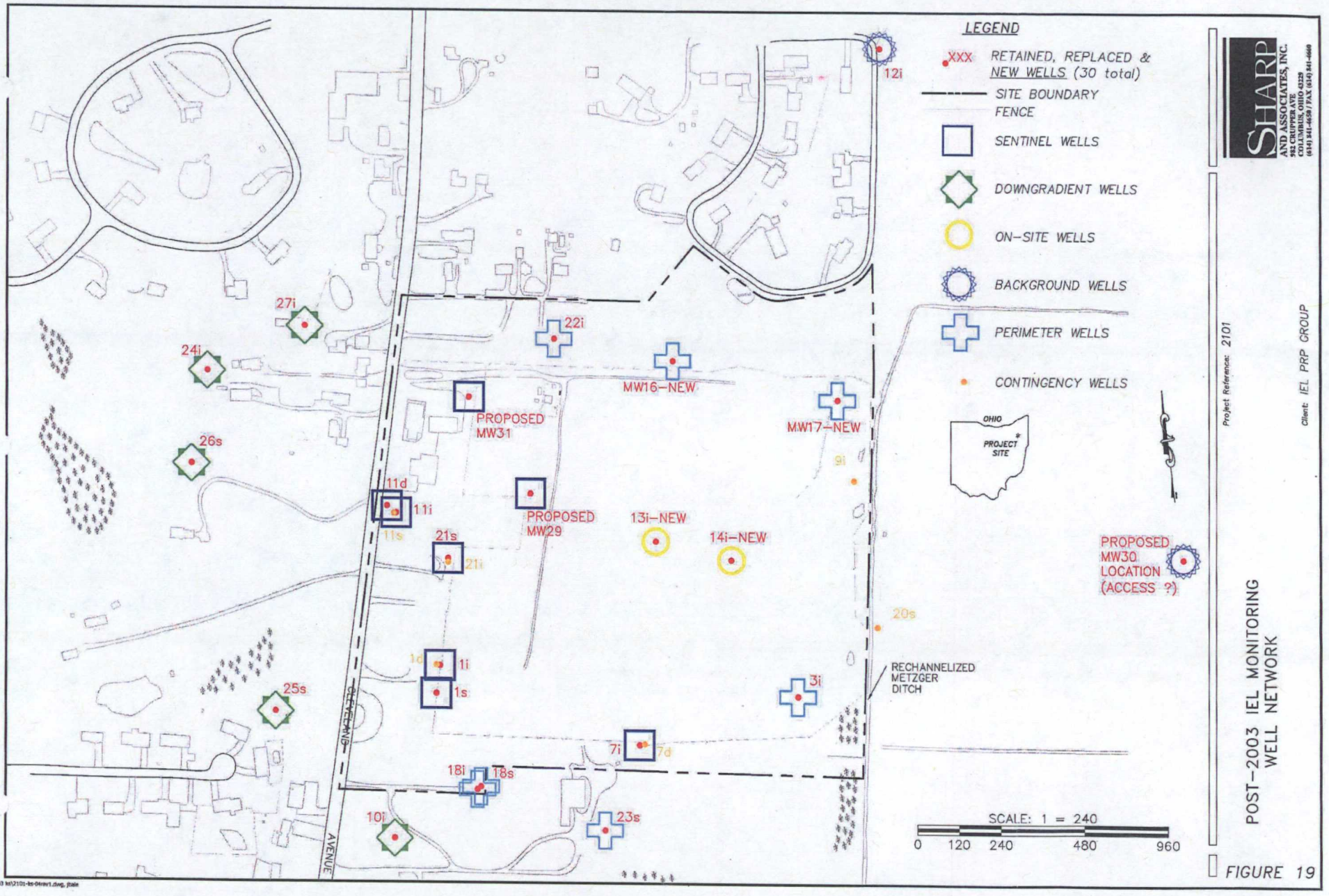
Regular monitoring using modern techniques conducted beginning in August 2000; I.e. year one through year three has already been completed under an agreement with the Township under the supervision of USEPA and OhioEPA.

Assume new monitoring wells installed before August 2004 event

Monitoring Year	Years Post ROD	Event #	Date	Monitoring Well Tiers to be Sampled	Analytical Parameters	Rationale
Year One		1	August-2000	All Tiers	VOCs, Metals, Nat'l, RAD	Supplement the historic database; charaterize seasonal variation; montor natural attenuation processes and chemical constituents on-site; monitor for potential off-site impacts via sentinel wells; put RAD issue to bed,
		2	November-2000	All Tiers; Tier A1** only for RAD	VOCs, Metals, Nat'l, RAD	
		3	February-2001	Tier S, B, OW; Tier A1 only for RAD	VOCs, Metals, Nat'l, RAD	
		4	May-2001	Tier S, B, OW; Tier A1 only for RAD	VOCs, Metals, Nat'l, RAD	
Year Two		5	August-2001	Tier S, B, OW;	VOCs, Metals, Nat'l	Monitor that no off-site migration of landfill constituents is occurring; monitor on-site conditions
		6	May-2002	Tier S, B, OW	VOCs, Metals, Nat'l	
		7	July-2002	All Tiers	VOCs, SVOCs, Metals, Nat'l	All Tiers/Parameters to complete characterization
Year Three		8	November-2002	Tier S, B	VOCs, Metals	Monitor that no off-site migration of landfill constituents is occurring. Snapshot of on-site conditions
		9	March-2003	Tier S, B, OW	VOCs	
		10	July-2003	All Tiers	VOCs, Nat'l	All Tiers to supplement database and confirm nat'l
				REMEDIAL ACTION APPROVED		
2003 Year Four	0	11	November-2003	All Tiers	VOCs	
		12	February-2004	All Tiers	VOCs	
		13	May-2004	All Tiers+G11	VOCs	
		14	August-2004	All Wells	VOCs, SVOCs, Metals, Nat'l	
Year Five	1	15	February-2005	Sentinel, On-Site	VOCs	Number of sampled wells reduced as long as results warrant.
		16	August-2005	Sentinel, On-Site	VOCs	
Year Six	2	17	November-2005	Sentinel, On-Site	VOCs	
		18	May-2006	All Tiers	VOCs, SVOCs, Metals, Nat'l	
Year Six			September-2006	**CERCLA 5-YEAR REVIEW**		Previous 5-year Review in 2001
Year Seven	3	19	August-2007	All Tiers	VOCs	Planned Annual Sampling of all wells for all parameters unless superseded by agreement
Year Eight	4	20	May-2008	All Tiers	VOCs	
Year Nine	5	21	February-2009	All Tiers	VOCs	
Year Ten	6	22	November-2010	All Tiers	VOCs	
Year Eleven	7	23	May-2011	All Tiers	VOCs, SVOCs, Metals, Nat'l	
Year Eleven			September-2011	**CERCLA 5-YEAR REVIEW**		Previous 5-year Review in 2006
Years 12-33	30	24-34	2012-2033	All Tiers	VOCs, SVOCs, Metals, Nat'l	Biannual sampling of all wells/paramters unless superseded by agreement.

24 Total Number of Events, post-ROD

34 Total Number of Events, post August 2000


LEGEND
XXX RETAINED, REPLACED & NEW WELLS (30 total)
SITE BOUNDARY
FENCE
SENTINEL WELLS
DOWNGRADIENT WELLS
ON-SITE WELLS
BACKGROUND WELLS
PERIMETER WELLS
CONTINGENCY WELLS
OHIO
PROJECT SITE
SHARP AND ASSOCIATES, INC.
982 CRUPPER AVE
COLUMBUS, OHIO 43229
(614) 841-4659 / FAX (614) 841-4660
Project Reference: 2101
Client: IEL PRP GROUP
POST-2003 IEL MONITORING WELL NETWORK
12i
27i
24i
22i
MW16-NEW
MW17-NEW
PROPOSED MW31
26s
11d
11i
11s
PROPOSED MW29
13i-NEW
14i-NEW
21s
21i
9i
PROPOSED MW30 LOCATION (ACCESS ?)
20s
1d
1i
1s
25s
CLEVELAND AVENUE
RECHANNELIZED METZGER DITCH
3i
7i
7d
18i
18s
10i
23s
SCALE: 1 = 240
0 120 240 480 960
FIGURE 19

APPENDIX D

ENVIRONMENTAL COVENANTS for LANDFILL PROPERTY AND OWNER'S ADJACENT SITE LOT

Instr:200905050017746
P:1 of 14 F:$124.00 05/05/2009
Rick Campbell 3:27PM MISC
Stark County Recorder T20090013660

To be recorded with Deed Records - ORC § 317.08

ENVIRONMENTAL COVENANT

This Environmental Covenant is entered into by Industrial Excess Landfill, Inc. ("Owner"), the Ohio Environmental Protection Agency ("Ohio EPA"), and the United States, on behalf of the U.S. Environmental Protection Agency ("U.S. EPA"), pursuant to Ohio Revised Code ("ORC") §§ 5301.80 to 5301.92 for the purpose of subjecting the Property to the activity and use limitations set forth herein.

Whereas, in a Record of Decision Amendment dated September 27, 2002 (the "ROD"), the EPA Region 5 Superfund Division Director selected a "remedial action" for the Site, which provides, in part, for the following actions: augmentation of existing vegetative cover; natural attenuation of groundwater contaminants and gas monitoring; and deed restrictions prohibiting residential use and drinking water wells.

Whereas, the parties hereto have agreed to 1) grant a permanent right of access over the Property to the United States, Ohio EPA, and the defendants performing work under a partial consent decree in United States and the State of Ohio, v. Industrial Excess Landfill, Inc. (N.D. Ohio), Case No. 5:89 CV 1988 and 5:91 CV 2559 ("Work Defendants"), and 2) to impose upon the Property use restrictions as covenants that will run with the land for the purpose of protecting human health and the environment.

Now therefore, the Owner, the United States and Ohio EPA agree to the following:

1. Environmental Covenant. This instrument is an environmental covenant developed and executed pursuant to ORC §§ 5301.80 to 5301.92.

2. Property. This Environmental Covenant concerns the Industrial Excess Landfill, which is part of the Industrial Excess Landfill, Inc. Site (the "IEL Site" or the "Site"), that the U.S. EPA, pursuant to Section 105 of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9605, placed on the National Priorities List, set forth at 40 C.F.R. Part 300, Appendix B, by publication in the Federal Register on June 10, 1986, 51 Fed. Reg. 21054, 21064. Industrial Excess Landfill, Inc. owns a parcel of property located at 12646 Cleveland

Instr:200905050017746
P:2 of 14 F:$124.00 05/05/2009
Rick Campbell 3:27PM MISC
Stark County Recorder T20090013660

Avenue, in Uniontown, Stark County, Ohio Stark County Parcel Number 2200248, which is part of the IEL Site (the "Property"). The Property is more particularly described in Exhibit A attached hereto and hereby incorporated by reference herein ("Property").

3. Owner. Industrial Excess Landfill, Inc. ("Owner") is the owner of the Property.

4. Holder. Owner, whose address is listed above, is the holder of this Environmental Covenant.

5. Activity and Use Limitations/Rights of Access. It is the purpose of this Environmental Covenant to convey property rights, which will run with the land, to facilitate the remediation of past environmental contamination and to protect human health and the environment by reducing the risk of exposure to contaminants. Owner hereby imposes and agrees to comply with the following activity and use limitations, and agrees to provide Ohio EPA, the United States, and the Work Defendants, subject to Paragraph 22, with an irrevocable, permanent and continuing right of access at all reasonable times to the Property for the purposes of:

a) Implementing the response actions in the ROD, including but not limited to operation and maintenance of the vegetative cover, groundwater monitoring wells, gas venting system, and perimeter fencing.

b) Verifying any data or information submitted by the Work Defendants;

c) Verifying that no action is being taken on the property in violation of the terms of this instrument or of any federal or state environmental laws or regulations;

d) Monitoring response actions on the Site and conducting investigations relating to contamination on or near the Site, including, without limitation, sampling of air, water, sediments, soils, and specifically, without limitation, obtaining split or

Instr:200905050017746
P:3 of 14 F:$124.00 05/05/2009
Rick Campbell 3:27PM MISC
Stark County Recorder T20090013660

duplicate samples;

e) Conducting periodic reviews of the remedial action, including but not limited to, reviews required by applicable statutes and/or regulations;

f) Implementing additional or new response actions if U.S. EPA, in its sole discretion, after review and comment by Ohio EPA, determines i) that such actions are necessary to protect the environment because either the original remedial action has proven to be ineffective or because new technology has been developed which will accomplish the purposes of the remedial action in a significantly more efficient or cost effective manner; and, ii) that the additional or new response actions will not impose any significantly greater burden on the Property or unduly interfere with the then existing uses of the Property.

6. Use Restrictions. Owner shall refrain from using the property in any manner that would interfere with or adversely affect the implementation, integrity or protectiveness of the remedial measures to be performed at the Site, including (i) extracting, consuming, exposing, or using in any way the ground water underlying the Site without the prior written approval of U.S. EPA; (ii) undertaking any type of excavation on the Site without the prior written approval of U.S. EPA; (iii) allowing or conducting any residential use of the Site (iv) or any alternative land use at the Site that is not supported by a risk assessment and has not been approved by U.S. EPA; or (v) other restrictions that U.S. EPA determines are necessary to implement, ensure non-interference with, or ensure the protectiveness of the remedial measures to be performed at the Site.

7. Running with the Land. This Environmental Covenant shall be binding upon the Owner and all assigns and successors in interest, including any Transferee, and shall run with the land, pursuant to ORC § 5301.85, subject to amendment or termination or expiration as set forth herein. The term "Transferee," as used in this Environmental Covenant, shall mean any future owner of any interest in the Property or any portion thereof, including, but not limited to, owners of an interest in fee simple, mortgagees, easement holders, and/or lessees.

8. Reserved Rights of Owner. The Owner hereby reserves unto itself, its successors, and assigns, all rights and privileges in and to the use of the Property which are not incompatible with the restrictions, rights and covenants granted herein.

9. Nothing in this document shall limit or otherwise affect U.S. EPA's or Ohio EPA's right to take response actions under CERCLA, the NCP, or other federal or state law.

10. Administrative jurisdiction. The federal agency having administrative jurisdiction over the interests acquired by the United States by this instrument is U.S. EPA.

11. Compliance Enforcement. Compliance with this Environmental Covenant may be enforced pursuant to ORC § 5301.91 by the United States and Ohio EPA. Failure to timely enforce compliance with this Environmental Covenant or the activity and use limitations contained herein by any party shall not bar subsequent enforcement by such party and shall not be deemed a waiver of the party's right to take action to enforce any non-compliance. Nothing in this Environmental Covenant shall restrict the Director of Ohio EPA or the United States from exercising any authority under applicable law.

12. Compliance Reporting. Owner or any Transferee shall submit to Ohio EPA and U.S. EPA on an annual basis written documentation verifying that the activity and use limitations remain in place and are being complied with.

13. Notice upon conveyance. Each instrument hereafter conveying any interest in the Property or any portion of the Property shall contain a notice of the activity and use limitations set forth in this Environmental Covenant, and provide the recorded location of this Environmental Covenant. The notice shall be substantially in the following form:

Instr:200905050017746
D 5 of 14 F:$124.00 05/05/2009
Rick Campbell 3:27PM MISC
Stark County Recorder T20090013660

THE INTEREST CONVEYED HEREBY IS SUBJECT TO AN ENVIRONMENTAL COVENANT, DATED_____, 200_, RECORDED IN THE DEED OR OFFICIAL RECORDS OF THE _____COUNTY RECORDER ON _____, 200_, IN [DOCUMENT ____, *or* BOOK___, PAGE ____,]. THE ENVIRONMENTAL COVENANT CONTAINS THE FOLLOWING ACTIVITY AND USE LIMITATIONS: *[Insert the language that describes the activity and use limitations exactly as it appears in the Environmental Covenant.]*

Owner shall notify Ohio EPA and the United States within ten (10) days after each conveyance of an interest in any portion of the Property. Owner's notice shall include the name, address, and telephone number of the Transferee, a copy of the deed or other documentation evidencing the conveyance, and a survey map that shows the boundaries of the property being transferred.

14. Representations and Warranties. Owner hereby represents and warrants to the other signatories hereto:

a) that the Owner is the sole owner of the Property;

b) that the Owner holds fee simple title to the Property which is free, clear and unencumbered;

c) that the Owner has the power and authority to enter into this Environmental Covenant, to grant the rights and interests herein provided and to carry out all obligations hereunder;

d) that the Owner has identified all other persons that own an interest in or hold an encumbrance on the Property and notified such persons of the Owner's intention to enter into this Environmental Covenant; and

e) that this Environmental Covenant will not materially violate or contravene or constitute a material default under any other agreement, document or instrument to which Owner is a party or by which Owner may be bound or affected.

15. Termination Rights. A party's rights and obligations under this instrument terminate upon transfer of the party's interest in the Property, except that liability for acts or omissions occurring prior to transfer shall survive the transfer, unless otherwise provided in the Consent Decree.

Instr:200905050017745
P:6 of 14 F:$124 00 05/05/2009
Rick Campbell 3 27PM MISC
Stark County Recorder 20090013660

16. Severability. If any provision of this Environmental Covenant is found to be unenforceable in any respect, the validity, legality, and enforceability of the remaining provisions shall not in any way be affected or impaired.

17. Governing Law. This Environmental Covenant shall be governed by and interpreted in accordance with the laws of the State of Ohio.

18. Recordation. Within thirty (30) days after the date of the final required signature upon this Environmental Covenant, Owner shall file this Environmental Covenant for recording, in the same manner as a deed to the Property, with the Stark County Recorder's Office.

19. Effective Date. The effective date of this Environmental Covenant shall be the date upon which the fully executed Environmental Covenant has been recorded as a deed record for the Property with the Stark County Recorder.

20. Distribution of Environmental Covenant. The Owner shall distribute a file- and date-stamped copy of the recorded Environmental Covenant to: the United States, Ohio EPA, Stark County, and each person holding a recorded interest in the Property, if any; and any other person designated by Ohio EPA; see ORC § 5301.83.

21. Notice. Unless otherwise notified in writing by or on behalf of the current owner, the United States, or Ohio EPA, any document or communication required by this Environmental Covenant shall be submitted to:

Enforcement Coordinator
Division of Emergency & Remedial Response
Ohio EPA
P.O. Box 1049
Columbus, Ohio 43216-1049

Larry Antonelli
Site Coordinator
Division of Emergency & Remedial Response
Northeast District Office
2110 E. Aurora Road
Twinsburg, Ohio 44087

Hyman Budoff, President
Industrial Excess Landfill, Inc.
374 Pershing Ave.
Akron, Ohio 44309

U.S. Environmental Protection Agency
Superfund Division
Region 5
77 West Jackson Boulevard
Chicago, IL 60604-3507

22. Expiration. This Environmental Covenant shall terminate and be of no further force or effect if the Consent Decree is entered by the Court but reversed on appeal after entry.

The undersigned representative of Owner represents and certifies that he is authorized to execute this Environmental Covenant.

Instr:200905050017746
P:8 of 14 F:$124.00
Rick Campbell
Stark County Recorder
05/05/2009
3:27PM MISC
T20090013660

IT IS SO AGREED:

Industrial Excess Landfill, Inc.

Hyman Budoff

Signature of Owner[s]

Hyman Budoff, President

Printed name and Title

2-20-09

Date

State of Ohio)
) ss:
County of Summit)

Allison La Rocca, Notary Public
State of Ohio, My Commission
Expires Oct. 19th, 2013

Before me, a notary public, in and for said county and state, personally appeared Hyman Budoff, a duly authorized representative of Industrial Excess Landfill, Inc., who acknowledged to me that *[he/she]* did execute the foregoing instrument on behalf of Industrial Excess Landfill, Inc.

IN TESTIMONY WHEREOF, I have subscribed my name and affixed my official seal this 20th day of February, 2009

Allison LaRocca

Notary Public

OHIO ENVIRONMENTAL PROTECTION AGENCY

D. Korleski

Chris Korleski, Director

3/31/09

Date

State of Ohio)
) ss:
County of Franklin)

Before me, a notary public, in and for said county and state, personally appeared Chris ~~Korelski~~ Korleski, the Director of Ohio EPA, who acknowledged to me that he did execute the foregoing instrument on behalf of Ohio EPA.

IN TESTIMONY WHEREOF, I have subscribed my name and affixed my official seal this 31st day of March, 2009.

Charma Diane Casteel
Notary Public

CHARMA DIANE CASTEEL
NOTARY PUBLIC
STATE OF OHIO
MY COMMISSION EXPIRES
May 10, 2009

U.S ENVIRONMENTAL PROTECTION AGENCY

Richard C Karl — 4.14.09
[insert] Director, Superfund Division — Date

State of Illinois)
) ss:
County of Cook)

R. KARL Before me, a notary public, in and for said county and state, personally appeared [insert] the SFD Div. Director of Region 5 of the U.S. Environmental Protection Agency, who acknowledged to me that he did execute the foregoing instrument on behalf of the U.S. Environmental Protection Agency.

IN TESTIMONY WHEREOF, I have subscribed my name and affixed my official seal this 14th day of April, 2009

OFFICIAL SEAL
JOHN V FAGIOLO
NOTARY PUBLIC - STATE OF ILLINOIS
MY COMMISSION EXPIRES:03/13/10

John V Fagiolo
Notary Public

PREPARED BY:

Matthew Yackshaw, Esq.
Day Ketterer Ltd.
Millennium Centre – Suite 300
200 Market Ave. N.
P.O. Box 24213
Canton, Ohio 44701-4213

Instr:200905050017748
P:9 of 14 F:$124.00
Rick Campbell
Stark County Recorder
05/05/2009
3:27PM MISC
T20090013660

EXHIBIT A

VOL 3319 PAGE 251

211072

WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS that, CHARLES M. KITTINGER and MERLE B. KITTINGER, Husband and Wife, the Grantors, who claim title by or through instrument recorded in Volume Page County Recorder's Office, for the consideration of One Dollar and other valuable consideration ($1.00) received to their full satisfaction of INDUSTRIAL EXCESS LANDFILL, INC. a corporation organized and existing under the laws of the State of Ohio, the Grantees whose TAX MAILING ADDRESS will be

do Give, Grant, Bargain, Sell and Convey unto the said Grantee, its heirs, successors, and assigns, the following described premises, situated in the Township of Lake, County of Stark and State of Ohio:

And known as and being a part of the Southeast Quarter and part of the Southwest Quarter of Section #7, Township #12 Range #8, described as follows: Beginning at the center of Section #7; thence South along the quarter line about 865.5 feet to an iron pin near the Southwest corner of a 4.9 acre lot belonging to L. A. and E. M. Loutzenheiser which is the true place of beginning; thence South 86° 10' East, 1346.5 feet to an iron pin on J. W. Richards West line; thence South 4° 56' West 786.82 feet to an iron pin; thence North 86° 10' West 1483.3 feet to the middle of the Canton Road; thence North 10° East 786.82 feet to a point; thence South 86° 10' East 65.8 feet to the place of beginning, containing 26 acres of land, be the same more or less, but subject to all legal highways.

RECEIVED FOR RECORD MAY 29 1968 at 3:46 o'clock P M. RECORDED MAY 31 1968 in Stark County Records Vol 3319 Page 251 ... Recorder Fee 5.00

Also the following described property, known as being a tract in said quarter section; beginning at the North-west corner of said quarter section South 865.5 feet to a point; thence West 65.8 feet to a point; thence South 10° West 786.82 feet to a point and the true place of beginning of said tract; thence continuing South 10° West 298.2 feet to a point; thence South 85° 44' East 1510.8 feet to a point; thence North 4° 56' East 303 feet to a point; thence North 86° 10' West 1483.3 feet to the place of beginning containing 10.245 acres of land, more or less.

EXCEPTING THEREFROM THE FOLLOWING SEVEN (7) DESCRIBED TRACTS:

1. Known as and being a part of the Southeast and Southwest Quarters of Section #7, Township #12, Range #8 Stark County, Ohio, beginning at the Northwest Corner of

MAY 29 1968

the Southeast Quarter of Section #7; thence South along the West line of the Southeast Quarter of Section #7; thence South along the West line of the Southeast Quarter 865.56 feet to a point, thence North 86° 10' West 65.8 feet to the center of the Canton-Akron Road; thence South 10° 00' West along the center of said Road 379.02 feet to a point and the place of beginning of the tract herein described; thence South 85° 44' East 435.00 feet to a stake; thence 10° 00' West 150 feet to a stake; thence North 85° 44' West 435.00 feet to a point in the center of the Canton-Akron Road; thence North 10° 0:" East along the center of said road 150.0 feet to a point and the place of beginning, containing 1.492. acres of land, more or less (Vol. 1456, Pg. 370)

2. Known as and being a part of the Southeast and Southwest Quarters of Section #7, Township #12, Range #C, described as follows: Beginning at the Northwest corner of the Southeast Quarter of Section #7, thence South along the West line of said Southeast Quarter Section, 865.5 feet to a point in the North line of said 26.0 acre tract; described above; thence along the North line of said 26.0 acre tract; thence North 86° 10' West,65.8 feet to a point in the center line of the Canton-Akron Road; thence along the center line of said road South 10° 00' West 79.02 feet to a point and the place of beginning of the parcel herein described; thence along the center line of the Canton-Akron Road South 10° 00' West 300.0 feet to a point; thence South 85° 44' East 250.0 feet to an iron pipe; thence parallel with the center line of the Canton-Akron Road North 10° 0' East 300.0 feet to an iron pipe; thence North 85° 44' West 250.0 feet to the place of beginning and containing 1.713 acres as surveyed May 24, 1933 by E. A. Tewksbury, be the same more or less, (Vol. 2007, Pg. 185)

3. Beginning at the Northwest Corner of the Southeast Quarter of Section #7; thence South along the West line of the Southeast Quarter Section 865.5 feet to a point on the North line of the 26.0 acre tract described above; thence along the North line of said 26.0 acre tract North 86° 10' West 65.8 feet to a point in the center line of the Canton-Akron Road; thence along the center line of said road South 10° 00' West 529.02 feet to a point and the place of beginning of the tract herein described; thence continuing along the center line of said Canton-Akron Road South 10° 00' West 75.0 feet to a point; thence South 85° 44' East 250.0 feet to an iron pipe; thence parallel with the center line of said Canton-Akron Road North 10° 00' East 75.0 feet to an iron pipe; thence North 85° 44' West 250.0 feet to thetrue place of beginning and containing 0.428 acres as surveyed September 15, 1952 by E. A. Tewksbury, (Vol.2131; Pg. 519).

4. Beginning at the Northwest corner of the Southeast Quarter of Section #7; thence South along the West line of said Southeast Quarter Section 865.5 feet to a point in the North line of the 26.0 acre tract described above; along the North line of said 26.0 acre tract North 86° 10' West 65.8 feet to a point in the center line of the

Instr:200905050017746
05/05/2009
P:11 of 14 F:$124.00
3:27PM MISC
Rick Campbell
Stark County Recorder
T20090013660

Canton-Akron Road; thence along the center line of said Road South 10° 00' West 604.02 feet to a point and the place of beginning of the tract herein described; thence continuing along the center line of said Road South 10° 00' West 106.0 feet to a point; thence South 85° 44' East 250.0 feet to an iron pipe; thence parallel with the center line of said Road North 10° 00' East 106.0 feet to an iron pipe; thence North 85° 44' West 250.0 feet to the place of beginning and containing approximately 0.605 acres as surveyed September 15, 1952, by E. A. Tewksbury, (Vol. 2131, Pg. 519).

5. Beginning at the Northeast corner of the Southeast Quarter of Section #7; thence South along the West line of said Southeast Quarter Section 865.5 feet to apoint in the north line of the 26.0 acre tract described above; thence along the North line of said 26.0 acre tract North 86° 10' West 65.8 feet to a point in the center line of the Canton-Akron Road; thence Along the center line of said Road South 10° 00' West 710.02 feet to a point and the place of beginning of the tract herein described; thence continuing along the center line of said Road South 10° 00' West 150.0 feet to a point; thence South 85° 44' East 25000 feet to an iron pipe; thence parallel with the center line of said Canton-Akron Road; North10° 00' East 150.0 to an iron pipe; thence North 85° 44' West 250.0 feet to the place of beginning and containing 0.861 acres as surveyed September 15, 1952 by E. A. Tewksbury, (Vol. 2131, Pg. 517).

6. Beginning at the Northwest corner of the Southeast Quarter of Section #7; thence along the West line of said Southeast Quarter Section; thence South 865.5 feet to a point in the North line of the 26.0 acre tract described above; thence along the North line of said 26.0 acre tract North 86° 10' West 65.8 feet to a point in the center line of the Canton-Akron Road; thence along the center line of said Road South 10° 00' West 860.02 feet to a point; and the real place of beginning of the parcel herein described; thence continuing along the center line of said Road South 10° 00' West 100.0 feet to a point; thence South 85° 44' East 250.0 feet to an iron pipe; thence parallel with the center line of said Canton-Akron Road North 10° 00' East 100.0 feet to an iron pipe; thence North 85° 44' West 250.0 feet to the place of beginning and containing 0.571 acres as surveyed September 15, 1952 by E. A. Tewksbury, (Vol.2131 Pg. 315).

7. Beginning at the Northwest corner of the Southeast Quarter of Section #7; thence South along the West line of said Southeast Quarter Section 865.5 feet to a point in the North line of the 26.0 acre tract described above; thence along the North line of said 26.0 acre tract North 86° 10' West 65.8 feet to a point in the center line of the Canton-Akron Road; thence along the center line of said Road South 10° 00' West 960.02 feet to a point, and the place of beginning of the parcel herein described; thence continuing along thecenter line of said Road South 10° 00' West 125.0 feet to a point;

thence South 85° 44' East 250.00 feet to an iron pipe; thence parallel with the center line of the Akron-Canton Road North 10 00' East 125.00 feet to an iron pipe; thence North 85° 44' West 250.00 feet to the place of beginning and containing 0.717 acre as surveyed September 15, 1952 by E. A. Twwksbury, (Vol.2131, Pg. 513).

Leaving to be conveyed by this conveyance 29.855 acres more or less.

Reserving However, an easement across the entire North end of the conveyed tract of land, 4 0 feet in width for roadway purposes and for ingress and egress to other lands of the Grantor.

Be the same more or less, but subject to all legal highways.

TO HAVE AND TO HOLD, the above granted and bargained premises with the appurtenances thereof, unto the said Grantee, its heirs, successors and assigns forever.

And We, Charles M. Mittinger and Merle B. Mittinger, Husband and Wife, the said Grantors, do for ourselves and our heirs, executors, and administrators, convenant with the said Grantee, its heirs, successors and assigns, that at and until the ensealing of these presents, we are well seized of the above described premises, as a good and indefeasible estate in FEE SIMPLE and have the good right to bargain and sell the same in manner and form as above written and that the same are FREE FROM ALL INCUMBRANCES WHATSOEVER except taxes, assessments, limitations, easements, restrictions and leases of record, if any, and that we will WARRANT and DEFEND said premises, with the appurtenances thereunto belonging to the said Grantee its heirs, successors, and assigns, against all lawful claims and demands whatsoever, except as hereinbefore set forth.

And for valuable consideration, I,Charles M. Mittinger, spouse of within Merle B. Mittinger and I, Merle B. Mittinger, spouse of with Charles M. Mittinger, do hereby remise, release and forever

quit-claim unto the said Grantee its heirs, successors and assigns, all our right and expectancy of DOWER in the above described premises.

IN WITNESS WHEREOF, We have hereunto set our hands this 23rd day of May, in the year of our Lord one thousand nine hundred and Sixty-Eight.

Signed and acknowledged in the presence of:

Norman Costick

Betty Beals

CHARLES H. HITTINGER

NERLE B. HITTINGER

STATE OF OHIO)
SS:
SUMMIT COUNTY)

Before me a Notary Public in and for said County and State, personally appeared the above named CHARLES H. HITTINGER and NERLE B. HITTINGER, Husband and Wife, who acknowledged that they did sign the foregoing instrument and that the same is their free act and deed.

IN TESTIMONY WHEREOF, I have hereunto set my hand and official seal, at Akron, Ohio, this 24th day of May, 1968.

NOTARY PUBLIC-LIFETIME COMM.

This instrument was prepared by:
Norman Costick
Attorney-at-Law
751 First National Tower
Akron, Ohio 44308

Exhibit "A"

111 WARRANTY DEED, FROM A CORP TO A CORP. 836 FALLS LAW PRINT COMPANY, CUYAHOGA FALLS, O

Know all Men by these Presents

That INDUSTRIAL EXCESS LANDFILL, INC., a Corporation, the Grantor, for the consideration of Ten Dollars ($ 10.00) received to its full satisfaction of HYBUD EQUIPMENT CORPORATION 556 Beacon Street, Akron, Ohio a Corporation, the Grantee, does give, grant, bargain, sell and convey unto the said Grantee, its successors and assigns, the following described premises, situated in the Township of Lake County of Stark and State of Ohio:

And known as and being a part of the southeast and southwest quarter of Section 17, Township 12, (Lake) Range 8, Stark County, Ohio, beginning at the northwest corner of the southeast quarter Section 17, thence south along the west line of the southeast quarter 865.55 feet to a point; thence north 86 degrees 10 minutes west 65.8 feet to the center of the Canton-Akron road; thence south 10 degrees 00 minutes west along the center of said road 379.02 feet to a point and the place of beginning for the tract herein described; thence south 85 degrees 44 minutes east 435.00 feet to a stake; thence south 10 degrees 00 minutes west 150.00 feet to a stake; thence north 85 degrees 44 minutes west 435.00 feet to a point in the center of the Canton-Akron road; thence north 10 degrees 00 minutes east along the center of said road 150.00 feet to a point and the place of beginning, containing 1.491 acres more or less, but subject to all legal highways.

****

Instr:200905050017747
P:10 of 11 F:$100.00 05/05/2009
Rick Campbell 3:27PM MISC
Stark County Recorder T20090013660

TRANSFERRED
JAN 10 1980
WILLIAM S. BOWMAN
STARK COUNTY AUDITOR
DEPUTY

IN COMPLIANCE WITH ORC 319.202
JAN 10 1980
WILLIAM S. BOWMAN
STARK COUNTY AUDITOR
52.00 FEE RB CERT

be the same more or less but subject to all legal highways.

00290

vol.4212 pg530

To Have and to Hold the above granted and bargained premises, with the appurtenances thereunto belonging, unto the said Grantee, its successors and assigns forever. And INDUSTRIAL EXCESS LANDFILL, INC. the said Grantor does for itself and its successors and assigns covenant with the said Grantee, its successors and assigns, that at and until the ensealing of these presents, it is well seized of the above described premises, as a good and indefeasible estate in FEE SIMPLE, and has good right to bargain and sell the same in manner and form as above written, that the same are free and clear from all incumbrances whatsoever except easements of record, and real estate taxes and first mortgage to Firestone Bank which grantee assumes and agrees to pay.

and that it will WARRANT AND DEFEND said premises, with the appurtenances thereunto belonging, to the said Grantee, its successors and assigns forever, against all lawful claims and demands whatsoever except those stated above.

In Witness Whereof said Corporation hereunto sets its hand and corporate seal, by Hyman Budoff its President and Joseph M. Cromleigh, Jr. its Secretary this 17th day of December in the year of our Lord One Thousand Nine Hundred and Seventy-Nine.

INDUSTRIAL EXCESS LANDFILL, INC.

Signed and acknowledged in presence of

Joseph Ackerman

Richard J. Otley

By: Hyman Budoff
Hyman Budoff, President

By: Joseph M. Cromleigh Jr.
Joseph M. Cromleigh, Jr.

State of Ohio, Summit County, ss. Before me, a Notary Public in and for said County and State personally appeared the above named INDUSTRIAL EXCESS LANDFILL, INC. by Hyman Budoff its President and Joseph M. Cromleigh, Jr. its Secretary who acknowledged that they did sign the foregoing instrument, and that the same is the free act and deed of said Corporation, and the free act and deed of each of them personally and as such officers.

Joseph E. Robinson, Attorney at Law, Notary Public, State of Ohio, My Commission has no expiration date, section 147.03 R.C.

In Testimony Whereof, I have hereunto set my hand and official seal, at Akron, Ohio this 17th day of December A. D. 1979

This instrument prepared by Joseph E. Robinson Atty

Joseph E. Robinson
Notary Public

Warranty Deed

636

INDUSTRIAL EXCESS LANDFILL, INC.

TO

HYBUD EQUIPMENT CORPORATION

Transferred 19

COUNTY AUDITOR

State of Ohio, County of STARK, ss.

Received for Record on the day of JAN 10 1980 at 3:30 o'clock P.M. and Recorded JAN 11 1980 in Deed Book 4212, Page 530

COUNTY RECORDER

Recorder's Fee $ 5.00

Instr:200905050017747
P:11 of 11 F:$100.00
Rick Campbell
Stark County Recorder
05/05/2009
3:27PM MISC
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Instr:200905050017747
P:1 of 11 F:$100.00 05/05/2009
Rick Campbell 3:27PM MISC
Stark County Recorder T20090013660

To be recorded with Deed Records - ORC § 317.08

ENVIRONMENTAL COVENANT

This Environmental Covenant is entered into by Hybud Equipment Corporation ("Owner"), the Ohio Environmental Protection Agency ("Ohio EPA"), and the United States, on behalf of the U.S. Environmental Protection Agency ("U.S. EPA"), pursuant to Ohio Revised Code ("ORC") §§ 5301.80 to 5301.92 for the purpose of subjecting the Property to the activity and use limitations set forth herein.

Whereas, in a Record of Decision Amendment dated September 27, 2002 (the "ROD"), the EPA Region 5 Superfund Division Director selected a "remedial action" for the Site, which provides, in part, for the following actions: augmentation of existing vegetative cover; natural attenuation of groundwater contaminants and gas monitoring; and deed restrictions prohibiting residential use and drinking water wells.

Whereas, the parties hereto have agreed to 1) grant a permanent right of access over the Property to the United States, Ohio EPA, and the defendants performing work under a partial consent decree in United States and the State of Ohio, v. Industrial Excess Landfill, Inc. (N.D. Ohio), Case No. 5:89 CV 1988 and 5:91 CV 2559 ("Work Defendants"), and 2) to impose upon the Property use restrictions as covenants that will run with the land for the purpose of protecting human health and the environment.

Now therefore, the Owner, the United States and Ohio EPA agree to the following:

1. Environmental Covenant. This instrument is an environmental covenant developed and executed pursuant to ORC §§ 5301.80 to 5301.92.

2. Property. This Environmental Covenant concerns the Industrial Excess Landfill, which is part of the Industrial Excess Landfill, Inc. Site (the "IEL Site" or the "Site"), that the U.S. EPA, pursuant to Section 105 of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9605, placed on the National Priorities List, set forth at 40 C.F.R. Part 300, Appendix B, by publication in the Federal Register on June 10, 1986, 51 Fed. Reg. 21054, 21064. Hybud Equipment Corporation owns a parcel of property located at Cleveland

Avenue, in Uniontown, Stark County, Ohio Stark County Parcel Number 2204130, which is deemed to be part of the IEL Site (the "Property"). The Property is more particularly described in Exhibit A attached hereto and hereby incorporated by reference herein ("Property").

3. Owner. Hybud Equipment Corporation ("Owner") is the owner of the Property.

4. Holder. Owner, whose address is listed above, is the holder of this Environmental Covenant.

5. Activity and Use Limitations/Rights of Access. It is the purpose of this Environmental Covenant to convey property rights, which will run with the land, to facilitate the remediation of past environmental contamination and to protect human health and the environment by reducing the risk of exposure to contaminants. Owner hereby imposes and agrees to comply with the following activity and use limitations, and agrees to provide Ohio EPA, the United States, and the Work Defendants, subject to Paragraph 22, with an irrevocable, permanent and continuing right of access at all reasonable times to the Property for the purposes of:

a) Implementing the response actions in the ROD, including but not limited to operation and maintenance of the vegetative cover, groundwater monitoring wells, and gas venting system.

b) Verifying any data or information submitted by the Work Defendants;

c) Verifying that no action is being taken on the property in violation of the terms of this instrument or of any federal or state environmental laws or regulations;

d) Monitoring response actions on the Site and conducting investigations relating to contamination on or near the Site, including, without limitation, sampling of air, water, sediments, soils, and specifically, without limitation, obtaining split or duplicate samples;

e) Conducting periodic reviews of the remedial action, including but not limited to, reviews required by applicable statutes and/or regulations;

f) Implementing additional or new response actions if U.S. EPA, in its sole discretion, after review and comment by Ohio EPA, determines i) that such actions are necessary to protect the environment because either the original remedial action has proven to be ineffective or because new technology has been developed which will accomplish the purposes of the remedial action in a significantly more efficient or cost effective manner; and, ii) that the additional or new response actions will not impose any significantly greater burden on the Property or unduly interfere with the then existing uses of the Property.

6. Use Restrictions. Owner shall refrain from using the property in any manner that would interfere with or adversely affect the implementation, integrity or protectiveness of the remedial measures to be performed at the Site, including (i) extracting, consuming, exposing, or using in any way the ground water underlying the Site without the prior written approval of U.S. EPA; (ii) undertaking any type of excavation on the Site without the prior written approval of U.S. EPA; (iii) allowing or conducting any residential use of the Site; or (iv) other restrictions that U.S. EPA determines are necessary to implement, ensure non-interference with, or ensure the protectiveness of the remedial measures to be performed at the Site.

7. Running with the Land. This Environmental Covenant shall be binding upon the Owner and all assigns and successors in interest, including any Transferee, and shall run with the land, pursuant to ORC § 5301.85, subject to amendment or termination or expiration as set forth herein. The term "Transferee," as used in this Environmental Covenant, shall mean any future owner of any interest in the Property or any portion thereof, including, but not limited to, owners of an interest in fee simple, mortgagees, easement holders, and/or lessees.

8. Reserved Rights of Owner. The Owner hereby reserves unto itself, its

successors, and assigns, all rights and privileges in and to the use of the Property which are not incompatible with the restrictions, rights and covenants granted herein.

9. Nothing in this document shall limit or otherwise affect U.S. EPA's or Ohio EPA's right to take response actions under CERCLA, the NCP, or other federal or state law.

10. Administrative jurisdiction. The federal agency having administrative jurisdiction over the interests acquired by the United States by this instrument is U.S. EPA.

11. Compliance Enforcement. Compliance with this Environmental Covenant may be enforced pursuant to ORC § 5301.91 by the United States and Ohio EPA. Failure to timely enforce compliance with this Environmental Covenant or the activity and use limitations contained herein by any party shall not bar subsequent enforcement by such party and shall not be deemed a waiver of the party's right to take action to enforce any non-compliance. Nothing in this Environmental Covenant shall restrict the Director of Ohio EPA or the United States from exercising any authority under applicable law.

12. Compliance Reporting. Owner or any Transferee shall submit to Ohio EPA and U.S. EPA on an annual basis written documentation verifying that the activity and use limitations remain in place and are being complied with.

13. Notice upon conveyance. Each instrument hereafter conveying any interest in the Property or any portion of the Property shall contain a notice of the activity and use limitations set forth in this Environmental Covenant, and provide the recorded location of this Environmental Covenant. The notice shall be substantially in the following form:

THE INTEREST CONVEYED HEREBY IS SUBJECT TO AN

ENVIRONMENTAL COVENANT, DATED_____, 200_, RECORDED IN THE DEED OR OFFICIAL RECORDS OF THE _____COUNTY RECORDER ON _____, 200_, IN [DOCUMENT ____, *or* BOOK___, PAGE ____,]. THE ENVIRONMENTAL COVENANT CONTAINS THE FOLLOWING ACTIVITY AND USE LIMITATIONS: *[Insert the language that describes the activity and use limitations exactly as it appears in the Environmental Covenant.]*

Owner shall notify Ohio EPA and the United States within ten (10) days after each conveyance of an interest in any portion of the Property. Owner's notice shall include the name, address, and telephone number of the Transferee, a copy of the deed or other documentation evidencing the conveyance, and a survey map that shows the boundaries of the property being transferred.

14. Representations and Warranties. Owner hereby represents and warrants to the other signatories hereto:

a) that the Owner is the sole owner of the Property;

b) that the Owner holds fee simple title to the Property which is free, clear and unencumbered;

c) that the Owner has the power and authority to enter into this Environmental Covenant, to grant the rights and interests herein provided and to carry out all obligations hereunder;

d) that the Owner has identified all other persons that own an interest in or hold an encumbrance on the Property and notified such persons of the Owner's intention to enter into this Environmental Covenant; and

e) that this Environmental Covenant will not materially violate or contravene or constitute a material default under any other agreement, document or instrument to which Owner is a party or by which Owner may be bound or affected.

15. Termination Rights. A party's rights and obligations under this instrument terminate upon transfer of the party's interest in the Property, except that liability for acts or omissions occurring prior to transfer shall survive the transfer, unless otherwise provided in the Consent Decree.

16. Severability. If any provision of this Environmental Covenant is found to be unenforceable in any respect, the validity, legality, and enforceability of the remaining provisions shall not in any way be affected or impaired.

17. Governing Law. This Environmental Covenant shall be governed by and interpreted in accordance with the laws of the State of Ohio.

18. Recordation. Within thirty (30) days after the date of the final required signature upon this Environmental Covenant, Owner shall file this Environmental Covenant for recording, in the same manner as a deed to the Property, with the Stark County Recorder's Office.

19. Effective Date. The effective date of this Environmental Covenant shall be the date upon which the fully executed Environmental Covenant has been recorded as a deed record for the Property with the Stark County Recorder.

20. Distribution of Environmental Covenant. The Owner shall distribute a file- and date-stamped copy of the recorded Environmental Covenant to: the United States, Ohio EPA, Stark County, and each person holding a recorded interest in the Property, if any; and any other person designated by Ohio EPA; see ORC § 5301.83.

21. Notice. Unless otherwise notified in writing by or on behalf of the current owner, the United States, or Ohio EPA, any document or communication required by this Environmental Covenant shall be submitted to:

Enforcement Coordinator
Division of Emergency & Remedial Response
Ohio EPA
P.O. Box 1049
Columbus, Ohio 43216-1049

Larry Antonelli
Site Coordinator
Division of Emergency & Remedial Response
Northeast District Office
2110 E. Aurora Road
Twinsburg, Ohio 44087

Hyman Budoff, President
Hybud Equipment Corporation
374 Pershing Ave.
Akron, Ohio 44309

U.S. Environmental Protection Agency
Superfund Division
Region 5
77 West Jackson Boulevard
Chicago, IL 60604-3507

22. Expiration. This Environmental Covenant shall terminate and be of no further force or effect if the Consent Decree is entered by the Court but reversed on appeal after entry.

The undersigned representative of Owner represents and certifies that he is authorized to execute this Environmental Covenant.

IT IS SO AGREED:

Hybud Equipment Corporation

Signature of Owner[s]

Hyman Budoff, President
Printed name and Title

2-20-09
Date

State of Ohio)
) ss:
County of Summit)

Allison La Rocca, Notary Public
State of Ohio, My Commission
Expires Oct. 19th, 2013

Before me, a notary public, in and for said county and state, personally appeared Hyman Budoff, a duly authorized representative of Hybud Equipment Corporation, who acknowledged to me that ~~[he/she]~~ did execute the foregoing instrument on behalf of Hybud Equipment Corporation.

IN TESTIMONY WHEREOF, I have subscribed my name and affixed my official seal this 20th day of February 2009.

Notary Public

OHIO ENVIRONMENTAL PROTECTION AGENCY

Chris Korleski, Director

Date 3/31/09

State of Ohio)
) ss:
County of Franklin)

Before me, a notary public, in and for said county and state, personally appeared Chris ~~Korolski,~~ Korleski the Director of Ohio EPA, who acknowledged to me that he did execute the foregoing instrument on behalf of Ohio EPA.

Instr:200905050017747
P:8 of 11 F:$00.00 05/05/2009
Rick Campbell 3:27PM MISC
Stark County Recorder T20090013660

IN TESTIMONY WHEREOF, I have subscribed my name and affixed my official seal this 31st day of MARCH 2009

NOTARIAL SEAL STATE OF OHIO

Charma Diane Casteel
Notary Public

CHARMA DIANE CASTEEL
NOTARY PUBLIC
STATE OF OHIO
MY COMMISSION EXPIRES
May 10, 2009

U.S ENVIRONMENTAL PROTECTION AGENCY

Richard C Karl — 4-14-09

[insert] Director, Superfund Division — Date

State of Illinois)
) ss:
County of Cook)

R. KARL Before me, a notary public, in and for said county and state, personally appeared [insert] the SFD DIV. DIRECTOR of Region 5 of the U.S. Environmental Protection Agency, who acknowledged to me that he did execute the foregoing instrument on behalf of the U.S. Environmental Protection Agency.

IN TESTIMONY WHEREOF, I have subscribed my name and affixed my official seal this 14TH day of APRIL, 2009

OFFICIAL SEAL
JOHN V FAGIOLO
NOTARY PUBLIC - STATE OF ILLINOIS
MY COMMISSION EXPIRES:03/13/10

John V Fagiolo
Notary Public

PREPARED BY:

Matthew Yackshaw, Esq.
Day Ketterer Ltd.
Millennium Centre – Suite 300
200 Market Ave. N.
P.O. Box 24213
Canton, Ohio 44701-4213

Instr:200905050017747
P:9 of 11 F:$100.00 05/05/2009
Rick Campbell 3:27PM MISC
Stark County Recorder T20090013650

APPENDIX E

2011 – 2015
GROUNDWATER MONITORING DATA

Table 8. Summary of Monitoring Well Results May 2011

Analyte	Units	Sample ID: MW-01I Sample Date: 06/01/11 Field ID: MW-01I	Sample ID: MW-01S Sample Date: 05/31/11 Field ID: MW-01S	Sample ID: MW-03I Sample Date: 05/25/11 Field ID: MW-03I	Sample ID: MW-07I Sample Date: 05/25/11 Field ID: MW-07I	Sample ID: MW-10I Sample Date: 05/26/11 Field ID: MW-10I	Sample ID: MW-11I Sample Date: 05/31/11 Field ID: MW-11I	Sample ID: MW-11S Sample Date: 05/27/11 Field ID: MW-11S	Sample ID: MW-11S Sample Date: 05/31/11 Field ID: MW-11S	Sample ID: MW-12I Sample Date: 05/19/11 Field ID: MW-12I
Conventionals and Inorganics										
Ammonia (as N)	mg/L	9.9	1.1	2.7	0.70	1.9	2.3	0.10 U		0.24 U
Chloride	mg/L	240	3.3	130	120	85	55		56	760
Nitrate Nitrite as N	mg/L	0.016 U	0.035 J	0.039 J	0.020 J	0.10 U	0.055 J	0.49 U		0.014 U
Sulfate	mg/L	21	46	43	64	38	150		150	56
Sulfide	mg/L	3.4	1.0 U	0.67 U	0.67 U	1.0 U	1.0 U	1.0 U		0.67 U
Cyanide, Total	mg/L	0.010 U	0.010 U	0.0050 U	0.0050 U	0.010 U	0.010 U		0.010 U	0.029
Ferrous Iron	mg/L	9.4 J	2.0 J	0.49 J	0.083 J	0.10 UJ	0.26 J		0.25 UJ	0.95 J
Aluminum	ug/L	38 U	59	19 U	19 U	43 J	50 U	1400		4500
Antimony	ug/L	0.44 U	4.4	0.13 U	0.13 U	0.18 U	0.30 J	0.98 U		0.53 U
Arsenic	ug/L	6.4	6.2	0.49 J	3.6	2.5 J	3.4	61		13
Barium	ug/L	880	310	790	510	680	200	390		320
Beryllium	ug/L	1.0 U	1.0 U	0.20 U	0.20 U	1.0 U	0.20 J	0.32 J		0.22 J
Cadmium	ug/L	0.19 J	0.69 J	0.13 U	0.13 U	1.0 U	0.23 J	0.81 J		7.5
Calcium	ug/L	130000	180000	100000	110000	120000	130000	210000		190000
Chromium	ug/L	18	4.2 U	0.79 J	0.71 U	1.2 U	0.87 U	5200		220
Cobalt	ug/L	2.8	4.5	0.27 J	0.14 J	0.38 J	0.42 J	250		4.1
Copper	ug/L	26 U	25	1.2 U	0.56 U	0.80 U	0.54 U	260 U		23
Iron	ug/L	48000	18000	6100	2900	4300	6000	280000		15000
Lead	ug/L	0.97 U	1.8	0.18 U	0.18 U	0.34 U	0.28 J	28 U		10
Magnesium	ug/L	40000	37000	27000	29000	29000	43000	38000		38000
Manganese	ug/L	380	2100	220	140	230	66	13000		790
Nickel	ug/L	47	12	8.7	5.7	6.0	39	1100		100
Potassium	ug/L	12000	3100	4200	3800	4400	8800	3900		3900
Selenium	ug/L	5.0 U	5.0 U	0.57 U	0.57 U	5.0 U	5.0 U	1.6 J		0.60 J
Silver	ug/L	1.0 U	1.0 U	0.080 U	0.080 U	1.0 U	1.0 U	1.0 U		0.11 J
Sodium	ug/L	180000	3900	78000	69000	61000	130000	41000		320000
Thallium	ug/L	0.24 U	1.5	0.14 U	0.14 U	1.2	1.5	1.8		0.24 U
Zinc	ug/L	11 U	11 U	4.2 U	3.0 U	5.7 U	3.2 U	110 U		1200
Mercury	ug/L	0.20 U	0.20 U	0.12 U	0.12 U	0.20 U	0.20 UJ	0.20 U		0.20 U
Semi-volatile Organics										
1,1'-Biphenyl	ug/L	0.95 U	0.95 U	0.76 U	0.76 U	0.95 U	0.95 U	0.95 U		0.76 U
2,2'-oxybis[1-chloropropane]	ug/L	0.95 U	0.95 U	0.38 U	0.38 U	0.95 U	0.95 U	0.95 U		0.38 U
2,4,5-Trichlorophenol	ug/L	4.8 U	4.8 U	0.29 U	0.29 U	4.8 U	4.8 U	4.8 U		0.29 U
2,4,6-Trichlorophenol	ug/L	4.8 U	4.8 U	0.76 U	0.76 U	4.8 U	4.8 U	4.8 U		0.76 U
2,4-Dichlorophenol	ug/L	1.9 U	1.9 U	0.76 U	0.76 U	1.9 U	1.9 U	1.9 U		0.76 U
2,4-Dimethylphenol	ug/L	1.9 U	1.9 U	0.76 U	0.76 U	1.9 U	1.9 U	1.9 U		0.76 U
2,4-Dinitrophenol	ug/L	4.8 U	4.8 U	2.3 U	2.3 U	4.8 U	4.8 U	4.8 U		2.3 U

Table 8. Summary of Monitoring Well Results May 2011

Sample ID	MW-01I	MW-01S	MW-03I	MW-07I	MW-10I	MW-11I	MW-11S	MW-11S	MW-12I
Sample Date	06/01/11	05/31/11	05/25/11	05/25/11	05/26/11	05/31/11	05/27/11	05/31/11	05/19/11
Field ID	MW-01I	MW-01S	MW-03I	MW-07I	MW-10I	MW-11I	MW-11S	MW-11S	MW-12I
Analyte	Units								
2,4-Dinitrotoluene	ug/L	4.8 U	4.8 U	0.26 U	0.26 U	4.8 U	4.8 U	4.8 U		0.26 U
2,6-Dinitrotoluene	ug/L	4.8 U	4.8 U	0.76 U	0.76 U	4.8 U	4.8 U	4.8 U		0.76 U
2-Chloronaphthalene	ug/L	0.95 U	0.95 U	0.095 U	0.095 U	0.95 U	0.95 U	0.95 U		0.095 U
2-Chlorophenol	ug/L	0.95 U	0.95 U	0.28 U	0.28 U	0.95 U	0.95 U	0.95 U		0.28 U
2-Methylnaphthalene	ug/L	0.19 U	0.19 U	0.095 U	0.095 U	0.19 U	0.19 U	0.19 U		0.095 U
2-Methylphenol	ug/L	0.95 U	0.95 U	0.76 U	0.76 U	0.95 U	0.95 U	0.95 U		0.76 U
2-Nitroaniline	ug/L	1.9 U	1.9 U	0.76 U	0.76 U	1.9 U	1.9 U	1.9 U		0.76 U
2-Nitrophenol	ug/L	1.9 U	1.9 U	0.27 U	0.27 U	1.9 U	1.9 U	1.9 U		0.27 U
3 & 4 Methylphenol	ug/L	1.9 U	1.9 U	0.71 U	0.71 U	1.9 U	1.9 U	1.9 U		0.71 U
3,3'-Dichlorobenzidine	ug/L	4.8 U	4.8 U	0.35 U	0.35 U	4.8 U	4.8 R	4.8 U		0.35 U
3-Nitroaniline	ug/L	1.9 U	1.9 U	0.27 U	0.27 U	1.9 U	1.9 U	1.9 U		0.27 U
4,6-Dinitro-2-methylphenol	ug/L	4.8 U	4.8 U	2.3 U	2.3 U	4.8 U	4.8 U	4.8 U		2.3 U
4-Bromophenyl phenyl ether	ug/L	1.9 U	1.9 U	0.76 U	0.76 U	1.9 U	1.9 U	1.9 U		0.76 U
4-Chloro-3-methylphenol	ug/L	1.9 U	1.9 U	0.76 U	0.76 U	1.9 U	1.9 U	1.9 U		0.76 U
4-Chloroaniline	ug/L	1.9 U	1.9 U	0.76 U	0.76 U	1.9 U	1.9 U	1.9 U		0.76 U
4-Chlorophenyl phenyl ether	ug/L	1.9 U	1.9 U	0.29 U	0.29 U	1.9 U	1.9 U	1.9 U		0.29 UJ
4-Nitroaniline	ug/L	1.9 U	1.9 U	0.76 U	0.76 U	1.9 U	1.9 U	1.9 U		0.76 U
4-Nitrophenol	ug/L	4.8 U	4.8 U	2.3 U	2.3 U	4.8 U	4.8 U	4.8 U		2.3 U
Acenaphthene	ug/L	0.19 U	0.19 U	0.095 U	0.095 U	0.19 U	0.19 U	0.19 U		0.095 U
Acenaphthylene	ug/L	0.19 U	0.19 U	0.095 U	0.095 U	0.19 U	0.19 U	0.19 U		0.095 U
Acetophenone	ug/L	0.95 U	0.95 U	0.32 U	0.32 U	0.95 U	0.95 U	0.95 U		0.32 U
Anthracene	ug/L	0.19 U	0.19 U	0.095 U	0.095 U	0.19 U	0.19 U	0.19 U		0.095 U
Atrazine	ug/L	0.95 U	0.95 U	0.32 U	0.32 U	0.95 U	0.95 U	0.95 U		0.32 U
Benzaldehyde	ug/L	0.95 U	0.95 U	0.37 U	0.37 U	0.95 U	0.95 U	0.95 U		0.37 U
Benzo[a]anthracene	ug/L	0.19 U	0.19 U	0.095 U	0.095 U	0.19 U	0.19 U	0.19 U		0.095 U
Benzo[a]pyrene	ug/L	0.19 U	0.19 U	0.095 U	0.095 U	0.19 U	0.19 U	0.19 U		0.095 U
Benzo[b]fluoranthene	ug/L	0.19 U	0.19 U	0.095 U	0.095 U	0.19 U	0.19 U	0.19 U		0.095 U
Benzo[g,h,i]perylene	ug/L	0.19 U	0.19 U	0.095 U	0.095 U	0.19 U	0.19 U	0.19 U		0.095 U
Benzo[k]fluoranthene	ug/L	0.19 U	0.19 U	0.095 U	0.095 U	0.19 U	0.19 U	0.19 U		0.095 U
Bis(2-chloroethoxy)methane	ug/L	0.95 U	0.95 U	0.30 U	0.30 U	0.95 U	0.95 U	0.95 U		0.30 U
Bis(2-chloroethyl)ether	ug/L	0.95 U	0.95 U	0.095 U	0.095 U	0.95 U	0.95 U	0.95 U		0.095 U
Bis(2-ethylhexyl) phthalate	ug/L	1.9 U	1.9 U	0.76 U	0.76 U	1.9 U	1.9 U	1.9 U		1.7 J
Butyl benzyl phthalate	ug/L	0.95 U	0.95 U	0.76 U	0.76 U	0.95 U	0.95 U	0.95 U		0.76 U
Caprolactam	ug/L	4.8 U	4.8 U	0.76 U	0.76 U	4.8 U	4.8 U	4.8 U		0.76 U
Carbazole	ug/L	0.95 U	0.95 U	0.27 U	0.27 U	0.95 U	0.95 U	0.95 U		0.27 U
Chrysene	ug/L	0.19 U	0.19 U	0.095 U	0.095 U	0.19 U	0.19 U	0.19 U		0.095 U
Dibenz(a,h)anthracene	ug/L	0.19 U	0.19 U	0.095 U	0.095 U	0.19 U	0.19 U	0.19 U		0.095 U
Dibenzofuran	ug/L	0.95 U	0.95 U	0.095 U	0.095 U	0.95 U	0.95 U	0.95 U		0.095 U

Table 8. Summary of Monitoring Well Results May 2011

	Sample ID	MW-01I	MW-01S	MW-03I	MW-07I	MW-10I	MW-11I	MW-11S	MW-11S	MW-12I
	Sample Date	06/01/11	05/31/11	05/25/11	05/25/11	05/26/11	05/31/11	05/27/11	05/31/11	05/19/11
	Field ID	MW-01I	MW-01S	MW-03I	MW-07I	MW-10I	MW-11I	MW-11S	MW-11S	MW-12I
Analyte	Units									
Diethyl phthalate	ug/L	0.95 U	0.95 U	0.57 U	0.57 U	0.95 U	0.95 U	0.95 U		0.57 U
Dimethyl phthalate	ug/L	0.95 U	0.95 U	0.28 U	0.28 U	0.95 U	0.95 U	0.95 U		0.28 U
Di-n-butyl phthalate	ug/L	0.95 U	0.95 U	0.64 U	0.64 U	0.95 U	0.95 U	0.95 U		0.64 U
Di-n-octyl phthalate	ug/L	0.95 U	0.95 U	0.76 U	0.76 U	0.95 U	0.95 U	0.95 U		0.76 U
Fluoranthene	ug/L	0.19 U	0.19 U	0.095 U	0.095 U	0.19 U	0.19 U	0.19 U		0.28
Fluorene	ug/L	0.19 U	0.19 U	0.095 U	0.095 U	0.19 U	0.19 U	0.19 U		0.095 U
Hexachlorobenzene	ug/L	0.19 U	0.19 U	0.095 U	0.095 U	0.19 U	0.19 U	0.19 U		0.095 U
Hexachlorobutadiene	ug/L	0.95 U	0.95 U	0.26 U	0.26 U	0.95 U	0.95 U	0.95 U		0.26 U
Hexachlorocyclopentadiene	ug/L	9.5 U	9.5 U	0.76 U	0.76 U	9.5 U	9.5 U	9.5 U		0.76 U
Hexachloroethane	ug/L	0.95 U	0.95 U	0.76 U	0.76 U	0.95 U	0.95 U	0.95 U		0.76 U
Indeno[1,2,3-cd]pyrene	ug/L	0.19 U	0.19 U	0.095 U	0.095 U	0.19 U	0.19 U	0.19 U		0.095 U
Isophorone	ug/L	0.95 U	0.95 U	0.26 U	0.26 U	0.95 U	0.95 U	0.95 U		0.26 U
Naphthalene	ug/L	0.19 U	0.19 U	0.095 U	0.095 U	0.19 U	0.19 U	0.19 U		0.095 U
Nitrobenzene	ug/L	0.95 U	0.95 U	0.038 U	0.038 U	0.95 U	0.95 U	0.95 U		0.038 U
N-Nitrosodi-n-propylamine	ug/L	0.95 U	0.95 U	0.76 U	0.76 U	0.95 U	0.95 U	0.95 U		0.76 U
N-Nitrosodiphenylamine	ug/L	0.95 U	0.95 U	0.30 U	0.30 U	0.95 U	0.95 U	0.95 U		0.30 U
Pentachlorophenol	ug/L	4.8 U	4.8 U	2.3 U	2.3 U	4.8 U	4.8 U	4.8 U		2.3 U
Phenanthrene	ug/L	0.19 U	0.19 U	0.095 U	0.095 U	0.19 U	0.19 U	0.19 U		0.095 U
Phenol	ug/L	0.95 U	0.95 U	0.57 U	0.57 U	0.95 U	0.95 U	0.95 U		0.57 U
Pyrene	ug/L	0.19 U	0.19 U	0.095 U	0.095 U	0.19 U	0.19 U	0.19 U		0.24
Volatile Organics										
1,1,1-Trichloroethane	ug/L	1.0 U	1.0 U	0.22 U	0.22 U	1.0 U	1.0 U	1.0 U	1.0 U	0.22 U
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	1.0 U	0.18 U	0.18 U	1.0 U	1.0 U	1.0 U	1.0 U	0.18 U
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	1.0 U	1.0 U	0.28 U	0.28 U	1.0 U	1.0 U	1.0 U	1.0 U	0.28 U
1,1,2-Trichloroethane	ug/L	1.0 U	1.0 U	0.27 U	0.27 U	1.0 U	1.0 U	1.0 U	1.0 U	0.27 U
1,1-Dichloroethane	ug/L	1.0 U	1.0 U	0.15 U	0.15 U	1.0 U	1.4	1.0 U	1.0 U	0.15 U
1,1-Dichloroethene	ug/L	1.0 U	1.0 U	0.19 U	0.19 U	1.0 U	1.0 U	1.0 U	1.0 U	0.19 U
1,2,4-Trichlorobenzene	ug/L	1.0 U	1.0 U	0.15 U	0.15 U	1.0 U	1.0 U	1.0 U	1.0 U	0.15 U
1,2-Dibromo-3-Chloropropane	ug/L	2.0 U	2.0 U	0.67 U	0.67 U	2.0 U	2.0 U	2.0 U	2.0 U	0.67 U
1,2-Dichlorobenzene	ug/L	1.0 U	1.0 U	0.13 U	0.13 U	1.0 U	1.0 U	1.0 U	1.0 U	0.13 U
1,2-Dichloroethane	ug/L	1.0 U	1.0 U	0.22 U	0.22 U	1.0 U	1.0 U	1.0 U	1.0 U	0.22 U
1,2-Dichloropropane	ug/L	1.0 U	1.0 U	0.18 U	0.18 U	1.0 U	1.0 U	1.0 U	1.0 U	0.18 U
1,3-Dichlorobenzene	ug/L	1.0 U	1.0 U	0.14 U	0.14 U	1.0 U	1.0 U	1.0 U	1.0 U	0.14 U
1,3-Dichloropropene, Total	ug/L	2.0 U	2.0 U	0.22 U	0.22 U	2.0 U	2.0 U	2.0 U	2.0 U	0.22 U
1,4-Dichlorobenzene	ug/L	1.0 U	1.0 U	0.13 U	0.13 U	1.0 U	1.0 U	1.0 U	1.0 U	0.13 U
2-Butanone (MEK)	ug/L	10 U	10 U	0.57 U	0.57 U	10 U	10 U	10 U	10 U	0.57 U
2-Hexanone	ug/L	10 U	10 U	0.41 U	0.41 U	10 U	10 U	10 U	10 U	0.41 U
4-Methyl-2-pentanone (MIBK)	ug/L	10 U	10 U	0.32 U	0.32 U	10 U	10 U	10 U	10 U	0.32 U

Table 8. Summary of Monitoring Well Results May 2011

	Sample ID	MW-01I	MW-01S	MW-03I	MW-07I	MW-10I	MW-11I	MW-11S	MW-11S	MW-12I
	Sample Date	06/01/11	05/31/11	05/25/11	05/25/11	05/26/11	05/31/11	05/27/11	05/31/11	05/19/11
	Field ID	MW-01I	MW-01S	MW-03I	MW-07I	MW-10I	MW-11I	MW-11S	MW-11S	MW-12I
Analyte	Units									
Acetone	ug/L	10 U	18 U	1.1 U	10 U	10 U	10 U	10 U	10 U	1.1 U
Benzene	ug/L	1.0 U	0.77 J	0.13 U	0.13 U	1.0 U	1.0 U	1.0 U	1.0 U	0.13 U
Bromoform	ug/L	1.0 U	1.0 U	0.64 U	0.64 U	1.0 U	1.0 U	1.0 U	1.0 U	0.64 U
Bromomethane	ug/L	1.0 U	1.0 U	0.41 U	0.41 U	1.0 U	1.0 U	1.0 U	1.0 U	0.41 U
Carbon disulfide	ug/L	1.0 U	1.0 U	1.1	0.13 U	1.0 U	1.0 U	1.0 U	1.0 U	0.13 U
Carbon tetrachloride	ug/L	1.0 U	1.0 U	0.13 U	0.13 U	1.0 U	1.0 U	1.0 U	1.0 U	0.13 U
Chlorobenzene	ug/L	1.0 U	1.1	0.15 U	0.15 U	1.0 U	1.0 U	1.0 U	1.0 U	0.15 U
Chlorodibromomethane	ug/L	1.0 U	1.0 U	0.18 U	0.18 U	1.0 U	1.0 U	1.0 U	1.0 U	0.18 U
Chloroethane	ug/L	1.0 U	1.0 U	0.29 U	0.29 U	1.0 U	4.4	1.0 U	1.0 U	0.29 U
Chloroform	ug/L	1.0 U	1.0 U	0.16 U	0.16 U	1.0 U	1.0 U	1.0 U	1.0 U	0.16 U
Chloromethane	ug/L	1.0 U	1.0 U	0.30 U	0.30 U	1.0 U	1.0 U	1.0 U	1.0 U	0.30 U
cis-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	0.17 U	0.17 U	1.0 U	0.76 J	1.0 U	1.0 U	0.17 U
cis-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	0.14 U	0.14 U	1.0 U	1.0 U	1.0 U	1.0 U	0.14 U
Cyclohexane	ug/L	1.0 U	1.0 U	0.12 U	0.12 U	1.0 U	1.0 U	1.0 U	1.0 U	0.12 U
Dichlorobromomethane	ug/L	1.0 U	1.0 U	0.15 U	0.15 U	1.0 U	1.0 U	1.0 U	1.0 U	0.15 U
Dichlorodifluoromethane	ug/L	1.0 U	1.0 U	0.31 U	0.31 U	1.0 U	1.0 U	1.0 U	1.0 U	0.31 U
Ethylbenzene	ug/L	1.0 U	1.0 U	0.17 U	0.17 U	1.0 U	1.0 U	1.0 U	1.0 U	0.17 U
Ethylene Dibromide	ug/L	1.0 U	1.0 U	0.24 U	0.24 U	1.0 U	1.0 U	1.0 U	1.0 U	0.24 U
Isopropylbenzene	ug/L	1.0 U	1.0 U	0.13 U	0.13 U	1.0 U	1.0 U	1.0 U	1.0 U	0.13 U
Methyl acetate	ug/L	10 U	10 U	0.38 U	0.38 U	10 U	10 U	10 U	10 U	0.38 U
Methyl tert-butyl ether	ug/L	5.0 U	5.0 U	0.17 U	0.17 U	5.0 U	5.0 U	5.0 U	5.0 U	0.17 U
Methylcyclohexane	ug/L	1.0 U	1.0 U	0.13 U	0.13 U	1.0 U	1.0 U	1.0 U	1.0 U	0.13 U
Methylene Chloride	ug/L	1.0 U	1.0 U	0.33 U	0.33 U	1.0 U	1.0 U	1.0 U	1.0 U	0.33 U
Styrene	ug/L	1.0 U	1.0 U	0.11 U	0.11 U	1.0 U	1.0 U	1.0 U	1.0 U	0.11 U
Tetrachloroethene	ug/L	1.0 U	1.0 U	0.29 U	0.29 U	1.0 U	1.0 U	1.0 U	1.0 U	0.29 U
Toluene	ug/L	1.0 U	1.0 U	0.13 U	0.13 U	1.0 U	1.0 U	1.0 U	1.0 U	0.13 U
trans-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	0.19 U	0.19 U	1.0 U	1.0 U	1.0 U	1.0 U	0.19 U
trans-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	0.19 U	0.19 U	1.0 U	1.0 U	1.0 U	1.0 U	0.19 U
Trichloroethene	ug/L	1.0 U	1.0 U	0.17 U	0.17 U	1.0 U	1.0 U	1.0 U	1.0 U	0.17 U
Trichlorofluoromethane	ug/L	1.0 U	1.0 U	0.21 U	0.21 U	1.0 U	1.0 U	1.0 U	1.0 U	0.21 U
Vinyl chloride	ug/L	1.3	1.0 U	0.22 U	0.22 U	1.0 U	2.2	1.0 U	1.0 U	0.22 U
Xylenes, Total	ug/L	2.0 U	2.0 U	0.28 U	0.28 U	2.0 U	2.0 U	2.0 U	2.0 U	0.28 U

Table 8. Summary of Monitoring Well Results May 2011

Analyte	Units	Sample ID: MW-13I NEW Sample Date: 05/26/11 Field ID: MW-13I NEW	MW-14I NEW 05/25/11 MW-141 NEW	MW-16 NEW 05/18/11 MW-16	MW-17 NEW 05/26/11 MW-17 NEW	MW-18I 05/24/11 MW-18I	MW-18S 05/20/11 MW-18S	MW-21S 05/31/11 MW-21S	MW-22I 05/18/11 MW-22I	MW-23S 05/20/11 MW-23S
Conventionals and Inorganics										
Ammonia (as N)	mg/L	9.4	0.67	0.074 U	0.14 J	0.12 U	0.090 U	9.4	0.091 U	14
Chloride	mg/L	240	190	120 J	49	33	5.7	190	92	36
Nitrate Nitrite as N	mg/L	0.10 U	0.014 U	4.4	0.014 U	2.8	1.6	0.017 J	0.014 U	0.014 U
Sulfate	mg/L	20	64	53 J	74	29	26	54	760	19
Sulfide	mg/L	1.0 U	0.67 U	0.67 U	0.67 U	1.0 U	0.67 U	1.0 U	0.67 U	13
Cyanide, Total	mg/L	0.010 U	0.0050 U	0.0025 U	0.0050 U	0.010 U	0.0025 U	0.010 U	0.0025 U	0.0025 U
Ferrous Iron	mg/L	0.47 J	2.1 J	0.090 UJ	2.1 J	0.29 J	0.090 UJ	3.3 J	0.32 J	12 J
Aluminum	ug/L	280	26000	14000	12000	47 J	12000	4000 J	860	5100 J
Antimony	ug/L	0.43 U	0.82 J	0.72 J	0.28 J	1.7 J	1.3 J	0.46 J	2.0 U	0.53 J
Arsenic	ug/L	4.9	22	41	9.7	7.7	27	13 J	1.8 J	17 J
Barium	ug/L	700	370	190	240	280	190	280	240	500
Beryllium	ug/L	1.0 U	1.6	1.0	0.83 J	1.0 U	0.81 J	0.23 J	1.0 U	0.39 J
Cadmium	ug/L	1.0 U	0.27 J	0.41 J	0.13 U	0.13 J	0.59 J	0.29 J	1.0 U	0.30 J
Calcium	ug/L	140000	140000	140000	94000	110000	160000	120000	110000	150000
Chromium	ug/L	27	92	68	27	1400	180	540 J	180	15 J
Cobalt	ug/L	2.0	26	18	13	4.1	17	11 J	0.93 J	8.4 J
Copper	ug/L	1.9 U	44	55	21	22	60	32 J	6.1 U	36 J
Iron	ug/L	7000	62000	49000	24000	13000	39000	27000 J	3500	32000
Lead	ug/L	1.5 U	32	48	15	0.68 J	25	8.6 J	1.2	13 J
Magnesium	ug/L	45000	40000	38000	24000	24000	37000	53000	25000	53000
Manganese	ug/L	77	1000	880	430	270	2800	850	110	470
Nickel	ug/L	39	87	49	29	240	130	320 J	44	30
Potassium	ug/L	12000	9100	5100	5500	2300	4800	23000	1900	18000
Selenium	ug/L	5.0 U	2.1 J	6.2	0.75 J	5.0 U	0.76 J	5.0 U	5.0 U	5.0 U
Silver	ug/L	1.0 U	0.080 U	1.0 U	0.080 U	1.0 U	0.29 J	0.21 J	1.0 U	1.0 U
Sodium	ug/L	190000	100000	66000	16000	28000	3700	110000	33000	37000
Thallium	ug/L	1.6	0.52 J	0.41 J	0.26 J	0.22 J	0.58 U	0.52 U	1.0 U	0.27 U
Zinc	ug/L	21 U	200	260	83	17 U	160	54 J	34 U	93 U
Mercury	ug/L	0.20 U	0.12 U	0.20 U	0.12 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Semi-volatile Organics										
1,1'-Biphenyl	ug/L	0.95 U	0.76 U	0.76 U	0.76 U	0.95 U	0.76 U	0.95 U	0.76 U	0.76 U
2,2'-oxybis[1-chloropropane]	ug/L	0.95 U	0.38 U	0.38 U	0.38 U	0.95 U	0.38 U	0.95 U	0.38 U	0.38 U
2,4,5-Trichlorophenol	ug/L	4.8 U	0.29 U	0.29 U	0.29 U	4.8 U	0.29 U	4.8 U	0.29 U	0.29 U
2,4,6-Trichlorophenol	ug/L	4.8 U	0.76 U	0.76 U	0.76 U	4.8 U	0.76 U	4.8 U	0.76 U	0.76 U
2,4-Dichlorophenol	ug/L	1.9 U	0.76 U	0.76 U	0.76 U	1.9 U	0.76 U	1.9 U	0.76 U	0.76 U
2,4-Dimethylphenol	ug/L	1.9 U	0.76 U	0.76 U	0.76 U	1.9 U	0.76 U	1.9 U	0.76 U	0.76 U
2,4-Dinitrophenol	ug/L	4.8 U	2.3 U	2.3 U	2.3 U	4.8 U	2.3 U	4.8 U	2.3 U	2.3 U

Table 8. Summary of Monitoring Well Results May 2011

	Sample ID	MW-13I NEW	MW-14I NEW	MW-16 NEW	MW-17 NEW	MW-18I	MW-18S	MW-21S	MW-22I	MW-23S
	Sample Date	05/26/11	05/25/11	05/18/11	05/26/11	05/24/11	05/20/11	05/31/11	05/18/11	05/20/11
	Field ID	MW-13I NEW	MW-141 NEW	MW-16	MW-17 NEW	MW-18I	MW-18S	MW-21S	MW-22I	MW-23S
Analyte	Units									
2,4-Dinitrotoluene	ug/L	4.8 U	0.26 U	0.26 U	0.26 U	4.8 U	0.26 U	4.8 U	0.26 U	0.26 U
2,6-Dinitrotoluene	ug/L	4.8 U	0.76 U	0.76 U	0.76 U	4.8 U	0.76 U	4.8 U	0.76 U	0.76 U
2-Chloronaphthalene	ug/L	0.95 U	0.095 U	0.095 U	0.095 U	0.95 U	0.095 U	0.95 U	0.095 U	0.095 U
2-Chlorophenol	ug/L	0.95 U	0.28 U	0.28 U	0.28 U	0.95 U	0.28 U	0.95 U	0.28 U	0.28 U
2-Methylnaphthalene	ug/L	0.19 U	0.17 J	0.095 U	0.095 U	0.19 U	0.095 U	0.19 U	0.095 U	0.095 U
2-Methylphenol	ug/L	0.95 U	0.76 U	0.76 U	0.76 U	0.95 U	0.76 U	0.95 U	0.76 U	0.76 U
2-Nitroaniline	ug/L	1.9 U	0.76 U	0.76 U	0.76 U	1.9 U	0.76 U	1.9 U	0.76 U	0.76 U
2-Nitrophenol	ug/L	1.9 U	0.27 U	0.27 U	0.27 U	1.9 U	0.27 U	1.9 U	0.27 U	0.27 U
3 & 4 Methylphenol	ug/L	1.9 U	0.71 U	0.71 U	0.71 U	1.9 U	0.71 U	1.9 U	0.71 U	0.71 U
3,3'-Dichlorobenzidine	ug/L	4.8 U	0.35 U	0.35 U	0.35 U	4.8 U	0.35 U	4.8 U	0.35 U	0.35 U
3-Nitroaniline	ug/L	1.9 U	0.27 U	0.27 U	0.27 U	1.9 U	0.27 U	1.9 U	0.27 U	0.27 U
4,6-Dinitro-2-methylphenol	ug/L	4.8 U	2.3 U	2.3 U	2.3 U	4.8 U	2.3 U	4.8 U	2.3 U	2.3 U
4-Bromophenyl phenyl ether	ug/L	1.9 U	0.76 U	0.76 U	0.76 U	1.9 U	0.76 U	1.9 U	0.76 U	0.76 U
4-Chloro-3-methylphenol	ug/L	1.9 U	0.76 U	0.76 U	0.76 U	1.9 U	0.76 U	1.9 U	0.76 U	0.76 U
4-Chloroaniline	ug/L	1.9 U	0.76 U	0.76 U	0.76 U	1.9 U	0.76 U	1.9 U	0.76 U	0.76 U
4-Chlorophenyl phenyl ether	ug/L	1.9 U	0.29 U	0.29 UJ	0.29 U	1.9 U	0.29 UJ	1.9 U	0.29 UJ	0.29 UJ
4-Nitroaniline	ug/L	1.9 U	0.76 U	0.76 U	0.76 U	1.9 U	0.76 U	1.9 U	0.76 U	0.76 U
4-Nitrophenol	ug/L	4.8 U	2.3 U	2.3 U	2.3 U	4.8 U	2.3 U	4.8 U	2.3 U	2.3 U
Acenaphthene	ug/L	0.19 U	0.095 U	0.095 U	0.095 U	0.19 U	0.095 U	0.19 U	0.095 U	0.095 U
Acenaphthylene	ug/L	0.19 U	0.095 U	0.095 U	0.095 U	0.19 U	0.095 U	0.19 U	0.095 U	0.095 U
Acetophenone	ug/L	0.95 U	0.32 U	0.32 U	0.32 U	0.95 U	0.32 U	0.95 U	0.32 U	0.32 U
Anthracene	ug/L	0.19 U	0.095 U	0.095 U	0.095 U	0.19 U	0.095 U	0.19 U	0.095 U	0.095 U
Atrazine	ug/L	0.95 U	0.32 U	0.32 U	0.32 U	0.95 U	0.32 U	0.95 U	0.32 U	0.32 U
Benzaldehyde	ug/L	0.95 U	0.37 U	0.37 U	0.37 U	0.95 U	0.37 U	0.95 U	0.37 U	0.37 U
Benzo[a]anthracene	ug/L	0.19 U	0.095 U	0.095 U	0.095 U	0.19 U	0.095 U	0.19 U	0.095 U	0.095 U
Benzo[a]pyrene	ug/L	0.19 U	0.095 U	0.095 UJ	0.095 U	0.19 U	0.095 U	0.19 U	0.095 UJ	0.095 U
Benzo[b]fluoranthene	ug/L	0.19 U	0.095 U	0.095 U	0.095 U	0.19 U	0.095 U	0.19 U	0.095 U	0.095 U
Benzo[g,h,i]perylene	ug/L	0.19 U	0.095 U	0.095 UJ	0.095 U	0.19 U	0.095 U	0.19 U	0.095 UJ	0.095 U
Benzo[k]fluoranthene	ug/L	0.19 U	0.095 U	0.095 U	0.095 U	0.19 U	0.095 U	0.19 U	0.095 U	0.095 U
Bis(2-chloroethoxy)methane	ug/L	0.95 U	0.30 U	0.30 U	0.30 U	0.95 U	0.30 U	0.95 U	0.30 U	0.30 U
Bis(2-chloroethyl)ether	ug/L	0.95 U	0.095 U	0.095 U	0.095 U	0.95 U	0.095 U	0.95 U	0.095 U	0.095 U
Bis(2-ethylhexyl) phthalate	ug/L	1.9 U	0.76 U	1.9 U	0.76 U	1.9 U	0.76 U	14	2.9 U	0.76 U
Butyl benzyl phthalate	ug/L	0.95 U	0.76 U	0.76 U	0.76 U	0.95 U	0.76 U	0.95 U	0.76 U	0.76 U
Caprolactam	ug/L	4.8 U	0.76 U	0.76 U	4.8 U	4.8 U	0.76 U	4.8 U	0.76 U	0.76 U
Carbazole	ug/L	0.95 U	0.27 U	0.27 U	0.27 U	0.95 U	0.27 U	0.95 U	0.27 U	0.27 U
Chrysene	ug/L	0.19 U	0.095 U	0.095 U	0.095 U	0.19 U	0.095 U	0.19 U	0.095 U	0.095 U
Dibenz(a,h)anthracene	ug/L	0.19 U	0.095 U	0.095 UJ	0.095 U	0.19 U	0.095 U	0.19 U	0.095 UJ	0.095 U
Dibenzofuran	ug/L	0.95 U	0.095 U	0.095 U	0.095 U	0.95 U	0.095 U	0.95 U	0.095 U	0.095 U

Table 8. Summary of Monitoring Well Results May 2011

	Sample ID	MW-13I NEW	MW-14I NEW	MW-16 NEW	MW-17 NEW	MW-18I	MW-18S	MW-21S	MW-22I	MW-23S
	Sample Date	05/26/11	05/25/11	05/18/11	05/26/11	05/24/11	05/20/11	05/31/11	05/18/11	05/20/11
	Field ID	MW-13I NEW	MW-141 NEW	MW-16	MW-17 NEW	MW-18I	MW-18S	MW-21S	MW-22I	MW-23S
Analyte	Units									
Diethyl phthalate	ug/L	0.95 U	0.57 U	0.57 U	0.57 U	0.95 U	0.57 U	0.95 U	0.57 U	0.57 U
Dimethyl phthalate	ug/L	0.95 U	0.28 U	0.28 U	0.28 U	0.95 U	0.28 U	0.95 U	0.28 U	0.28 U
Di-n-butyl phthalate	ug/L	0.95 U	0.64 U	0.64 U	0.84 J	0.95 U	0.64 U	0.95 U	0.64 U	0.64 U
Di-n-octyl phthalate	ug/L	0.95 U	0.76 U	0.76 UJ	0.76 U	0.95 U	0.76 U	0.95 U	0.76 UJ	0.76 U
Fluoranthene	ug/L	0.19 U	0.095 U	0.095 U	0.095 U	0.19 U	0.095 U	0.19 U	0.095 U	0.095 U
Fluorene	ug/L	0.19 U	0.095 U	0.095 U	0.095 U	0.19 U	0.095 U	0.19 U	0.095 U	0.095 U
Hexachlorobenzene	ug/L	0.19 U	0.095 U	0.095 U	0.095 U	0.19 U	0.095 U	0.19 U	0.095 U	0.095 U
Hexachlorobutadiene	ug/L	0.95 U	0.26 U	0.26 U	0.26 U	0.95 U	0.26 U	0.95 U	0.26 U	0.26 U
Hexachlorocyclopentadiene	ug/L	9.5 U	0.76 U	0.76 U	0.76 U	9.5 U	0.76 U	9.5 U	0.76 U	0.76 U
Hexachloroethane	ug/L	0.95 U	0.76 U	0.76 U	0.76 U	0.95 U	0.76 U	0.95 U	0.76 U	0.76 U
Indeno[1,2,3-cd]pyrene	ug/L	0.19 U	0.095 U	0.095 UJ	0.095 U	0.19 U	0.095 U	0.19 U	0.095 UJ	0.095 U
Isophorone	ug/L	0.95 U	0.26 U	0.26 U	0.26 U	0.95 U	0.26 U	0.95 U	0.26 U	0.26 U
Naphthalene	ug/L	0.19 U	0.095 U	0.095 U	0.095 U	0.19 U	0.095 U	0.19 U	0.095 U	0.095 U
Nitrobenzene	ug/L	0.95 U	0.038 U	0.038 U	0.038 U	0.95 U	0.038 U	0.95 U	0.038 U	0.038 U
N-Nitrosodi-n-propylamine	ug/L	0.95 U	0.76 U	0.76 U	0.76 U	0.95 U	0.76 U	0.95 U	0.76 U	0.76 U
N-Nitrosodiphenylamine	ug/L	0.95 U	0.30 U	0.30 U	0.30 U	0.95 U	0.30 U	0.95 U	0.30 U	0.30 U
Pentachlorophenol	ug/L	4.8 U	2.3 U	2.3 U	2.3 U	4.8 U	2.3 U	4.8 U	2.3 U	2.3 U
Phenanthrene	ug/L	0.19 U	0.16 J	0.095 U	0.095 U	0.19 U	0.095 U	0.19 U	0.095 U	0.095 U
Phenol	ug/L	0.95 U	0.57 U	0.57 U	0.57 U	0.95 U	0.57 U	0.95 U	0.57 U	0.57 U
Pyrene	ug/L	0.19 U	0.095 U	0.095 U	0.095 U	0.19 U	0.095 U	0.19 U	0.095 U	0.095 U
Volatile Organics										
1,1,1-Trichloroethane	ug/L	1.0 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	1.0 U	0.22 U	0.22 U
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	1.0 U	0.18 U	0.18 U
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	1.0 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	1.0 U	0.28 U	0.28 U
1,1,2-Trichloroethane	ug/L	1.0 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	1.0 U	0.27 U	0.27 U
1,1-Dichloroethane	ug/L	1.0 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	1.3	0.15 U	1.7
1,1-Dichloroethene	ug/L	1.0 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	1.0 U	0.19 U	0.19 U
1,2,4-Trichlorobenzene	ug/L	1.0 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	1.0 U	0.15 U	0.15 U
1,2-Dibromo-3-Chloropropane	ug/L	2.0 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	2.0 U	0.67 U	0.67 U
1,2-Dichlorobenzene	ug/L	1.0 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	1.0 U	0.13 U	0.13 U
1,2-Dichloroethane	ug/L	1.0 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	6.0	0.22 U	0.22 U
1,2-Dichloropropane	ug/L	1.0 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	1.0 U	0.18 U	0.18 U
1,3-Dichlorobenzene	ug/L	1.0 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	1.0 U	0.14 U	0.14 U
1,3-Dichloropropene, Total	ug/L	2.0 U	0.22 U	0.22 U	0.22 U		0.22 U	2.0 U	0.22 U	0.22 U
1,4-Dichlorobenzene	ug/L	1.0 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	1.0 U	0.13 U	0.13 U
2-Butanone (MEK)	ug/L	10 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	10 U	0.57 U	0.57 U
2-Hexanone	ug/L	10 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	10 U	0.41 U	0.41 U
4-Methyl-2-pentanone (MIBK)	ug/L	10 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	10 U	0.32 U	0.32 U

Table 8. Summary of Monitoring Well Results May 2011

Sample ID		MW-13I NEW	MW-14I NEW	MW-16 NEW	MW-17 NEW	MW-18I	MW-18S	MW-21S	MW-22I	MW-23S
Sample Date		05/26/11	05/25/11	05/18/11	05/26/11	05/24/11	05/20/11	05/31/11	05/18/11	05/20/11
Field ID		MW-13I NEW	MW-141 NEW	MW-16	MW-17 NEW	MW-18I	MW-18S	MW-21S	MW-22I	MW-23S
Analyte	Units									
Acetone	ug/L	10 U	10 U	1.1 U	1.1 U	1.1 U	10 U	10 U	1.1 U	10 U
Benzene	ug/L	1.0 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	1.5	0.13 U	0.13 U
Bromoform	ug/L	1.0 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	1.0 U	0.64 U	0.64 U
Bromomethane	ug/L	1.0 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	1.0 U	0.41 U	0.41 U
Carbon disulfide	ug/L	1.0 U	0.13 U	0.13 U	0.13 U	0.13 U	0.16 J	0.58 J	0.13 U	0.75 J
Carbon tetrachloride	ug/L	1.0 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	1.0 U	0.13 U	0.13 U
Chlorobenzene	ug/L	1.0 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	1.0 U	0.15 U	0.15 U
Chlorodibromomethane	ug/L	1.0 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	1.0 U	0.18 U	0.18 U
Chloroethane	ug/L	1.0 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	36	0.29 U	4.2
Chloroform	ug/L	1.0 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	1.0 U	0.16 U	0.16 U
Chloromethane	ug/L	1.0 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	1.0 U	0.30 U	0.30 U
cis-1,2-Dichloroethene	ug/L	1.0 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	13	0.17 U	3.2 J
cis-1,3-Dichloropropene	ug/L	1.0 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	1.0 U	0.14 U	0.14 U
Cyclohexane	ug/L	1.0 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	1.0 U	0.12 U	0.12 U
Dichlorobromomethane	ug/L	1.0 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	1.0 U	0.15 U	0.15 U
Dichlorodifluoromethane	ug/L	1.0 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	1.0 U	0.31 U	0.35 J
Ethylbenzene	ug/L	1.0 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	1.0 U	0.17 U	0.17 U
Ethylene Dibromide	ug/L	1.0 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	1.0 U	0.24 U	0.24 U
Isopropylbenzene	ug/L	1.0 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	1.0 U	0.13 U	0.13 U
Methyl acetate	ug/L	10 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	10 U	0.38 U	0.38 U
Methyl tert-butyl ether	ug/L	5.0 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.25 J	0.17 U	0.17 U
Methylcyclohexane	ug/L	1.0 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	1.0 U	0.13 U	0.13 U
Methylene Chloride	ug/L	1.0 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	1.0 U	0.33 U	0.33 U
Styrene	ug/L	1.0 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	1.0 U	0.11 U	0.11 U
Tetrachloroethene	ug/L	1.0 U	0.29 U	0.29 U	0.29 U	0.29 U	0.51 J	1.0 U	0.29 U	0.29 U
Toluene	ug/L	1.0 U	0.13 U	0.13 U	0.13 U	0.13 U	0.18 J	1.0 U	0.13 U	0.13 U
trans-1,2-Dichloroethene	ug/L	1.0 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.26 J	0.19 U	0.19 U
trans-1,3-Dichloropropene	ug/L	1.0 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	1.0 U	0.19 U	0.19 U
Trichloroethene	ug/L	1.0 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.57 J	0.17 U	0.25 J
Trichlorofluoromethane	ug/L	1.0 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	1.0 U	0.21 U	0.21 U
Vinyl chloride	ug/L	1.0 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	2.4	0.22 U	0.22 U
Xylenes, Total	ug/L	2.0 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	2.0 U	0.28 U	0.28 U

Table 8. Summary of Monitoring Well Results May 2011

	Sample ID	MW-25S	MW-26S	MW-27I	MW-29	MW-30	MW-31
	Sample Date	05/20/11	05/24/11	05/24/11	06/01/11	05/19/11	05/19/11
	Field ID	MW-25S	MW-26S	MW-27I	MW-29	MW-30	MW-31
Analyte	Units						
Conventionals and Inorganics							
Ammonia (as N)	mg/L	0.10 U	0.42	0.20 U	4.6	0.20 U	0.12 U
Chloride	mg/L	24	250	220	290	63	18
Nitrate Nitrite as N	mg/L	4.2	0.014 U	0.014 U	0.062 U	0.30 U	1.6
Sulfate	mg/L	38	70	73	86	47	34
Sulfide	mg/L	0.67 U	1.0 U	1.0 U	1.0 U	0.67 U	14
Cyanide, Total	mg/L	0.0025 U	0.010 U	0.010 U	0.010 U	0.0025 U	0.0025 U
Ferrous Iron	mg/L	0.032 J	0.050 UJ	0.14 J	1.8 J	1.2 J	0.018 UJ
Aluminum	ug/L	570	1200	2100	9500	21000	540
Antimony	ug/L	0.25 J	0.48 J	2.0 U	1.1 U	0.97 J	0.92 U
Arsenic	ug/L	1.2 J	5.2	9.5	17	24	1.9 J
Barium	ug/L	69	680	380	170	200	63
Beryllium	ug/L	1.0 U	1.0 U	1.0 U	0.55 J	1.2	1.0 U
Cadmium	ug/L	1.0 U	0.17 J	1.0 U	0.50 J	0.30 J	0.35 J
Calcium	ug/L	79000	150000	140000	150000	92000	35000
Chromium	ug/L	7.0	42	790	430	54	20
Cobalt	ug/L	3.7	1.6	2.2	16	17	0.81 J
Copper	ug/L	10	8.3	7.8	49 U	46	11
Iron	ug/L	6900	7400	6800	37000	44000	1400
Lead	ug/L	2.9 U	2.0	2.3	29 U	26	1.5 U
Magnesium	ug/L	15000	36000	34000	50000	24000	3900
Manganese	ug/L	98	160	190	660	1000	89
Nickel	ug/L	290	45	98	250	49	11
Potassium	ug/L	2100	2600	3100	15000	10000	8000
Selenium	ug/L	5.0 U	5.0 U	5.0 U	1.0 J	1.3 J	5.0 U
Silver	ug/L	1.0 U	1.0 U	1.0 U	0.26 J	1.0 U	1.0 U
Sodium	ug/L	19000	130000	96000	160000	25000	8600
Thallium	ug/L	1.0 U	0.64 J	0.35 J	0.43 U	0.51 U	1.0 U
Zinc	ug/L	28 U	20 U	28 U	200 U	170	160
Mercury	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Semi-volatile Organics							
1,1'-Biphenyl	ug/L	0.76 U	0.96 U	0.96 U	0.95 U	0.76 U	0.76 U
2,2'-oxybis[1-chloropropane]	ug/L	0.38 U	0.96 U	0.96 U	0.95 U	0.38 U	0.38 U
2,4,5-Trichlorophenol	ug/L	0.29 U	4.8 U	4.8 U	4.8 U	0.29 U	0.29 U
2,4,6-Trichlorophenol	ug/L	0.76 U	4.8 U	4.8 U	4.8 U	0.76 U	0.76 U
2,4-Dichlorophenol	ug/L	0.76 U	1.9 U	1.9 U	1.9 U	0.76 U	0.76 U
2,4-Dimethylphenol	ug/L	0.76 U	1.9 U	1.9 U	1.9 U	0.76 U	0.76 U
2,4-Dinitrophenol	ug/L	2.3 U	4.8 U	4.8 U	4.8 U	2.3 U	2.3 U

Table 8. Summary of Monitoring Well Results May 2011

	Sample ID	MW-25S	MW-26S	MW-27I	MW-29	MW-30	MW-31
	Sample Date	05/20/11	05/24/11	05/24/11	06/01/11	05/19/11	05/19/11
	Field ID	MW-25S	MW-26S	MW-27I	MW-29	MW-30	MW-31
Analyte	Units						
2,4-Dinitrotoluene	ug/L	0.26 U	4.8 U	4.8 U	4.8 U	0.26 U	0.26 U
2,6-Dinitrotoluene	ug/L	0.76 U	4.8 U	4.8 U	4.8 U	0.76 U	0.76 U
2-Chloronaphthalene	ug/L	0.095 U	0.96 U	0.96 U	0.95 U	0.095 U	0.095 U
2-Chlorophenol	ug/L	0.28 U	0.96 U	0.96 U	0.95 U	0.28 U	0.28 U
2-Methylnaphthalene	ug/L	0.095 U	0.19 U	0.19 U	0.19 U	0.095 U	0.095 U
2-Methylphenol	ug/L	0.76 U	0.96 U	0.96 U	0.95 U	0.76 U	0.76 U
2-Nitroaniline	ug/L	0.76 U	1.9 U	1.9 U	1.9 U	0.76 U	0.76 U
2-Nitrophenol	ug/L	0.27 U	1.9 U	1.9 U	1.9 U	0.27 U	0.27 U
3 & 4 Methylphenol	ug/L	0.71 U	1.9 U	1.9 U	1.9 U	0.71 U	0.71 U
3,3'-Dichlorobenzidine	ug/L	0.35 U	4.8 U	4.8 U	4.8 U	0.35 U	0.35 U
3-Nitroaniline	ug/L	0.27 U	1.9 U	1.9 U	1.9 U	0.27 U	0.27 U
4,6-Dinitro-2-methylphenol	ug/L	2.3 U	4.8 U	4.8 U	4.8 U	2.3 U	2.3 U
4-Bromophenyl phenyl ether	ug/L	0.76 U	1.9 U	1.9 U	1.9 U	0.76 U	0.76 U
4-Chloro-3-methylphenol	ug/L	0.76 U	1.9 U	1.9 U	1.9 U	0.76 U	0.76 U
4-Chloroaniline	ug/L	0.76 U	1.9 U	1.9 U	1.9 U	0.76 U	0.76 U
4-Chlorophenyl phenyl ether	ug/L	0.29 UJ	1.9 U	1.9 U	1.9 U	0.29 UJ	0.29 UJ
4-Nitroaniline	ug/L	0.76 U	1.9 U	1.9 U	1.9 U	0.76 U	0.76 U
4-Nitrophenol	ug/L	2.3 U	4.8 U	4.8 U	4.8 U	2.3 U	2.3 U
Acenaphthene	ug/L	0.095 U	0.19 U	0.19 U	0.19 U	0.095 U	0.095 U
Acenaphthylene	ug/L	0.095 U	0.19 U	0.19 U	0.19 U	0.095 U	0.095 U
Acetophenone	ug/L	0.32 U	0.96 U	0.96 U	0.95 U	0.32 U	0.32 U
Anthracene	ug/L	0.095 U	0.19 U	0.19 U	0.19 U	0.095 U	0.095 U
Atrazine	ug/L	0.32 U	0.96 U	0.96 U	0.95 U	0.32 U	0.32 U
Benzaldehyde	ug/L	0.37 U	0.96 U	0.96 U	0.95 U	0.37 U	0.37 U
Benzo[a]anthracene	ug/L	0.095 U	0.19 U	0.19 U	0.19 U	0.095 U	0.095 U
Benzo[a]pyrene	ug/L	0.095 U	0.19 U	0.19 U	0.19 U	0.095 U	0.095 U
Benzo[b]fluoranthene	ug/L	0.095 U	0.19 U	0.19 U	0.19 U	0.095 U	0.095 U
Benzo[g,h,i]perylene	ug/L	0.095 U	0.19 U	0.19 U	0.19 U	0.095 U	0.095 U
Benzo[k]fluoranthene	ug/L	0.095 U	0.19 U	0.19 U	0.19 U	0.095 U	0.095 U
Bis(2-chloroethoxy)methane	ug/L	0.30 U	0.96 U	0.96 U	0.95 U	0.30 U	0.30 U
Bis(2-chloroethyl)ether	ug/L	0.095 U	0.96 U	0.96 U	0.95 U	0.095 U	0.095 U
Bis(2-ethylhexyl) phthalate	ug/L	0.76 U	1.9 U	1.9 U	1.9	0.76 U	0.86 J
Butyl benzyl phthalate	ug/L	0.76 U	0.96 U	0.96 U	0.95 U	0.76 U	0.76 U
Caprolactam	ug/L	0.76 U	4.8 U	4.8 U	4.8 U	0.76 U	0.76 U
Carbazole	ug/L	0.27 U	0.96 U	0.96 U	0.95 U	0.27 U	0.27 U
Chrysene	ug/L	0.095 U	0.19 U	0.19 U	0.19 U	0.095 U	0.095 U
Dibenz(a,h)anthracene	ug/L	0.095 U	0.19 U	0.19 U	0.19 U	0.095 U	0.095 U
Dibenzofuran	ug/L	0.095 U	0.96 U	0.96 U	0.95 U	0.095 U	0.095 U

Table 8. Summary of Monitoring Well Results May 2011

	Sample ID	MW-25S	MW-26S	MW-27I	MW-29	MW-30	MW-31
	Sample Date	05/20/11	05/24/11	05/24/11	06/01/11	05/19/11	05/19/11
	Field ID	MW-25S	MW-26S	MW-27I	MW-29	MW-30	MW-31
Analyte	Units						
Diethyl phthalate	ug/L	0.57 U	0.96 U	0.96 U	0.95 U	0.57 U	0.57 U
Dimethyl phthalate	ug/L	0.28 U	0.96 U	0.96 U	0.95 U	0.28 U	0.28 U
Di-n-butyl phthalate	ug/L	0.64 U	0.96 U	0.96 U	0.95 U	0.64 U	0.64 U
Di-n-octyl phthalate	ug/L	0.76 U	0.96 U	0.96 U	0.95 U	0.76 U	0.76 U
Fluoranthene	ug/L	0.095 U	0.19 U	0.19 U	0.19 U	0.095 U	0.095 U
Fluorene	ug/L	0.095 U	0.19 U	0.19 U	0.19 U	0.095 U	0.095 U
Hexachlorobenzene	ug/L	0.095 U	0.19 U	0.19 U	0.19 U	0.095 U	0.095 U
Hexachlorobutadiene	ug/L	0.26 U	0.96 U	0.96 U	0.95 U	0.26 U	0.26 U
Hexachlorocyclopentadiene	ug/L	0.76 U	9.6 U	9.6 U	9.5 U	0.76 U	0.76 U
Hexachloroethane	ug/L	0.76 U	0.96 U	0.96 U	0.95 U	0.76 U	0.76 U
Indeno[1,2,3-cd]pyrene	ug/L	0.095 U	0.19 U	0.19 U	0.19 U	0.095 U	0.095 U
Isophorone	ug/L	0.26 U	0.96 U	0.96 U	0.95 U	0.26 U	0.26 U
Naphthalene	ug/L	0.095 U	0.19 U	0.19 U	0.19 U	0.095 U	0.095 U
Nitrobenzene	ug/L	0.038 U	0.96 U	0.96 U	0.95 U	0.038 U	0.038 U
N-Nitrosodi-n-propylamine	ug/L	0.76 U	0.96 U	0.96 U	0.95 U	0.76 U	0.76 U
N-Nitrosodiphenylamine	ug/L	0.30 U	0.96 U	0.96 U	0.95 U	0.30 U	0.30 U
Pentachlorophenol	ug/L	2.3 U	4.8 U	4.8 U	4.8 U	2.3 U	2.3 U
Phenanthrene	ug/L	0.095 U	0.19 U	0.19 U	0.19 U	0.095 U	0.095 U
Phenol	ug/L	0.57 U	0.96 U	0.96 U	0.95 U	0.57 U	0.57 U
Pyrene	ug/L	0.095 U	0.19 U	0.19 U	0.19 U	0.095 U	0.095 U
Volatile Organics							
1,1,1-Trichloroethane	ug/L	0.22 U	0.22 U	0.22 U	1.7 U	0.22 U	0.22 U
1,1,2,2-Tetrachloroethane	ug/L	0.18 U	0.18 U	0.18 U	1.7 U	0.18 U	0.18 U
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	0.28 U	0.28 U	0.28 U	1.7 U	0.28 U	0.28 U
1,1,2-Trichloroethane	ug/L	0.27 U	0.27 U	0.27 U	1.7 U	0.27 U	0.27 U
1,1-Dichloroethane	ug/L	0.15 U	0.15 U	0.15 U	37	0.15 U	0.15 U
1,1-Dichloroethene	ug/L	0.19 U	0.19 U	0.19 U	1.3 J	0.19 U	0.19 U
1,2,4-Trichlorobenzene	ug/L	0.15 U	0.15 U	0.15 U	1.7 U	0.15 U	0.15 U
1,2-Dibromo-3-Chloropropane	ug/L	0.67 U	0.67 U	0.67 U	3.3 U	0.67 U	0.67 U
1,2-Dichlorobenzene	ug/L	0.13 U	0.13 U	0.13 U	1.7 U	0.13 U	0.13 U
1,2-Dichloroethane	ug/L	0.22 U	0.22 U	0.22 U	18	0.22 U	0.22 U
1,2-Dichloropropane	ug/L	0.18 U	0.18 U	0.18 U	1.7 U	0.18 U	0.18 U
1,3-Dichlorobenzene	ug/L	0.14 U	0.14 U	0.14 U	1.7 U	0.14 U	0.14 U
1,3-Dichloropropene, Total	ug/L	0.22 U			3.3 U	0.22 U	0.22 U
1,4-Dichlorobenzene	ug/L	0.13 U	0.13 U	0.13 U	1.7 U	0.13 U	0.13 U
2-Butanone (MEK)	ug/L	0.57 U	0.57 U	0.57 U	17 U	0.57 U	0.57 U
2-Hexanone	ug/L	0.41 U	0.41 U	0.41 U	17 U	0.41 U	0.41 U
4-Methyl-2-pentanone (MIBK)	ug/L	0.32 U	0.32 U	0.32 U	17 U	0.32 U	0.32 U

Table 8. Summary of Monitoring Well Results May 2011

	Sample ID	MW-25S	MW-26S	MW-27I	MW-29	MW-30	MW-31
	Sample Date	05/20/11	05/24/11	05/24/11	06/01/11	05/19/11	05/19/11
	Field ID	MW-25S	MW-26S	MW-27I	MW-29	MW-30	MW-31
Analyte	Units						
Acetone	ug/L	1.1 U	1.1 U	1.1 U	17 U	1.1 U	1.1 U
Benzene	ug/L	0.13 U	0.13 U	0.13 U	1.7 U	0.13 U	0.13 U
Bromoform	ug/L	0.64 U	0.64 U	0.64 U	1.7 U	0.64 U	0.64 U
Bromomethane	ug/L	0.41 U	0.41 U	0.41 U	1.7 U	0.41 U	0.41 U
Carbon disulfide	ug/L	0.13 U	0.13 U	0.13 U	0.27 J	0.13 U	0.13 U
Carbon tetrachloride	ug/L	0.13 U	0.13 U	0.13 U	1.7 U	0.13 U	0.13 U
Chlorobenzene	ug/L	0.15 U	0.15 U	0.15 U	1.7 U	0.15 U	0.15 U
Chlorodibromomethane	ug/L	0.18 U	0.18 U	0.18 U	1.7 U	0.18 U	0.18 U
Chloroethane	ug/L	0.29 U	0.29 U	0.29 U	24	0.29 U	0.29 U
Chloroform	ug/L	0.16 U	0.16 U	0.16 U	1.7 U	0.16 U	0.16 U
Chloromethane	ug/L	0.30 U	0.30 U	0.30 U	1.7 U	0.30 U	0.30 U
cis-1,2-Dichloroethene	ug/L	0.17 U	0.17 U	0.17 U	64	0.17 U	0.17 U
cis-1,3-Dichloropropene	ug/L	0.14 U	0.14 U	0.14 U	1.7 U	0.14 U	0.14 U
Cyclohexane	ug/L	0.12 U	0.12 U	0.12 U	1.7 U	0.12 U	0.12 U
Dichlorobromomethane	ug/L	0.15 U	0.15 U	0.15 U	1.7 U	0.15 U	0.15 U
Dichlorodifluoromethane	ug/L	0.31 U	0.31 U	0.31 U	1.7 U	0.31 U	0.31 U
Ethylbenzene	ug/L	0.17 U	0.17 U	0.17 U	1.7 U	0.17 U	0.17 U
Ethylene Dibromide	ug/L	0.24 U	0.24 U	0.24 U	1.7 U	0.24 U	0.24 U
Isopropylbenzene	ug/L	0.13 U	0.13 U	0.13 U	1.7 U	0.13 U	0.13 U
Methyl acetate	ug/L	0.38 U	0.38 U	0.38 U	17 U	0.38 U	0.38 U
Methyl tert-butyl ether	ug/L	0.17 U	0.17 U	0.17 U	8.3 U	0.17 U	0.17 U
Methylcyclohexane	ug/L	0.13 U	0.13 U	0.13 U	1.7 U	0.13 U	0.13 U
Methylene Chloride	ug/L	0.33 U	0.33 U	0.33 U	1.7 U	0.33 U	0.33 U
Styrene	ug/L	0.11 U	0.11 U	0.11 U	1.7 U	0.11 U	0.11 U
Tetrachloroethene	ug/L	0.29 U	0.29 U	0.29 U	1.7 U	0.29 U	0.29 U
Toluene	ug/L	0.13 U	0.13 U	0.13 U	1.7 U	0.13 U	0.13 U
trans-1,2-Dichloroethene	ug/L	0.19 U	0.19 U	0.19 U	1.7 U	0.19 U	0.19 U
trans-1,3-Dichloropropene	ug/L	0.19 U	0.19 U	0.19 U	1.7 U	0.19 U	0.19 U
Trichloroethene	ug/L	0.17 U	0.17 U	0.17 U	1.7 U	0.17 U	0.17 U
Trichlorofluoromethane	ug/L	0.21 U	0.21 U	0.21 U	1.7 U	0.21 U	0.21 U
Vinyl chloride	ug/L	0.22 U	0.22 U	0.22 U	5.0	0.22 U	0.22 U
Xylenes, Total	ug/L	0.28 U	0.28 U	0.28 U	3.3 U	0.28 U	0.28 U

NOTES:
U - not detected above MDL
J - estimated concentration

Table 7. Summary of Constituent Results May 2013
Industrial Excess Landfill, Uniontown, Ohio

	Sample ID	MW-01i	MW-01s	MW-03i	MW-7i	MW-10i	MW-11i	MW-11s	MW-12i	MW-13i NEW
	Sample Date	05/14/13	05/14/13	05/14/13	05/14/13	05/09/13	05/14/13	05/14/13	05/09/13	05/14/13
	Field ID	MW-01i	MW-01s	MW-03i	MW-7i	MW-10I	MW-11i	MW-11s	MW-12I	MW-13i NEW
Analyte	**Units**									
Conventionals and Inorganics										
Ammonia (as N)	mg/L	8	1.8	1.9	3.3	2.7	3.2	0.052 U	0.21	9.3
Chloride	mg/L	260	3.9	97	93	45	190	60	630	210
Nitrate Nitrite as N	mg/L	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.37	0.014 U	0.014 U
Sulfate	mg/L	27	10	54	37	47	71	160	65	20
Sulfide	mg/L	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	10	0.67 U
Cyanide, Total	mg/L	0.0032 U	0.0032 U	0.0032 U	0.0032 U	0.0032 U	0.0032 U	0.0032 U	0.51	0.0032 U
Ferrous Iron	mg/L	0.58 J	1.4 J	0.082 UJ	0.043 UJ	0.018 UJ	1 J	0.023 UJ	0.5 J	0.6 J
Aluminum	ug/L	11 J	430	9.2 J	18 J	280	25 J	1500	40000	1500
Antimony	ug/L	0.52 U	1.9 J B	0.21 U	0.27 U	0.2 U	0.21 U	1.7 J B	5 B	0.48 U
Arsenic	ug/L	2.8 J B	8.6 B	3.5 B	0.53 J B	2.2 J B	2.9 J B	67 B	67 B	5.9 B
Barium	ug/L	780 B	360 B	460 B	780 B	680 B	200 B	380 B	540 B	630 B
Beryllium	ug/L	0.094 U	0.11 U	0.082 U	0.12 U	0.031 U	0.058 U	0.36 J	1.6	0.32 J
Cadmium	ug/L	0.026 U	1.8	0.026 U	0.026 U	0.05 J	0.026 U	0.75 J	120	0.23 J
Calcium	ug/L	140000 B	160000 B	110000 B	110000 B	110000 B	130000 B	210000 B	170000 B	130000 B
Chromium	ug/L	5.1 U	26	0.6 J	1.9 U	12 B	1.5 U	4300	3100 B	19
Cobalt	ug/L	1.1	6.2	0.18 U	0.48 U	0.5 J	0.26 U	210	27	2.8
Copper	ug/L	11 B	40 B	0.61 U	4.2 B	5.1 B	0.69 U	190 B	300 B	9.3 B
Iron	ug/L	18000 B	14000 B	2900 B	6600 B	3800 B	5800 B	290000 B	69000 B	8700 B
Lead	ug/L	0.74 U	2.2	0.36 U	0.38 U	0.75 J	0.27 U	17	89	5.6
Magnesium	ug/L	41000 B	27000 B	29000 B	29000 B	28000 B	44000 B	38000 B	40000 B	39000 B
Manganese	ug/L	210 B	1600 B	140 B	200 B	230 B	75 B	12000 B	1400 B	110 B
Nickel	ug/L	34 U	23 U	4.9 U	10 U	13 B	35 U	1300 B	700 B	36 U
Potassium	ug/L	8300 B	2800 B	4100 B	3500 B	4700 B	10000 B	3200 B	7700 B	11000 B
Selenium	ug/L	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	1.9 J	7.2	0.66 J
Silver	ug/L	0.014 U	0.032 U	0.01 U	0.014 U	0.0083 U	0.0083 U	0.094 U	1.6	0.08 U
Sodium	ug/L	170000 B	4400 B	64000 B	78000 B	48000 B	110000 B	32000 B	300000 B	150000 B
Thallium	ug/L	0.4 U	0.59 J	0.4 U	0.4 U	0.4 U	0.4 U	0.97 J	0.61 J	0.4 U
Zinc	ug/L	10 U	67 U	3.7 U	2.3 U	7.4 U	6.3 U	120 U	18000 B	120 U
Mercury	ug/L	0.12 U	0.14 J	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.43	0.12 U
Semi-volatile Organics										
1,1'-Biphenyl	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.93 U	0.76 U
2,2'-oxybis[1-chloropropane]	ug/L	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.47 U	0.38 U
2,4,5-Trichlorophenol	ug/L	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.35 U	0.29 U
2,4,6-Trichlorophenol	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.93 U	0.76 U
2,4-Dichlorophenol	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.93 U	0.76 U
2,4-Dimethylphenol	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.93 U	0.76 U
2,4-Dinitrophenol	ug/L	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.8 U	2.3 U

Table 7. Summary of Constituent Results May 2013
Industrial Excess Landfill, Uniontown, Ohio

	Sample ID	MW-01i	MW-01s	MW-03i	MW-7i	MW-10i	MW-11i	MW-11s	MW-12i	MW-13i NEW
	Sample Date	05/14/13	05/14/13	05/14/13	05/14/13	05/09/13	05/14/13	05/14/13	05/09/13	05/14/13
	Field ID	MW-01i	MW-01s	MW-03i	MW-7i	MW-10I	MW-11i	MW-11s	MW-12I	MW-13i NEW
Analyte	Units									
2,4-Dinitrotoluene	ug/L	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.31 U	0.26 U
2,6-Dinitrotoluene	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.93 U	0.76 U
2-Chloronaphthalene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.12 U	0.095 U
2-Chlorophenol	ug/L	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.34 U	0.28 U
2-Methylnaphthalene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.13 J	0.095 U
2-Methylphenol	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.93 U	0.76 U
2-Nitroaniline	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.93 U	0.76 U
2-Nitrophenol	ug/L	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.33 U	0.27 U
3 & 4 Methylphenol	ug/L	0.71 U	1.7 J	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.87 U	0.71 U
3,3'-Dichlorobenzidine	ug/L	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.43 U	0.35 U
3-Nitroaniline	ug/L	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.33 U	0.27 U
4,6-Dinitro-2-methylphenol	ug/L	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.8 U	2.3 U
4-Bromophenyl phenyl ether	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.93 U	0.76 U
4-Chloro-3-methylphenol	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.93 U	0.76 U
4-Chloroaniline	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.93 U	0.76 U
4-Chlorophenyl phenyl ether	ug/L	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.35 U	0.29 U
4-Nitroaniline	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.93 U	0.76 U
4-Nitrophenol	ug/L	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.8 U	2.3 U
Acenaphthene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.12 U	0.095 U
Acenaphthylene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.12 U	0.095 U
Acetophenone	ug/L	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.4 U	0.32 U
Anthracene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.12 U	0.095 U
Atrazine	ug/L	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.4 U	0.32 U
Benzaldehyde	ug/L	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.65 J	0.37 U
Benzo[a]anthracene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.49	0.095 U
Benzo[a]pyrene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.86	0.095 U
Benzo[b]fluoranthene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	1.9	0.095 U
Benzo[g,h,i]perylene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	1.4	0.095 U
Benzo[k]fluoranthene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.68	0.095 U
Bis(2-chloroethoxy)methane	ug/L	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.37 U	0.3 U
Bis(2-chloroethyl)ether	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.12 U	0.095 U
Bis(2-ethylhexyl) phthalate	ug/L	0.76 U	0.96 J	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	19	0.76 U
Butyl benzyl phthalate	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.93 U	0.76 U
Caprolactam	ug/L	0.76 U	58	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.93 U	0.76 U
Carbazole	ug/L	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.33 U	0.27 U
Chrysene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	1	0.095 U
Dibenz(a,h)anthracene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.12 U	0.095 U
Dibenzofuran	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.12 U	0.095 U

Table 7. Summary of Constituent Results May 2013
Industrial Excess Landfill, Uniontown, Ohio

	Sample ID	MW-01i	MW-01s	MW-03i	MW-7i	MW-10i	MW-11i	MW-11s	MW-12i	MW-13i NEW
	Sample Date	05/14/13	05/14/13	05/14/13	05/14/13	05/09/13	05/14/13	05/14/13	05/09/13	05/14/13
	Field ID	MW-01i	MW-01s	MW-03i	MW-7i	MW-10I	MW-11i	MW-11s	MW-12I	MW-13i NEW
Analyte	**Units**									
Diethyl phthalate	ug/L	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.7 U	0.57 U
Dimethyl phthalate	ug/L	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.34 U	0.28 U
Di-n-butyl phthalate	ug/L	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.78 U	0.64 U
Di-n-octyl phthalate	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.93 U	0.76 U
Fluoranthene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	1.7	0.095 U
Fluorene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.12 U	0.095 U
Hexachlorobenzene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.12 U	0.095 U
Hexachlorobutadiene	ug/L	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.31 U	0.26 U
Hexachlorocyclopentadiene	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.93 R	0.76 U
Hexachloroethane	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.93 U	0.76 U
Indeno[1,2,3-cd]pyrene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.98	0.095 U
Isophorone	ug/L	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.31 U	0.26 U
Naphthalene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.17 J	0.095 U
Nitrobenzene	ug/L	0.038 U	0.038 U	0.038 U	0.038 U	0.038 U	0.038 U	0.038 U	0.047 U	0.038 U
N-Nitrosodi-n-propylamine	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.93 U	0.76 U
N-Nitrosodiphenylamine	ug/L	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.36 U	0.3 U
Pentachlorophenol	ug/L	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.8 U	2.3 U
Phenanthrene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.78	0.095 U
Phenol	ug/L	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.7 U	0.57 U
Pyrene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	1.7	0.095 U
Volatile Organics										
1,1,1-Trichloroethane	ug/L	0.16 U	0.16 U	0.16 U	0.16 U	0.22 U	0.16 U	0.16 U	1.1 U	0.16 U
1,1,2,2-Tetrachloroethane	ug/L	0.21 U	0.21 U	0.21 U	0.21 U	0.18 U	0.21 U	0.21 U	0.9 U	0.21 U
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	0.42 U	0.42 U	0.42 U	0.42 U	0.28 U	0.42 U	0.42 U	1.4 U	0.42 U
1,1,2-Trichloroethane	ug/L	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	1.4 U	0.27 U
1,1-Dichloroethane	ug/L	0.22 U	0.22 U	0.22 U	0.22 U	0.15 U	1.5	0.22 U	0.75 U	0.22 U
1,1-Dichloroethene	ug/L	0.23 U	0.23 U	0.23 U	0.23 U	0.19 U	0.23 U	0.23 U	0.95 U	0.23 U
1,2,4-Trichlorobenzene	ug/L	0.21 U	0.21 U	0.21 U	0.21 U	0.15 U	0.21 U	0.21 U	0.75 U	0.21 U
1,2-Dibromo-3-Chloropropane	ug/L	0.47 U	0.47 U	0.47 U	0.47 U	0.67 U	0.47 U	0.47 U	3.4 U	0.47 U
1,2-Dichlorobenzene	ug/L	0.15 U	0.15 U	0.15 U	0.15 U	0.13 U	0.15 U	0.15 U	0.65 U	0.15 U
1,2-Dichloroethane	ug/L	0.13 U	0.13 U	0.13 U	0.13 U	0.22 U	0.71 J	0.13 U	1.1 U	0.13 U
1,2-Dichloropropane	ug/L	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.9 U	0.18 U
1,3-Dichlorobenzene	ug/L	0.13 U	0.13 U	0.13 U	0.13 U	0.14 U	0.13 U	0.13 U	0.7 U	0.13 U
1,4-Dichlorobenzene	ug/L	0.16 U	0.16 U	0.16 U	0.16 U	0.13 U	0.16 U	0.16 U	0.65 U	0.16 U
2-Butanone (MEK)	ug/L	2 U	2 U	2 U	2 U	0.57 U	2 U	2 U	2.9 U	2 U
2-Hexanone	ug/L	1.7 U	1.7 U	1.7 U	1.7 U	0.41 U	1.7 U	1.7 U	2.1 U	1.7 U
4-Methyl-2-pentanone (MIBK)	ug/L	0.98 U	0.98 U	0.98 U	0.98 U	0.32 U	0.98 U	0.98 U	1.6 U	0.98 U
Acetone	ug/L	1.9 U	1.9 U	1.9 U	1.9 U	1.1 U	1.9 U	1.9 U	5.5 U	1.9 U

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Industrial Excess Landfill, Uniontown, Ohio

	Sample ID	MW-01i	MW-01s	MW-03i	MW-7i	MW-10i	MW-11i	MW-11s	MW-12i	MW-13i NEW
	Sample Date	05/14/13	05/14/13	05/14/13	05/14/13	05/09/13	05/14/13	05/14/13	05/09/13	05/14/13
	Field ID	MW-01i	MW-01s	MW-03i	MW-7i	MW-10I	MW-11i	MW-11s	MW-12I	MW-13i NEW
Analyte	Units									
Benzene	ug/L	0.16 U	0.16 U	0.16 U	0.16 U	0.13 U	0.16 U	0.16 U	0.65 U	0.16 U
Bromoform	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.64 U	0.19 U	0.19 U	3.2 U	0.19 U
Bromomethane	ug/L	0.21 U	0.21 U	0.21 U	0.21 U	0.41 U	0.21 U	0.21 U	2.1 U	0.21 U
Carbon disulfide	ug/L	0.45 U	0.45 U	0.45 U	0.45 U	0.13 U	0.45 U	0.45 U	0.65 U	0.45 U
Carbon tetrachloride	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.13 U	0.19 U	0.19 U	0.65 U	0.19 U
Chlorobenzene	ug/L	0.17 U	0.98 J	0.17 U	0.17 U	0.15 U	0.17 U	0.17 U	0.75 U	0.17 U
Chlorodibromomethane	ug/L	0.17 U	0.17 U	0.17 U	0.17 U	0.18 U	0.17 U	0.17 U	0.9 U	0.17 U
Chloroethane	ug/L	0.41 U	0.41 U	0.41 U	0.41 U	0.29 U	7.8	0.41 U	1.5 U	0.41 U
Chloroform	ug/L	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.8 U	0.16 U
Chloromethane	ug/L	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.5 U	0.3 U
cis-1,2-Dichloroethene	ug/L	0.15 U	0.15 U	0.15 U	0.15 U	0.17 U	0.89 J	0.15 U	0.85 U	0.15 U
cis-1,3-Dichloropropene	ug/L	0.16 U	0.16 U	0.16 U	0.16 U	0.14 U	0.16 U	0.16 U	0.7 U	0.16 U
Cyclohexane	ug/L	0.28 U	0.28 U	0.28 U	0.28 U	0.12 U	0.28 U	0.28 U	0.6 U	0.28 U
Dichlorobromomethane	ug/L	0.17 U	0.17 U	0.17 U	0.17 U	0.15 U	0.17 U	0.17 U	0.75 U	0.17 U
Dichlorodifluoromethane	ug/L	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	1.6 U	0.31 U
Ethylbenzene	ug/L	0.16 U	0.16 U	0.16 U	0.16 U	0.17 U	0.16 U	0.16 U	0.85 U	0.16 U
Ethylene Dibromide	ug/L	0.18 U	0.18 U	0.18 U	0.18 U	0.24 U	0.18 U	0.18 U	1.2 U	0.18 U
Isopropylbenzene	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.13 U	0.19 U	0.19 U	0.65 U	0.19 U
Methyl acetate	ug/L	1.6 U	1.6 U	1.6 U	1.6 U	0.38 U	1.6 U	1.6 U	1.9 U	1.6 U
Methyl tert-butyl ether	ug/L	0.25 U	0.25 U	0.25 U	0.25 U	0.17 U	0.25 U	0.25 U	0.85 U	0.25 U
Methylcyclohexane	ug/L	0.36 U	0.36 U	0.36 U	0.36 U	0.13 U	0.36 U	0.36 U	0.65 U	0.36 U
Methylene Chloride	ug/L	0.32 U	0.32 U	0.32 U	0.32 U	0.33 U	0.32 U	0.32 U	5 U	0.32 U
Styrene	ug/L	0.17 U	0.17 U	0.17 U	0.17 U	0.11 U	0.17 U	0.17 U	0.55 U	0.17 U
Tetrachloroethene	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.29 U	0.2 U	0.2 U	1.5 U	0.2 U
Toluene	ug/L	0.17 U	1 U	0.17 U	0.17 U	0.13 U	0.17 U	0.17 U	0.65 U	0.17 U
trans-1,2-Dichloroethene	ug/L	0.15 U	0.15 U	0.15 U	0.15 U	0.19 U	0.15 U	0.15 U	0.95 U	0.15 U
trans-1,3-Dichloropropene	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.95 U	0.19 U
Trichloroethene	ug/L	0.16 U	0.16 U	0.16 U	0.16 U	0.17 U	0.16 U	0.16 U	0.85 U	0.16 U
Trichlorofluoromethane	ug/L	0.29 U	0.29 U	0.29 U	0.29 U	0.21 U	0.29 U	0.29 U	1.1 U	0.29 U
Vinyl chloride	ug/L	2.5	0.1 U	0.1 U	0.1 U	0.22 U	2.9	0.1 U	1.1 U	0.1 U
Xylenes, Total	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.28 U	0.19 U	0.19 U	1.4 U	0.19 U

Table 7. Summary of Constituent Results May 2013
Industrial Excess Landfill, Uniontown, Ohio

	Sample ID	MW-14i NEW	MW-16 NEW	MW-17 NEW	MW-18i	MW-18s	MW-21s	MW-22i	MW-23s	MW-25s
	Sample Date	05/14/13	05/13/13	05/13/13	05/10/13	05/10/13	05/14/13	05/10/13	05/16/13	05/09/13
	Field ID	MW-14i NEW	MW-16 NEW	MW-17 NEW	MW-18I	MW-18S	MW-21s	MW-22I	MW-23S	MW-25S
Analyte	**Units**									
Conventionals and Inorganics										
Ammonia (as N)	mg/L	0.98	0.035 U	0.044 J	0.54 B	0.2	12	0.13 J	0.61 J	0.064 J
Chloride	mg/L	190	84	65	54	14	160	100	9.3	63
Nitrate Nitrite as N	mg/L	0.014 U	5.5	0.071 J	0.014 U	7	0.034 J	0.014 U	0.092 J	3
Sulfate	mg/L	54	54	69	36	62	33	80	21	70
Sulfide	mg/L	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	1.2	0.67 U	0.67 U	0.67 U
Cyanide, Total	mg/L	0.0032 U	0.0032 U	0.0032 U	0.0032 U	0.0032 U	0.0032 U	0.0032 U	0.0032 J	0.0032 U
Ferrous Iron	mg/L	0.2 J	0.033 J	0.043 J	0.13 J	0.018 UJ	2.6 J	1 J	0.82 J	0.033 J
Aluminum	ug/L	13000	48000	36000	16 J	6900	120 J	2000	6600 J	800
Antimony	ug/L	0.45 U	2.5 B	0.86 JB	0.59 U	0.74 U	0.27 U	0.99 U	0.9 U	0.29 U
Arsenic	ug/L	7.1 B	160 B	29 B	4.8 B	13 B	4.7 B	2.7 J B	11 B	1.5 J B
Barium	ug/L	340 B	390 B	380 B	390 B	160 B	270 B	260 B	230 B	110 B
Beryllium	ug/L	0.81 J	3.6	2.3	0.031 U	0.52 U	0.086 U	0.3 U	0.42 J	0.052 J
Cadmium	ug/L	0.067 J	1.3	0.38 J	0.035 J	0.41 J	0.026 U	0.31 J	0.28 J	0.084 J
Calcium	ug/L	130000 B	190000 B	120000 B	84000 B	170000 B	120000 B	110000 B	110000 B	110000 B
Chromium	ug/L	22	190	100	730	170	1.7 U	620	470 J	120 B
Cobalt	ug/L	7.8	61	39	1.6	9.9	2.2	2.5	12	8.6
Copper	ug/L	22 B	210 B	66 B	11 B	42 B	12 B	14 B	41 B	19 B
Iron	ug/L	22000 B	180000	76000	8600	18000	8200 B	5400	28000	13000 B
Lead	ug/L	10	150	43	0.65 J	13	0.74 U	3.6	17 J	3.5
Magnesium	ug/L	35000 B	64000 B	36000 B	20000 B	41000 B	60000 B	25000 B	28000 B	23000 B
Manganese	ug/L	330 B	2700	1200	150 B	1300 B	560 B	150 B	640 B	460 B
Nickel	ug/L	34 U	160	93	100	120	58 B	180	240 J	650 B
Potassium	ug/L	6800 B	11000	11000	2200	3700	25000 B	1900	4300 B	2600 B
Selenium	ug/L	1.5 J	28	5	0.34 U	1.3 J	0.34 U	0.56 J	0.97 J	0.34 U
Silver	ug/L	0.046 U	0.3 J	0.1 J	0.0083 U	0.047 J	0.009 U	0.082 J	0.085 U	0.014 J
Sodium	ug/L	120000 B	57000 B	22000 B	35000 B	16000 B	120000 B	38000 B	6500 B	39000 B
Thallium	ug/L	0.4 U	1.1	1	0.4 U	1.2 U	0.4 U	1.3 U	0.4 U	0.4 U
Zinc	ug/L	62 U	720 B	230 B	7.3 U	97 B	7.1 U	22 U	120 B	40 U
Mercury	ug/L	0.12 U	0.37	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Semi-volatile Organics										
1,1'-Biphenyl	ug/L	0.76 U	0.76 U	0.76 U	0.76 UJ	0.76 UJ	0.76 U	0.76 U	0.76 U	0.76 U
2,2'-oxybis[1-chloropropane]	ug/L	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
2,4,5-Trichlorophenol	ug/L	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U
2,4,6-Trichlorophenol	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
2,4-Dichlorophenol	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
2,4-Dimethylphenol	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
2,4-Dinitrophenol	ug/L	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U

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	Sample ID	MW-14i NEW	MW-16 NEW	MW-17 NEW	MW-18i	MW-18s	MW-21s	MW-22i	MW-23s	MW-25s
	Sample Date	05/14/13	05/13/13	05/13/13	05/10/13	05/10/13	05/14/13	05/10/13	05/16/13	05/09/13
	Field ID	MW-14i NEW	MW-16 NEW	MW-17 NEW	MW-18I	MW-18S	MW-21s	MW-22I	MW-23S	MW-25S
Analyte	Units									
2,4-Dinitrotoluene	ug/L	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
2,6-Dinitrotoluene	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
2-Chloronaphthalene	ug/L	0.095 U	0.095 U	0.095 U	0.095 UJ	0.095 UJ	0.095 U	0.095 U	0.095 U	0.095 U
2-Chlorophenol	ug/L	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
2-Methylnaphthalene	ug/L	0.095 U	0.1 J	0.095 U	0.095 UJ	0.095 UJ	0.095 U	0.095 U	0.095 U	0.095 U
2-Methylphenol	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
2-Nitroaniline	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
2-Nitrophenol	ug/L	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
3 & 4 Methylphenol	ug/L	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U
3,3'-Dichlorobenzidine	ug/L	0.35 U	0.35 U	0.35 U	0.35 UJ	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
3-Nitroaniline	ug/L	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
4,6-Dinitro-2-methylphenol	ug/L	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U
4-Bromophenyl phenyl ether	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
4-Chloro-3-methylphenol	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
4-Chloroaniline	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
4-Chlorophenyl phenyl ether	ug/L	0.29 U	0.29 U	0.29 U	0.29 UJ	0.29 UJ	0.29 U	0.29 U	0.29 U	0.29 U
4-Nitroaniline	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
4-Nitrophenol	ug/L	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U
Acenaphthene	ug/L	0.095 U	0.095 U	0.095 U	0.095 UJ	0.095 UJ	0.095 U	0.095 U	0.095 U	0.095 U
Acenaphthylene	ug/L	0.095 U	0.095 U	0.095 U	0.095 UJ	0.095 UJ	0.095 U	0.095 U	0.095 U	0.095 U
Acetophenone	ug/L	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Anthracene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Atrazine	ug/L	0.32 U	0.32 U	0.32 U	0.32 U *	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Benzaldehyde	ug/L	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
Benzo[a]anthracene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Benzo[a]pyrene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Benzo[b]fluoranthene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Benzo[g,h,i]perylene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Benzo[k]fluoranthene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Bis(2-chloroethoxy)methane	ug/L	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Bis(2-chloroethyl)ether	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Bis(2-ethylhexyl) phthalate	ug/L	0.76 U	0.88 J	0.76 U	0.76 U	0.76 U	0.76 U	4.9	1 J	0.76 U
Butyl benzyl phthalate	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
Caprolactam	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
Carbazole	ug/L	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Chrysene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Dibenz(a,h)anthracene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Dibenzofuran	ug/L	0.095 U	0.095 U	0.095 U	0.095 UJ	0.095 UJ	0.095 U	0.095 U	0.095 U	0.095 U

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	Sample Date	05/14/13	05/13/13	05/13/13	05/10/13	05/10/13	05/14/13	05/10/13	05/16/13	05/09/13
	Field ID	MW-14i NEW	MW-16 NEW	MW-17 NEW	MW-18I	MW-18S	MW-21s	MW-22I	MW-23S	MW-25S
Analyte	**Units**									
Diethyl phthalate	ug/L	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
Dimethyl phthalate	ug/L	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
Di-n-butyl phthalate	ug/L	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.69 J	0.64 U
Di-n-octyl phthalate	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
Fluoranthene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Fluorene	ug/L	0.095 U	0.095 U	0.095 U	0.095 UJ	0.095 UJ	0.095 U	0.095 U	0.095 U	0.095 U
Hexachlorobenzene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Hexachlorobutadiene	ug/L	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Hexachlorocyclopentadiene	ug/L	0.76 U	0.76 UJ	0.76 UJ	0.76 UJ	0.76 UJ	0.76 U	0.76 UJ	0.76 UJ	0.76 U
Hexachloroethane	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
Indeno[1,2,3-cd]pyrene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Isophorone	ug/L	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Naphthalene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Nitrobenzene	ug/L	0.038 U	0.038 U	0.038 U	0.038 U	0.038 U	0.038 U	0.038 U	0.038 U	0.038 U
N-Nitrosodi-n-propylamine	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
N-Nitrosodiphenylamine	ug/L	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Pentachlorophenol	ug/L	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U
Phenanthrene	ug/L	0.095 U	0.13 J	0.095 U	0.095 UJ	0.095 UJ	0.095 U	0.095 U	0.095 U	0.095 U
Phenol	ug/L	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	1.6	0.57 U
Pyrene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Volatile Organics										
1,1,1-Trichloroethane	ug/L	0.16 U	0.22 U	0.22 U	0.22 U	0.22 U	0.16 U	0.22 U	0.16 U	0.22 U
1,1,2,2-Tetrachloroethane	ug/L	0.21 U	0.18 U	0.18 U	0.18 U	0.18 U	0.21 U	0.18 U	0.21 U	0.18 U
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	0.42 U	0.28 U	0.28 U	0.28 U	0.28 U	0.42 U	0.28 U	0.42 U	0.28 U
1,1,2-Trichloroethane	ug/L	0.27 U	0.27 U	0.27 U	0.27 UJ	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
1,1-Dichloroethane	ug/L	0.22 U	0.15 U	0.15 U	0.15 UJ	0.15 U	1 J	0.15 U	1.3	0.15 U
1,1-Dichloroethene	ug/L	0.23 U	0.19 U	0.19 U	0.19 U	0.19 U	0.23 U	0.19 U	0.23 U	0.19 U
1,2,4-Trichlorobenzene	ug/L	0.21 U	0.15 U	0.15 U	0.15 U	0.15 U	0.21 U	0.15 U	0.21 U	0.15 U
1,2-Dibromo-3-Chloropropane	ug/L	0.47 U	0.67 U	0.67 U	0.67 U	0.67 U	0.47 U	0.67 U	0.47 U	0.67 U
1,2-Dichlorobenzene	ug/L	0.15 U	0.13 U	0.13 U	0.13 UJ	0.13 U	0.15 U	0.13 U	0.15 U	0.13 U
1,2-Dichloroethane	ug/L	0.13 U	0.22 U	0.22 U	0.22 U	0.22 U	6.3 J	0.22 U	0.13 U	0.22 U
1,2-Dichloropropane	ug/L	0.18 U	0.18 U	0.18 U	0.18 UJ	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
1,3-Dichlorobenzene	ug/L	0.13 U	0.14 U	0.14 U	0.14 UJ	0.14 U	0.13 U	0.14 U	0.13 U	0.14 U
1,4-Dichlorobenzene	ug/L	0.16 U	0.13 U	0.13 U	0.13 UJ	0.13 U	0.16 U	0.13 U	0.16 U	0.13 U
2-Butanone (MEK)	ug/L	2 U	0.57 U	0.57 U	0.57 U	0.57 U	2 U	0.57 U	2 U	0.57 U
2-Hexanone	ug/L	1.7 U	0.41 U	0.41 U	0.41 U	0.41 U	1.7 U	0.41 U	1.7 U	0.41 U
4-Methyl-2-pentanone (MIBK)	ug/L	0.98 U	0.32 U	0.32 U	0.32 U	0.32 U	0.98 U	0.32 U	0.98 U	0.32 U
Acetone	ug/L	1.9 U	1.1 U	1.1 U	1.1 U	1.1 U	1.9 U	1.1 U	1.9 U	1.1 U

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	Sample ID	MW-14i NEW	MW-16 NEW	MW-17 NEW	MW-18i	MW-18s	MW-21s	MW-22i	MW-23s	MW-25s
	Sample Date	05/14/13	05/13/13	05/13/13	05/10/13	05/10/13	05/14/13	05/10/13	05/16/13	05/09/13
	Field ID	MW-14i NEW	MW-16 NEW	MW-17 NEW	MW-18I	MW-18S	MW-21s	MW-22I	MW-23S	MW-25S
Analyte	**Units**									
Benzene	ug/L	0.16 U	0.15 J	0.13 U	0.13 UJ	0.13 U	1.5	0.13 U	0.16 U	0.13 U
Bromoform	ug/L	0.19 U	0.64 U	0.64 U	0.64 U	0.64 U	0.19 U	0.64 U	0.19 U	0.64 U
Bromomethane	ug/L	0.21 U	0.41 U	0.41 U	0.41 U	0.41 U	0.21 U	0.41 U	0.21 U	0.41 U
Carbon disulfide	ug/L	0.45 U	0.13 U	0.13 U	0.13 U	0.13 U	0.45 U	0.13 U	0.45 U	0.13 U
Carbon tetrachloride	ug/L	0.19 U	0.13 U	0.13 U	0.13 U	0.13 U	0.19 U	0.13 U	0.19 U	0.13 U
Chlorobenzene	ug/L	0.17 U	0.15 U	0.15 U	0.15 UJ	0.15 U	0.17 U	0.15 U	0.17 U	0.15 U
Chlorodibromomethane	ug/L	0.17 U	0.18 U	0.18 U	0.18 U	0.18 U	0.17 U	0.18 U	0.17 U	0.18 U
Chloroethane	ug/L	0.41 U	0.29 U	0.29 U	0.29 U	0.29 U	17	0.29 U	0.41 U	0.29 U
Chloroform	ug/L	0.16 U	0.16 U	0.16 U	0.16 UJ	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Chloromethane	ug/L	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
cis-1,2-Dichloroethene	ug/L	0.15 U	0.17 U	0.17 U	0.17 UJ	0.17 U	15	0.17 U	2.7	0.17 U
cis-1,3-Dichloropropene	ug/L	0.16 U	0.14 U	0.14 U	0.14 U	0.14 U	0.16 U	0.14 U	0.16 U	0.14 U
Cyclohexane	ug/L	0.28 U	0.13 J	0.12 U	0.12 U	0.12 U	0.28 U	0.12 U	0.28 U	0.12 U
Dichlorobromomethane	ug/L	0.17 U	0.15 U	0.15 U	0.15 UJ	0.15 U	0.17 U	0.15 U	0.17 U	0.15 U
Dichlorodifluoromethane	ug/L	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Ethylbenzene	ug/L	0.16 U	0.17 U	0.17 U	0.17 UJ	0.17 U	0.16 U	0.17 U	0.16 U	0.17 U
Ethylene Dibromide	ug/L	0.18 U	0.24 U	0.24 U	0.24 UJ	0.24 U	0.18 U	0.24 U	0.18 U	0.24 U
Isopropylbenzene	ug/L	0.19 U	0.13 U	0.13 U	0.13 UJ	0.13 U	0.19 U	0.13 U	0.19 U	0.13 U
Methyl acetate	ug/L	1.6 U	0.38 U	0.38 U	0.38 U	0.38 U	1.6 U	0.38 U	1.6 U	0.38 U
Methyl tert-butyl ether	ug/L	0.25 U	0.17 U	0.17 U	0.17 U	0.17 U	0.25 J	0.17 U	0.25 U	0.17 U
Methylcyclohexane	ug/L	0.36 U	0.62 J	0.13 U	0.13 U	0.13 U	0.36 U	0.13 U	0.36 U	0.13 U
Methylene Chloride	ug/L	0.32 U	0.33 U	0.33 U	0.33 UJ	0.33 U	0.32 U	0.33 U	0.32 U	0.33 U
Styrene	ug/L	0.17 U	0.11 U	0.11 U	0.11 UJ	0.11 U	0.17 U	0.11 U	0.17 U	0.11 U
Tetrachloroethene	ug/L	0.2 U	0.29 U	0.29 U	0.29 U	0.79 J	0.2 U	0.29 U	0.2 U	0.29 U
Toluene	ug/L	0.17 U	1 U	0.13 U	0.13 UJ	0.13 U	0.17 U	0.13 U	0.17 U	0.13 U
trans-1,2-Dichloroethene	ug/L	0.15 U	0.19 U	0.19 U	0.19 UJ	0.19 U	0.28 J	0.19 U	0.15 U	0.19 U
trans-1,3-Dichloropropene	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Trichloroethene	ug/L	0.16 U	0.17 U	0.17 U	0.17 U	0.17 U	0.61 J	0.17 U	0.42 J	0.17 U
Trichlorofluoromethane	ug/L	0.29 U	0.21 U	0.21 U	0.21 U	0.21 U	0.29 U	0.21 U	0.29 U	0.21 U
Vinyl chloride	ug/L	0.1 U	0.22 U	0.22 U	0.22 U	0.22 U	2.2	0.22 U	0.1 U	0.22 U
Xylenes, Total	ug/L	0.19 U	0.28 U	0.28 U	0.28 UJ	0.28 U	0.19 U	0.28 U	0.19 U	0.28 U

Table 7. Summary of Constituent Results May 2013
Industrial Excess Landfill, Uniontown, Ohio

	Sample ID	MW-26s	MW-27i	MW-29	MW-30	MW-31
	Sample Date	05/09/13	05/09/13	05/14/13	05/09/13	05/14/13
	Field ID	MW-26S	MW-27I	MW-29	MW-30	MW-31
Analyte	**Units**					
Conventionals and Inorganics						
Ammonia (as N)	mg/L	0.52	0.29	4.2	0.16 J	0.066 U
Chloride	mg/L	240	200	320	98	18
Nitrate Nitrite as N	mg/L	0.014 U	0.014 U	0.014 U	0.17	0.29
Sulfate	mg/L	63	76	78	91	21
Sulfide	mg/L	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U
Cyanide, Total	mg/L	0.0032 U	0.0032 U	0.0032 U	0.0032 U	0.0032 U
Ferrous Iron	mg/L	0.18 J	0.12 J	1.3 J	0.053 J	0.15 J
Aluminum	ug/L	3900	560	12000	28000	5400
Antimony	ug/L	0.49 U	0.25 U	1 U	0.88 U	0.64 U
Arsenic	ug/L	6 B	8.5 B	15 B	29 B	5.9 B
Barium	ug/L	690 B	320 B	190 B	250 B	98 B
Beryllium	ug/L	0.24 J	0.067 J	0.76 J	1.5	0.4 J
Cadmium	ug/L	0.099 J	0.11 J	0.32 J	0.39 J	0.33 J
Calcium	ug/L	140000 B	140000 B	160000 B	120000 B	41000 B
Chromium	ug/L	63 B	280 B	350	62 B	86
Cobalt	ug/L	3.7	1.1	16	19	5
Copper	ug/L	9.8 B	4.3 B	81 B	71 B	30 B
Iron	ug/L	12000 B	4500 B	35000 B	50000 B	11000 B
Lead	ug/L	5	0.75 J	31	32	5.7
Magnesium	ug/L	35000 B	33000 B	52000 B	31000 B	8800 B
Manganese	ug/L	220 B	140 B	600 B	1100 B	230 B
Nickel	ug/L	51 B	72 B	260 B	53 B	54 B
Potassium	ug/L	3500 B	2700 B	13000 B	11000 B	4800 B
Selenium	ug/L	0.47 J	0.34 U	1.9 J	3.8 J	0.57 J
Silver	ug/L	0.023 J	0.013 J	0.11 U	0.093 J	0.1 U
Sodium	ug/L	130000 B	95000 B	150000 B	50000 B	7700 B
Thallium	ug/L	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Zinc	ug/L	31 U	24 U	240 B	180 B	100 U
Mercury	ug/L	0.12 U	0.12 U	0.18 J	0.12 U	0.12 U
Semi-volatile Organics						
1,1'-Biphenyl	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
2,2'-oxybis[1-chloropropane]	ug/L	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
2,4,5-Trichlorophenol	ug/L	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U
2,4,6-Trichlorophenol	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
2,4-Dichlorophenol	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
2,4-Dimethylphenol	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
2,4-Dinitrophenol	ug/L	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U

Table 7. Summary of Constituent Results May 2013
Industrial Excess Landfill, Uniontown, Ohio

	Sample ID	MW-26s	MW-27i	MW-29	MW-30	MW-31
	Sample Date	05/09/13	05/09/13	05/14/13	05/09/13	05/14/13
	Field ID	MW-26S	MW-27I	MW-29	MW-30	MW-31
Analyte	Units					
2,4-Dinitrotoluene	ug/L	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
2,6-Dinitrotoluene	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
2-Chloronaphthalene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
2-Chlorophenol	ug/L	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
2-Methylnaphthalene	ug/L	0.095 U	0.095 U	0.095 U	0.29 J	0.095 U
2-Methylphenol	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
2-Nitroaniline	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
2-Nitrophenol	ug/L	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
3 & 4 Methylphenol	ug/L	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U
3,3'-Dichlorobenzidine	ug/L	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
3-Nitroaniline	ug/L	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
4,6-Dinitro-2-methylphenol	ug/L	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U
4-Bromophenyl phenyl ether	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
4-Chloro-3-methylphenol	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
4-Chloroaniline	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
4-Chlorophenyl phenyl ether	ug/L	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U
4-Nitroaniline	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
4-Nitrophenol	ug/L	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U
Acenaphthene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Acenaphthylene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Acetophenone	ug/L	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Anthracene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Atrazine	ug/L	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Benzaldehyde	ug/L	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
Benzo[a]anthracene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Benzo[a]pyrene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Benzo[b]fluoranthene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Benzo[g,h,i]perylene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Benzo[k]fluoranthene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Bis(2-chloroethoxy)methane	ug/L	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Bis(2-chloroethyl)ether	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Bis(2-ethylhexyl) phthalate	ug/L	0.76 U	2.7	0.96 J	0.76 U	0.76 U
Butyl benzyl phthalate	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
Caprolactam	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
Carbazole	ug/L	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Chrysene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Dibenz(a,h)anthracene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Dibenzofuran	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U

Table 7. Summary of Constituent Results May 2013
Industrial Excess Landfill, Uniontown, Ohio

	Sample ID	MW-26s	MW-27i	MW-29	MW-30	MW-31
	Sample Date	05/09/13	05/09/13	05/14/13	05/09/13	05/14/13
	Field ID	MW-26S	MW-27I	MW-29	MW-30	MW-31
Analyte	**Units**					
Diethyl phthalate	ug/L	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
Dimethyl phthalate	ug/L	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
Di-n-butyl phthalate	ug/L	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
Di-n-octyl phthalate	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
Fluoranthene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Fluorene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Hexachlorobenzene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Hexachlorobutadiene	ug/L	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Hexachlorocyclopentadiene	ug/L	0.76 U	0.76 U	0.76 U	0.76 R	0.76 U
Hexachloroethane	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
Indeno[1,2,3-cd]pyrene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Isophorone	ug/L	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Naphthalene	ug/L	0.095 U	0.095 U	0.095 U	0.15 J	0.095 U
Nitrobenzene	ug/L	0.038 U	0.038 U	0.038 U	0.038 U	0.038 U
N-Nitrosodi-n-propylamine	ug/L	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
N-Nitrosodiphenylamine	ug/L	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Pentachlorophenol	ug/L	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U
Phenanthrene	ug/L	0.095 U	0.095 U	0.095 U	0.11 J	0.095 U
Phenol	ug/L	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
Pyrene	ug/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Volatile Organics						
1,1,1-Trichloroethane	ug/L	0.22 U	0.22 U	0.64 U	0.22 U	0.16 U
1,1,2,2-Tetrachloroethane	ug/L	0.18 U	0.18 U	0.84 U	0.18 U	0.21 U
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	0.28 U	0.28 U	1.7 U	0.28 U	0.42 U
1,1,2-Trichloroethane	ug/L	0.27 U	0.27 U	1.1 U	0.27 U	0.27 U
1,1-Dichloroethane	ug/L	0.15 U	0.15 U	26	0.15 U	0.22 U
1,1-Dichloroethene	ug/L	0.19 U	0.19 U	1.5 J	0.19 U	0.23 U
1,2,4-Trichlorobenzene	ug/L	0.15 U	0.15 U	0.84 U	0.15 U	0.21 U
1,2-Dibromo-3-Chloropropane	ug/L	0.67 U	0.67 U	1.9 U	0.67 U	0.47 U
1,2-Dichlorobenzene	ug/L	0.13 U	0.13 U	0.6 U	0.13 U	0.15 U
1,2-Dichloroethane	ug/L	0.22 U	0.22 U	19	0.22 U	0.13 U
1,2-Dichloropropane	ug/L	0.18 U	0.18 U	0.72 U	0.18 U	0.18 U
1,3-Dichlorobenzene	ug/L	0.14 U	0.14 U	0.52 U	0.14 U	0.13 U
1,4-Dichlorobenzene	ug/L	0.13 U	0.13 U	0.64 U	0.13 U	0.16 U
2-Butanone (MEK)	ug/L	0.57 U	0.57 U	8 U	0.57 U	2 U
2-Hexanone	ug/L	0.41 U	0.41 U	6.8 U	0.41 U	1.7 U
4-Methyl-2-pentanone (MIBK)	ug/L	0.32 U	0.32 U	3.9 U	0.32 U	0.98 U
Acetone	ug/L	1.1 U	1.1 U	7.6 U	1.1 U	1.9 U

Table 7. Summary of Constituent Results May 2013
Industrial Excess Landfill, Uniontown, Ohio

	Sample ID	MW-26s	MW-27i	MW-29	MW-30	MW-31
	Sample Date	05/09/13	05/09/13	05/14/13	05/09/13	05/14/13
	Field ID	MW-26S	MW-27I	MW-29	MW-30	MW-31
Analyte	Units					
Benzene	ug/L	0.13 U	0.13 U	0.64 U	0.13 U	0.16 U
Bromoform	ug/L	0.64 U	0.64 U	0.76 U	0.64 U	0.19 U
Bromomethane	ug/L	0.41 U	0.41 U	0.84 U	0.41 U	0.21 U
Carbon disulfide	ug/L	0.13 U	0.13 U	1.8 U	0.24 J	0.45 U
Carbon tetrachloride	ug/L	0.13 U	0.13 U	0.76 U	0.13 U	0.19 U
Chlorobenzene	ug/L	0.15 U	0.15 U	0.68 U	0.15 U	0.17 U
Chlorodibromomethane	ug/L	0.18 U	0.18 U	0.68 U	0.18 U	0.17 U
Chloroethane	ug/L	0.29 U	0.29 U	18	0.29 U	0.41 U
Chloroform	ug/L	0.16 U	0.16 U	0.64 U	0.16 U	0.16 U
Chloromethane	ug/L	0.3 U	0.3 U	1.2 U	0.3 U	0.3 U
cis-1,2-Dichloroethene	ug/L	0.17 U	0.17 U	64	0.17 U	0.15 U
cis-1,3-Dichloropropene	ug/L	0.14 U	0.14 U	0.64 U	0.14 U	0.16 U
Cyclohexane	ug/L	0.12 U	0.12 U	1.1 U	0.12 U	0.28 U
Dichlorobromomethane	ug/L	0.15 U	0.15 U	0.68 U	0.15 U	0.17 U
Dichlorodifluoromethane	ug/L	0.31 U	0.31 U	1.2 U	0.31 U	0.31 U
Ethylbenzene	ug/L	0.17 U	0.17 U	0.64 U	0.17 U	0.16 U
Ethylene Dibromide	ug/L	0.24 U	0.24 U	0.72 U	0.24 U	0.18 U
Isopropylbenzene	ug/L	0.13 U	0.13 U	0.76 U	0.13 U	0.19 U
Methyl acetate	ug/L	0.38 U	0.38 U	6.6 U	0.38 U	1.6 U
Methyl tert-butyl ether	ug/L	0.17 U	0.17 U	1 U	0.17 U	0.25 U
Methylcyclohexane	ug/L	0.13 U	0.13 U	1.4 U	0.13 U	0.36 U
Methylene Chloride	ug/L	0.33 U	0.33 U	1.3 U	0.33 U	0.32 U
Styrene	ug/L	0.11 U	0.11 U	0.68 U	0.11 U	0.17 U
Tetrachloroethene	ug/L	0.29 U	0.29 U	0.8 U	0.29 U	0.2 U
Toluene	ug/L	0.13 U	0.13 U	0.68 U	0.13 U	0.17 U
trans-1,2-Dichloroethene	ug/L	0.19 U	0.19 U	0.6 U	0.19 U	0.15 U
trans-1,3-Dichloropropene	ug/L	0.19 U	0.19 U	0.76 U	0.19 U	0.19 U
Trichloroethene	ug/L	0.17 U	0.17 U	0.64 U	0.17 U	0.16 U
Trichlorofluoromethane	ug/L	0.21 U	0.21 U	1.2 U	0.21 U	0.29 U
Vinyl chloride	ug/L	0.22 U	0.22 U	2.6 J	0.22 U	0.1 U
Xylenes, Total	ug/L	0.28 U	0.28 U	0.76 U	0.28 U	0.19 U

NOTES:
B - analyte found in blank
J - estimated concentratio

Table 7. Summary of Constituent Results May 2015
Industrial Excess Landfill, Uniontown, Ohio

Sample ID		MW-01i	MW-01s	MW-03i	MW-07i	MW-11i	MW-11s	MW-13i (NEW)	MW-14i (NEW)	MW-16 (NEW)	MW-17 (NEW)	MW-18i	MW-18s	MW-21s	MW-22i	MW-23s	MW-25s	MW-26s	MW-27i	MW-29	MW-30
Sample Date		05/24/15	05/19/15	05/23/15	05/25/15	05/23/15	05/20/15	05/20/15	05/20/15	05/21/15	05/21/15	05/21/15	05/22/15	05/22/15	05/18/15	05/18/15	05/23/15	05/20/15	05/19/15	05/23/15	05/22/15
Field ID		MW-01I	MW-1-S	MW-03I	MW-07I	MW-11I	MW-11S	MW-13 (NEW)	MW-14 (NEW)	MW-16 (NEW)	MW-17 (NEW)	MW-18I	MW-18S	MW-21S	MW-22I	MW-23S	MW-25S	MW-26S	MW-27I	MW-29	MW-30
Analyte	**Units**																				
Conventionals and Inorganics																					
Ammonia (as N)	mg/L	4.2	0.72	7	0.16 J	4.2	0.11 U	9.5	0.66	0.11 U	0.11 U	0.5	0.11 U	1.9	0.26	12	0.2	0.46	0.39	4	0.21
Chloride	mg/L	250	4	92	53 J	260	70	220	190	110	75	53	6.4	190	120	22	110	260	230	310	120
Nitrate Nitrite as N	mg/L	0.01 U	0.01 U	0.01 U	0.32	0.01 U	0.16	0.01 U	0.01 U	3.9	0.01 U	0.01 U	2.1	0.01 U	0.01 U	0.01 U	1.2	0.01 U	0.01 U	0.01 U	0.01 U
Sulfate	mg/L	67	16	40	29 J	67	140	22	67	54	82	43	33	47	85	15	93	55	69	75	100
Sulfide	mg/L	0.41 U	0.41 U	0.41 U	0.41 U	0.98 J	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	14	0.41 U	0.41 U
Sulfide as H2S	mg/L	0.41 U	0.41 U	0.41 U	0.41 U	1	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	15	0.41 U	0.41 U
Cyanide, Total	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Ferrous Iron	mg/L	0.036 UJ	0.48 J	0.066 J	0.018 UJ	0.036 UJ	0.018 UJ	1.1 J	0.64 J	0.022 J	0.022 J	0.018 UJ	0.018 UJ	0.045 J	0.11 J	0.85 J	0.036 UJ	0.2 J	0.043 J	0.043 J	0.096 J
Aluminum	ug/L	9 U	21 J	9 U	130	50 U	210 B	50 U	2000 B	2100	2800	50 U	11000	160	710	2600	3900	1500 B	960	820	4900
Antimony	ug/L	0.16 U	2 U	0.16 U	2 U	2 U	1.7 J	0.16 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Arsenic	ug/L	3.7 B	7.7 B	3 U	3.6 B	3.5 B	5 B	4.2 B	4.9 B	6.5 B	4.2 B	5.4 B	20 B	4.4 B	2.2 J,B	8.6 B	23 B	5.5 B	20 B	4.7 B	30 B
Barium	ug/L	240	360	960	99	230	90	610	240	100	180	490	180	250	270	430	150	620	370	120	150
Beryllium	ug/L	0.053 U	1 U	0.053 U	0.053 U	0.053 U	0.47 J,B	1 U	1 U	0.36 J	1 U	1 U	0.58 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Cadmium	ug/L	0.061 U	1 U	0.061 U	1 U	0.061 U	1 U	1 U	0.35 J,B	0.52 J	1 U	1 U	0.83 J	0.061 U	1 U	0.55 J,B	0.061 U	1 U	1 U	1 U	1 U
Calcium	ug/L	140000	160000	110000	20000	140000	200000 B	130000 B	130000 B	130000	110000	82000	180000	110000	120000	130000	110000	140000 B	130000	150000	120000
Chromium	ug/L	2.1 U	2.3 U	2.2 U	17 B	3.4 U	900 B	5 U	12 B	9.5 B	9.8 B	670 B	240 B	5.9 U	1300 B	7.9 B	8.9 B	29 B	380 B	27 B	9 B
Cobalt	ug/L	0.36 J,B	3.6 B	1 U	0.58 J,B	0.37 J,B	14 B	1.3 B	2.5 B	2.3 B	2.3 B	1.6 B	15 B	2.1 B	1.6	3.1	3.2 B	1.8 B	1.4 B	1.7 B	3 B
Copper	ug/L	0.75 U	15 B	0.75 U	26 B	3.9 U	33 B	0.75 U	4.9 B	7.9 U	5.9 U	13 B	51 B	3.8 U	8.5	8.3	8.9 B	4.3 U	26 B	9.2 B	7.9 U
Iron	ug/L	6100	9200	5000	2600	5600	20000 B	6000 B	9300 B	5300 B	4700 B	8500 B	28000 B	7300	4100	18000	13000 B	8100 B	6500	7900 B	14000 B
Lead	ug/L	0.11 U	0.86 J	0.11 U	2.6	1 U	2.7 B	1 U	2.8 B	5.7 B	2.6	0.64 J	22	0.69 J	1.2 B	5.7 B	5	2.3 B	1.4	3.1	4.6
Magnesium	ug/L	47000	37000	31000	22000	46000	38000 B	41000 B	33000 B	30000	25000	20000	41000	53000	26000 B	46000 B	24000	36000 B	33000	46000	26000
Manganese	ug/L	71	2200	220	73	71	910	57	170	95	170	120	2300	460	120	280	790	150	150	100	850
Nickel	ug/L	48 B	6.5	8.3 B	21 B	44 B	120	24	14	6.8 B	7.6 B	75 B	160 B	50 B	200	15	12 B	46	59	60 B	11 B
Potassium	ug/L	13000 B	2100	4700 B	8100 B	13000 B	3300 B	12000 B	3700 B	2400 B	2700 B	2300 B	4500 B	24000 B	1700	15000	5800 B	2800 B	2800	11000 B	6400 B
Selenium	ug/L	5 U	1.5 J	5 U	5 U	5 U	5 U	5 U	5 U	2.6 J	5 U	5 U	1.7 J	5 U	5 U	1.6 J,B	5 U	5 U	0.71 J	5 U	5 U
Silver	ug/L	0.02 U	0.022 J	0.02 U	0.058 J	0.02 U	0.052 J	0.02 U	0.02 U	0.033 J	0.02 U	0.02 U	0.083 J	0.02 U	0.043 J	0.073 J	0.02 U	0.02 U	0.02 U	0.025 J	0.026 J
Sodium	ug/L	130000	3400 B	73000	85000	120000	33000 B	150000 B	100000 B	63000 B	29000 B	29000 B	6000 B	110000	39000 B	25000 B	50000	130000 B	91000 B	150000	53000 B
Thallium	ug/L	0.074 U	0.43 J	0.074 U	0.074 U	0.074 U	1 U	1 U	1 U	0.31 J	0.23 J	0.083 J	0.4 J	0.074 U	0.074 U	0.14 J	0.081 J	1 U	0.14 J	0.18 J	0.12 J
Zinc	ug/L	7.3 U	12 J	7.3 U	41	8.6 J	26 B	20 U	20 U	33 U	26 U	7.3 U	120 B	8.8 J	7.3 U	31	48	14 J,B	21	38	37 U
Mercury	ug/L	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U,F1	0.097 J	0.09 UJ	0.09 U
Semi-volatile Organics																					
1,1'-Biphenyl	ug/L	0.13 U	0.14 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.14 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
2,2'-oxybis[1-chloropropane]	ug/L	0.41 U	0.43 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.4 U	0.41 U	0.4 U	0.41 U	0.41 U	0.4 U	0.4 U	0.42 U	0.41 U	0.41 U	0.4 U	0.41 U	0.41 U
2,4,5-Trichlorophenol	ug/L	0.31 U	0.32 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.3 U	0.31 U	0.3 U	0.31 U	0.31 U	0.3 U	0.3 U	0.32 U	0.31 U	0.31 U	0.3 U	0.31 U	0.31 U
2,4,6-Trichlorophenol	ug/L	0.25 U	0.26 U	0.25 U	0.25 U	0.24 U	0.24 U	0.24 U	0.24 U	0.25 U	0.24 U	0.24 U	0.25 U	0.24 U	0.24 U	0.25 U	0.24 U	0.25 U	0.24 U	0.25 U	0.25 U
2,4-Dichlorophenol	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U	0.19 U	0.19 U	0.2 U	0.19 U	0.19 U	0.2 U	0.19 U	0.2 U	0.19 U	0.2 U	0.2 U
2,4-Dimethylphenol	ug/L	0.26 U	0.27 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.25 U	0.26 U	0.25 U	0.26 U	0.26 U	0.25 U	0.25 U	0.26 U	0.26 U	0.26 U	0.25 U	0.26 U	0.26 U
2,4-Dinitrophenol	ug/L	0.33 U	0.34 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U	0.33 U	0.32 U	0.33 U	0.33 U	0.32 U	0.32 U	0.34 U	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U
2,4-Dinitrotoluene	ug/L	0.26 U	0.27 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.25 U	0.26 U	0.25 U	0.26 U	0.26 U	0.25 U	0.25 U	0.26 U	0.26 U	0.26 U	0.25 U	0.26 U	0.26 U
2,6-Dinitrotoluene	ug/L	0.82 U	0.85 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.81 U	0.82 U	0.81 U	0.82 U	0.82 U	0.81 U	0.81 U	0.84 U	0.82 U	0.82 U	0.81 U	0.82 U	0.82 U
2-Chloronaphthalene	ug/L	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2-Chlorophenol	ug/L	0.3 U	0.31 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.31 U	0.3 U	0.3 U	0.29 U	0.3 U	0.3 U
2-Methylnaphthalene	ug/L	0.093 U	0.096 U	0.093 U	0.093 U	0.092 U	0.092 U	0.092 U	0.091 U	0.093 U	0.091 U	0.092 U	0.093 U	0.091 U	0.091 U	0.095 U	0.092 U	0.093 U	0.091 U	0.093 U	0.093 U
2-Methylphenol	ug/L	0.18 U	0.18 U	0.18 U	0.18 U	0.17 U	0.17 U	0.17 U	0.17 U	0.18 U	0.17 U	0.17 U	0.18 U	0.17 U	0.17 U	0.18 U	0.17 U	0.18 U	0.17 U	0.18 U	0.18 U
2-Nitroaniline	ug/L	0.22 U	0.22 U	0.22 U	0.22 U	0.21 U	0.21 U	0.21 U	0.21 U	0.22 U	0.21 U	0.21 U	0.22 U	0.21 U	0.21 U	0.22 U	0.21 U	0.22 U	0.21 U	0.22 U	0.22 U
2-Nitrophenol	ug/L	0.29 U	0.3 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.29 U	0.28 U	0.29 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.28 U	0.29 U	0.29 U
3 & 4 Methylphenol	ug/L	0.82 U	0.85 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.81 U	0.82 U	0.81 U	0.82 U	0.82 U	0.81 U	0.81 U	0.84 U	0.82 U	0.82 U	0.81 U	0.82 U	0.82 U
3,3'-Dichlorobenzidine	ug/L	0.38 U	0.39 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.37 U	0.38 U	0.37 U	0.38 U	0.38 U	0.37 U	0.37 U	0.39 U	0.38 U	0.38 U	0.37 U	0.38 U	0.38 U
3-Nitroaniline	ug/L	0.29 U	0.3 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.29 U	0.28 U	0.29 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.28 U	0.29 U	0.29 U
4,6-Dinitro-2-methylphenol	ug/L	2.5 U	2.6 U	2.5 U	2.5 U	2.4 U	2.4 U	2.4 U	2.4 U	2.5 U	2.4 U	2.4 U	2.5 U	2.4 U	2.4 U	2.5 U	2.4 U	2.5 U	2.4 U	2.5 U	2.5 U
4-Bromophenyl phenyl ether	ug/L	0.23 U	0.23 U	0.23 U	0.23 U	0.22 U	0.22 U	0.22 U	0.22 U	0.23 U	0.22 U	0.22 U	0.23 U	0.22 U	0.22 U	0.23 U	0.22 U	0.23 U	0.22 U	0.23 U	0.23 U
4-Chloro-3-methylphenol	ug/L	0.22 U	0.22 U	0.22 U	0.22 U	0.21 U	0.21 U	0.21 U	0.21 U	0.22 U	0.21 U	0.21 U	0.22 U	0.21 U	0.21 U	0.22 U	0.21 U	0.22 U	0.21 U	0.22 U	0.22 U
4-Chloroaniline	ug/L	0.22 U	0.22 U	0.22 U	0.22 U	0.21 U	0.21 U	0.21 U	0.21 U	0.22 U	0.21 U	0.21 U	0.22 U	0.21 U	0.21 U	0.22 U	0.21 U	0.22 U	0.21 U	0.22 U	0.22 U
4-Chlorophenyl phenyl ether	ug/L	0.31 U	0.32 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.3 U	0.31 U	0.3 U	0.31 U	0.31 U	0.3 U	0.3 U	0.32 U	0.31 U	0.31 U	0.3 U	0.31 U	0.31 U
4-Nitroaniline	ug/L	0.23 U	0.23 U	0.23 U	0.23 U	0.22 U	0.22 U	0.22 U	0.22 U	0.23 U	0.22 U	0.22 U	0.23 U	0.22 U	0.22 U	0.23 U	0.22 U	0.23 U	0.22 U	0.23 U	0.23 U
4-Nitrophenol	ug/L	0.3 U	0.31 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.31 U	0.3 U	0.3 U	0.29 U	0.3 U	0.3 U
Acenaphthene	ug/L	0.046 U	0.047 U	0.046 U	0.046 U	0.045 U	0.045 U	0.045 U	0.045 U	0.046 U	0.045 U	0.045 U	0.046 U	0.045 U	0.045 U	0.047 U	0.045 U	0.046 U	0.045 U	0.046 U	0.046 U
Acenaphthylene	ug/L	0.05 U	0.051 U	0.05 U	0.05 U	0.049 U	0.049 U	0.049 U	0.049 U	0.05 U	0.049 U	0.049 U	0.05 U	0.049 U	0.049 U	0.051 U	0.049 U	0.05 U	0.049 U	0.05 U	0.05 U
Acetophenone	ug/L	0.35 U	0.36 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.34 U	0.35 U	0.34 U	0.35 U	0.35 U	0.34 U	0.34 U	0.36 U	0.35 U	0.35 U	0.34 U	0.35 U	0.35 U

Table 7. Summary of Constituent Results May 2015
Industrial Excess Landfill, Uniontown, Ohio

Sample ID		MW-01i	MW-01s	MW-03i	MW-07i	MW-11i	MW-11s	MW-13i (NEW)	MW-14i (NEW)	MW-16 (NEW)	MW-17 (NEW)	MW-18i	MW-18s	MW-21s	MW-22i	MW-23s	MW-25s	MW-26s	MW-27i	MW-29	MW-30
Sample Date		05/24/15	05/19/15	05/23/15	05/25/15	05/23/15	05/20/15	05/20/15	05/20/15	05/21/15	05/21/15	05/21/15	05/22/15	05/22/15	05/18/15	05/18/15	05/23/15	05/20/15	05/19/15	05/23/15	05/22/15
Field ID		MW-01I	MW-1-S	MW-03I	MW-07I	MW-11I	MW-11S	MW-13 (NEW)	MW-14 (NEW)	MW-16 (NEW)	MW-17 (NEW)	MW-18I	MW-18S	MW-21S	MW-22I	MW-23S	MW-25S	MW-26S	MW-27I	MW-29	MW-30
Analyte	**Units**																				
Anthracene	ug/L	0.091 U	0.094 U	0.091 U	0.091 U	0.09 U	0.09 U	0.09 U	0.089 U	0.091 U	0.089 U	0.09 U	0.091 U	0.089 U	0.089 U	0.093 U	0.09 U	0.091 U	0.089 U	0.091 U	0.091 U
Atrazine	ug/L	0.35 U	0.36 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.34 U	0.35 U	0.34 U	0.35 U	0.35 U	0.34 U	0.34 U	0.36 U	0.35 U	0.35 U	0.34 U	0.35 U	0.35 U
Benzaldehyde	ug/L	0.4 U	0.41 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.39 U	0.4 U	0.39 U	0.4 U	0.4 U	0.39 U	0.39 U	0.41 U	0.4 U	0.4 U	0.39 U	0.4 U	0.4 U
Benzo[a]anthracene	ug/L	0.03 U	0.031 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.031 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Benzo[a]pyrene	ug/L	0.053 U	0.055 U	0.053 U	0.053 U	0.052 U	0.052 U	0.052 U	0.052 U	0.053 U	0.052 U	0.052 U	0.053 U	0.052 U	0.052 U	0.054 U	0.052 U	0.053 U	0.052 U	0.053 U	0.053 U
Benzo[b]fluoranthene	ug/L	0.041 U	0.042 U	0.041 U	0.041 U	0.04 U	0.04 U	0.04 U	0.04 U	0.041 U	0.04 U	0.04 U	0.041 U	0.04 U	0.04 U	0.041 U	0.04 U	0.041 U	0.04 U	0.041 U	0.041 U
Benzo[g,h,i]perylene	ug/L	0.048 U	0.049 U	0.048 U	0.048 U	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U	0.047 U	0.048 U	0.047 U	0.047 U	0.049 U	0.047 U	0.048 U	0.047 U	0.048 U	0.048 U
Benzo[k]fluoranthene	ug/L	0.046 U	0.048 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.045 U	0.046 U	0.045 U	0.046 U	0.046 U	0.045 U	0.045 U	0.047 U	0.046 U	0.046 U	0.045 U	0.046 U	0.046 U
Bis(2-chloroethoxy)methane	ug/L	0.33 U	0.34 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U	0.33 U	0.32 U	0.33 U	0.33 U	0.32 U	0.32 U	0.34 U	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U
Bis(2-chloroethyl)ether	ug/L	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Bis(2-ethylhexyl) phthalate	ug/L	1.8 U	1.8 U	1.8 U	1.8 U	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U	1.7 U	1.7 U	1.8 U	1.7 U	1.7 U	1.8 U	1.7 U	1.8 U	1.7 U	1.8 U	1.8 U
Butyl benzyl phthalate	ug/L	0.27 U	0.28 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.26 U	0.27 U	0.26 U	0.27 U	0.27 U	0.26 U	0.26 U	0.27 U	0.27 U	0.27 U	0.26 U	0.27 U	0.27 U
Caprolactam	ug/L	0.21 U	1.2 J	0.21 U	0.21 U	0.2 U	5.1 U	0.2 U	5.1 U	0.21 U	0.2 U	0.2 U	0.21 U	0.2 U	0.79 J	0.21 U	0.2 U	0.21 U	0.6 J	0.21 U	0.21 U
Carbazole	ug/L	0.29 U	0.3 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.29 U	0.28 U	0.29 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.28 U	0.29 U	0.29 U
Chrysene	ug/L	0.052 U	0.053 U	0.052 U	0.052 U	0.051 U	0.051 U	0.051 U	0.051 U	0.052 U	0.051 U	0.051 U	0.052 U	0.051 U	0.051 U	0.053 U	0.051 U	0.052 U	0.051 U	0.052 U	0.052 U
Dibenz(a,h)anthracene	ug/L	0.046 U	0.047 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.045 U	0.046 U	0.045 U	0.046 U	0.046 U	0.045 U	0.045 U	0.047 U	0.046 U	0.046 U	0.045 U	0.046 U	0.046 U
Dibenzofuran	ug/L	0.021 U	0.021 U	0.021 U	0.021 U	0.02 U	0.02 U	0.02 U	0.02 U	0.021 U	0.02 U	0.02 U	0.021 U	0.02 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	0.021 U	0.021 U
Diethyl phthalate	ug/L	0.62 U	0.64 U	0.62 U	0.68 J	0.61 U	0.61 U	0.61 U	0.61 U	0.62 U	0.61 U	0.61 U	0.62 U	0.61 U	0.61 U	0.63 U	0.61 U	0.62 U	0.61 U	0.62 U	0.62 U
Dimethyl phthalate	ug/L	0.3 U	0.31 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.31 U	0.3 U	0.3 U	0.29 U	0.3 U	0.3 U
Di-n-butyl phthalate	ug/L	1.8 U	1.8 U	1.8 U	1.8 U	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U	1.7 U	1.7 U	1.8 U	1.7 U	1.7 U	1.8 U	1.7 U	1.8 U	1.7 U	1.8 U	1.8 U
Di-n-octyl phthalate	ug/L	0.24 U	0.24 U	0.24 U	0.24 U	0.23 U	0.23 U	0.23 U	0.23 U	0.24 U	0.23 U	0.23 U	0.24 U	0.23 U	0.23 U	0.24 U	0.23 U	0.24 U	0.23 U	0.24 U	0.24 U
Fluoranthene	ug/L	0.046 U	0.047 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.045 U	0.046 U	0.045 U	0.046 U	0.046 U	0.045 U	0.045 U	0.047 U	0.046 U	0.046 U	0.045 U	0.046 U	0.046 U
Fluorene	ug/L	0.042 U	0.043 U	0.042 U	0.042 U	0.041 U	0.041 U	0.041 U	0.041 U	0.042 U	0.041 U	0.041 U	0.042 U	0.041 U	0.041 U	0.043 U	0.041 U	0.042 U	0.041 U	0.042 U	0.042 U
Hexachlorobenzene	ug/L	0.088 U	0.091 U	0.088 U	0.088 U	0.087 U	0.087 U	0.087 U	0.086 U	0.088 U	0.086 U	0.087 U	0.088 U	0.086 U	0.086 U	0.09 U	0.087 U	0.088 U	0.086 U	0.088 U	0.088 U
Hexachlorobutadiene	ug/L	0.28 U	0.29 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.27 U	0.28 U	0.27 U	0.28 U	0.28 U	0.27 U	0.27 U	0.28 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U
Hexachlorocyclopentadiene	ug/L	0.25 U	0.26 U	0.25 U	0.25 U	0.24 U	0.24 U	0.24 U	0.24 U	0.25 U	0.24 U	0.24 U	0.25 U	0.24 U	0.24 U	0.25 U	0.24 U	0.25 U	0.24 U	0.25 U	0.25 U
Hexachloroethane	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U	0.19 U	0.19 U	0.2 U	0.19 U	0.19 U	0.2 U	0.19 U	0.2 U	0.19 U	0.2 U	0.2 U
Indeno[1,2,3-cd]pyrene	ug/L	0.045 U	0.046 U	0.045 U	0.045 U	0.044 U	0.044 U	0.044 U	0.044 U	0.045 U	0.044 U	0.044 U	0.045 U	0.044 U	0.044 U	0.046 U	0.044 U	0.045 U	0.044 U	0.045 U	0.045 U
Isophorone	ug/L	0.28 U	0.29 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.27 U	0.28 U	0.27 U	0.28 U	0.28 U	0.27 U	0.27 U	0.28 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U
Naphthalene	ug/L	0.065 U	0.067 U	0.065 U	0.065 U	0.064 U	0.064 U	0.064 U	0.063 U	0.065 U	0.063 U	0.064 U	0.065 U	0.063 U	0.063 U	0.066 U	0.064 U	0.065 U	0.063 U	0.065 U	0.065 U
Nitrobenzene	ug/L	0.041 U	0.043 U	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	0.04 U	0.041 U	0.04 U	0.041 U	0.041 U	0.04 U	0.04 U	0.042 U	0.041 U	0.041 U	0.04 U	0.041 U	0.041 U
N-Nitrosodi-n-propylamine	ug/L	0.25 U	0.26 U	0.25 U	0.25 U	0.24 U	0.24 U	0.24 U	0.24 U	0.25 U	0.24 U	0.24 U	0.25 U	0.24 U	0.24 U	0.25 U	0.24 U	0.25 U	0.24 U	0.25 U	0.25 U
N-Nitrosodiphenylamine	ug/L	0.32 U	0.33 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.31 U	0.32 U	0.31 U	0.32 U	0.32 U	0.31 U	0.31 U	0.33 U	0.32 U	0.32 U	0.31 U	0.32 U	0.32 U
Pentachlorophenol	ug/L	0.28 U	0.29 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.27 U	0.28 U	0.27 U	0.28 U	0.28 U	0.27 U	0.27 U	0.28 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U
Phenanthrene	ug/L	0.064 U	0.066 U	0.064 U	0.064 U	0.063 U	0.063 U	0.063 U	0.063 U	0.064 U	0.063 U	0.063 U	0.064 U	0.063 U	0.063 U	0.065 U	0.063 U	0.064 U	0.063 U	0.064 U	0.064 U
Phenol	ug/L	0.62 U	0.64 U	0.62 U	0.62 U	0.61 U	0.61 U	0.61 U	0.61 U	0.62 U	0.61 U	0.61 U	0.62 U	0.61 U	0.61 U	0.63 U	0.61 U	0.62 U	0.61 U	0.62 U	0.62 U
Pyrene	ug/L	0.043 U	0.045 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.042 U	0.043 U	0.042 U	0.043 U	0.043 U	0.042 U	0.042 U	0.044 U	0.043 U	0.043 U	0.042 U	0.043 U	0.043 U
Volatile Organics																					
1,1,1-Trichloroethane	ug/L	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	1.5 U	0.44 U
1,1,2,2-Tetrachloroethane	ug/L	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.73 U	0.22 U
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 UJ	0.45 UJ	0.45 UJ	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	1.5 U	0.45 U
1,1,2-Trichloroethane	ug/L	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.8 U	0.24 U
1,1-Dichloroethane	ug/L	1.5	0.3 U	0.3 U	0.3 U	1.9	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.83 J	0.3 U	1.6	0.3 U	0.3 U	0.3 U	25	0.3 U
1,1-Dichloroethene	ug/L	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	3.1 J	0.45 U
1,2,4-Trichlorobenzene	ug/L	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U,F2	0.32 U	1.1 U	0.32 U
1,2-Dibromo-3-Chloropropane	ug/L	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	2.7 U	0.82 U
1,2-Dichlorobenzene	ug/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.83 U	0.25 U
1,2-Dichloroethane	ug/L	1	0.23 U	0.23 U	0.23 U	1.2	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	5.9	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	19	0.23 U
1,2-Dichloropropane	ug/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.83 U	0.25 U
1,3-Dichlorobenzene	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.63 U	0.19 U
1,4-Dichlorobenzene	ug/L	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.9 U	0.27 U
2-Butanone (MEK)	ug/L	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	1.8 U	0.53 U
2-Hexanone	ug/L	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	1.6 U	0.48 U
4-Methyl-2-pentanone (MIBK)	ug/L	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	3.3 U	0.99 U
Acetone	ug/L	0.94 U	47	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	10 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	3.1 U	0.94 U
Benzene	ug/L	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	1.6	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	1.2 U	0.35 U
Bromoform	ug/L	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	1.9 U	0.56 U
Bromomethane	ug/L	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	1.5 U	0.44 U
Carbon disulfide	ug/L	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	1.3 U	0.38 U
Carbon tetrachloride	ug/L	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	1.4 U	0.43 U

Table 7. Summary of Constituent Results May 2015
Industrial Excess Landfill, Uniontown, Ohio

Sample ID		MW-01i	MW-01s	MW-03i	MW-07i	MW-11i	MW-11s	MW-13i (NEW)	MW-14i (NEW)	MW-16 (NEW)	MW-17 (NEW)	MW-18i	MW-18s	MW-21s	MW-22i	MW-23s	MW-25s	MW-26s	MW-27i	MW-29	MW-30
Sample Date		05/24/15	05/19/15	05/23/15	05/25/15	05/23/15	05/20/15	05/20/15	05/20/15	05/21/15	05/21/15	05/21/15	05/22/15	05/22/15	05/18/15	05/18/15	05/23/15	05/20/15	05/19/15	05/23/15	05/22/15
Field ID		MW-01I	MW-1-S	MW-03I	MW-07I	MW-11I	MW-11S	MW-13 (NEW)	MW-14 (NEW)	MW-16 (NEW)	MW-17 (NEW)	MW-18I	MW-18S	MW-21S	MW-22I	MW-23S	MW-25S	MW-26S	MW-27I	MW-29	MW-30
Analyte	**Units**																				
Chlorobenzene	ug/L	0.25 U	1.1	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.83 U	0.25 U
Chlorodibromomethane	ug/L	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	1.4 U	0.43 U
Chloroethane	ug/L	6.3	0.32 U	0.32 U	0.32 U	7.6	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	11	0.32 U	5.3	0.32 U	0.32 U	0.32 U	37	0.32 U
Chloroform	ug/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.83 U	0.25 U
Chloromethane	ug/L	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	1.5 U	0.44 U
cis-1,2-Dichloroethene	ug/L	1.2	0.26 U	0.26 U	0.26 U	1.5	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	15	0.26 U	3.3	0.26 U	0.26 U	0.26 U	86	0.26 U
cis-1,3-Dichloropropene	ug/L	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	1.5 U	0.46 U
Cyclohexane	ug/L	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	1.5 U	0.45 U
Dichlorobromomethane	ug/L	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.97 U	0.29 U
Dichlorodifluoromethane	ug/L	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	1.1 U	0.32 U
Ethylbenzene	ug/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.83 U	0.25 U
Ethylene Dibromide	ug/L	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	1.1 U	0.32 U
Isopropylbenzene	ug/L	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	1.2 U	0.35 U
Methyl acetate	ug/L	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	7.6 U	2.3 U
Methyl tert-butyl ether	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.26 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.67 U	0.2 U
Methylcyclohexane	ug/L	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	1.4 U	0.43 U
Methylene Chloride	ug/L	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	1.1 U	0.33 U
Styrene	ug/L	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	1.5 U	0.45 U
Tetrachloroethene	ug/L	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.57 J	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	1 U	0.31 U
Toluene	ug/L	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.77 U	0.23 U
trans-1,2-Dichloroethene	ug/L	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 J	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U
trans-1,3-Dichloropropene	ug/L	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	1.9 U	0.56 U
Trichloroethene	ug/L	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.89 J	0.22 U	0.44 J	0.22 U	0.22 U	0.22 U	0.73 U	0.22 U
Trichlorofluoromethane	ug/L	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	1.6 U	0.49 U
Vinyl chloride	ug/L	2.2	0.29 U	0.29 U	0.29 U	2.2	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	2	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	4.8	0.29 U
Xylenes, Total	ug/L	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	1.7 U	0.52 U

NOTES:
B - analyte found in blank and sample
J - estimated concentration
R - Rejected
U - not detected above MDL
* - LCS or LCSD exceeds the control limits

Table 7. Summary of Constituent Results May 2015
Industrial Excess Landfill, Uniontown, Ohio

	Sample ID	MW-31
	Sample Date	05/22/15
	Field ID	MW-31
Analyte	Units	
Conventionals and Inorganics		
Ammonia (as N)	mg/L	0.11 U
Chloride	mg/L	84 J
Nitrate Nitrite as N	mg/L	0.18 J
Sulfate	mg/L	85 J
Sulfide	mg/L	0.41 U
Sulfide as H2S	mg/L	0.41 U
Cyanide, Total	mg/L	0.005 U
Ferrous Iron	mg/L	0.5 J
Aluminum	ug/L	1100 J
Antimony	ug/L	2 U
Arsenic	ug/L	4.5 J
Barium	ug/L	140 J
Beryllium	ug/L	1 U
Cadmium	ug/L	1 U
Calcium	ug/L	85000 J
Chromium	ug/L	55 J
Cobalt	ug/L	1.6 J
Copper	ug/L	5.3 U
Iron	ug/L	4700 J
Lead	ug/L	1.5 J
Magnesium	ug/L	19000 J
Manganese	ug/L	170 J
Nickel	ug/L	34 J
Potassium	ug/L	3000 B
Selenium	ug/L	5 U
Silver	ug/L	0.02 U
Sodium	ug/L	20000 J
Thallium	ug/L	0.074 U
Zinc	ug/L	53 B
Mercury	ug/L	0.09 U
Semi-volatile Organics		
1,1'-Biphenyl	ug/L	0.14 U
2,2'-oxybis[1-chloropropane]	ug/L	0.42 U
2,4,5-Trichlorophenol	ug/L	0.31 U
2,4,6-Trichlorophenol	ug/L	0.25 U
2,4-Dichlorophenol	ug/L	0.2 U
2,4-Dimethylphenol	ug/L	0.26 U
2,4-Dinitrophenol	ug/L	0.33 U
2,4-Dinitrotoluene	ug/L	0.26 U
2,6-Dinitrotoluene	ug/L	0.83 U
2-Chloronaphthalene	ug/L	0.1 U
2-Chlorophenol	ug/L	0.3 U
2-Methylnaphthalene	ug/L	0.094 U
2-Methylphenol	ug/L	0.18 U
2-Nitroaniline	ug/L	0.22 U
2-Nitrophenol	ug/L	0.29 U
3 & 4 Methylphenol	ug/L	0.83 U
3,3'-Dichlorobenzidine	ug/L	0.39 U
3-Nitroaniline	ug/L	0.29 U
4,6-Dinitro-2-methylphenol	ug/L	2.5 U
4-Bromophenyl phenyl ether	ug/L	0.23 U
4-Chloro-3-methylphenol	ug/L	0.22 U
4-Chloroaniline	ug/L	0.22 U
4-Chlorophenyl phenyl ether	ug/L	0.31 U
4-Nitroaniline	ug/L	0.23 U
4-Nitrophenol	ug/L	0.3 U
Acenaphthene	ug/L	0.046 U
Acenaphthylene	ug/L	0.05 U
Acetophenone	ug/L	0.35 U

Table 7. Summary of Constituent Results May 2015
Industrial Excess Landfill, Uniontown, Ohio

Sample ID		MW-31
Sample Date		05/22/15
Field ID		MW-31
Analyte	**Units**	
Anthracene	ug/L	0.092 U
Atrazine	ug/L	0.35 U
Benzaldehyde	ug/L	0.41 U
Benzo[a]anthracene	ug/L	0.031 U
Benzo[a]pyrene	ug/L	0.054 U
Benzo[b]fluoranthene	ug/L	0.041 U
Benzo[g,h,i]perylene	ug/L	0.048 U
Benzo[k]fluoranthene	ug/L	0.047 U
Bis(2-chloroethoxy)methane	ug/L	0.33 U
Bis(2-chloroethyl)ether	ug/L	0.1 U
Bis(2-ethylhexyl) phthalate	ug/L	1.8 U
Butyl benzyl phthalate	ug/L	0.27 U
Caprolactam	ug/L	0.21 U
Carbazole	ug/L	0.29 U
Chrysene	ug/L	0.052 U
Dibenz(a,h)anthracene	ug/L	0.046 U
Dibenzofuran	ug/L	0.021 U
Diethyl phthalate	ug/L	0.62 U
Dimethyl phthalate	ug/L	0.3 U
Di-n-butyl phthalate	ug/L	1.8 U
Di-n-octyl phthalate	ug/L	0.24 U
Fluoranthene	ug/L	0.046 U
Fluorene	ug/L	0.042 U
Hexachlorobenzene	ug/L	0.089 U
Hexachlorobutadiene	ug/L	0.28 U
Hexachlorocyclopentadiene	ug/L	0.25 U
Hexachloroethane	ug/L	0.2 U
Indeno[1,2,3-cd]pyrene	ug/L	0.045 U
Isophorone	ug/L	0.28 U
Naphthalene	ug/L	0.065 U
Nitrobenzene	ug/L	0.042 U
N-Nitrosodi-n-propylamine	ug/L	0.25 U
N-Nitrosodiphenylamine	ug/L	0.32 U
Pentachlorophenol	ug/L	0.28 U
Phenanthrene	ug/L	0.064 U
Phenol	ug/L	0.62 U
Pyrene	ug/L	0.044 U
Volatile Organics		
1,1,1-Trichloroethane	ug/L	0.44 U
1,1,2,2-Tetrachloroethane	ug/L	0.22 U
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	0.45 U
1,1,2-Trichloroethane	ug/L	0.24 U
1,1-Dichloroethane	ug/L	0.3 U
1,1-Dichloroethene	ug/L	0.45 U
1,2,4-Trichlorobenzene	ug/L	0.32 U
1,2-Dibromo-3-Chloropropane	ug/L	0.82 U
1,2-Dichlorobenzene	ug/L	0.25 U
1,2-Dichloroethane	ug/L	0.23 U
1,2-Dichloropropane	ug/L	0.25 U
1,3-Dichlorobenzene	ug/L	0.19 U
1,4-Dichlorobenzene	ug/L	0.27 U
2-Butanone (MEK)	ug/L	0.53 U
2-Hexanone	ug/L	0.48 U
4-Methyl-2-pentanone (MIBK)	ug/L	0.99 U
Acetone	ug/L	0.94 U
Benzene	ug/L	0.35 U
Bromoform	ug/L	0.56 U
Bromomethane	ug/L	0.44 U
Carbon disulfide	ug/L	0.38 U
Carbon tetrachloride	ug/L	0.43 U

Table 7. Summary of Constituent Results May 2015
Industrial Excess Landfill, Uniontown, Ohio

	Sample ID	MW-31
	Sample Date	05/22/15
	Field ID	MW-31
Analyte	Units	
Chlorobenzene	ug/L	0.25 U
Chlorodibromomethane	ug/L	0.43 U
Chloroethane	ug/L	0.32 U
Chloroform	ug/L	0.25 U
Chloromethane	ug/L	0.44 U
cis-1,2-Dichloroethene	ug/L	0.26 U
cis-1,3-Dichloropropene	ug/L	0.46 U
Cyclohexane	ug/L	0.45 U
Dichlorobromomethane	ug/L	0.29 U
Dichlorodifluoromethane	ug/L	0.32 U
Ethylbenzene	ug/L	0.25 U
Ethylene Dibromide	ug/L	0.32 U
Isopropylbenzene	ug/L	0.35 U
Methyl acetate	ug/L	2.3 U
Methyl tert-butyl ether	ug/L	0.2 U
Methylcyclohexane	ug/L	0.43 U
Methylene Chloride	ug/L	0.33 U
Styrene	ug/L	0.45 U
Tetrachloroethene	ug/L	0.31 U
Toluene	ug/L	0.23 U
trans-1,2-Dichloroethene	ug/L	0.3 U
trans-1,3-Dichloropropene	ug/L	0.56 U
Trichloroethene	ug/L	0.22 U
Trichlorofluoromethane	ug/L	0.49 U
Vinyl chloride	ug/L	0.29 U
Xylenes, Total	ug/L	0.52 U

APPENDIX F

2011 – 2016
METHANE MONITORING DATA

2011-2013 IEL Combustible Gas Indicator Measurements (Methane)

Landfill Gas Wells												
Well ID	Deep 8/17/2011		Deep 7/9/2013		Intermediate 8/17/2011		Intermediate 7/9/2013		Shallow 8/17/2011		Shallow 7/9/2013	
	%LEL	%VOL	%LEL	%VOL	%LEL	%VOL	%LEL	%VOL	%LEL	%VOL	%LEL	%VOL
LFG-2	0	0	NS	NS	0	0	NS	NS	0	0	NS	NS
LFG-2*	0	0	NS	NS	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LFG-3	N/A	N/A	N/A	N/A	0	0	0	0	0	0	0	0
LFG-4	0	0	0	0	0	0	0	0	0	0	0	0
LFG-9	5	0.25	0	0	0	0	0	0	0	0	0	0
LFG-12	N/A	N/A	NS	NS	0	0	NS	NS	0	0	NS	NS
LFG-13	0	0	0	0	0	0	0	0	0	0	0	0
LFG-14	0	0	NS	NS	0	0	NS	NS	0	0	NS	NS
LFG-15	0	0	NS	NS	0	0	NS	NS	0	0	NS	NS
LFG-16	0	0	NS	NS	0	0	NS	NS	1.0	0.05	NS	NS
LFG-17	0	0	0	0	0	0	0	0	0	0	0	0
LFG-18	0	0	0	0	0	0	0	0	0	0	0.7	0.035
LFG-19	0	0	NS	NS	0	0	NS	NS	0	0	NS	NS
LFG-20	0	0	NS	NS	N/A	N/A	NS	NS	N/A	N/A	NS	NS
LFG-21	0	0	NS	NS	N/A	N/A	NS	NS	N/A	N/A	NS	NS
LFG-22	0	0	NS	NS	N/A	N/A	NS	NS	N/A	N/A	NS	NS
LFG-23	6	0.3	NS	NS	N/A	N/A	NS	NS	N/A	N/A	NS	NS

*NS-Not Sampled

**LFG 20 thru 23 have one well

***LFG-2 has an extra well (blue)—four depths in total

Extraction Wells				
	8/17/2011		7/9/2013	
	%LEL	%VOL	%LEL	%VOL
EW-1	0	0	0	0
EW-2	0	0	0	0
EW-3	0	0	1.2	0.06
EW-4	0	0	NS	NS
EW-5	0	0	NS	NS
EW-6	0	0	NS	NS
EW-7	0	0	NS	NS
EW-8	0	0	NS	NS
EW-9	19	0.95	0.9	0.045
EW-10	0	0	NS	NS
EW-11	0	0	NS	NS
EW-12	0	0	NS	NS

Passive Vents				
	8/17/2011		7/9/2013	
	%LEL	%VOL	%LEL	%VOL
PV-1	0	0	NS	NS
PV-2	0	0	NS	NS
PV-3	0	0	NS	NS
PV-4	0	0	NS	NS
PV-5	0	0	NS	NS
PV-6	0	0	NS	NS
PV-7	0	0	NS	NS
PV-8	16	0.80	0	0
PV-9	19	0.95	0	0
PV-10	0	0	NS	NS
PV-11	0	0	NS	NS
PV-12	0	0	NS	NS
PV-13	0	0	NS	NS

*NS-Not Sampled

Landfill Gas Monitoring
IEL Site
December 16, 2015
49-58 Degrees and Mostly Sunny
Pressure dropped from 30.01 inches to 29.78 inches
GEM2000 Landfill Gas Meter

Location	Methane (%LEL)	Other Observations
EW-9	ND	Passive vent just east of shed
PV-1	18	0.9% methane, 1% CO2
PV-2	6	0.3% methane, 0.2% CO2
PV-3	77	3.9% methane, 10.5% CO2, 6% O2
PV-10	ND	
PV-11	ND	
PV-5	ND	
PV-6	ND	
PV-7	ND	
PV-12	ND	
PV-13	>LEL to 27% of LEL	5.1-1.9% methane, 1.1% CO2
EW-1	11	0.6% methane, 0.8% CO2
EW-1R	ND	Functions as passive vent
EW-2	ND	
PV-4	ND	
EW-4	>LEL	10.6% methane, 7.8% CO2, 13.3% O2
EW-3	ND	
EW-5	24	1.2% methane, 1.3% CO2
EW-6	2	0.1% methane, 5.2 % CO2
EW-7	37	1.9% methane, 3.4% CO2, 11.7% O2
PV between EW-7 and EW-8	ND	North of EW-7
EW-8	20	0.1% methane, 3.6% CO2, 15.4% O2
EW-8 PV (three)	ND	
PV north-east of MVS	>LEL	21.3% methane, 20.4% CO2, 0.4% O2 PV at end of header line
EW-10	1	0.1% methane, 3.5% CO2
PV at EW-10	ND	0.2% CO2, 1.1% O2
EW-11	1	0.1% methane, 4.2 % CO2, 13.6% O2
EW-12	1	0.1% methane, 0.4% CO2
PV at EW-12 (north)	>LEL	17.5% methane, 25.5 % CO2, 1% O2 Open pipe at end of header line
PV at EW-12 (south)	>LEL	10.5% methane, 19.2% CO2, 4.4% O2 Open pipe at end of header line
PV at EW-12 (tall vent)	ND	
PV-8	>LEL	8.5% methane, 6% CO2, 17.8% O2
PV-9	>LEL	31% methane, 23.1% CO2, 0.1% O2 Broken and detached, probe put down

		in casing
Open pipe near PV-9	>LEL	14.4% methane, 10.7% CO2, 13.9% O2 50 yards east of PV-9
Open pipe near PV-9	>LEL	11.2% methane, 4.4% CO2, 17.6% O2 30 yards south-east of PV-9
Piezometer 1-deep Piezometer 1-intermed Piezometer 1-shallow	>LEL ND ND	76% methane, 28% CO2, 0% O2 No methane detected No methane detected
Piezometer 2-deep Piezometer 2-intermed Piezometer 2-shallow	>LEL >LEL >LEL	63% methane, 30.4% CO2, 0% O2 71% methane, 28.1% CO2, 0% O2 47.1% methane, 8.4% CO2, 4.7% O2
Piezometer 3-deep Piezometer 3-intermed Piezometer 3-shallow	>LEL ND >LEL	63.2% methane, 31.2% CO2, 0% O2 No methane detected 66.2% methane, 24.7% CO2, 0.7% O2
LFG-20	>LEL	14.5% methane, 23.2% CO2, 0% O2
LFG-21	ND	0.6% CO2, 20.9% O2
LFG-23	5	0.3% methane, 0% CO2, 21.3% O2
LFG-22	>LEL	26.6% methane, 21.5% CO2, 19% O2 Dropped to 0.1% methane after 5 mins.
LFG-15	ND	
LFG-14	ND	
LFG-9	Deep-ND Intermediate-2 Shallow-ND	Deep Intermediate-2nd time ND Shallow-4.6% CO2, 16.3% O2
LFG-13	Deep->LEL Intermediate-ND Shallow-ND	Deep-8.2% methane, 13.8% CO2 Intermediate-6.8%CO2 Shallow-1.9% CO2
LFG-17	Deep-ND Intermediate-ND Shallow-ND	Deep-4.8% CO2, 13.9% O2 Intermediate-1.1% CO2, 20.9% O2 Shallow-5.3% CO2, 18.6% O2
LFG-7	Deep-fluctuated Intermediate— fluctuated Shallow-fluctuated	Deep-2.3-1.1% methane, 0.6% CO2 Intermediate-2.0-0.9% methane, 1.8%CO2 Shallow-17.2-4.2% methane, 1.8% CO2
LFG-18	Deep-fluctuated Intermediate- fluctuated Shallow-7% LEL	Deep-5.2-1.0% methane, 0.4% CO2 Intermediate-3-9.2% methane, 0.5% CO2 Shallow-0.4% methane, 0.03% CO2
LFG-2	ND	
LFG-3	ND	
LFG-19	ND	
LFG-12	ND	
LFG-16	ND	
LFG-4	ND	

IEL Combustible Gas Indicator %Methane Measurements

yellow = deep; green = intermediate; red = shallow

	3/3/2016	3/11/2016	3/17/2016
LFG-2 (yellow)	0	0	**8.2**
LFG-2 (green)	0	0	**7.6**
LFG-2 (red)	0	0	**2.6**
LFG-2 (blue)	0	0	**3.3**
LFG-3 (green)	0	0	**2.9**
LFG-3 (red)	0	0	0
LFG-4 (yellow)	0	0	0
LFG-4 (green)	0	0	0
LFG-4 (red)	0	0	0
LFG-7 (yellow)	**2.2**	**1.1**	**0.5**
LFG-7 (green)	**1.5**	**2.1**	**0.3**
LFG-7 (red)	**27.3**	**35.3**	**36.1**
LFG-9 (yellow)	**0.6**	0	0
LFG-9 (green)	**3.1**	0	**0.2**
LFG-9 (red)	0	0	0
LFG-12 (green)	0	0	0
LFG-12 (red)	0	0	0
LFG-13 (yellow)	0	0	**3.9**
LFG-13 (green)	0	0	**0.1**
LFG-13 (red)	0	0	0
LFG-14 (yellow)	0	0	0
LFG-14 (green)	0	0	0
LFG-14 (red)	0	0	0
LFG-15 (yellow)	0	0	0
LFG-15 (green)	0	0	0
LFG-15 (red)	0	0	0
LFG-16 (yellow)	0	0	**1.0**
LFG-16 (green)	0	0	**0.4**
LFG-16 (red)	0	0	**0.02**
LFG-17 (yellow)	0	0	0
LFG-17 (green)	0	0	**1.2**
LFG-17 (red)	0	0	0
LFG-18 (yellow)	2.1	**0.2**	**4.1**
LFG-18 (green)	0	0	0
LFG-18 (red)	0	**0.1**	0
LFG-19 (yellow)	0	0	0

IEL Combustible Gas Indicator %Methane Measurements

yellow = deep; green = intermediate; red = shallow

	3/3/2016	3/11/2016	3/17/2016
LFG-19 (green)	0.3	0.4	0
LFG-19 (red)	0	0	0
LFG-20	0	0	0
LFG-21	0	0	0
LFG-22	0	0	0
LFG-23	12.3	30.6	9.2
EW-1	11.7	0	6.8
EW-2	0	0	0.1
EW-3	0	0	0
EW-4	9.9	0.3	16.4
EW-5	0	61.4	0
EW-6	0	0	0
EW-7	0.2	0.2	0
EW-8	0	0	0
EW-9	0.3	0	0
EW-10	0	0	0
EW-11	0	0	0
EW-12	0	0	0
EW-12 (PV) A		0	13.4
EW-12 (PV) B		0	9.8
EW-12 (PV) C		0	0
PV-1	0	0.05	0
PV-2	0	0	0
PV-3	0.7	0	0.6
PV-4	6.5	0	4.4
PV-5	0	0	0.3
PV-6	0	0	0
PV-7	0	0	0.1
PV-8	0	0	4.1
PV-9	20.3	0	28.3
PV-10	0	0	0
PV-11	0	0	0
PV-12	0	0	0.2
PV-13	2.1	5.1	5.9

IEL Combustible Gas Indicator %Methane Measurements

yellow = deep; green = intermediate; red = shallow

	3/3/2016	3/11/2016	3/17/2016
Header 1		0	0
Header 2		0	**3.1**
Header 3		0	**7.4**
Ambient**		ND	ND

APPENDIX G

SITE PHOTOGRAPHS

Photograph 1: Main driveway and access gate to fenced landfill area. Northwest corner of Site, facing east.

Photograph 2: The thick, thorny vegetative cover minimizes contact with landfilled materials and makes access across the landfill difficult.

Photograph 3: North-east access gate between EPA's Hilltop Avenue property and the landfill near LFG-9. Gate is locked. Facing southeast.

Photograph 4: North-central access gate between EPA's Hilltop Avenue property and the landfill near MW-16. Gate is locked. Facing north.

Photograph 5: West-central access gate between EPA's Cleveland Avenue property and the landfill near LFG-7. Gate is locked. Facing east.

Photograph 6: Unlabeled passive gas vent venting about three (3) feet off the ground.

Photograph 7: Former extraction well venting about one (1) foot off the ground, about five (5) feet from EPA's unfenced Cleveland Avenue property.

Photograph 8: Unlabeled pipes of unknown construction venting gas in northeast area of Site near EW-12.

Photograph 9: Unlabeled pipe of unknown purpose and construction in the eastern area of the Site. Facing east.

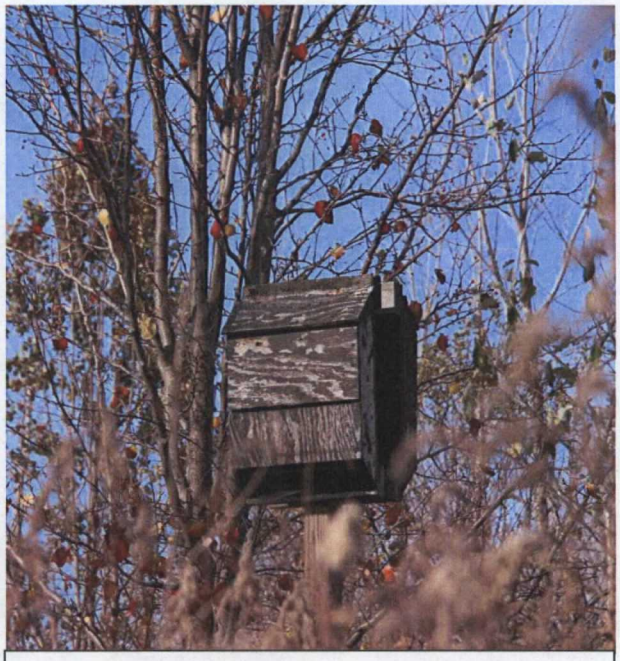
Photograph 10: Unlabeled pipes of unknown construction venting gas at the ground surface near the west fence.

Photograph 11: Unlabeled gas vent of unknown construction with gas above potentially explosive levels near the ground surface (note red light on meter).

Photograph 12: Downgradient groundwater monitoring well MW-24i. MW-24i was buried by a gravel parking lot in 2010 and re-located by the Stark County Health Department in March 2016.

Photograph 13: Unburying downgradient groundwater monitoring well MW-24i.

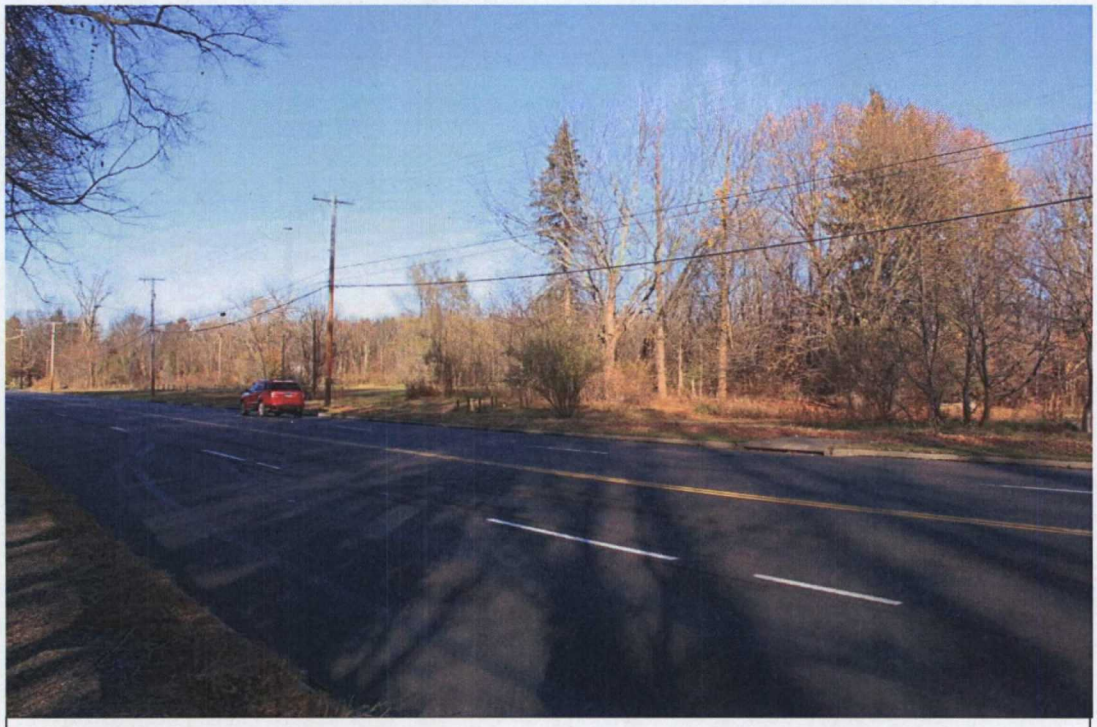
Photograph 14: Bat box No. 1



Photograph 15: Bat box No. 2.

Photograph 16: Bluebird houses.

Photograph 17: Iron staining near groundwater monitoring well MW-14NEW.



Photograph 18: EPA's Site property along Cleveland Avenue adjacent to the west side of the landfill. Photograph taken from west side of Cleveland Avenue facing northeast.

Photograph 19: EPA's Site property along the south side of the landfill. Facing east.

Photograph 20: EPA's Site property along the north side of the landfill. Facing east.