FIFTH FIVE-YEAR REVIEW REPORT FOR
TYBOUTS CORNER LANDFILL SUPERFUND SITE
NEW CASTLE COUNTY, DELAWARE

July 2020

Prepared by

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

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Date

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LIST OF ABBREVIATIONS AND ACRONYMS

1,2-DCA	1,2-Dichloroethane
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COC	Contaminant of Concern
DNREC	Delaware Department of Natural Resources and Environmental Control
EPA	United States Environmental Protection Agency
ESD	Explanation of Significant Differences
FS	Feasibility Study
FYR	Five-Year Review
GMCS	Gas Migration Control System
GMZ	Groundwater Management Zone
IC	Institutional Control
LEL	Lower Explosive Limit
MCL	Maximum Contaminant Level
µg/L	Micrograms per Liter
NCP	National Contingency Plan
NPL	National Priorities List
O&M	Operation and Maintenance
OU	Operable Unit
P1	Potomac Number 1
P2	Potomac Number 2
POTW	Publicly Owned Treatment Works
PRP	Potentially Responsible Party
RAO	Remedial Action Objective
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
ROD	Record of Decision
RPM	Remedial Project Manager
UHZ	Upper Hydrological Zone
UU/UE	Unlimited Use and Unrestricted Exposure
VOC	Volatile Organic Compound

I. INTRODUCTION

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

The U.S. Environmental Protection Agency (EPA) is preparing this FYR pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA) Section 121, consistent with the National Contingency Plan (NCP) (40 Code of Federal Regulations (CFR) Section 300.430(f)(4)(ii)) and considering EPA policy.

This is the fifth FYR for the Tybouts Corner Landfill Superfund Site (the Site). The triggering action for this statutory review is the completion date of the previous FYR. The FYR was conducted because hazardous substances, pollutants or contaminants remain at the Site above levels that allow for unlimited use and unrestricted exposure (UU/UE).

The Site consists of one operable unit (OU) that addresses the contaminated soils and groundwater.

EPA remedial project managers (RPMs) Andrea Bain and Chris Vallone led the FYR. Additional EPA participants included the EPA Community Involvement Coordinator (CIC) Amanda Miles, Human Health Risk Assessor Jeffrey Tuttle, Ecological Risk Assessor Matt Taynor, Hydrogeologist Jeffrey Tuttle and Herminio Concepcion. The Delaware Department of Natural Resources and Environmental Control (DNREC) also participated in the FYR. Skeo Solutions (Skeo) provided EPA contractor support for this FYR. The potentially responsible parties (PRPs) were notified of the initiation of the FYR. The review began on April 14, 2019.

Site Background

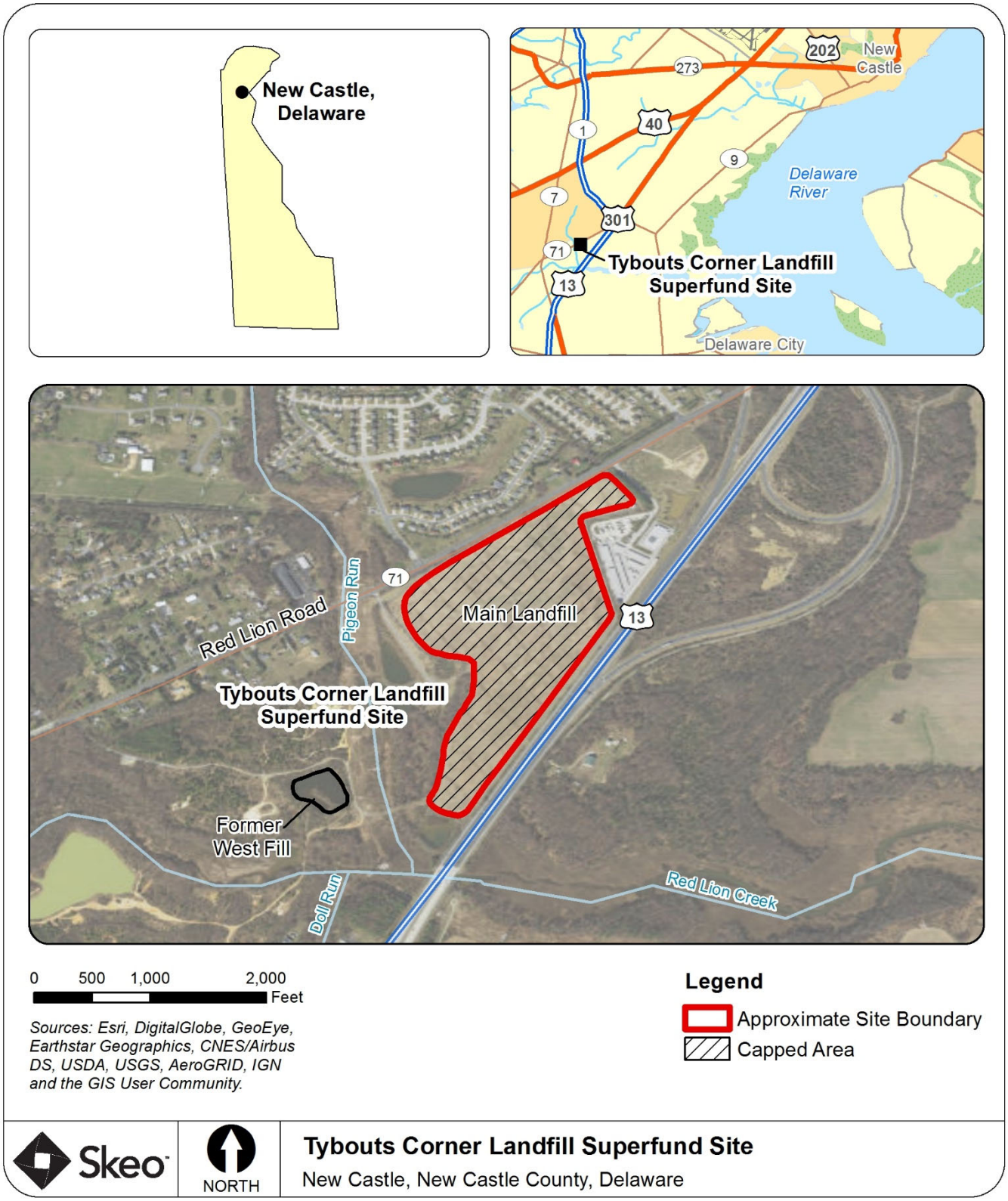
The Site is located in New Castle, New Castle County, Delaware, about 10 miles south of Wilmington (Figure 1). The New Castle County Department of Public Works used the Site as a municipal sanitary landfill. Two unlined landfill areas, referred to as the 47-acre Main Landfill and the 4-acre Former West Fill area, received industrial wastes containing trichloroethylene; vinyl chloride; 1,2-dichloroethane (1,2-DCA); benzene; and other chemicals from 1968 to 1971.

The Site is surrounded by woodlands to the south, residential development to the north and west, and a self-storage facility and Highway 13 to the east. Current Site features include the fenced and capped 47-acre Main Landfill and remedy-related structures. The Former West Fill area is now a wetland. The Main Landfill surface is relatively flat and slopes to the south toward Red Lion Creek, which runs west to east. Pigeon Run, a tributary to Red Lion Creek, flows along the western boundary of the Main Landfill. Red Lion Creek enters the Delaware River two miles downstream from the Site. Land uses near the Site are primarily residential. Residences and businesses near the Site obtain drinking water from the municipal water supply.

Geology at the Site consists of the Columbia, Merchantville and Potomac formations. The Columbia Formation is the uppermost geological unit underlying the Site. Groundwater in the Columbia Aquifer flows through the Columbia Formation to the southeast. The Merchantville Formation underlies the Columbia Formation and consists of sandy silt. The groundwater flow system in the Potomac Formation is often separated from the Columbia Aquifer by the Merchantville Formation, which impedes, but does not totally eliminate, downward migration of groundwater. The first two sand beds encountered in the Upper Hydrological Zone (UHZ) of the Potomac Aquifer are referred to as the Potomac Number 1 (P1) Sand and Potomac Number 2 (P2) Sand. Groundwater within the P1 Sand and P2 Sand generally flows to the southeast beneath the Site. Site-related contaminants are found within Columbia and P1 groundwater.

Appendix A provides a list of Site-related resources. Appendix B provides a chronology of events for the Site.

Figure 1: Site Vicinity Map



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

FIVE-YEAR REVIEW SUMMARY FORM

SITE IDENTIFICATION		
Site Name: Tybouts Corner Landfill		
EPA ID: DED000606079		
Region: 3	**State:** DELAWARE	**City/County:** New Castle / New Castle
SITE STATUS		
NPL Status: Final		
Multiple OUs? No	**Has the Site achieved construction completion?** Yes	
REVIEW STATUS		
Lead agency: EPA		
Author name: Chris Vallone, with additional support provided by Skeo		
Author affiliation: EPA Region 3		
Review period: 4/15/2019 - 7/3/2020		
Date of site inspection: 5/13/2019		
Type of review: Statutory		
Review number: 5		
Triggering action date: 7/31/2015		
Due date *(five years after triggering action date)*: 7/31/2020		

II. RESPONSE ACTION SUMMARY

Basis for Taking Action

In May 1976, DNREC discovered volatile organic compounds (VOCs) in a domestic supply well 400 feet east of the Main Landfill. EPA testing in 1983 and 1984 identified contamination in a second residential well located 150 feet north of the Main Landfill. EPA added the Site to the Superfund program's National Priorities List (NPL) in September 1983.

Between January 1983 and June 1985, EPA performed a Remedial Investigation and Feasibility Study (RI/FS) to assess the nature and extent of Site contamination and evaluate appropriate cleanup options.

EPA determined that the main threat posed by the Site was the migration of hazardous substances disposed of in the landfill into the local and regional aquifers which were the main source of water for the region. The organic contaminants most commonly detected were benzene, 1,2-DCA, chloroethane, 1,2-transdichloroethane, toluene, vinyl chloride, acetone and xylenes.

Response Actions

In September 1984, EPA selected an initial remedial measure to address contaminated residential water supply wells, requiring the PRPs to construct a public water line which was completed in January 1985.

EPA selected a remedy to address Site-wide contamination in a Record of Decision (ROD) issued in March 1986. The ROD established the following Remedial Action Objectives (RAOs):

- Elimination or appreciable reduction of vertical infiltration of rainfall through the Main Landfill and West Fill areas.
- Elimination or control of lateral migration of groundwater into the Main Landfill and West Fill areas.
- Elimination or control of the contaminated groundwater presently in the Columbia Aquifer and the UHZ of the Potomac Aquifer.

The remedial action selected by EPA in the ROD includes:

- Consolidation of the West Fill area into the Main Landfill. Excavation would include all wastes and contaminated soil. The amount of contaminated soil to be removed would be based on a site-specific chemical fate and transport analysis.
- Analysis of the West Fill area to ensure that no soil is left in place that could cause groundwater to exceed groundwater cleanup standards.
- Backfilling of the West Fill area with clean fill.
- Construction of a multi-layer Resource Conservation and Recovery Act (RCRA) cap over the consolidated Main landfill area to significantly reduce or eliminate vertical infiltration of precipitation.
- Installation of a drain or trench system in the vicinity of the Main Landfill to prohibit lateral groundwater migration through the fill and to collect existing leachate from the fill.
- On-site treatment or off-site discharge to a local sewage treatment plant of contaminated water (including leachate) generated during remedial activities.
- Pumping and treating, or otherwise disposing of, the off-site plume of contaminated groundwater in the UHZ of the Potomac Aquifer.
- Institutional controls to prevent the use of contaminated groundwater during pumping and treating activities.
- Implementation of a health and safety plan and air monitoring during remedy construction.
- Establishment and implementation of a monitoring program to ensure that groundwater quality, surface water quality, the landfill cap and air quality are maintained.

Figure 2 and Appendix C include major remedial features. The goal of the groundwater pumping was to reduce the level of contaminants to 100 ppb of total VOCs, with separate standards for carcinogenic contaminants of concern (COCs) where MCLs were available (Table 1).

Table 1: Groundwater COC Cleanup Goals

Groundwater COC	ROD Cleanup Goal (µg/L)[a]
Total VOCs	100
Vinyl chloride	1
Benzene	5
1,2-DCA	5
Notes: a = Cleanup goals as defined in the 1986 ROD. Goals were established based on human health risk and maximum contaminant levels (MCLs). µg/L = micrograms per liter	

In 1989, the United States secured settlements with numerous PRPs under which the remedial action selected in the ROD was constructed and continues to be operated and maintained. The settlements were modified to incorporate subsequent remedy changes.

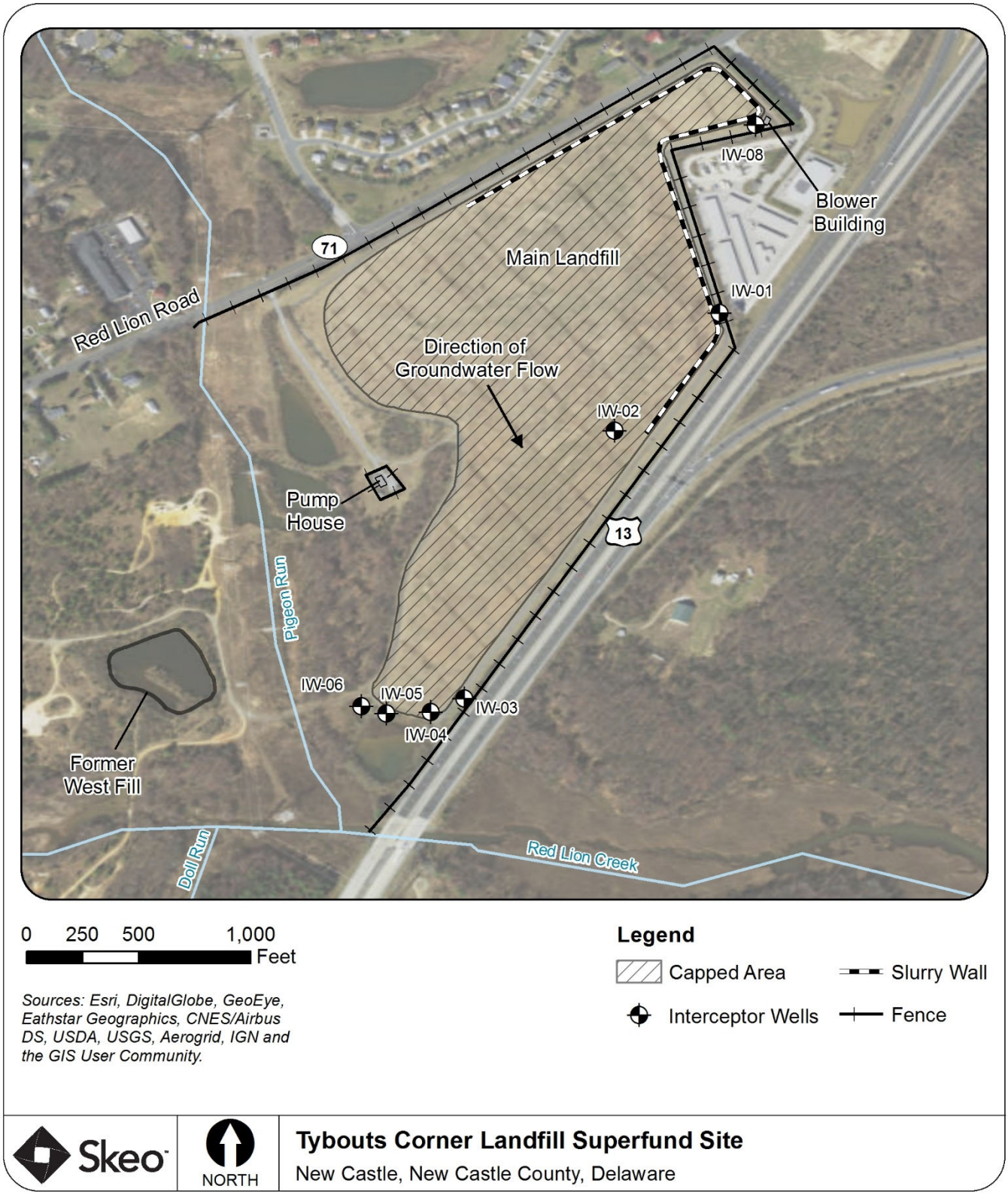
In May 1992, EPA modified the ROD with an Explanation of Significant Differences (ESD) to replace the upgradient trench with a slurry wall and the groundwater trench with interceptor wells. Intercepted groundwater was to be pumped to a publicly owned treatment works (POTW).

In October 1996, methane gas was detected outside the confines of the consolidated Main Landfill, adjacent to Red Lion Road. To mitigate threats presented by the migration of the gas, the PRPs installed a temporary active gas extraction system along the northern perimeter of the landfill along Red Lion Road in November 1996. In July 2000, EPA issued a second ESD to enhance the remedy with a permanent active landfill gas migration control system (GMCS) along the northern, eastern and southern boundaries of the landfill.

Remedy modifications in the 2000 ESD included:

- Replacement of the temporary active gas venting system installed along the Red Lion Road Corridor with a permanent above-ground system that will, in conjunction with other system components, prevent subsurface migration of gas from the landfill.
- Landfill gas monitoring to ensure that landfill gas concentrations at all monitoring points located outside of the landfill are below the threshold limit of 20 percent of the lower explosive limit (LEL).
- Operation of the gas collection and monitoring systems until landfill gas is no longer detected at any of the off-site monitoring points for four consecutive monitoring events.
- In the event monitoring data reflect an increase or buildup of landfill gas in any perimeter area, appropriate response measures will be taken to prevent the uncontrolled subsurface migration of gases from the landfill.
- Collection of air samples from all vents at least once following construction and operation of the active vent system. Within a year of construction, analytical data shall be incorporated into an atmospheric model designed to evaluate threats to human health and the environment from gases vented from the landfill. Air emission controls will be installed if the model predicts an exposure risk greater than $1 X10^{-6}$.
- In the event that land to the east, south, and/or west of the landfill is developed, additional off-site monitoring points in accordance with an EPA-approved plan.
- Revision of the Operation and Maintenance (O&M) Plan, as well as other plans as necessary, to incorporate these ESD changes.

Figure 2. Site Map



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Status of Implementation

Remedial design began in April 1989. The PRPs completed the remedial design and initiated remedial action in November 1992.

PRP contractors consolidated the Former West Fill area material in the Main Landfill area in July 1993. In May 1995, post-excavation sampling from the Former West Fill area confirmed that the excavation removed all source material. In accordance with EPA-approved specifications, the area underwent wetland mitigation. The Former West Fill area is now a wetland.

The Main Landfill remedy was designed to prevent clean water from entering the landfill and to extract contaminated leachate. The PRPs installed the slurry wall in October 1993 to prevent infiltration of clean groundwater into the landfill and to lower the water level within the landfill. The PRPs completed the multi-layer RCRA cap over the Main Landfill in November 1994. Following cap construction, the PRPs installed 51 passive gas vents in the landfill surface and 15 gas monitoring wells outside, and downgradient, of the landfill. The PRPs completed construction of a network of eight interceptor wells in April 1995 to prevent off-site migration of landfill leachate. Remedy construction finished in September 1995. As required by the 2000 ESD, the PRPs constructed a permanent above-ground landfill GMCS in 2000 to help prevent the subsurface migration of gas from the landfill. In 2017, the PRPs proposed to optimize the system using as single blower. EPA approved the request and the system now operates with a single blower.

The interceptor wells were designed to achieve and maintain groundwater capture downgradient of the landfill. In June 2003, the PRPs completed a detailed assessment of groundwater conditions. Based on the assessment, the PRPs concluded that the combined effluent of the interceptor well system was in compliance with the groundwater cleanup goals established in the ROD and that the interceptor wells could be shut down. With EPA and DNREC approval, interceptor wells IW-01, IW-05, IW-06, IW-07 and IW-08 were shut down on June 29, 2004, and wells IW-02, IW-03 and IW-04 were shut down on May 7, 2007. When in operation, the interceptor wells pumped groundwater into a storage tank in the on-site pump house. The groundwater was then pumped to the New Castle County sewer system. No water has been discharged to the New Castle County sewer since 2007. IW-07, the southernmost well, was dismantled and abandoned on October 4-5, 2016.

Institutional Control (IC) Review

Institutional controls selected in the 1986 ROD were limited to controls to prevent use of groundwater during pumping (Table 2). The settlements under which the remedial action was implemented (which included a settlement with the owner of the property upon which the landfill is located), provided that:

- the owner shall not obstruct or interfere with the remedy,
- that no conveyance of title, easement or other interest in the land be made without a provision allowing access as required under the settlement and a provision ensuring that there shall be no obstruction with or alteration of the remedy,
- that all conveyances of land interests shall contain such covenants necessary to permit remedial activities and protect the remedy,
- that New Castle County (a settling party) was required to file a copy of the settlement in the appropriate land records, and
- The restrictions and obligations regarding the land were intended to run with the land and be binding on anyone acquiring an interest in the land.

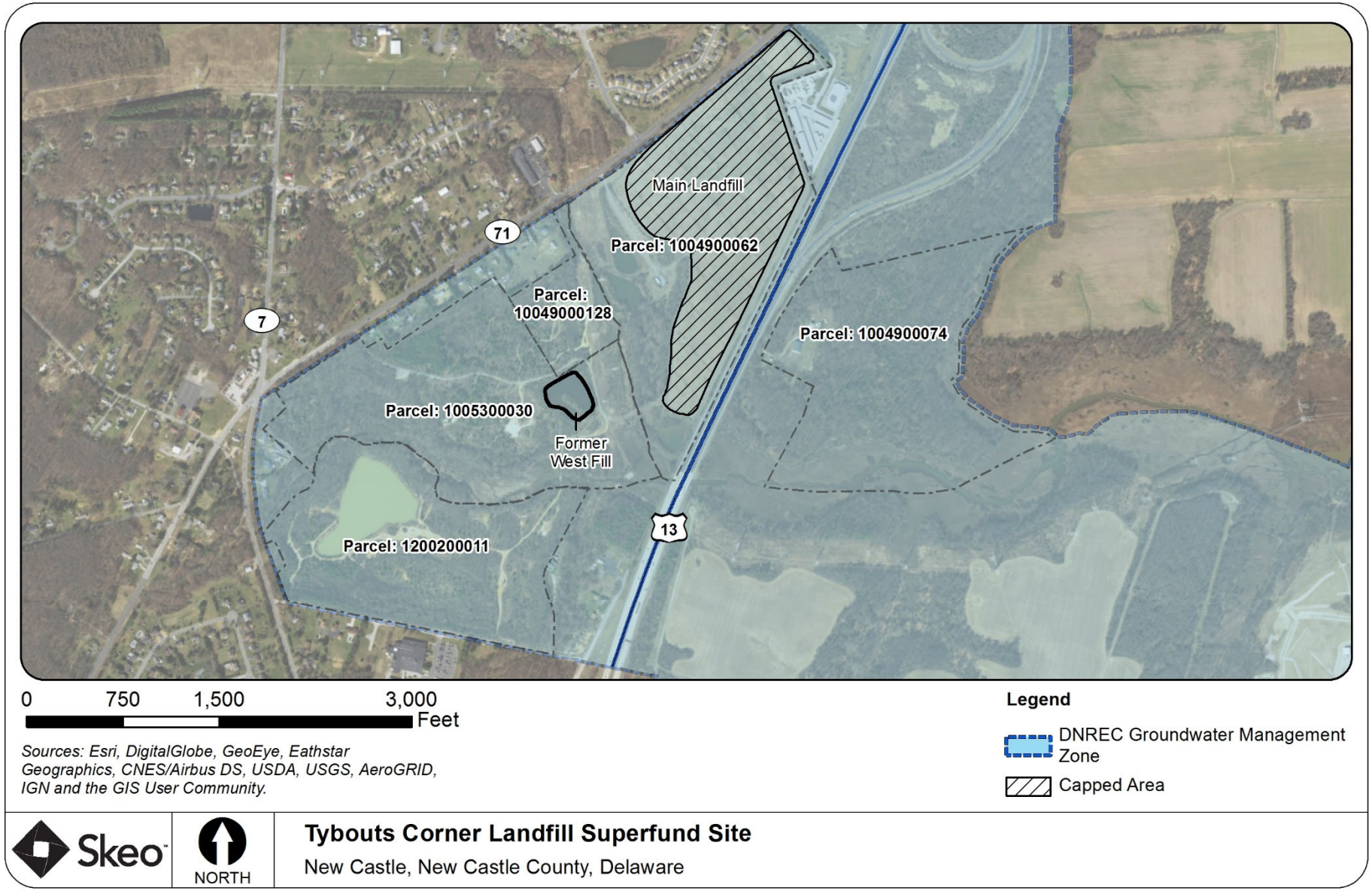
New Castle County filed a notice of the settlements as required in August 2001. There has been recent interest from several developers in the Site. EPA has been working with the PRPs, DNREC and interested buyers to ensure that future use of the property will not affect the protectiveness of the remedy.

In April 2014, Red Lion Open Space purchased the Main Landfill parcel (1004900062) and the parcel along the northwestern edge of the Main Landfill (Parcel 1004900128) (Figure 3). The landfill parcel is currently zoned for commercial use. Parcel 1004900128 is zoned for residential use. In April 2014, Red Lion Ventures LLC purchased the Former West Fill area parcel (1005300030) and an adjoining parcel, located south of Red Lion Creek (1200200011). The Former West Fill parcel is zoned for commercial use. Parcel 1200200011 is zoned for residential use. A property records search, performed as part of this FYR, determined that the land use restrictions required by the 1989 settlements continue to exist in the chain of title for each of the four parcels.

Table 2: Summary of Planned and/or Implemented Institutional Controls (ICs)

Media, Engineered Controls, and Areas That Do Not Support UU/UE Based on Current Conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date (or planned)
Groundwater	Yes	Yes, during pumping and treating of groundwater	1004900062, 1005300030, 1004900128, 1200200011 and 1004900074	Restrict installation of groundwater wells and groundwater use.	2005 DNREC Groundwater Management Zone (GMZ)
Soil	Yes	No	1004900062	Prohibit activities that could compromise the integrity of the remedy.	1988 consent decree implements restrictions on the Main Landfill parcel, 1004900062, as well as adjacent parcels 1005300030 1004900128 and 1200200011

Figure 3: Institutional Control Map



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Systems Operations/Operation and Maintenance (O&M)

The Long-Term Phase O&M Manual was revised and submitted to EPA on May 1, 2007. The PRPs prepare and submit quarterly O&M reports to EPA and DNREC. The reports document O&M inspection and Site monitoring results. Current monitoring of remedy performance includes semi-annual groundwater sampling, semi-annual groundwater level monitoring, quarterly passive gas monitoring, annual slurry wall monitoring, quarterly gas migration control, and annual landfill cap inspections.

Groundwater sampling was reduced to a semi-annual basis in the third quarter of 2008, and the long-term groundwater program was modified again in March 2012. The semi-annual sampling and analysis of groundwater was changed to nine wells sampled annually and eight wells sampled semi-annually, as provided in the Long-Term O&M Manual, Addendum 3.

Cap mowing and inspection occurs during the fourth quarter. EPA has suggested modifications to reduce impacts to grass-nesting birds. Following the 2015 FYR, a management plan for groundhogs has been developed and incorporated into the Site's O&M Plan. Addendum 4 of the Tybouts Long-Term O&M Manual (approved by EPA on June 26, 2017) contains the Burrowing Animal Management Plan. Trapping is now conducted as needed.

There has been some evidence of differential settlement of the cap near the blower building. The condensate sump housing and discharge piping has been realigned to allow for proper drainage. The PRPs prepared an evaluation of the differential settlement concerns of these areas, which was submitted as Appendix 2 of the Fourth Quarter 2015 O&M Report.

III. PROGRESS SINCE THE PREVIOUS REVIEW

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

Table 3: Protectiveness Determinations/Statements from the 2015 FYR Report

OU #	Protectiveness Determination	Protectiveness Statement
Sitewide	Short-term Protective	The remedy currently protects human health and the environment in the short term because the cap and institutional controls (which were not selected by EPA in a decision document) prevent exposure to contaminated soil and groundwater. The active landfill GMCS effectively prevents off Site migration of unacceptable levels of landfill gas. For the remedy to be protective over the long term, the following actions need to be taken: 1) Conduct an evaluation of groundwater further downgradient of TY-119B to better define and map the leading edge of the plume. 2) Monitor Well TY-119A to determine if contamination is migrating vertically into the P2 Sand at that location. 3) Determine if the concentration of 1, 2-DCA in TY-204 is attributable to the landfill. 4) Determine the anticipated land use changes and install additional gas monitoring probes along the western edge of the landfill, if needed. 5) Document the selection of land and groundwater use restrictions for properties affected by Site-related contamination.

Table 4: Status of Recommendations from the 2015 FYR Report

Issue	Recommendation	Current Status	Current Implementation Status Description	Completion Date (if applicable)
Benzene concentrations remain elevated in the furthest downgradient well that is sampled, TY-119B.	Conduct an evaluation of groundwater further downgradient of TY-119B to better define and map the leading edge of the groundwater plume.	Completed	The PRP sampled the wells downgradient of TY-119B across Red Lion Creek (i.e., TY-116A, TY-116B and TY-116C and TY-121A and TY-121B) as well as TY-119A (the deeper interval for TY-119B) in May 2016. Benzene was not detected in any of these downgradient wells.	9/29/2017
A downward vertical groundwater gradient at well TY-119B may indicate vertical migration of contamination into the P2 Sand.	Monitor well TY-119A to determine if contamination is migrating vertically into the P2 Sand at that location.	Completed	The PRPs sampled TY-119A on four successive sampling rounds with no detections and found no evidence of vertical migration into the P2 Sand.	9/29/2017
Concentrations of 1,2-dichloroethane have gradually increased in well TY-204.	Determine if the concentrations of 1,2-DCA in TY-204 are attributable to the landfill.	Completed	Since the 2015 FYR Report, the 1,2-DCA concentrations in TY-204 have returned to low historic levels (May 2015 – 4.3 µg/L, November 2015 – 0.74 µg/L, May 2016 – 7.3 µg/L, November 2016 – 0.94 µg/L, and May 2017 – 0.711 µg/L). Therefore, EPA does not anticipate further action related to this issue. 1,2-DCA will continue to be included in the analytical suite in future groundwater sampling.	9/29/2017
Based on the recent property transfer and expected land use change at parcels adjacent to the landfill, additional gas monitoring probes may be needed.	Determine the anticipated land use changes and install additional gas monitoring probes along the western edge of the landfill, if needed.	Completed	EPA is aware of a proposed residential development for the parcels to the south of the Landfill (Parcels: 10049000128, 1005300030, 1200200011). After review of recent data, EPA determined the landfill gas is not migrating in the direction of the parcels west of the Main Landfill and additional gas monitoring locations are not necessary to protect the proposed residential development, at this time. To date there has been no site work on these parcels. EPA is working with the developer regarding Site plans.	2/24/2020

Issue	Recommendation	Current Status	Current Implementation Status Description	Completion Date (if applicable)
The requirement of land and groundwater institutional controls needed to ensure protectiveness is not documented in a decision document.	Document the selection of land and groundwater use restrictions for properties affected by site-related contamination.	Ongoing	EPA is considering the need for a decision document to capture the implementation of ICs.	NA

IV. FIVE-YEAR REVIEW PROCESS

Community Notification, Community Involvement and Site Interviews

A public notice was made available in the *New Castle Weekly* newspaper on March 25, 2019 (See Appendix D). The notice stated that the FYR was underway and invited the public to submit any comments to EPA. EPA received no comments and the results of the review and the report will be made available at the Site's information repository at the DNREC offices located at 391 Lukens Drive, New Castle, Delaware, 19720.

During the FYR process, an interview was conducted with a nearby landowner to document any perceived problems or successes with the remedy that has been implemented to date (Appendix E)**.** The owner of the downgradient parcel did not express any concerns with the remedy. He uses his property for hunting and stated no one lives on the property and he does not use groundwater. This parcel is not under consideration for residential development.

Data Review

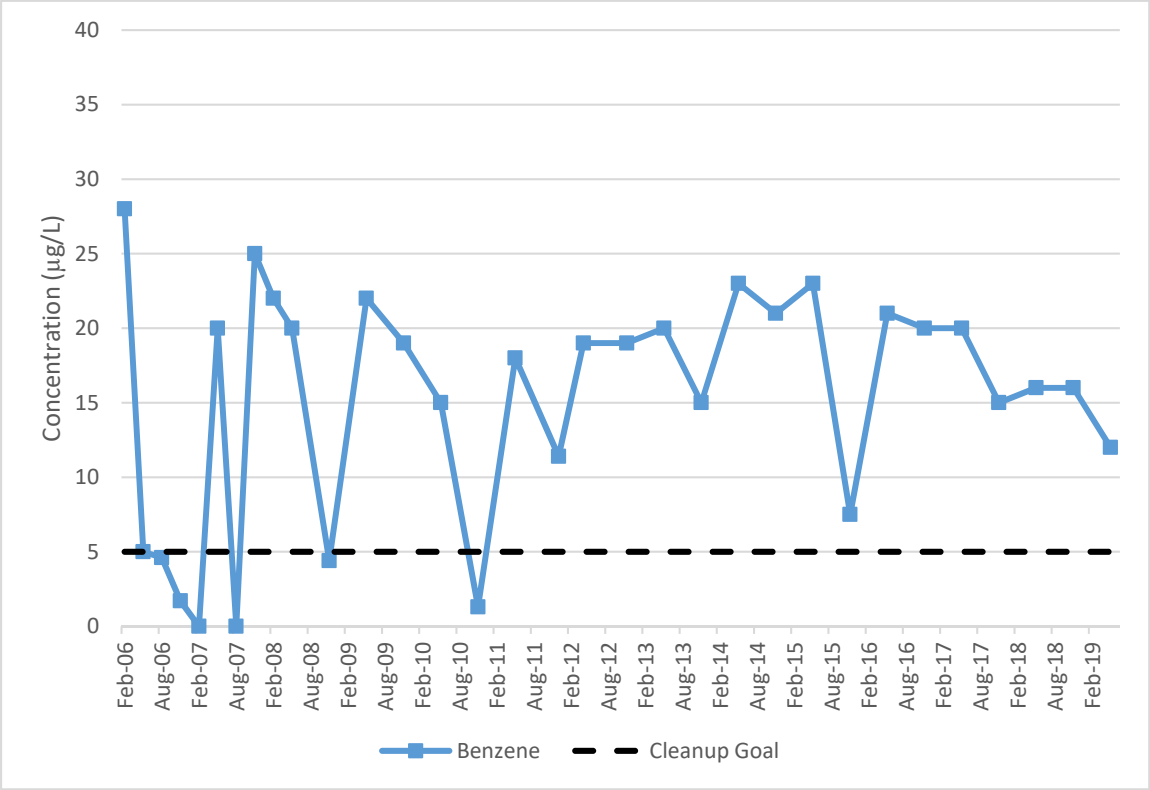
This FYR includes a review of the long-term groundwater monitoring and the landfill gas monitoring programs. Appendix H includes comprehensive data tables.

Groundwater Monitoring

The PRPs perform semi-annual groundwater monitoring to assess contaminant trends in downgradient monitoring wells along the eastern boundary of the landfill. The current long-term groundwater monitoring program includes sampling of 16 of 31 wells (Figure 5).

Concentrations in all wells sampled since November 2014 are below the cleanup criteria for total VOCs and vinyl chloride (Appendix H). As in the prior FYR period, this FYR period identified occasional exceedances of the benzene or 1,2-DCA cleanup goal in P1 Sand wells MW-02, MW-10, and TY-204, all below 10 micrograms per liter (µg/L). Benzene in TY-119B decreased from 23 µg/L to 12 µg/L since the previous FYR and demonstrate a downward trend approaching the MCL of 5 µg/L (see Figure 4). Benzene in TY-205 decreased from 9 µg/L to 4 µg/L since the previous FYR and demonstrate a downward trend approaching the MCL of 5 µg/L (see Figure 10 in Appendix H).

Figure 4. Benzene Concentrations in TY-119B



Landfill Gas

The 2000 ESD established a threshold limit for methane gas of 20 percent of the LEL (20 percent LEL) for off-site gas monitoring locations. Fifteen perimeter wells are located around the entire perimeter of the landfill, with a representative subset sampled each quarter to monitor for methane gas (see Figure 6). Since the 2015 FYR, PGMW-7 is now monitored each quarter due to regular detections and its location along the western edge of the landfill, adjacent to the wooded area between the landfill cap and the Former West Fill property. The landfill GMCS does not control gas migration along the western edge of the landfill.

Between 2015 and Q2 of 2019, a LEL greater than 0% was detected on one occasion in PRMW-2 (11%, Q2 2015) and PGMW-3 (10%, Q3 2018, Appendix H). PGMW-7 showed frequent elevated concentrations of methane, well above the 20% threshold. EPA has previously noted that the wet, marshy area immediately west of PGMW-7 may help to capture and degrade any escaped methane. The Site's August 2008 O&M Plan Amendment #1 includes a provision for the installation of additional gas monitoring probes between the landfill and the parcels west of the Main Landfill upon transfer of site property ownership. Site ownership changed in 2014. After review of recent data, EPA determined the landfill gas is not migrating in the direction of the parcels west of the Main Landfill and additional monitoring locations are not necessary at this time.

Figure 5: Monitoring Well Map

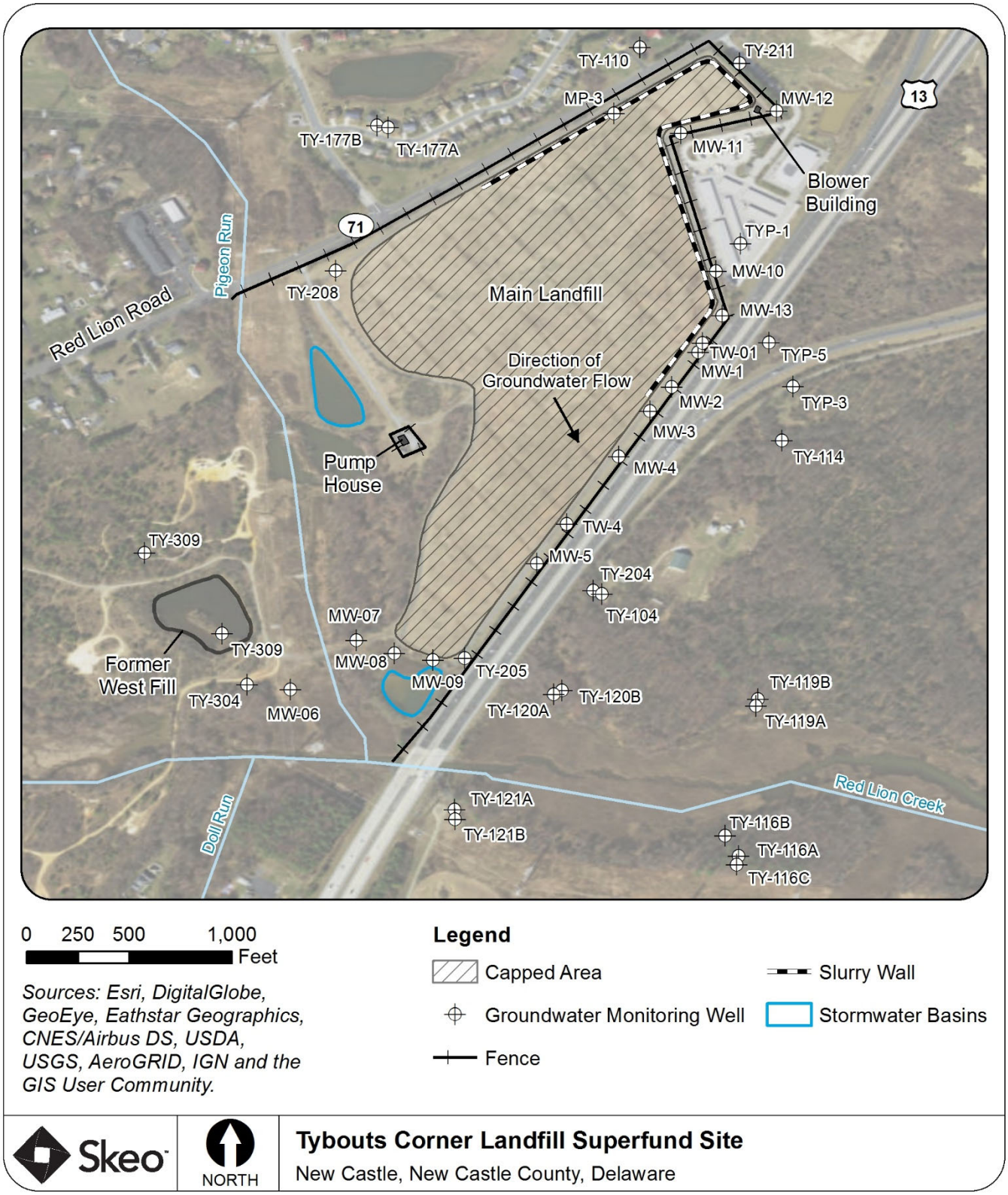


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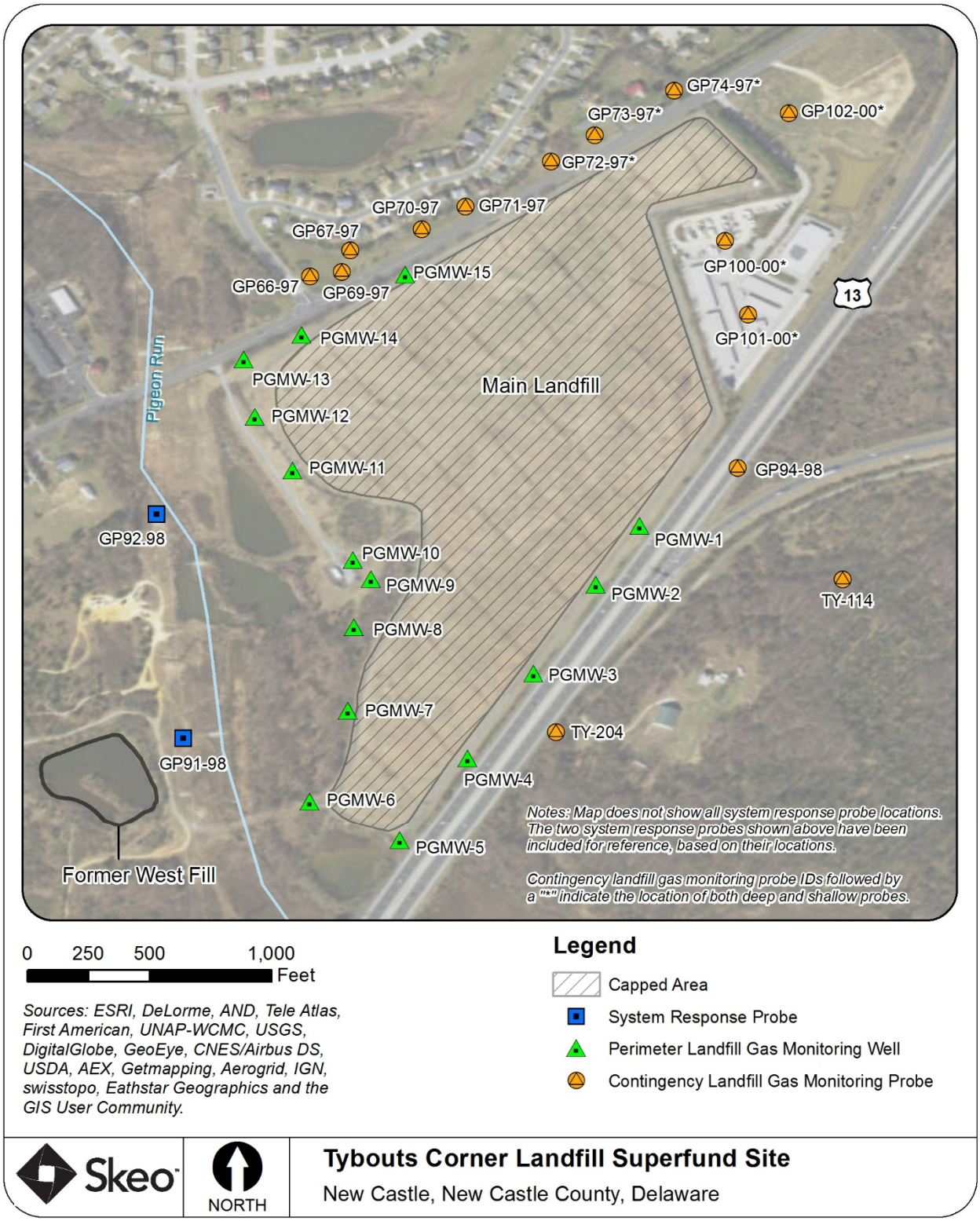
Figure 6: Gas Monitoring Network Map



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Site Inspection

The site inspection took place on May 13, 2019. Participants included the EPA RPM, DNREC, PRP and PRP contractors, and Skeo. The purpose of the inspection was to assess the protectiveness of the remedy. The site inspection checklist and photographs are included in Appendices F and G.

The inspection team toured the Main Landfill area by walking the access road and inspected various features. Heavy rain and pooling limited the site inspection. All passive and active landfill gas wells and inactive interceptor wells inspected appeared to be in good condition. All on-site groundwater monitoring wells observed appeared to be in good condition and were closed and secured with locks. The inspection team observed the areas of historical subsidence in the northeast corner of the landfill, west of the blower building and along the landfill's southeast border. These areas remain unchanged since the prior FYR. The inspection team did not see any evidence of burrowing in the landfill cap. Overall, no issues were noted during the inspection.

V. TECHNICAL ASSESSMENT

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

Question A Summary:

Yes, the remedy is functioning as intended by the decision documents. Excavation removed source contamination from the Former West Fill area. The Main Landfill is secured by a fence and the cover protects potential receptors from unacceptable exposures. The cap and the slurry wall installed along the upgradient side of the landfill prevents clean water from infiltrating the landfill and helps prevent elevated water levels within the landfill.

Groundwater monitoring data indicate that groundwater cleanup goals have largely been achieved. While groundwater COC concentrations at five monitoring locations exceed cleanup goals, COC concentrations at those locations have remained relatively stable over time. Additional sampling since the 2015 FYR did not identify any additional downgradient or deeper aquifer contamination. Benzene in wells P1 Sand wells TY-205 and TY-119B consistently exceeded the cleanup goal, with concentrations consistent with post-2007 pumping shutdown. Therefore, EPA will determine if additional investigations in consideration of resumed pumping are warranted due to continued exceedances of the benzene cleanup goal, in accordance with 2007 long-term monitoring plan.

Groundwater use restrictions are in place for the Main Landfill and Former West Fill area properties and for the surrounding properties. The Site and areas to the southeast (downgradient) of the Site are located within a DNREC GMZ. The Site’s location within the GMZ restricts the installation of groundwater wells and groundwater use at and near the Site.

On August 21, 2001, New Castle County filed a Notice of Consent Decree that included a copy of the 1988 Consent Decree between the site owner and the United States. In 2019, a developer proposed a residential development for the parcels south of the Main Landfill, which includes the Former West Fill area. These parcels are: 10049000128, 1005300030, 1200200011, and are subject to the land use restrictions established in the 1988 Consent Decree; EPA is working with the developer regarding Site plans.

The Site's EPA-approved August 2008 O&M Plan Amendment #1 includes a provision for the installation of additional gas monitoring probes between the Main landfill and the parcels west of the Main Landfill upon transfer of site property ownership. Monitoring points will be established when future plans for development are finalized to ensure they are properly located, as stipulated in the 2000 ESD. A site plan for residential development was proposed to the county in 2019.

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

Question B Summary:
The groundwater cleanup goals and RAOs remain valid. Groundwater use in the affected area has been eliminated through the extension of the public water supply and the enforcement of the DNREC GMZ. The MCLs identified in the ROD for total VOCs is 100 µg/L, 1,2-DCA and benzene have not changed (5 µg/L and 5 µg/L), and the current federal MCL for vinyl chloride (2 µg/L) is less stringent than the cleanup goal (1 µg/L). Contaminated soils have been excavated and capped, eliminating direct exposures and infiltration to groundwater.

The vapor intrusion pathway has not been evaluated, but the Long-Term O&M Plan Amendment #2 (January 2009) includes a provision for the PRPs to perform a vapor intrusion investigation if redevelopment occurs. At this time, there are no completed exposure pathways for vapor intrusion because there are no inhabited structures in the area of the groundwater plume. The gas monitoring network monitors potential gas migration to adjacent areas. In the prior FYR, EPA determined the air dispersion modeling performed from 2011 to 2014 indicated that the maximum annual off-site concentration of landfill gas is significantly less than the EPA screening levels established for determination of risk.

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

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

VI. ISSUES/RECOMMENDATIONS

Issues and Recommendations Identified in the Five-Year Review:

OU: Sitewide	**Issue Category: Institutional Controls**			
	Issue: The requirement of land and groundwater institutional controls needed to ensure protectiveness is not documented in a decision document.			
	Recommendation: Document the selection of land and groundwater use restrictions for properties affected by site-related contamination.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party**	**Milestone Date**
No	Yes	EPA	EPA	12/31/2020

OTHER FINDINGS

In addition, the following was identified during the FYR. These findings do not affect current or future protectiveness.

- A site plan for residential development was proposed to the county in 2019. EPA determined the landfill gas is not migrating in the direction of the parcels west of the Main Landfill and additional monitoring locations are not necessary at this time.
- EPA will continue to evaluate groundwater monitoring results to determine if additional investigations are warranted, in accordance with the 2007 long-term monitoring plan.

VII. PROTECTIVENESS STATEMENT

Protectiveness Statement		
Operable Unit: Sitewide	*Protectiveness Determination:* Short-term Protective	*Planned Addendum Completion Date:* Click here to enter a date
Protectiveness Statement: The remedy protects human health and the environment in the short term because the remedy is functioning as intended by the decision documents and prevents exposure to contaminated soil and groundwater. Source contamination was consolidated and covered in the Main Landfill, a slurry wall was installed to prevent migration of groundwater into the Main Landfill, and leachate was collected from the landfill until 2007. Institutional controls are in place to protect the integrity of the remedy and to prevent the installation of wells in areas of impacted groundwater. For the remedy to be protective of human health and the environment over the long term, the following actions need to be taken: • Document the selection of land and groundwater use restrictions for properties affected by site-related contamination.		

VIII. NEXT REVIEW

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

APPENDIX A – REFERENCE LIST

Air Dispersion Modeling Report, Tybouts Corner Landfill, New Castle County, Delaware. Prepared for The Tybouts Corner Landfill Steering Committee by Conestoga-Rovers & Associates. January 2012.

Amended Memorandum of Agreement between the Division of Waste and Hazardous Substances and Division of Water for the City of Wilmington Groundwater Management Zone. Department of Natural Resources and Environmental Control. September 2011.

Differential Settlement of Tybouts Corner Landfill Site Memorandum. Conestoga-Rovers & Associates. February 2015.

Explanation of Significant Differences, Tybouts Corner Landfill OU 1, New Castle, Delaware. United States Environmental Protection Agency Region 3. July 26, 2000.

Five-Year Review Report for Tybouts Corner Landfill, Bear, Delaware. United States Environmental Protection Agency Region 3. September 29, 2000.

Fourth Five-Year Review Report for Tybouts Corner Landfill Site, New Castle, New Castle County, Delaware. United States Environmental Protection Agency Region 3. July 29, 2015.

Negotiating Decision Document, Tybouts Corner Landfill, New Castle, Delaware. United States Environmental Protection Agency Region 3. September 13, 1984.

Operations and Maintenance Quarterly Reports for the Tybouts Corner Superfund Site, 2015-2019. Tybouts Corner Landfill Site Trust Fund.

Record of Decision, Tybouts Corner Landfill OU1, New Castle, Delaware. United States Environmental Protection Agency Region 3. March 6, 1986.

Remedial Action Completion Report, Tybouts Corner, Delaware. Tybouts Corner Landfill Site Trust Fund. May 1995.

Remedial Investigation/Feasibility Study Report, Tybouts Corner Landfill, New Castle County, Delaware. June 1985. Prepared for EPA Region 3 by NUS Corporation.

Second Five-Year Review Report for Tybouts Corner Landfill Site, New Castle, New Castle County, Delaware. United States Environmental Protection Agency Region 3. September 29, 2005.

Superfund Site Agreement for Tybouts Corner Landfill Site between William C. Ward and New Castle County. March 4, 1992.

Tybouts Corner Landfill Design Report, West Landfill/Wetland Mitigation Sampling and Analysis Report. Prepared for Tybouts Corner Landfill Trust Fund Management Steering Committee by DPL Consultants. October 1995.

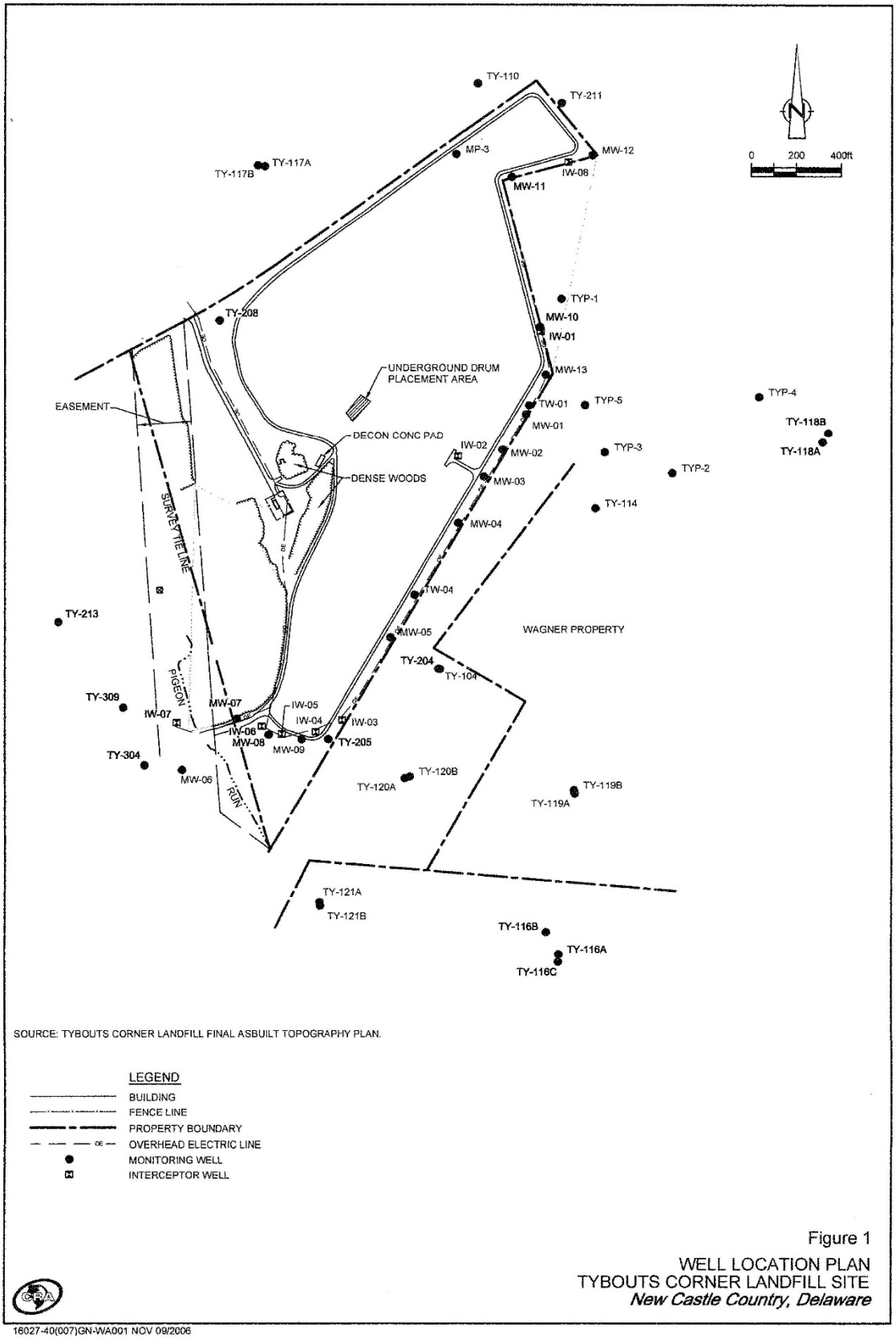
Tybouts Corner Landfill Long-Term Phase Operation & Maintenance Manual Addendum 1. Tybouts Corner Landfill Trust Fund Management Steering Committee. August 2008.

APPENDIX B – SITE CHRONOLOGY

Table B-1: Site Chronology

Event	Date
Site owners operated sand and gravel quarry at the Site	Prior to 1968
New Castle County disposed of municipal and industrial waste at the Site	1968-1971
DNREC discovered VOCs in domestic supply well several hundred feet east of the main landfill	April 1976
EPA listed the Site on the Superfund program's NPL	September 8, 1983
EPA selected interim measures to address contaminated residential drinking water wells	September 13, 1984
EPA entered into Consent Decree with PRPs for extension of public water supply line to residences near the landfill	December 19, 1984
PRPs constructed public water line	January 1985
EPA completed the Site's RI/FS	June 1985
EPA signed ROD to address contaminated groundwater	March 6, 1986
The U.S. District Court for the District of Delaware (Court) approved several consent decrees under which the PRPs agreed to design and implement the 1986 ROD and additionally implement land use restrictions to protect the operation and integrity of the remedy	April 19, 1989
EPA issued an ESD to replace the upgradient trench with a slurry wall and the downgradient trench with interceptor wells	May 14, 1992
PRPs completed the remedial design and started the remedial action	November 25, 1992
The Court approved a modification to the Consent Decree to incorporate the 1992 ESD	December 16, 1994
PRPs completed remedy construction and EPA released the Site's Preliminary Close-out Report	September 11, 1995
EPA issued second ESD to enhance remedy with permanent active GMCS along the landfill's northern, eastern and southern boundaries	July 26, 2000
EPA signed the Site's first FYR Report	September 29, 2000
PRPs began operation of the active landfill GMCS	December 2000
The Court approved a modification to the Consent Decree to incorporate the 2000 ESD	December 17, 2001
EPA signed the Site's second FYR Report	September 29, 2005
PRPs shut down the remaining groundwater interceptor wells	May 7, 2007
EPA signed the Site's third FYR Report	September 29, 2010
EPA provided a comfort letter to the potential purchaser of the site property	September 16, 2011
Red Lion Ventures, LLC and Red Lion Open Space purchased the parcel immediately south of the Main Landfill, including the Former West Fill area	April 30, 2014
EPA signed the Site's fourth FYR Report	September 29, 2015

APPENDIX C – ADDITIONAL SITE MAPS



SOURCE: TYBOUTS CORNER LANDFILL FINAL ASBUILT TOPOGRAPHY PLAN.

LEGEND

- BUILDING
- FENCE LINE
- PROPERTY BOUNDARY
- OE — OVERHEAD ELECTRIC LINE
- MONITORING WELL
- INTERCEPTOR WELL

Figure 1

WELL LOCATION PLAN
TYBOUTS CORNER LANDFILL SITE
New Castle Country, Delaware

16027-40(007)GN-WA001 NOV 09/2006

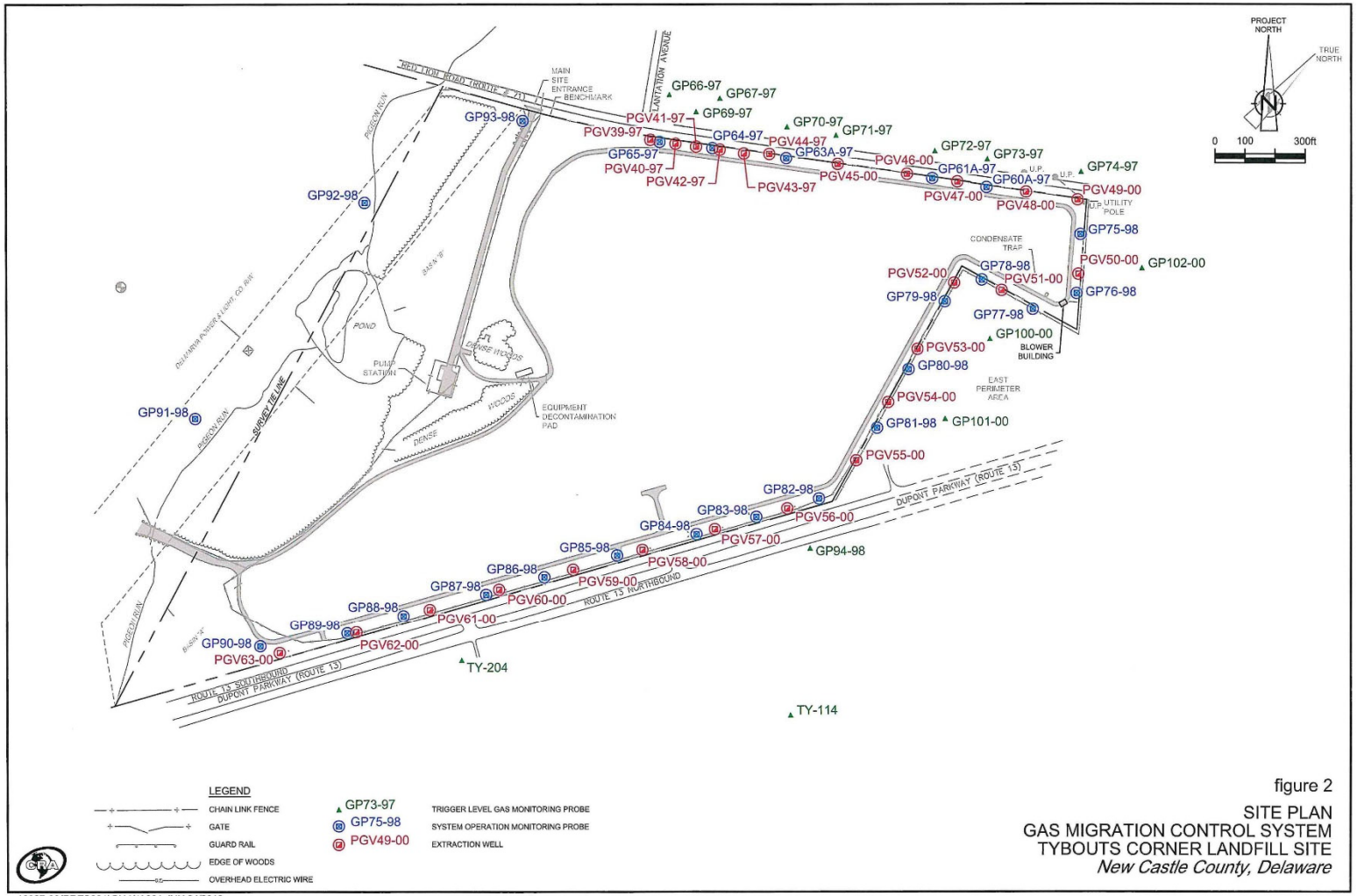
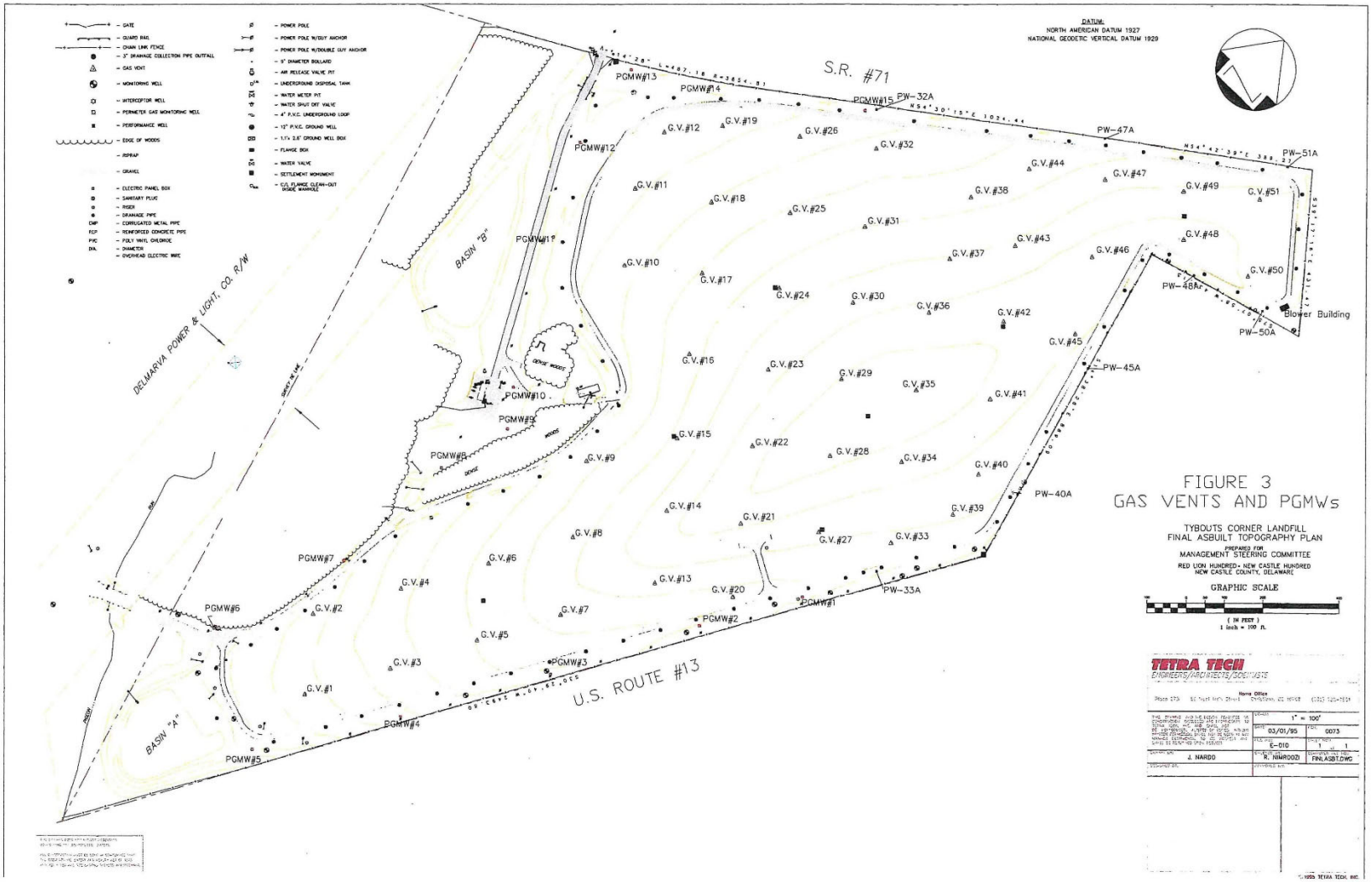


figure 2

SITE PLAN
GAS MIGRATION CONTROL SYSTEM
TYBOUTS CORNER LANDFILL SITE
New Castle County, Delaware

16027-00(PRES001)GN-WA001 JUN 24/2013


DATUM:
NORTH AMERICAN DATUM 1927
NATIONAL GEODETIC VERTICAL DATUM 1929
S.R. #71
U.S. ROUTE #13
DELMARVA POWER & LIGHT, CO. R/W
BASIN "A"
BASIN "B"
Blower Building
PGMW#1
PGMW#2
PGMW#3
PGMW#4
PGMW#5
PGMW#6
PGMW#7
PGMW#8
PGMW#9
PGMW#10
PGMW#11
PGMW#12
PGMW#13
PGMW#14
PGMW#15
PW-32A
PW-33A
PW-40A
PW-45A
PW-47A
PW-48A
PW-50A
PW-51A
FIGURE 3
GAS VENTS AND PGMWs
TYBOUTS CORNER LANDFILL
FINAL ASBUILT TOPOGRAPHY PLAN
PREPARED FOR
MANAGEMENT STEERING COMMITTEE
RED LION HUNDRED • NEW CASTLE HUNDRED
NEW CASTLE COUNTY, DELAWARE
GRAPHIC SCALE
TETRA TECH
ENGINEERS/ARCHITECTS/CONSULTANTS
1" = 100'
03/01/95
0073
E-010
J. NARDO
R. NWR0021
FINLASBT.DWG

APPENDIX D – PRESS NOTICE

EPA PUBLIC NOTICE

EPA REVIEWS CLEANUP

TYBOUTS CORNER LANDFILL SUPERFUND SITE

The U.S. Environmental Protection Agency (EPA) is reviewing the cleanup that was conducted at the Tybouts Corner Landfill Superfund Site located in New Castle, Delaware. EPA inspects sites regularly to ensure that cleanups conducted protect public health and the environment. EPA's 2015 review of the site concluded that the remedy was working as designed and is protective in the short term. Findings from the current review will be available in July 2020.

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

For questions or to provide site-related information for the review, contact:
Amanda Miles, EPA Community Involvement Coordinator
215-814-5557 or miles.amanda@epa.gov

APPENDIX E – INTERVIEW FORMS

Tybouts Corner Landfill Superfund Site		**Five-Year Review Interview Form**	
Site Name:	**Tybouts Corner Landfill**	**EPA ID No.:**	**DED000606079**
Interviewer Name:		**Affiliation:**	**EPA**
Subject Name:		**Affiliation:**	
Subject Contact Information:			
Time:		**Date:**	**5/13/2019**
Interview Location:	**Wagner Property**		
Interview Format (circle one):	**In Person**	**Phone**	**Mail** **Other:**

Interview Category: **Resident**

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

   I am aware of the site. My grandfather owned this property in the 1960s. I returned to the property in 1995 and 1996.

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

   It seems fine.

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

   I am aware of housing development plans across the creek.

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

   There have been break-ins into the building. People ask me for deer horns. I do not live at the Wagner Property. I am not doing anything I am not supposed to be doing.

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

   Email, texts, and on the phone.

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

   There are no wells used here.

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

   No.

APPENDIX F – SITE INSPECTION CHECKLIST

FIVE-YEAR REVIEW SITE INSPECTION CHECKLIST

I. SITE INFORMATION

Site Name: Tybouts Corner Landfill	**Date of Inspection:** 05/13/2019
Location and Region: New Castle, DE, Region 3	**EPA ID: DED000606079**
Agency, Office or Company Leading the Five-Year Review: EPA Region 3	**Weather/Temperature:** 80 degrees, rainy

Remedy Includes: (check all that apply)

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

Attachments: ☐ Inspection team roster attached ☐ Site map attached

II. INTERVIEWS (check all that apply)

1. **O&M Site Manager** _____ Name _____ Title _____ Date
   Interviewed ☐ at site ☐ at office ☐ by phone Phone: _____
   Problems, suggestions ☐ Report attached: _____

2. **O&M Staff** _____ Name _____ Title _____ Date
   Interviewed ☐ at site ☐ at office ☐ by phone Phone: _____
   Problems/suggestions ☐ Report attached: _____

3. **Local Regulatory Authorities and Response Agencies** (i.e., state and tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices). Fill in all that apply.

   Agency _____
   Contact _____ Name _____ Title _____ Date _____ Phone No.
   Problems/suggestions ☐ Report attached: _____

   Agency _____
   Contact _____Name _____ Title _____ Date _____ Phone No.
   Problems/suggestions ☐ Report attached:_____

   Agency _____
   Contact _____ Name _____ Title _____ Date _____ Phone No.
   Problems/suggestions ☐ Report attached:_____

   Agency _____
   Contact _____ Name _____ Title _____ Date _____ Phone No.
   Problems/suggestions ☐ Report attached: _____

   Agency _____

	Contact	Name	Title	Date	Phone No.
	Problems/suggestions ☐ Report attached:				
4.	**Other Interviews** (optional) ☒ Report attached:				
Adjacent landowner					
	III. ON-SITE DOCUMENTS AND RECORDS VERIFIED (check all that apply)				
1.	**O&M Documents**				
	☒ O&M manual	☒ Readily available	☒ Up to date	☐ N/A	
	☒ As-built drawings	☒ Readily available	☒ Up to date	☐ N/A	
	☒ Maintenance logs	☒ Readily available	☒ Up to date	☐ N/A	
	Remarks:				
2.	**Site-Specific Health and Safety Plan**	☒ Readily available	☒ Up to date	☐ N/A	
	☒ Contingency plan/emergency response plan	☒ Readily available	☒ Up to date	☐ N/A	
	Remarks:				
3.	**O&M and OSHA Training Records**	☒ Readily available	☒ Up to date	☐ N/A	
	Remarks:				
4.	**Permits and Service Agreements**				
	☐ Air discharge permit	☐ Readily available	☐ Up to date	☒ N/A	
	☐ Effluent discharge	☐ Readily available	☐ Up to date	☒ N/A	
	☐ Waste disposal, POTW	☐ Readily available	☐ Up to date	☒ N/A	
	☐ Other permits:	☐ Readily available	☐ Up to date	☒ N/A	
	Remarks:				
5.	**Gas Generation Records**	☒ Readily available	☒ Up to date	☐ N/A	
	Remarks:				
6.	**Settlement Monument Records**	☐ Readily available	☐ Up to date	☒ N/A	
	Remarks:				
7.	**Groundwater Monitoring Records**	☒ Readily available	☒ Up to date	☐ N/A	
	Remarks:				
8.	**Leachate Extraction Records**	☐ Readily available	☐ Up to date	☒ N/A	
	Remarks:				
9.	**Discharge Compliance Records**				
	☒ Air	☒ Readily available	☒ Up to date	☐ N/A	
	☐ Water (effluent)	☐ Readily available	☐ Up to date	☒ N/A	
	Remarks:				
10.	**Daily Access/Security Logs**	☐ Readily available	☐ Up to date	☒ N/A	

Remarks: _____

IV. O&M COSTS

1. **O&M Organization**

☐ State in-house ☐ Contractor for state

☐ PRP in-house ☒ Contractor for PRP

☐ Federal facility in-house ☐ Contractor for Federal facility

☐ _____

2. **O&M Cost Records**

☐ Readily available ☐ Up to date

☐ Funding mechanism/agreement in place ☒ Unavailable

Original O&M cost estimate: _____ ☐ Breakdown attached

Total annual cost by year for review period if available

From: _____ Date	To: _____ Date	_____ Total cost	☐ Breakdown attached
From: _____ Date	To: _____ Date	_____ Total cost	☐ Breakdown attached
From: _____ Date	To: _____ Date	_____ Total cost	☐ Breakdown attached
From: _____ Date	To: _____ Date	_____ Total cost	☐ Breakdown attached
From: _____ Date	To: _____ Date	_____ Total cost	☐ Breakdown attached

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

Describe costs and reasons: _____

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

A. Fencing

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

Remarks: _____

B. Other Access Restrictions

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

Remarks: _____

C. Institutional Controls (ICs)

1. **Implementation and Enforcement**

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

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

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

Frequency: _____

Responsible party/agency: _____

Contact _____ _____ _____ _____

Name Title Date Phone no.

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

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

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

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

Other problems or suggestions: ☐ Report attached

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

Remarks: _____

D. General

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

Remarks: _____

2. **Land Use Changes On Site** ☒ N/A

Remarks: _____

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

Remarks: The parcel with the west fill area is proposed for residential development.

VI. GENERAL SITE CONDITIONS

A. Roads ☒ Applicable ☐ N/A

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

Remarks: _____

B. Other Site Conditions

Remarks: _____

VII. LANDFILL COVERS ☒ Applicable ☐ N/A

A. Landfill Surface

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

Area extent: _____ Depth: _____

Remarks: _____

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

Lengths: _____ Widths: _____ Depths: _____

Remarks: _____

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

1. **Settlement** (Low spots) ☐ Location shown on site map ☒ No evidence of settlement
Area extent: _____ Depth: _____
Remarks: _____

2. **Material Degradation** ☐ Location shown on site map ☒ No evidence of degradation
Material type:_____ Area extent: _____
Remarks: _____

3. **Erosion** ☐ Location shown on site map ☒ No evidence of erosion
Area extent: _____ Depth: _____
Remarks: _____

4. **Undercutting** ☐ Location shown on site map ☒ No evidence of undercutting
Area extent: _____ Depth: _____
Remarks: _____

5. **Obstructions** Type: _____ ☒ No obstructions
☐ Location shown on site map Area extent: _____
Size: _____
Remarks: _____

6. **Excessive Vegetative Growth** Type: _____
☒ No evidence of excessive growth
☐ Vegetation in channels does not obstruct flow
☐ Location shown on site map Area extent: _____
Remarks: _____

D. Cover Penetrations ☒ Applicable ☐ N/A

1. **Gas Vents** ☒ Active ☒ Passive
☒ Properly secured/locked ☒ Functioning ☒ Routinely sampled ☒ Good condition
☐ Evidence of leakage at penetration ☐ Needs maintenance ☐ N/A
Remarks: _____

2. **Gas Monitoring Probes**
☒ Properly secured/locked ☒ Functioning ☒ Routinely sampled ☒ Good condition
☐ Evidence of leakage at penetration ☐ Needs maintenance ☐ N/A
Remarks: _____

3. **Monitoring Wells** (within surface area of landfill)
☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition
☐ Evidence of leakage at penetration ☐ Needs maintenance ☒ N/A
Remarks: _____

4. **Extraction Wells Leachate**
☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition

☐ Evidence of leakage at penetration ☐ Needs maintenance ☒ N/A

Remarks: _____

5. **Settlement Monuments** ☐ Located ☐ Routinely surveyed ☒ N/A

Remarks: _____

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

1. **Gas Treatment Facilities**

☐ Flaring ☐ Thermal destruction ☐ Collection for reuse

☒ Good condition ☐ Needs maintenance

Remarks: _____

2. **Gas Collection Wells, Manifolds and Piping**

☒ Good condition ☐ Needs maintenance

Remarks: _____

3. **Gas Monitoring Facilities** (e.g., gas monitoring of adjacent homes or buildings)

☒ Good condition ☐ Needs maintenance ☐ N/A

Remarks: _____

F. Cover Drainage Layer ☐ Applicable ☒ N/A

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

Remarks: _____

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

Remarks: _____

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

1. **Siltation** Area extent: _____ Depth: _____ ☐ N/A

☐ Siltation not evident

Remarks: _____

2. **Erosion** Area extent: _____ Depth: _____

☐ Erosion not evident

Remarks: _____

3. **Outlet Works** ☐ Functioning ☐ N/A

Remarks: _____

4. **Dam** ☐ Functioning ☐ N/A

Remarks: _____

H. Retaining Walls ☐ Applicable ☒ N/A

1. **Deformations** ☐ Location shown on site map ☐ Deformation not evident

Horizontal displacement: _____ Vertical displacement: _____

Rotational displacement: _____

Remarks: _____

2. **Degradation** ☐ Location shown on site map ☐ Degradation not evident

Remarks: _____

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

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

Area extent: _____ Depth: _____

Remarks: _____

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

☐ Vegetation does not impede flow

Area extent: _____ Type: _____

Remarks: _____

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

Area extent: _____ Depth: _____

Remarks: _____

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

Remarks: _____

VIII. VERTICAL BARRIER WALLS ☒ Applicable ☐ N/A

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

Area extent: _____ Depth: _____

Remarks: _____

2. **Performance Monitoring** Type of monitoring: Water levels

☐ Performance not monitored

Frequency: _____ ☐ Evidence of breaching

Head differential: _____

Remarks: _____

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

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

1. **Pumps, Wellhead Plumbing and Electrical**

☒ Good condition ☐ All required wells properly operating ☐ Needs maintenance ☐ N/A

Remarks: The system is not in use but is maintained.

2. **Extraction System Pipelines, Valves, Valve Boxes and Other Appurtenances**

☒ Good condition ☐ Needs maintenance

Remarks: _____

3. **Spare Parts and Equipment**

☒ Readily available ☐ Good condition ☐ Requires upgrade ☐ Needs to be provided

Remarks: _____

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

1. **Collection Structures, Pumps and Electrical**

☐ Good condition ☐ Needs maintenance

Remarks: _____

2. **Surface Water Collection System Pipelines, Valves, Valve Boxes and Other Appurtenances**

☐ Good condition ☐ Needs maintenance

Remarks: _____

3. **Spare Parts and Equipment**

☐ Readily available ☐ Good condition ☐ Requires upgrade ☐ Needs to be provided

Remarks: _____

C. Treatment System ☐ Applicable ☒ N/A

1. **Treatment Train** (check components that apply)

☐ Metals removal ☐ Oil/water separation ☐ Bioremediation

☐ Air stripping ☐ Carbon adsorbers

☐ Filters: _____

☐ Additive (e.g., chelation agent, flocculent): _____

☐ Others: _____

☐ Good condition ☐ Needs maintenance

☐ Sampling ports properly marked and functional

☐ Sampling/maintenance log displayed and up to date

☐ Equipment properly identified

☐ Quantity of groundwater treated annually: _____

☐ Quantity of surface water treated annually: _____

Remarks: _____

2. **Electrical Enclosures and Panels** (properly rated and functional)

☐ N/A ☐ Good condition ☐ Needs maintenance

Remarks: _____

3. **Tanks, Vaults, Storage Vessels**

☐ N/A ☐ Good condition ☐ Proper secondary containment ☐ Needs maintenance

Remarks: _____

4. **Discharge Structure and Appurtenances**

☐ N/A ☐ Good condition ☐ Needs maintenance

Remarks: _____

5. **Treatment Building(s)**

☐ N/A ☐ Good condition (esp. roof and doorways) ☐ Needs repair

☐ Chemicals and equipment properly stored

Remarks: _____

6. **Monitoring Wells** (pump and treatment remedy)

☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition

☐ All required wells located ☐ Needs maintenance ☐ N/A

Remarks: _____

D. Monitoring Data

1. **Monitoring Data**

☒ Is routinely submitted on time ☒ Is of acceptable quality

2. **Monitoring Data Suggests:**

☒ Groundwater plume is effectively contained ☐ Contaminant concentrations are declining

E. Monitored Natural Attenuation

1. **Monitoring Wells** (natural attenuation remedy)

☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition

☐ All required wells located ☐ Needs maintenance ☐ N/A

Remarks: _____

X. OTHER REMEDIES

If there are remedies applied at the site and not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.

XI. OVERALL OBSERVATIONS

A. Implementation of the Remedy

Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is designed to accomplish (e.g., to contain contaminant plume, minimize infiltration and gas emissions).
The remedy is functioning as intended.

B. Adequacy of O&M

Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.
No issues noted.

C. Early Indicators of Potential Remedy Problems

Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs that suggest that the protectiveness of the remedy may be compromised in the future.
No early indicators of potential remedy problems.

D. Opportunities for Optimization

Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.
No opportunities for optimization noted.

APPENDIX G – SITE INSPECTION PHOTOS

Surface water drainage along western edge of landfill

Locked monitoring well

Gas collection pipeline

Northern fenceline

Former West Fill area

Landfill cover

APPENDIX H –DATA TABLES AND CHARTS

Table 4A
Tybouts Corner Landfill
On-site Groundwater Monitoring Wells Analytical Results

MW-01

Parameter	2/06	5/06	8/06	11/06	2/07	5/07	8/07	11/07	2/08	5/08	11/08	5/09	8/09	11/09	5/10	11/10	5/11	12/11	4/12	11/12	5/13	11/13	5/14	11/14	5/15	11/15	5/16	11/16	5/17	11/17	5/18	11/18	5/19
1,1-dichloroethane	0.63	0.8	0.65	0.64	0.45 J	0.57	0.47 J	0.64	0.92 J	0.29 J	0.91	0.40 J	NS	1.3	U0.5	0.33 J	0.41 J	0.565	0.51	0.30 J	0.31 J	0.26 J	0.25 J	0.43J	0.43 J	0.31 J	U0.12	U0.34	U0.34	U 0.63	U 0.63	U 0.63	U 0.63
1,2-dichloroethane	1.3	2.3	3.9	3.7	0.49 J	3.4	0.77	5.7	6	2.4	7.6	0.57		3.3	0.65	0.80	0.58	1.16	0.59	0.50 J	0.67	0.31 J	0.29 J	1.7	0.40 J	0.46 J	0.34 J	0.29 J	0.66 J	U 0.57	U 0.57	U 0.57	1.1
1,2-Dichloroethene (total)	U0.5	U0.5	U0.5	U0.5	U0.5	0.13 J	0.44 J	U0.5	U0.5	U0.5	0.13 J	0.44 J		0.25 J	0.31 J	0.11 J	0.23 J	0.26 J	0.55	0.5U	0.21 J	0.15 J	0.16 J	0.19J	0.24 J	0.16 J	NR	NR	NR	NR	NR	NR	NR
cis-1,2-dichloroethene	*0.38J*	*0.39 J*	*U0.5*	*0.18 J*	*0.23 J*	*U0.5*	*0.28 J*	*U0.5*	*U0.5*	*U0.5*	*0.13 J*	*0.31 J*		*0.26 J*	*0.2 J*	*0.11 J*	*0.15 J*	*0.199 J*	*0.55*	*0.5U*	*0.21 J*	*0.15 J*	0.16 J	0.19J	*0.24 J*	*0.16 J*	U0.24	U0.30	U0.30	U 0.71	U 0.71	U 0.71	U 0.71
trans-1,2-dichloroethene	*0.16J*	*0.25J*	*U0.5*	*0.18 J*	*0.13 J*	*0.12 J*	*0.15 J*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*0.14 J*		*U0.5*	*0.11 J*	*U0.5*	*0.08 J*	*0.0612 J*	*0.5U*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	U0.17	U0.20	U0.20	U 0.67	U 0.67	U 0.67	U 0.67
2-Butanone	U2.5	U2.5	U2.5	U2.5	2.1	U2.5	U2.5	U2.5	38	3.2	U2.5	U2.5		U2.5	U2.5	U2.5	U2.5	7.68	U2.5	U2.5	U2.5	U2.5	1.1 J	U2.5	U2.5	U2.5	U0.55	U2.6	U2.6	U 2.6	U 2.6	U 2.6	U 2.6
4-Methyl-2-pentanone	U2.5	U2.5	1.4 J	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5		U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U0.53	U2.2	U2.2	U 3.1	U 3.1	U 3.1	U 3.1
Acetone	U2.5	5.3B	7.7	U2.5	U2.5	12 B	5.2 B	11 B	180 B	29	11 B	4.5		9.6	U2.5	U2.5	2.3 J	U2.5	4.5	U2.5	U2.5	1.1 J	5.8	U2.5	1.2 JB	1.8 JB	U2.5	3.4 J	U3.1	U 3.4	U 3.4	U 3.4	4.2 J
Benzene	1.2	1.6	1.2	1.4	1.8	1.2	0.72 B	1.2	1.2 J	0.33 J	1.5	0.74		3.0	1.1	0.91	1.3	2.04	1.5	1.1	1.1	1.3	1.4	1.8	2.6	1.8	2.2	2.4	1.9	1.5	1.1	0.86 J	1.9
Carbon disulfide	U0.5	U0.5	U0.5	U0.5	0.11 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	U0.5	U0.5	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.051 J	0.080 J	U0.21	U0.53	U0.53	U 0.88	U 0.88	U 0.88	U 0.88
Chlorobenzene	1.3	1.1	0.69	1.1	1.3	1.1	0.93	0.81	0.54 J	0.21 J	0.68	1.3		0.79	1.3	1.1	1.3	1.28	1.8	1.2	0.75	1.0	0.99	0.46J	1.1	0.85	0.88 J	1.1	0.33 J	0.91 J	0.82 J	0.73 J	0.90 J
Chloroethane	0.54	0.75	1.0	0.51	0.47J	0.7	0.24 J	U0.5	U0.5	U0.5	0.43 J	U0.5		1	0.3 J	0.25 J	U0.5	U0.5	0.49 J	0.5U	0.5U	0.21 J	0.5U	0.5U	0.46 J	0.41 J	U0.21	U0.58	0.80 J	U 0.90	U 0.90	U 0.90	U 0.90
Ethylbenzene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		0.10 J	0.061 J	U0.5	U0.5	U0.5	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.054 J	0.5U	U0.23	U0.25	U0.25	U 0.51	U 0.51	U 0.51	U 0.51
Methylene Chloride	U0.5	0.42 JB	U0.5	U0.5	U0.5	0.3 J	U0.5	0.20 J	U0.5	0.13 J	0.38 JB	U0.5		0.33 JB	U0.5	U0.5	0.42 JB	0.212 JB	0.5U	0.24 J	0.14 JB	0.19 J	0.28 JB	0.029JB	0.14 JB	0.12 JB	U0.13	U0.94	U0.94	U 0.36	U 0.36	U 0.89	U 0.89
Tetrachloroethene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	U0.5	U0.5	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	U0.15	U0.24	U0.24	U 0.47	U 0.47	U 0.47	U 0.47
Toluene	0.11J	0.11J	0.11 J	U0.5	0.15 J	0.15 J	0.11 J	0.12 J	U0.5	U0.5	0.19 J	U0.5		0.17 J	U0.5	U0.5	0.2 J	0.186 J	0.5U	0.10 J	0.059 J	0.042 J	0.10 J	0.13J	0.19 J	0.043J	U0.15	U0.16	U0.16	U 0.46	U 0.46	U 0.46	U 0.46
Total xylene	U0.5	U0.5	0.13 J	0.11 J	U0.5	U0.5	U0.5	0.11 J	U0.5	U0.5	0.43 J	U0.5		0.45 J	0.1 J	U0.5	0.19 J	0.197 J	0.5U	0.5U	0.5U	0.5U	0.5U	0.17J	0.74	0.5U	U0.49	U0.27	U0.27	U 0.89	U 0.89	U 0.89	U 0.89
m,p-xylene	*U1.0*	*U1.0*	*U1.0*	*U1.0*	*U1.0*	*U1.0*	*U1.0*	*U1.0*	*U1.0*	*U1.0*	*0.22 J*	*U1.0*		*0.25 J*	*0.1 J*	*U1.0*	*0.12 J*	*0.166 J*	*1.0U*	*1.0U*	*1.0U*	*1.0U*	*1.0U*	*1.0U*	0.11J	0.16 J	*1.0U*	NR	NR	NR	NR	NR	NR	NR
o-xylene	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*0.11 J*	*U0.5*	*U0.5*	*0.20 J*	*U0.5*		*0.17 J*	*0.052 J*	*U0.5*	*0.068 J*	*0.0808 J*	*0.5U*	*0.5U*	*0.5U*	*0.5U*	*0.5U*	*0.5U*	0.065J	0.58	*0.5U*	NR	NR	NR	NR	NR	NR	NR
Trichloroethene	0.54	0.58	U0.5	U0.5	0.18 J	U0.5	0.62	U0.5	U0.5	U0.5	U0.5	0.13 J		0.11 J	0.064 J	U0.5	U0.5	0.0565 J	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	U0.14	U0.20	U0.20	U 0.69	U 0.69	U 0.69	U 0.69
Vinyl Acetate																										0.31 J	U0.22	U0.37	U0.37	U 0.81	U 0.81	U 0.81	U 0.81
Vinyl Chloride	0.69	0.99	0.6	0.41 J	0.31 J	0.41	0.38 J	U0.5	U0.5	0.2 J	0.54	0.23 J		0.34 J	U0.5	0.22 J	U0.5	U0.5	0.24 J	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	U0.23	U0.17	U0.17	U 0.88	U 0.88	U 0.88	U 0.88
Total VOCs	6.2	8.12	15.74	7.35	5.2	7.38	2.52	8.35	44.0	34.6	11.2	7.1		18.99	3.05	2.81	3.18	12.73	9.45	2.30	2.50	2.30	6.19	3.5	4.44	2.65	2.2	3.5	1.9	1.5	1.1	0	3.0

MW-02

Parameter	2/06	5/06	8/06	11/06	2/07	5/07	8/07	11/07	2/08	5/08	11/08	5/09	8/09	11/09	5/10	11/10	5/11	12/11	4/12	11/12	5/13	11/13	5/14	11/14	5/15	11/15	5/16	11/16	5/17	11/17	5/18	11/18	5/19
1,1-dichloroethane	0.26J	0.4J	0.27 J	0.36 J	0.26 J	0.5	0.36 J	0.47 J	0.1 J	0.32 J	0.13 JB	0.23 J	0.22 J	0.27 J	U0.5	U0.5	U0.5	0.141 J	0.16J	U0.5	U0.5	0.098 J	U0.5	U0.5	0.086 J	U0.5	U0.12	U0.34	U0.34	U 0.63	U 0.63	U 0.63	U 0.63
1,2-dichloroethane	0.52	0.76	0.33 J	0.28 J	0.29 J	U0.5	0.45 J	0.26 J	0.66	U0.5	0.49 J	U0.5	U0.5	U0.5	0.42 J	0.64	1.0	0.291 J	0.64	0.40 J	0.57	U0.5	0.30 J	0.66	0.57	0.49 J	0.65 J	0.50 J	0.42 J	U 0.57	0.62 J	U 0.57	U 0.57
1,2-Dichloroethene (total)	U0.5	U0.5	U0.5	U0.5	U0.5	0.23 J	0.43 J	0.21 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	NR	NR	NR	NR	NR	NR	NR
cis-1,2-dichloroethene	*U0.5*	*0.22J*	*U0.5*	*U0.5*	*0.33 J*	*0.24 J*	*0.28 J*	*0.21 J*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	U0.5	U0.24	U0.30	U0.30	U 0.71	U 0.71	U 0.71	U 0.71
trans-1,2-dichloroethene	*U0.5*	*0.16J*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*0.13 J*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	U0.5	U0.17	U0.20	U0.20	U 0.67	U 0.67	U 0.67	U 0.67
2-Butanone	U2.5	U2.5	U2.5	U2.5	1.4 J	U2.5	U2.5	1.3 J	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	0.83 J	U2.5	U2.5	U2.5	U2.5	U0.55	U2.6	U2.6	U 2.6	U 2.6	U 2.6	U 2.6
Acetone	U2.5	2.7B	U2.5	U2.5	U2.5	5.8 B	3.0 B	3.1 B	2.7 B	3.1	2.0 JB	U2.5	U2.5	U2.5	U2.5	U2.5	1.3 J	U2.5	18	U2.5	U2.5	0.83 J	U2.5	U2.5	1.2 JB	1.5JB	U2.5	3.6 J	U3.1	U 3.4	U 3.4	U 3.4	4.8 J
Benzene	2.4	1.7	1.7	3.7	2.8	4.5	5.5 B	3.8	0.67	3.6	3.5	7.5	9.8	12	10	5.8	4.8	8.99	9.6	8.8	7.7	6.0	4.5	7	5.3	0.77	3.6	7.6	3.1	5.8	5.3	5.9	1.6
Carbon Disulfide	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.075 J	U0.5	U0.5	0.0432 J	U0.5	U0.5	U0.5	0.042 J	0.093 J	U0.5	0.051 J	U0.5	U0.21	U0.53	U0.53	U 0.88	U 0.88	U 0.88	U 0.88
Chlorobenzene	3.1	2.0	2.1	3.7	2.1	4.0	3.5	4.1	0.63	3.2	2.1	5.1	5.9	6.5	5.1	3.4	2.9	5.43	6.6	5.5	4.4	3.6	2.9	4.3	3.1	0.59	1.8	4.4	1.7	3.5	3.0	3.2	0.96 J
Chloroethane	U0.5	0.38J	0.35 J	0.48 J	0.58	U0.5	U0.5	U0.5	U0.5	0.3 J	U0.5	U0.5	U0.5	0.39 J	0.43 J	U0.5	0.56	U0.5	U0.5	U0.5	U0.5	0.25 J	U0.5	U0.5	U0.5	U0.5	U0.21	U0.58	U0.58	U 0.90	U 0.90	U 0.90	U 0.90
Ethylbenzene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.045 J	U0.5	U0.23	U0.25	U0.25	U 0.51	U 0.51	U 0.51	U 0.51
Methylene Chloride	U0.5	0.29JB	U0.5	U0.5	U0.5	0.15 JB	U0.5	U0.5	U0.5	U0.5	0.13 JB	0.11 J	0.21 J	0.11 JB	U0.5	U0.5	U0.5	0.144 JB	U0.5	0.29 J	0.093 JB	0.15 JB	U0.5	0.095JB	0.058 JB	U0.5	U0.13	U0.94	U0.94	U 0.36	U 0.36	U 0.89	U 0.89
Tetrachloroethene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.15	U0.24	U0.24	U 0.47	U 0.47	U 0.47	U 0.47
Toluene	U0.5	U0.5	U0.5	0.10 J	0.12 J	0.28 J	0.10 J	0.10 J	U0.5	U0.5	U0.5	U0.5	0.13 J	0.11 JB	U0.5	U0.5	0.25 J	0.122 JB	U0.5	0.083 J	0.047 J	0.042 J	0.070 J	0.038J	0.17 J	U0.5	U0.15	U0.16	U0.16	U 0.46	U 0.46	U 0.46	U 0.46
Total xylene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.11 J	0.12 J	0.069 J	0.26 J	0.125 J	U0.5	U0.5	0.086 J	0.058 J	U0.5	U0.5	0.7	U0.5	U0.49	U0.27	U0.27	U 0.89	U 0.89	U 0.89	U 0.89
m,p-xylene	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	*U1.0*	*0.14 J*	*U1.0*	*U1.0*	*U1.0*	*U1.0*	*U1.0*	*U1.0*	*U1.0*	0.12 J	*U1.0*	NR	NR	NR	NR	NR	NR	NR
o-xylene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.11 J	0.12 J	*0.069 J*	*0.11 J*	*0.125 J*	*U0.5*	*U0.5*	*0.086 J*	*0.058 J*	*U0.5*	*U0.5*	0.58	*U0.5*	NR	NR	NR	NR	NR	NR	NR
Trichloroethene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.14	U0.20	U0.20	U 0.69	U 0.69	U 0.69	U 0.69
Vinyl Chloride	2.6	2.1	1.0	0.21 J	0.68	0.6	U0.5	U0.5	0.27 J	0.61	0.23 J	0.20 J	0.17 J	0.23 J	0.3 J	U0.5	0.6	U0.5	U0.5	0.26 J	U0.5	0.32 J	0.29 J	0.40J	0.44 J	0.6	0.64 J	0.50 J	0.55 J	U 0.88	U 0.88	U 0.88	U 0.88
Total VOCs	8.62	6.56	4.8	7.4	6.16	9.6	7	7.9	1.96	10.51	5.6	12.6	15.7	18.5	15.1	9.84	9.86	14.42	34.84	14.3	12.67	9.6	7.4	11.96	9.67	1.96	5.4	12	4.8	9.3	8.3	9.1	1.6

Table 4A
Tybouts Corner Landfill
On-site Groundwater Monitoring Wells Analytical Results

MW-04

Parameter	2/06	5/06	8/06	11/06	2/07	5/07	8/07	11/07	2/08	5/08	11/08	5/09	8/09	11/09	5/10	11/10	5/11	12/11	4/12	11/12	5/13	11/13	5/14	11/14	5/15	11/15	5/16	11/16	5/17	11/17	5/18	11/18	5/19
1,1-dichloroethane	U0.5	0.42 J	U0.5	0.32 J	U0.5	0.16 J	0.34 J	0.20 J	0.18 J	0.2 J	0.16 J	0.21 J	NS	0.32 J	U0.5	0.12 J	0.095 J	0.226 J	0.23 J	0.16 J	0.17 J	0.16 J	0.090 J	0.14J	0.10 J	0.11J	U0.12	U0.34	U0.34	U 0.65	U 0.63	U 0.65	U 0.63
1,2-dichloroethane	U0.5	0.59 J	0.18 J	0.21 J	0.12 J	U0.5	0.23 J	0.22 J	U0.5	U0.5	U0.5	U0.5		U0.5	0.26 J	1.4	1.6	0.304 J	0.33 J	0.21 J	U0.5	U0.5	0.24 J	U0.5	0.21 J	U0.5	0.22 J	U0.22	U0.24	U 0.57	U 0.57	U 0.57	U 0.57
1,2-Dichloroethene (total)	U0.5	U0.5	U0.5	0.48 J	U0.5	U0.5	0.51	0.14 J	U0.5	0.13 J	U0.5	0.11 J		0.28 J	0.3 J	0.075 J	0.11 J	0.303 J	0.58	0.15 J	0.21 J	0.18 J	0.19 J	0.10J	0.10 J	0.090J	NR	NR	NR	NR	NR	NR	NR	NR
cis-1,2-dichloroethene	*U0.5*	*0.48 J*	*0.20 J*	*0.44 J*	*0.17 J*	*U0.5*	*0.37 J*	*0.14 J*	*U0.5*	*0.14 J*	*U0.5*	*0.11 J*		*0.29 J*	*0.21 J*	*0.075 J*	*0.11 J*	*0.24 J*	*0.58*	*0.15 J*	*0.21 J*	*0.18 J*	*0.19 J*	*0.10J*	*0.10 J*	*0.090J*	U0.24	U0.30	U0.30	U 0.71	U 0.71	U 0.71	U 0.71
trans-1,2-dichloroethene	*U0.5*	*0.18 J*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*0.12 J*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*		*U0.5*	*0.095 J*	*U0.5*	*U0.5*	*0.0631 J*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	U0.17	U0.20	U0.20	U 0.67	U 0.67	U 0.67	U 0.67
2-Butanone	U0.5	U0.5	U0.5	U0.5	1.5 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	0.75 J	1.4 J	2.32 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U2.6	U2.6	U2.6	U 2.6	U 2.6	U 2.6	U 2.6
Acetone	U2.5	4.0B	U2.5	U2.5	U2.5	9.8 B	2.8 B	3.1 B	3.3	3.6	U2.5	4.0		2.5	U2.5	5.1	8.6	U2.5	7.4	0.79 J	U2.5	U2.5	6.8	U2.5	1.7 JB	2 UJB	U2.5	3.1 J	U3.1	U 3.4	U 3.4	U 3.4	4.2 J
Benzene	0.9	4.6	1.9	3.5	2.5	0.3 J	3.3 B	1.2	0.6	0.86	1.1	0.36 J		3.9	3.7	0.37 J	0.6	2.76	2.8	1.9	2.1	2.1	0.7	1.9	1.3	1.5	2.0	2.0	1.6	1.6	1.6	1.3	1.4
Carbon Disulfide	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	0.021 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.21	U0.53	U0.53	U 0.88	U 0.88	U 0.88	U 0.88
Chlorobenzene	1.4	6.3	3.2	5.4	3.2	0.57	5.6	2.1	0.92	1.5	1.6	0.72		6.2	6.3	0.69	1	5.71	8.1	4.7	4.2	4.3	2.9	5.1	3.9	4.7	4.2	5.1	4.1	4.3	4.4	3.9	4.3
Chloroethane	0.29J	1.0	0.49 J	0.69	0.53	U0.5	0.78	U0.5	U0.5	0.4 J	U0.5	U0.5		0.81	1.3	0.35	U0.5	U0.5	1.3	0.63	U0.5	0.6	0.62	0.51	0.38 J	0.52	0.51 J	0.71 J	1.0	U 0.90	1.0	U 0.90	U 0.90
Ethylbenzene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	0.041 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.095 J	U0.5	U0.23	U0.25	U 0.51	U 0.51	U 0.51	U 0.51
Methylene Chloride	U0.5	0.37 JB	U0.5	U0.5	U0.5	0.2 J	0.16 J	U0.5	0.12 J	U0.5	U0.5	U0.5		0.14 JB	U0.5	0.16 J	0.50 JB	0.192 JB	U0.5	0.3 J	0.18 JB	0.33 JB	U0.5	0.10JB	0.072 JB	0.070JB	U0.13	U0.94	U0.94	U 0.36	U 0.36	U 0.89	U 0.89
Tetrachloroethene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.15	U0.24	U0.24	U 0.47	U 0.47	U 0.47	U 0.47
Toluene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	0.23 J	0.123 JB	U0.5	0.066 J	0.048 J	0.046 J	0.11 J	0.043J	0.43 J	0.034J	0.69 J	U0.16	U0.16	U 0.46	U 0.46	U 0.46	U 0.46
Total xylene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.21 J	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	0.17 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.95	U0.5	U0.49	U0.27	U0.27	U 0.89	U 0.89	U 0.89	U 0.89
m,p-xylene	*U1.0*	*U1.0*	*U1.0*	*U1.0*	*U1.0*	*U1.0*	*U1.0*	*U1.0*	*U1.0*	*U1.0*	*U1.0*	*U1.0*		*U1.0*	*U1.0*	*U1.0*	*0.1 J*	*U1.0*	*U1.0*	*U1.0*	*U1.0*	*U1.0*	*U1.0*	*U1.0*	*0.31 J*	*U1.0*	NR	NR	NR	NR	NR	NR	NR
o-xylene	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*0.21 J*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*		*U0.5*	*U0.5*	*U0.5*	*0.067 J*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*0.64*	*U0.5*	NR	NR	NR	NR	NR	NR	NR
Trichloroethene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.14	U0.20	U0.20	U 0.69	U 0.69	U 0.69	U 0.69
Vinyl Acetate																										0.075J	U0.22	U0.37	U0.37	U 0.81	U 0.81	U 0.81	U 0.81
Vinyl Chloride	U0.5	0.22 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	0.082 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.23	U0.17	U0.17	U 0.88	U 0.88	U 0.88	U 0.88
Total VOCs	2.30	11.90	5.10	9.59	6.23	0.57	10.19	3.30	4.82	5.96	2.70	4.72		13.41	11.30	7.54	11.80	8.47	20.18	6.65	5.72	6.42	11.02	7.51	6.15	6.72	6.2	7.1	6.7	5.9	7.0	5.2	5.7

MW-05

Parameter	2/06	5/06	8/06	11/06	2/07	5/07	8/07	11/07	2/08	5/08	11/08	5/09	8/09	11/09	5/10	11/10	5/11	12/11	4/12	11/12	5/13	11/13	5/14	11/14	5/15	11/15	5/16	11/16	5/17	11/17	5/18	11/18	5/19
1,1-dichloroethane	0.28J	0.64	0.34 J	U0.5	0.31 J	0.37 J	0.59 J	0.38 J	0.36 J	0.35 J	0.30 J	0.41 J	NS	0.28 J	U0.5	0.18 J	0.19 J	NS	0.19 J	NS	0.14 J	NS	0.14 J	NS	0.13 J	NS	U0.12	NS	U0.32	NS	U0.63	NS	U0.63
1,2-dichloroethane	1.4	0.49 J	0.21 J	0.43 J	U0.5	0.38 J	0.34 J	0.36 J	0.14 J	U0.5	U0.5	U0.5		U0.5	0.33 J	U0.5	0.32 J		0.17 J		U0.5		0.35 J		0.24 J		U0.21		U0.24		U0.57		U0.57
1,2-Dichloroethene (total)	U0.5	0.40 J	U0.5	0.11 J	U0.5	U0.5	0.11 J	0.12 J	0.15 J	U0.5	U0.5	0.29 J		0.14 J	U0.5	U0.5	0.12 J		0.3		0.18 J		0.14 J		0.12 J		NR		NR		NR		NR
cis-1,2-dichloroethene	*U0.5*	*0.19 J*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*0.13 J*	*0.15 J*	*U0.5*	*U0.5*	*0.16 J*		*0.15 J*	*U0.5*	*U0.5*	*0.12 J*		*0.5*		*0.18 J*		*0.14 J*		*0.12 J*		U0.24		U0.30		U0.71		U0.71
trans-1,2-dichloroethene	*U0.5*	*0.22 J*	*U0.5*	*0.12 J*	*U0.5*	*U0.5*	*0.12 J*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*0.13 J*		*U0.5*	*U0.5*	*U0.5*	*U0.5*		*U0.5*		*U0.5*		*U0.5*		*U0.5*		U0.17		U0.20		U0.67		U0.67
2-Butanone	U2.5	U2.5	U2.5	U2.5	1.4 J	U2.5	1.1 J	U2.5	U2.5	U2.5	U2.5	U2.5		U2.5	U2.5	U2.5	0.65 J		U2.5		U2.5		U2.5		U2.5		U0.55		U2.6		U2.6		U2.6
4-Methyl-2-pentanone	U2.5	U2.5	U2.5	U2.5	U2.5	2.7	0.84 J	U2.5	U2.5	U2.5	U2.5	U2.5		U2.5	U2.5	U2.5	U2.5		U2.5		U2.5		U2.5		U2.5		U0.53		U2.2		U3.1		U3.1
Acetone	U2.5	3.7 B	7.7	U2.5	U2.5	7.7 B	4.0 B	3.5 B	3.2 B	7	3.6 B	U2.5		4.0	6.5 J	U2.5	4.6		8.4		U2.5		3.5		1.3 JB		U2.5		U3.1		U3.4		3.7 J
Benzene	3.2	6.3	3.4	4	4.5	4.0	3.6 B	4.3	4.4	4	3.9	4.3		4.1	2.9	2.3	1.3		2.8		2.2		0.72		1.8		0.82 J		1.3		1.4		1.4
Bromodichloromethane	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5		U2.5	0.22 J	U2.5	U2.5		U2.5		U2.5		U2.5		U2.5		NR		U0.57		U0.64		U0.64
Chlorobenzene	4.3	7.7	4.7	4.8	5.1	5.2	4.3	5.3	6.4	5	4.4	6.4		4.9	4.3	4.0	2.4		5.5		3.4		2.0		3.5		1.9		3.9		3.4		3.1
Chloroethane	U0.5	0.56	0.51	0.41 J	0.55	U0.5	0.41 J	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	0.33 J	U0.5		0.56		U0.5		U0.5		U0.5		U0.21		U0.58		U0.90		U0.90
Chloroform	U0.5	U0.5	U0.5	U0.5	U0.5	0.11 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	0.71 J	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.17		U0.27		U0.60		U0.60
Ethylbenzene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	0.052 J		U0.5		U0.5		U0.5		0.077 J		U0.23		U0.25		U0.51		U0.51
Methylene Chloride	U0.5	0.33 JB	U0.5	U0.5	U0.5	0.22 J	0.17 J	U0.5	0.15 J	0.11 J	0.18 JB	0.17 J		0.10 JB	U0.5	U0.5	0.54 B		U0.5		0.13 JB		0.15 JB		0.075 JB		U0.13		U0.94		U0.36		U0.89
Tetrachloroethene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.15		U0.24		U0.47		U0.47
Toluene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	0.18 J		U0.5		0.032 J		0.12 J		0.33 J		U0.15		U0.16		U0.46		U0.46
Total xylene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	0.14 J		U0.5		U0.5		U0.5		0.86		U0.49		U0.27		U0.89		U0.89
m,p-xylene	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0		U1.0	U1.0	U1.0	0.094 J		*U1.0*		*U1.0*		*U1.0*		*0.25 J*		NR		NR		NR		NR
o-xylene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	0.05 J		*U0.5*		*U0.5*		*U0.5*		*0.61*		NR		NR		NR		NR
Trichloroethene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.14		U0.20		U0.69		U0.69
Vinyl Chloride	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.23		U0.17		U0.88		U0.88
Total VOCs	8.9	15.2	16.31	8.8	10.15	11.9	7.9	9.6	10.8	16	8.5	10.7		13.0	7.2	6.3	8.3		17.76		5.1		6.22		6.16		1.9		5.2		4.8		4.5

All results in ug/L

Table 4A
Tybouts Corner Landfill
On-site Groundwater Monitoring Wells Analytical Results

MW-06

Parameter	2/06	5/06	8/06	11/06	2/07	5/07	8/07	11/07	2/08	5/08	11/08	5/09	8/09	11/09	5/10	11/10	5/11	12/11	4/12	11/12	5/13	11/13	5/14	11/14	5/15	11/15	5/16	11/16	5/17	11/17	5/18	11/18	5/19
2-butanone			Not Sampled										NS		0.38 J	U2.5	0.59 J	NS	U2.5	NS	U2.5	NS	U2.5	NS	U2.5	NS	U0.55	NS	U2.6	NS	U2.6	NS	U2.6
2-hexanone	U2.5					U2.5	U2.5	U2.5	1.2 J	U2.5	U2.5	U2.5		U2.5	U2.5	U2.5	U2.5		U2.5		U2.5		U2.5		U2.5		U0.16		U2.0		U3.3		U3.3
1,1-dichloroethane	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.12		U0.34		U0.63		U0.63
1,2-dichloroethane	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.21		U0.24		U0.57		U0.57
1,2-Dichloroethene (total)	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		NR		NR		NR		NR
cis-1,2-dichloroethene	*U0.5*					*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*		*U0.5*	*U0.5*	*U0.5*	*U0.5*		*U0.5*		*U0.5*		*U0.5*		*U0.5*		U0.24		U0.30		U0.71		U0.71
trans-1,2-dichloroethene	*U0.5*					*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*		*U0.5*	*U0.5*	*U0.5*	*U0.5*		*U0.5*		*U0.5*		*U0.5*		*U0.5*		U0.17		U0.20		U0.67		U0.67
Acetone	U2.5					U2.5	2.6 B	3.2 B	3.0 B	3.5	U2.5	U2.5		2.4 J	0.63 J	U2.5	1.7 J		27		U2.5		1.1 J		U2.5		1.1 J		U3.1		U3.4		4.6 J
Benzene	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.11		U0.18		U0.60		U0.60
Carbon Disulfide	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	0.048 J	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.21		U0.53		U0.88		U0.88
Chlorobenzene	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	U0.5		0.039J		U0.5		U0.5		U0.5		U0.14		U0.15		U0.50		U0.50
Chloroethane	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.21		U0.58		U0.90		U0.90
Chloroform	0.24 J					0.25 J	0.30 J	0.27 J	0.21 J	0.21 J	0.18 J	0.26 J		0.16 J	0.15 J	0.15 J	0.17 J		0.21 J		0.18 J		0.10 J		0.13 J		U0.17		U0.27		U0.60		U0.60
Ethylbenzene	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.23		U0.25		U0.51		U0.51
Methylene Chloride	U0.5					0.17 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	0.48 JB		U0.5		U0.5		0.13 JB		U0.5		U0.13		U0.94		U0.36		U0.89
Toluene	U0.5					0.10 J	U0.5	U0.5	U0.5	U0.5	U0.5	0.27 J		U0.5	U0.5	U0.5	0.2 J		0.98		0.27 J		0.12 J		0.15 J		U0.15		U0.16		U0.46		U0.46
Total xylene	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.44 J		U0.5	U0.5	U0.5	0.14 J		U0.5		U0.5		U0.5		0.54		U0.49		U0.27		U0.89		U0.89
m,p-xylene	U1.0					U1.0	U1.0	U1.0	U1.0	U1.0	0.27 J	U1.0		U1.0	U1.0	U1.0	0.1 J		U1.0		U1.0		U1.0		U1.0		NR		NR		NR		NR
o-xylene	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	0.15 J	U0.5		U0.5	U0.5	U0.5	0.043 J		U0.5		U0.5		U0.5		*0.54*		NR		NR		NR		NR
Trichloroethene	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.14		U0.20		U0.69		U0.69
Vinyl Chloride	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.23		U0.17		U0.88		U0.88
Total VOCs	0					0	0	0	0	3.5	0.0	0.0		0.0	0.0	0	0		27.98		0		0		0.54		0		0		0		0

MW-08

Parameter	2/06	5/06	8/06	11/06	2/07	5/07	8/07	11/07	2/08	5/08	11/08	5/09	8/09	11/09	5/10	11/10	5/11	12/11	4/12	11/12	5/13	11/13	5/14	11/14	5/15	11/15	5/16	11/16	5/17	11/17	5/18	11/18	5/19
2-butanone			Not Sampled										NS		0.62 J	U2.5	0.59 J	NS	U2.5	NS	U2.5	NS	U2.5	NS	U2.5	NS	U0.55	NS	U2.6	NS	U2.6	NS	U2.6
1,1-dichloroethane	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	0.41 J	0.24 J		U0.5		0.24 J		U0.5		0.19 J		U0.12		U0.34		U0.63		U0.63
1,2-dichloroethane	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.21		U0.24		U0.57		U0.57
1,2-Dichloroethene (total)	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	0.059 J	0.14 J	0.14 J		U0.5		U0.5		U0.5		0.034 J		NR		NR		NR		NR
cis-1,2-dichloroethene	*U0.5*					*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*		*U0.5*	*0.059 J*	*0.14 J*	*0.14 J*		*0.45 J*		U0.5		U0.5		*0.034 J*		U0.24		U0.30		U0.71		U0.71
trans-1,2-dichloroethene	*U0.5*					*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*		*U0.5*	*U0.5*	*U0.5*	*U0.5*		*U0.5*		U0.5		U0.5		U0.5		U0.17		U0.20		U0.67		U0.67
Acetone	U2.5					1.7 JB	2.7 B	3.0 B	4.0 B	U2.5	2.5	U2.5		2.2 J	4	U2.5	0.96 J		24		1.4 J		U2.5		1.6 JB		U2.5		U3.1		U3.4		4.6 J
Benzene	0.12 J					U0.5	0.12 JB	0.12 J	U0.5	U0.5	U0.5	U0.5		0.17 J	0.097 J	0.55	0.37 J		0.12 J		0.20 J		0.069 J		0.14 J		0.41 J		0.21 J		U0.60		U0.60
Carbon Disulfide															0.021 J	U0.5	U0.5		U0.5		U0.5		U0.5		0.041 J		U0.21		U0.53		U0.88		U0.88
Chlorobenzene	0.46 J					U0.5	U0.5	0.20 J	0.14 J	0.41 J	0.14 J	0.54		0.5	1.1	3.2	2.8		2.5		1.7		0.83		1.7		2.5		1.8		1.3		2.1
Chloroethane	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.21		U0.58		U0.90		U0.90
Chloroform	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.17		U0.27		U0.60		U0.60
Ethylbenzene	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.23		U0.25		U0.51		U0.51
Methylene Chloride	U0.5					0.14 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	0.50 JB		0.87 B		0.952JB		U0.5		U0.5		U0.13		U0.94		U0.36		U0.89
Styrene																			0.22 J		U0.5		U0.5		U0.5		U0.097		U0.22		U0.47		U0.47
Toluene	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	0.19 J		0.32 JB		0.054 J		0.091 J		0.27 J		0.21 J		U0.16		U0.46		U0.46
Total xylene	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	0.14 J		U0.5		U0.5		U0.5		0.68		U.049		U0.27		U0.89		U0.89
m,p-xylene	U1.0					U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0		U1.0	U1.0	U1.0	0.091 J		U1.0		U1.0		U1.0		*0.12 J*		NR		NR		NR		NR
o-xylene	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	0.044 J		0.15 J		U0.5		U0.5		*0.56*		NR		NR		NR		NR
Trichloroethene	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	0.28 J	U0.5		U0.5		U0.5		U0.5		U0.5		U0.14		U0.20		U0.69		U0.69
Vinyl Chloride	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.23		U0.17		U0.88		U0.88
Total VOCs	0.0					0.0	0.0	0.0	0.0	0.0	2.5	0.54		0.50	5.10	3.74	2.8		26.3		1.7		0.83		2.38		2.5		1.8		1.3		2.1

All results in ug/L

Table 4A
Tybouts Corner Landfill
On-site Groundwater Monitoring Wells Analytical Results

MW-09

Parameter	2/06	5/06	8/06	11/06	2/07	5/07	8/07	11/07	2/08	5/08	11/08	5/09	8/09	11/09	5/10	11/10	5/11	12/11	4/12	11/12	5/13	11/13	5/14	11/14	5/15	11/15	5/16	11/16	5/17	11/17	5/18	11/18	5/19
1,1-dichloroethane	U0.5		Not Sampled			U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.11 J	U0.5	U2.5	U2.5	0.084 J	U0.5	NS	0.2 J	NS	U0.5	NS	0.077 J	NS	0.047 J	NS	U0.12	NS	U0.34	NS	U0.63	NS	U0.63
1,2-dichloroethane	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U2.5	U2.5	U0.5	U0.5		U0.5		U0.5		0.12 J		U0.5		U0.21		U0.24		U0.57		U0.57
1,2-Dichloroethene (total)	0.44 J					U0.5	0.25 J	0.40 J	0.62	0.19 J	0.19 J	0.43 J	0.20 J	U2.5	0.22 J	0.30 J	0.19 J		0.88		0.23 J		0.42 J		0.12 J		NR		NR		NR		NR
cis-1,2-dichloroethene	*0.44 J*					*U0.5*	*0.22 J*	*0.41 J*	*0.64*	*0.33 J*	*0.29 J*	*0.44 J*	*0.20 J*	*U2.5*	*0.22 J*	*0.30 J*	*0.19 J*		*0.88*		*0.23 J*		*0.42 J*		*0.12 J*		U0.24		U0.30		U0.71		U0.71
trans-1,2-dichloroethene	*U0.5*					*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U2.5*	*U2.5*	*U0.5*	*U0.5*		*U0.5*		*U0.5*		*U0.5*		*U0.5*		U0.17		U0.20		U0.67		U0.67
2-Butanone	U2.5					U2.5	U2.5	2.2 J	U2.5	U2.5	U2.5	U2.5	U2.5	U13	U2.5	U2.5	U2.5		U2.5		U2.5		U2.5		U2.5		U0.55		U2.6		U2.6		U2.6
Acetone	U2.5					3.2 B	3.1 B	3.4 B	3.6 B	3.1	U2.5	U2.5	4.5	11 J	1.5 J	3.3	1.6 J		11		6.3		U2.5		1.8 JB		U2.5		U3.1		U3.4		5.3
Benzene	0.35 J					0.55	0.31 JB	0.38 J	0.45 J	0.49 J	0.42 J	1.5	0.51	0.81 J	0.72 J	0.93	U0.5		2.0		0.20 J		0.47 J		0.19 J		U0.11		U0.18		U0.60		0.67 J
Carbon Disulfide	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.021 J	U0.5	U0.5		U0.5		U0.5		U0.5		0.058 J		U0.21		U0.53		U0.88		U0.88
Chlorobenzene	3.5					3.5	1.7	3.8	6.3	3.5	2	7.6	3.2	3.9	4	5.1	2.5		12		1.1		3.4		1.2		0.69 J		0.26 J		1.0		3.7
Chloroethane	U0.5					U0.5	U0.5	U0.5	U0.5	0.14 J	U0.5	U0.5	0.24 J	U2.5	0.64	0.82	U0.5		2.1		U0.5		1.3		0.39 J		U0.21		U0.58		U0.90		U0.90
Chloromethane	U0.5					U0.5	U0.5	U0.5	U0.5	0.1 J	U0.5	U0.5	U0.5	U2.5	U2.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.28		U0.38		U0.90		U0.90
Chloroform	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	2.0 J	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.17		U0.27		U0.60		U0.60
Ethylbenzene	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U2.5	U2.5	U0.5	0.04 J		U0.5		U0.5		U0.5		U0.5		U0.23		U0.25		U0.51		U0.51
Methylene Chloride	U0.5					0.16 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.15 J	U2.5	U2.5	U0.5	0.31 JB		U0.5		U0.5		U0.5		0.053JB		U0.13		U0.94		U0.36		U0.89
Toluene	U0.5					0.10 J	U0.5	U0.5	0.11 J	U0.5	U0.5	U0.5	U0.5	U2.5	U2.5	U0.5	U0.5		0.16 J		0.034 J		0.072 J		0.11 J		U0.15		U0.16		U0.46		0.91 J
Total xylene	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U2.5	U2.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.49		U0.27		U0.89		U0.89
m,p-xylene	U1.0					U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U5.0	U5.0	U1.0	0.083 J		U1.0		U1.0		U1.0		U1.0		NR		NR		NR		NR
o-xylene	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U2.5	U2.5	U0.5	0.039 J		U0.5		U0.5		U0.5		U0.5		NR		NR		NR		NR
Trichloroethene	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U2.5	U2.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.14		U0.20		U0.69		U0.69
Vinyl Chloride	U0.5					U0.5	U0.5	U0.5	0.11 J	U0.5	U0.5	U0.5	U0.5	U2.5	U2.5	U0.5	U0.5		0.21 J		0.21 J		U0.5		U0.5		U0.23		U0.17		U0.88		U0.88
Total VOCs	3.5					4.05	1.7	3.8	7.56	6.6	2.0	9.1	8.2	3.9	4.6	10.15	2.5		27.98		6.52		4.7		1.2		0		0		1.0		9.0

MW-03

Parameter	2/06	5/06	8/06	11/06	2/07	5/07	8/07	11/07	2/08	5/08	11/08	5/09	8/09	11/09	5/10	11/10	5/11	12/11	4/12	11/12	5/13	11/13	5/14	11/14	5/15	11/15	5/16	11/16	5/17	11/17	5/18	11/18	5/19
1,1-dichloroethane			Not Sampled			U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.0503 J	0.137	U0.5	U0.5	0.086 J	U0.5	0.223	0.068 J	0.083J	U0.12	U0.34	U0.34	U 0.63	U 0.63	U 0.63	U 0.63
1,1-dichloroethene						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.101 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.30	U0.32	U0.32	U 0.55	U 0.55	U 0.55	U 0.55
1,1,1-Trichloroethane						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.0459 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.29	U0.27	U0.27	U 0.60	U 0.60	U 0.60	U 0.60
1,2-dichloroethane						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.579	4.5	U0.5	5.0	3.9	U0.5	8.6	2.3	2.7	1.3	U0.24	2.0	U0.57	0.73 J	0.73 J
1,2-Dichloroethene (total)						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.183 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	NR	NR	NR	NR	NR	NR	NR
cis-1,2-dichloroethene						*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*0.0645 J*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	U0.24	U0.30	U0.30	U 0.71	U 0.71	U 0.71	U 0.71
trans-1,2-dichloroethene						*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*0.119 J*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	U0.17	U0.20	U0.20	U 0.67	U 0.67	U 0.67	U 0.67
cis-1,3-Dichloropropene						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.046 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.19	U0.32	U0.32	U 0.59	U 0.59	U 0.59	U 0.59
trans-1,3-Dichloropropene						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.0675J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.15	U0.22	U0.22	U 0.58	U 0.58	U 0.58	U 0.58
2-Butanone						U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	60B	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U0.55	U2.6	U2.6	U 2.6	U 2.6	U 2.6	U 2.6
Acetone						120 B	9.9 B	6.7 B	30 B	21B	6.3 B	600B	4.1	89 B	75 B	4.6	64B	5.03	120B	12	U2.5	1.1 J	8.8	19B	3.6 JB	6.3B	18NC	4.9 J	3.4 J	3.9 J	U3.4	13	4.6 J
Benzene						U0.5	0.11 JB	U0.5	U0.5	U0.5	U0.5	0.13 J	U0.5	0.11 J	0.074 J	U0.5	U0.5	0.156 J	0.25 J	0.093 J	0.18 J	0.18 J	0.14 J	0.26J	0.18 J	0.18 J	0.21 J	0.18 J	0.20 J	U 0.60	U 0.60	U 0.60	U 0.60
Carbon Disulfide						U0.5	U0.5	U0.5	U0.5	U0.5	0.43 J	U0.5	U0.5	U0.5	0.035 J	U0.5	0.11 J	0.107 J	U0.5	U0.5	U0.5	0.027 J	U0.5	0.042J	0.044 J	U0.5	U0.21	U0.53	U0.53	U 0.88	U 0.88	U 0.88	U 0.88
Carbon Tetrachloride						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.0575 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.14	U0.56	U0.56	U 0.88	U 0.88	U 0.88	U 0.88
Chlorobenzene						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.058 J	U0.5	0.052 JB	U0.5	U0.5	0.054 J	0.056J	U0.14	U0.15	U0.15	U 0.50	U 0.50	U 0.50	U 0.50
Chloroethane						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.21	U0.58	U0.58	U 0.90	U 0.90	U 0.90	U 0.90
Chloroform						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.0432 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.17	U0.27	U0.27	U 0.60	U 0.60	U 0.60	U 0.60
Chloromethane						0.16 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.12 J	U0.5	U0.5	U0.5	U0.5	0.12 J	U0.5	U0.5	0.17 J	0.17J	U0.28	0.38 J	U0.58	U 0.90	U 0.90	U 0.90	U 0.90
Ethylbenzene						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.0997 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.23	U0.25	U0.25	U 0.51	U 0.51	U 0.51	U 0.51
Methylene Chloride						0.66	0.63	0.43 J	0.37 J	0.61	1.0 B	0.87	0.76	0.36 JB	0.26 JB	U0.5	0.53 B	0.475 JB	U0.5	0.97	0.21 JB	0.47 JB	0.95	0.36JB	0.67 B	0.46JB	1.1	3.1	1.7	0.55 J	U0.36	U0.89	U0.89
Styrene						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.0346 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.097	U0.22	U0.22	U 0.47	U 0.47	U 0.47	U 0.47
Tetrachloroethene						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.133 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.15	U0.24	U0.24	U 0.47	U 0.47	U 0.47	U 0.47
Toluene						0.12 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.16 JB	U0.5	0.28 J	0.26 JB	0.16 J	0.18 J	0.070 J	0.09 J	0.15 J	0.088J	0.14 J	0.063 J	U0.15	U0.16	U0.16	U 0.46	U 0.46	U 0.46	U 0.46
Total xylene						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.15 J	0.288 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.49	U0.27	U0.27	U 0.89	U 0.89	U 0.89	U 0.89
m,p-xylene						U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	0.20 J	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	NR	NR	NR	NR	NR	NR	NR
o-xylene						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.04 J	0.0882 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	NR	NR	NR	NR	NR	NR	NR
Trichloroethene						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.114 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.14	U0.20	U0.20	U 0.69	U 0.69	U 0.69	U 0.69
Vinyl Acetate																										0.14J	U0.22	U0.37	U0.37	U 0.81	U 0.81	U 0.81	U 0.81
Vinyl Chloride						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.107 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.23	U0.17	U0.17	U 0.88	U 0.88	U 0.88	U 0.88
Total VOCs						0.66	0.63	0.0	0.0	0.6	0.0	0.9	4.9	0.0	0.0	4.6	0.0	5.61	4.50	12.97	5.00	3.90	9.75	8.6	2.3	2.7	2.4	3.1	1.7	2.0	0.0	13	0

All results in ug/L

Table 4A
Tybouts Corner Landfill
On-site Groundwater Monitoring Wells Analytical Results

MW-10

Parameter	2/06	5/06	8/06	11/06	2/07	5/07	8/07	11/07	2/08	5/08	11/08	5/09	8/09	11/09	5/10	11/10	5/11	12/11	4/12	11/12	5/13	11/13	5/14	11/14	5/15	11/15	5/16	11/16	5/17	11/17	5/18	11/18	5/19
1,1-dichloroethane			Not Sampled			0.40 J	0.18 J	0.38 J	U0.5	0.13 J	U0.5	0.11 J	0.23 J	0.31 J	U0.5	0.23J	0.29 J	0.253 J	U0.5	0.25 J	0.20 J	0.24 J	0.25 J	U0.5	0.14 J	0.051 J	U0.12	U0.34	U0.34	U 0.63	U 0.63	U 0.63	U 0.63
1,1 -dichloroethene						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.0473 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.50	U0.32	U0.32	U 0.55	U 0.55	U 0.55	U 0.55
1,2-dichloroethane						18	27	4.1	8.5	0.81	14	110	7.2	130	1	7.6	5.7	1.63	4	0.94	11	2.1	0.94	7.8	8.2	45	0.89 J	41	0.49 J	0.83 J	0.89 J	0.99 J	2.8
1,2-Dichloroethene (total)						U0.5	U0.5	0.24 J	U0.5	0.11 J	U0.5	U0.5	0.18 J	0.17 J	0.22 J	0.13 J	0.20 J	0.206 J	U0.5	U0.5	U0.5	0.094 J	0.091 J	U0.5	0.054 J	0.048 J	NR	NR	NR	NR	NR	NR	NR
cis-1,2-dichloroethene						*U0.5*	*U0.5*	*0.12 J*	*U0.5*	*0.17 J*	*U0.5*	*U0.5*	*0.18 J*	*0.17 J*	*0.15 J*	*0.13 J*	*0.14 J*	*0.122 J*	*U0.5*	*U0.5*	*U0.5*	*0.094 J*	0.091 J	*U0.5*	*0.054 J*	*0.048 J*	U0.24	U0.30	U0.30	U 0.71	U 0.71	U 0.71	U 0.71
trans-1,2-dichloroethene						*U0.5*	*U0.5*	*0.12 J*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*0.077 J*	*U0.5*	*0.061 J*	*0.0838 J*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	U0.17	U0.20	U0.20	U 0.67	U 0.67	U 0.67	U 0.67
2-Butanone						U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	3.6	U2.5	U2.5	0.69 J	0.54	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U0.55	U2.6	U2.6	U 2.6	U 2.6	U 2.6	U 2.6
2- Hexanone						U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	0.896 J	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U0.16	U2.0	U2.0	U 3.3	U 3.3	U 3.3	U 3.3
Acetone						U2.5	3.5 B	2.8 B	2.6 B	5.2	3.0 B	19	3.6	3.3	6.2	2.1	4	U 2.5	20	U2.5	U2.5	U2.5	2.1	U2.5	1.8 JB	2.5 B	U2.5	9.3	U3.1	U 3.4	U 3.4	U 3.4	4.7 J
Benzene						4.7	1.9 B	3.6	0.25 J	2.2	0.32 J	U0.5	2.2	1.8	3.1	2.4	2.8	2.44	0.17 J	2.5	1.9	2.4	2.6	1.5	1.4	0.094 J	2.3	0.24 J	1.9	2.4	1.7	1.5	1.4
Bromoform						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	3.8	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.19	U0.76	U0.76	U 0.98	U 0.98	U 0.98	U 0.98
Carbon Disulfide						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.036 J	U0.5	U0.5	0.0487 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.055 J	U0.5	U0.21	U0.53	U0.53	U 0.88	U 0.88	U 0.88	U 0.88
Chlorobenzene						9.7	4.3	8.1	0.18 J	4.6	0.34 J	0.15 J	4.1	3.1	6.6	4.9	6.2	5.17	U0.5	5.2	4	4.8 B	5.4	3.4	3.3	U0.5	4.6	0.48 J	4.6	5.0	5.0	3.8	3.7
Chloroethane						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.21	U0.58	U0.58	U 0.90	U 0.90	U 0.90	U 0.90
Chloroform						U0.5	U0.5	U0.5	U0.5	0.11 J	U0.5	U0.5	U0.5	U0.5	0.091 J	0.076 J	0.10 J	0.0864 J	U0.5	0.083 J	0.083 J	0.095 J	0.13 J	0.086J	0.095 J	U0.5	U0.17	U0.27	U0.27	U 0.60	U 0.60	U 0.60	U 0.60
Dibromochloromethane						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.52	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.13	U0.57	U0.57	U 0.64	U 0.64	U 0.64	U 0.64
Ethylbenzene						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.059 J	0.063 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.11 J	U0.5	U0.23	U0.25	U0.25	U 0.51	U 0.51	U 0.51	U 0.51
Methylene Chloride						0.20 J	0.13 J	U0.5	0.15 J	U0.5	0.13 JB	U0.5	0.16 J	0.21 JB	U0.5	U0.5	0.58 JB	0.456 JB	U0.5	0.15 J	0.088JB	0.22 JB	0.068 J	0.10JB	0.065 JB	0.041 JB	U0.13	U0.94	U0.94	U 0.56	U0.89	U0.89	
Styrene						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.0245 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.097	U0.22	U0.22	U 0.47	U 0.47	U 0.47	U 0.47
Tetrachloroethene						0.40 J	0.32 J	0.8	U0.5	0.93	U0.5	U0.5	0.57	0.43 J	1	0.88	1.2	1.08	U0.5	0.92	1.0	1.1	1.4	0.59	0.58	U0.5	0.97 J	U0.24	0.92 J	1.1	1.1	0.67 J	0.92 J
Toluene						0.30 J	U0.5	0.19 J	U0.5	0.15 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.26 J	0.160 JB	0.13 J	0.087 J	0.071 J	0.086 J	0.091 JB	0.052J	0.47 J	U0.5	U0.15	U0.16	U0.16	U 0.46	U 0.46	U 0.46	U 0.46
Total xylene						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.11 J	0.19 J	0.088 J	0.33 J	0.257 J	U0.5	0.066 J	*0.074 J*	0.077 J	0.072 J	U0.5	1.1	U0.5	U0.49	U0.27	U0.27	U 0.89	U 0.89	U 0.89	U 0.89
m,p-xylene						*U1.0*	*U1.0*	*U1.0*	*U1.0*	*U1.0*	*U1.0*	*U1.0*	*U1.0*	*U1.0*	*0.087 J*	*U1.0*	*0.17 J*	*0.141 J*	*U1.0*	*U1.0*	*U1.0*	*U1.0*	*U1.0*	*0.031J*	*0.39 J*	*U1.0*	NR	NR	NR	NR	NR	NR	NR
o-xylene						*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*0.11 J*	*0.1 J*	*0.088 J*	*0.16 J*	*0.117 J*	*U0.5*	*0.066 J*	*0.074 J*	*0.077 J*	*0.072 J*	*0.031J*	*0.68*	*U0.5*	NR	NR	NR	NR	NR	NR	NR
Trichloroethene						U0.5	U0.5	0.10 J	U0.5	0.15 J	U0.5	U0.5	0.13 J	0.10 J	0.12 J	0.15 J	0.2 J	0.208 J	U0.5	0.16 J	0.12 J	0.15 J	0.18 J	U0.5	0.069 J	U0.5	U0.14	U0.20	U0.20	U 0.69	U 0.69	U 0.69	U 0.69
Vinyl Chloride						0.25 J	U0.5	0.19 J	U0.5	0.13 J	U0.5	U0.5	0.16 J	0.66	U0.5	0.22 J	U0.5	0.114 J	U0.5	U0.5	U0.5	0.096 J	U0.5	0.19J	0.16 J	0.34 J	U0.23	0.49 J	U0.17	U 0.88	U 0.88	U 0.88	U 0.88
Total VOCs						32.4	33.2	16.6	8.5	13.74	14	136.92	17.67	138.86	17.9	18.42	17.9	10.32	24	9.56	17.9	5.6	12.44	13.09	14.58	45	6.9	50.3	6.5	8.5	7.8	5.3	7.9

MW-12

Parameter	2/06	5/06	8/06	11/06	2/07	5/07	8/07	11/07	2/08	5/08	11/08	5/09	8/09	11/09	5/10	11/10	5/11	12/11	4/12	11/12	5/13	11/13	5/14	11/14	5/15	11/15	5/16	11/16	5/17	11/17	5/18	11/18	5/19
1,1-dichloroethane			Not Sampled			U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	NS	U0.5	U0.5	U0.5	U0.5	NS	U0.5	NS	U0.5	NS	U0.5	NS	U0.5	NS	U0.12	NS	U0.34	NS	U0.63	NS	U0.63
1,2-dichloroethane						U0.5	U0.5	U0.5	0.32 J	U0.5	U0.5	U0.5		0.21 J	0.21 J	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.21		U0.24		U0.57		U0.57
1,2-Dichloroethene (total)						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		NR		NR		NR		NR
cis-1,2-dichloroethene						*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*		*U0.5*	*U0.5*	*U0.5*	*U0.5*		*U0.5*		*U0.5*		*U0.5*		*U0.5*		U0.24		U0.30		U0.71		U0.71
trans-1,2-dichloroethene						*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*	*U0.5*		*U0.5*	*U0.5*	*U0.5*	*U0.5*		*U0.5*		*U0.5*		*U0.5*		*U0.5*		U0.17		U0.20		U0.67		U0.67
2-Butanone						U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5		U2.5	U2.5	U2.5	0.93 J		U2.5		U2.5		U2.5		U2.5		U0.55		U2.6		U2.6		U2.6
Acetone						U2.5	2.1 JB	2.7 B	1.8 JB	8.1	2.0 JB	1.7 J		U2.5	U2.5	U2.5	2.5 J		28		U2.5		2.0 JB		1.1 JB		U2.5		U3.1		U3.4		3.7 J
Benzene						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.11		U0.18		U0.60		U0.60
Carbon Disulfide						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	0.022 J	U0.5	0.033 J		U0.5		U0.5		U0.5		0.025 JB		U0.21		U0.53		U0.88		U0.88
Chlorobenzene						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	0.11 J	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.14		U0.15		U0.50		U0.50
Chloroethane						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.21		U0.58		U0.90		U0.90
Chloromethane						U0.5	U0.5	U0.5	U0.5	0.14 J	U0.5	U0.5		U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.28		U0.58		U0.90		U0.90
Chloroform						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.17		U0.27		U0.60		U0.60
Ethylbenzene						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		0.048 J		U0.23		U0.25		U0.51		U0.51
Methylene Chloride						0.15 J	U0.5	U0.5	0.10 J	0.17 J	U0.5	U0.5		U0.5	U0.5	U0.5	0.47 JB		U0.5		U0.5		0.029 J		U0.5		U0.13		U0.94		U0.36		U0.36
Styrene						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	0.031 J		U0.5		U0.5		U0.5		U0.5		U0.097		U0.22		U0.47		U0.47
Toluene						0.13 J	U0.5	0.11 J	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	U0.5		0.090 JB		0.036 JB		0.16 JB		0.21 J		U0.15		U0.16		U0.46		U0.46
Total xylene						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	0.17 J		U0.5		U0.5		0.14 J		0.76		U0.49		U0.27		U0.89		U0.89
m,p-xylene						U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0		U1.0	U1.0	U1.0	0.12 J		U1.0		U1.0		0.099 J		*0.17 J*		NR		NR		NR		NR
o-xylene						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	0.049 J		U0.5		U0.5		0.043 J		*0.59*		NR		NR		NR		NR
Trichloroethene						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.14		U0.20		U0.69		U0.69
Vinyl Chloride						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.23		U0.17		U0.88		U0.88
Total VOCs						0	0	0	0	8.1	0	0		0	0	0	0		28		0		0		0.76		0		0		0		0

All results in ug/L

Table 4A
Tybouts Corner Landfill
On-site Groundwater Monitoring Wells Analytical Results

TY-205

Parameter	2/06	5/06	8/06	11/06	2/07	5/07	8/07	11/07	2/08	5/08	11/08	5/09	8/09	11/09	5/10	11/10	5/11	12/11	6/12	11/12	5/13	11/13	5/14	11/14	5/15	11/15	5/16	11/16	5/17	11/17	5/18	11/18	5/19
2-butanone			Not Sampled												0.77 J	U2.5	0.66 J	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U0.55	U2.5	U2.6	U 2.6	U2.6	U2.6	U2.6
1,1-dichloroethane	U0.5					0.22 J	0.57	0.58	0.15 J	0.4 J	1.7	0.11 J	0.94	0.22 J	0.026 J	0.28 J	0.23 J	0.678	0.75	0.7	0.6	0.54	0.46 J	0.68	0.53	0.65	U0.12	0.90 J	0.41 J	0.64 J	U0.63	U0.63	U0.63
1,2-dichloroethane	U0.5					U0.5	0.42 J	U0.5	0.15 J	U0.5	U0.5	0.19 J	U0.5	U0.5	0.41 J	0.73	0.51	2.32	0.72	0.34 J	U0.5	U0.5	0.35 J	U0.5	U0.5	U0.5	U0.21	U0.24	U0.24	U 0.57	U0.57	U0.57	U0.57
1,2-Dichloroethene (total)	0.20 J					0.36 J	0.51	0.47 J	0.99	0.86	0.11 J	0.96	0.87	0.79	0.62	0.17 J	0.94	0.524	0.26 J	0.093 J	0.26 J	0.13 J	0.59	U0.5	0.25 J	0.053 J	NR	NR	NR	NR	NR	NR	NR
cis-1,2-dichloroethene	*0.20 J*					*0.21 J*	*0.30 J*	*0.36 J*	*0.73*	*0.57 J*	*U0.5*	*0.78*	*0.64*	*0.64*	*0.49 J*	*0.17 J*	*0.71*	*0.405 J*	*0.20 J*	*0.093 J*	*0.26 J*	*0.079 J*	*0.39 J*	*U0.5*	*0.26 J*	*0.053 J*	*0.47 J*	U0.30	0.31 J	U 0.71	U 0.71	U 0.71	U 0.71
trans-1,2-dichloroethene	*U0.5*					*0.15 J*	*0.19 J*	*0.11 J*	*0.25 J*	*0.31 J*	*0.11 J*	*0.20 J*	*0.22 J*	*0.15 J*	*0.13 J*	*U0.5*	*0.22 J*	*0.119 J*	*0.061 J*	*U0.5*	*U0.5*	*0.051 J*	*0.20 J*	*U0.5*	*0.093 J*	*U0.5*	U0.17	U0.20	U0.20	U 0.67	U0.67	U0.67	U0.67
Acetone	4.2					84 B	13 B	5.4 B	4.2 B	20	11 B	64	25	10	6.4	U2.5	3	U2.5	4	4.6	14	0.95 J	2.2 J	1.4JB	1.5 JB	2.0 JB	3.1 J	3.7 J	U5.1	U 3.4	U 3.4	U 3.4	4.5 J
Benzene	0.27 J					3.4	2.7 B	1.8	1.3	4.3	4.4	1.5	3.3	1.5	7.4	3.8	3.9	11.4	8.8	8.4	9.8	6.7	7.6	11	9.8	7	2.4	8.1	7.6	7.7	6.3	7.8	3.5
Carbon Disulfide	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	0.75	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.0591 J	U0.5	U0.5	U0.5	0.072 J	0.044 J	U0.5	0.066 J	U0.5	U0.21	U0.53	U0.53	U 0.88	U0.88	U 0.88	U 0.88
Chlorobenzene	3.9					11	12	11	18	22	6.9	13	16	9.6	16	6.8	26	17.8	13	10	16	8.5 B	22	12	17	12	14	14	19	9.6	9.1	5.8	8.4
Chloroethane	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.39 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.22 J	U0.21	U0.58	U0.58	U 0.90	U 0.90	U 0.90	U 0.90
Chloroform	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.17	U0.27	U0.27	U 0.60	U 0.60	U 0.60	U 0.60
Ethylbenzene	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.061 J	U0.5	0.08 J	U0.5	U0.5	0.053 J	U0.5	U0.5	0.057 J	U0.5	0.046 J	U0.5	U0.23	U0.25	U0.25	U 0.51	U 0.51	U 0.51	U 0.51
Methylene Chloride	U0.5					0.21 J	U0.5	U0.5	0.12 J	U0.5	0.10 JB	U0.5	0.18 J	U0.5	U0.5	U0.5	0.68 B	0.143 JB	0.17 J	0.14 J	0.053 JB	0.13 JB	0.16 JB	0.088JB	0.054 JB	U0.5	U0.13	U0.94	U0.94	U 0.36	U 0.36	U 0.89	U 0.89
Toluene	U0.5					0.34 J	0.15 J	0.12 J	0.24 J	0.27 J	0.18 J	0.21 J	0.31 J	0.25 J	U0.5	U0.5	0.44 J	0.316 JB	0.24 JB	0.29 J	0.16 J	0.14 J	0.33 J	0.12 J	0.20 J	0.087 J	0.25 J	0.16 J	0.20 J	U 0.46	U 0.46	U 0.46	U 0.46
Total xylene	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.22 J	0.132 J	U0.5	U0.5	U0.5	0.04 J	0.11 J	U0.5	0.55	U0.5	U0.49	U0.27	U0.27	U 0.89	U 0.89	U 0.89	U 0.89
m,p-xylene	U1.0					U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	*U1.0*	U1.0	*0.15 J*	*0.084 J*	U1.0	U1.0	U1.0	U1.0	0.081 J	U1.0	U1.0	U1.0	NR	NR	NR	NR	NR	NR	NR
o-xylene	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	*0.032 J*	U0.5	*0.075 J*	*0.0478 J*	U0.5	U0.5	U0.5	0.04 J	0.032 J	U0.5	0.55	U0.5	NR	NR	NR	NR	NR	NR	NR
Trichloroethene	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.0381 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.14	U0.20	U0.20	U 0.69	U 0.69	U 0.69	U 0.69
Vinyl Acetate																										0.21 J	U0.22	U0.37	U0.37	U 0.81	U 0.81	U 0.81	U 0.81
Vinyl Chloride	U0.5					U0.5	U0.5	U0.5	U0.5	0.29 J	U0.5	0.23 J	0.24 J	0.24 J	U0.5	U0.5	0.29 J	U0.5	U0.5	U0.5	U0.5	U0.5	0.23 J	U0.5	U0.5	U0.5	U0.23	U0.17	U0.17	U 0.88	U 0.88	U 0.88	U 0.88
Total VOCs	8.1					14.4	15.78	13.38	20.29	47.16	13.75	79.46	46.11	21.89	30.42	11.33	34.55	32.7	27.3	23.7	40.4	7.24	30.19	25.68	27.9	19.65	16.4	22.1	26.6	17.3	15.4	13.6	11.9

MW-13

Parameter																			4/12	11/12	5/13	11/13	5/14	11/14	5/15	11/15	5/16	11/16	5/17	11/17	5/18	11/18	5/19
1,2-dichloroethane									Not Sampled											NS		NS	0.33 J	NS	U0.5	NS	U0.21	NS	U0.24	NS	U0.57	NS	U0.57
2-Hexanone																							1.1 J		U2.5		U0.16		U2.0		U3.3		U3.3
Acetone																			11		U2.5		5.5		U2.5		U3.1		U3.4		U3.4		3.4 J
Benzene																			0.058 J		0.040 J				0.032 J		U0.11		U0.60		U0.60		U0.60
Chlorobenzene																			0.089 J		0.050 J				0.039 J		U0.14		U0.15		U0.50		U0.50
Chloroform																			0.12 J		0.097 J				0.048 J		U0.17		U0.27		U0.60		U0.60
Methylene Chloride																							0.042 J		0.035 JB		U0.13		U0.94		U0.36		U0.36
Tetrachloroethene																			0.17 J		0.19 J				0.14 J		U0.15		U0.24		U0.47		U0.47
Toluene																			0.18 JB		U0.5		0.044 JB		0.030 JB		U0.15		U0.16		U0.46		U0.46
Total VOCs																			11		0		5.5		0		0		0		0		0

All results in ug/L

Table 4B
Tybouts Corner Landfill
Off-Site Groundwater Monitoring Wells Analytical Results

TY-204

	2/06	5/06	8/06	11/06	2/07	5/07	8/07	11/07	2/08	5/08	11/08	5/09	11/09	5/10	11/10	5/11	12/11	5/12	11/12	5/13	11/13	5/14	11/14	5/15	11/15	5/16	11/16	5/17	11/17	5/18	11/18	5/19
1,1-dichloroethane	0.68	0.75	0.39 J	U0.5	0.27 J	0.27 J	0.55	0.51	0.58	0.66	0.6	0.75	0.49 J	U0.5	U0.5	0.27 J	0.373 J	0.43 J	0.32 J	0.40 J	0.30 J	0.34 J	0.21J	0.31 J	0.21 J	0.26 J	U0.34	U0.34	U 0.63	U 0.63	U 0.63	U 0.63
1,2-dichloroethane	0.43J	2.9	3.1	1.7	13	2.5	4	13	7	U0.5	7.3	3.3	7.8	14	U0.5	14	3.13	0.77	4.1	25	7.7	28	0.8	4.3	0.74	7.3	0.94 J	0.71 J	2.1	U0.57	1.9	1.9
1,2-Dichloroethene (total)	0.64	1.3	0.52	0.61	U0.5	U0.5	0.51	0.64	0.40 J	0.26 J	0.40 J	0.37 J	0.36 J	0.48 J	U0.5	0.35 J	0.279 J	0.24 J	0.15 J	0.87	0.38 J	1.1	U0.5	0.35 J	0.099 J	NR	NR	NR	NR	NR	NR	NR
cis-1,2-dichloroethene	0.28J	0.76	0.30 J	0.25 J	0.45 J	U0.5	0.25 J	0.44 J	0.25 J	U0.5	0.23 J	0.14 J	0.25 J	0.39 J	U0.5	0.35 J	0.171 J	0.13 J	0.15 J	0.77	0.30 J	1.00	U0.5	*0.28 J*	*0.099 J*	0.56 J	U0.30	U0.30	U 0.71	U 0.71	U 0.71	U 0.71
trans-1,2-dichloroethene	0.36J	0.38 J	0.22 J	0.36 J	U0.5	U0.5	0.27 J	0.17 J	0.12 J	0.25 J	0.17 J	0.22 J	0.12 J	0.086 J	U0.5	U0.5	0.108 J	0.11 J	U0.5	0.11 J	0.081 J	0.098 J	U0.5	*0.067 J*	U0.5	U0.17	U0.20	U0.20	U 0.67	U 0.67	U 0.67	U 0.67
2-Butanone	U2.5	U2.5	1.1 J	0.82 J	U2.5	U2.5	2.4 J	1.4 JB	26	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	0.308 J	0.56 J	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U0.55	U2.6	U2.6	U 2.6	U 2.6	U 2.6	U 2.6
Acetone	3.7	5.0 B	11	U2.5	U2.5	8.7 B	4.9 B	3.4 B	5.6 B	6.2	4.1 B	U2.5	7.6	4.5	U2.5	U2.5	U2.5	13 B	1.2 J	3.7	0.98 J	2.9	U2.5	1.8 JB	2.1 JB	U2.5	6.2	6.4	U 3.4	U 3.4	U 3.4	4.3 J
Benzene	14	9.6	7.8	11	1.3	1.3	9.7 B	5.5	7.1	8.7	6.3	5.9	3.4	3.3	U0.5	0.84	2.22	3.8	2.8	3.4	3.2	2.6	2.5	2.8	2.1	2.5	2.0	1.3	2.6	1.4	1.4	3.7
Carbon Disulfide	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.0317 J	0.028 J	U0.5	U0.5	0.043 J	0.020 J	U0.5	U0.5	U0.5	U0.21	U0.53	U0.53	U 0.88	U 0.88	U 0.88	U 0.88
Chlorobenzene	22	13	14	17	3.1	1.6	15	8.9	12	12	8.6	7.8	5.5	2.4	U0.5	1.5	2.9	4.1	3.9	3.7	3.9	3.1	3.8	3.5	3.4	3.4	3.2	1.6	3.3	1.2	2.4	3.0
Chloroethane	0.94	1.2	0.55	0.71	0.32 J	U0.5	0.47 J	0.29 J	0.43 J	043 J	0.40 J	U0.5	1.2	U0.5	U0.5	U0.5	0.205 J	0.38 J	U0.5	U0.5	0.27 J	0.35 J	U0.5	U0.5	U0.5	U0.21	U0.58	U0.58	U 0.90	U 0.90	U 0.90	U 0.90
Chloroform	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.031 J	U0.5	U0.5	U0.5	0.033 J	U0.5	U0.5	U0.5	U0.17	U0.27	U0.27	U 0.60	U 0.60	U 0.60	U 0.60
Chloromethane	U0.5	0.56	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.28	U0.38	U0.38	U 0.90	U 0.90	U 0.90	U 0.90
Ethylbenzene	0.35J	0.33 J	0.25 J	0.33 J	U0.5	U0.5	0.25 J	0.17 J	0.18 J	0.18 J	0.19 J	0.16 J	U0.5	0.14 J	U0.5	0.017 J	0.159 J	0.19 J	U0.5	0.11 J	0.11 J	0.061 J	0.064J	0.056 J	0.052 J	U0.23	U0.25	0.42 J	U 0.51	U 0.51	U 0.51	U 0.51
Methylene Chloride	U0.5	0.41 JB	U0.5	0.18 J	U0.5	U0.5	0.20 J	0.29 J	0.19 J	U0.5	0.31 JB	0.15 J	0.15 J	U0.5	U0.5	U0.5	0.427 JB	0.15 J	0.23 J	0.34 JB	0.18 JB	0.30 JB	0.2JB	0.24 JB	0.070JB	U0.13	U0.94	U0.94	U 0.36	U 0.36	U 0.89	U 0.89
Styrene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.0329 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.097	U0.22	U0.22	U 0.47	U 0.47	U 0.47	U 0.47
Tetrachloroethene	U0.5	U0.5	0.26 J	0.39 J	1.0	0.20 J	0.31 J	0.99	0.98	U0.5	0.28 J	0.35 J	U0.5	1.1	U0.5	1.8	0.458 J	U0.5	U0.5	0.23 J	0.10 J	0.49 J	U0.5	0.38 J	U0.5	U0.15	0.32 J	U0.24	U 0.47	U 0.47	U 0.47	0.72 J
Toluene	0.17J	0.16 J	0.17 J	0.10 J	U0.5	0.20 J	U0.5	0.19 J	0.15 J	0.11 J	0.15 J	0.11 J	3.5	U0.5	U0.5	U0.5	0.172 JB	0.16 JB	0.11 J	0.11 J	0.18 JB	0.20 J	0.048J	0.075 J	0.035 J	U0.15	U0.16	2.9	U 0.46	U 0.46	U 0.46	1.1
Total xylene	0.21J	0.11 J	0.15 J	0.16 J	U0.5	U0.5	0.13 J	U0.5	0.11 J	U0.5	U0.5	0.15 J	U0.5	U0.5	U0.5	U0.5	0.236 J	0.33 JB	U0.5	0.18 J	0.13 J	U0.5	U0.5	U0.5	U0.5	U0.49	U2.0	2.2	U 0.89	U 0.89	U 0.89	U 0.89
m,p-xylene	U1.0	U1.0	U1.0	U1.0	U1.0	U0.5	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	0.168 J	0.25 JB	U1.0	0.11 J	0.087 J	U1.0	U1.0	U1.0	U1.0	NR	NR	NR	NR	NR	NR	NR
o-xylene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.13 J	U0.5	0.11 J	U0.5	U0.5	0.15 J	U0.5	0.042 J	U0.5	U0.5	0.0673 J	0.080 J	U0.5	0.063 J	0.041 J	U0.5	U0.5	U0.5	U0.5	NR	NR	NR	NR	NR	NR	NR
Trichloroethene	U0.5	1.1	0.37 J	0.25 J	0.82	0.44 J	0.24 J	0.68	0.26 J	U0.5	0.17 J	U0.5	0.12 J	0.15 J	U0.5	0.40 J	0.124 J	U0.5	U0.5	U0.5	0.32 J	U0.5	0.14J	U0.5	0.16 J	U0.5	0.14 J	U0.20	U0.20	U 0.69	U 0.69	U 0.69	U 0.69
Vinyl Acetate																									0.17 J	U0.22	U0.37	U0.37	U 0.81	U 0.81	U 0.81	U 0.81
Vinyl Chloride	0.31	0.21	0.22	0.21	U0.5	U0.5	0.16	0.17	U0.5	U0.5	0.18 J	U0.5	0.16 J	U0.5	U0.5	U0.5	0.0778 J	U0.5	U0.5	U0.5	0.083 J	U0.5	U0.5	U0.5	U0.5	U0.23	U0.17	U0.17	U 0.88	U 0.88	U 0.88	U 0.88
Total VOCs	42.27	31.38	37.19	31.23	19.22	5.2	20.22	30.39	53.66	27.56	22.8	17.75	29.0	25.3	0	18.1	8.25	8.67	10.8	36.67	14.8	38.7	7.1	10.6	6.24	13.2	11.4	14.4	8.0	2.6	5.7	9.7

TY119B

Parameter	2/06	5/06	8/06	11/06	2/07	5/07	8/07	11/07	2/08	5/08	11/08	5/09	11/09	5/10	11/10	5/11	12/11	5/12	11/12	5/13	11/13	5/14	11/14	5/15	11/15	5/16	11/16	5/17	11/17	5/18	11/18	5/19
1,1-dichloroethane	2.3	1.0	0.59	0.53	0.67	2.4	1.7	2.4	2.1	1.8	1.3	2.4	2.0	1.3	0.82	1.3	1.19	1.5	1.3	1.5	1.1	1.3	1.1	1.2	0.59	1.2	1.3	1.2	1.2	1.1	1.1	1.2
1,1-dichloroethene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.0709 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.30	U0.32	U0.32	U 0.55	U0.55	U0.55	U0.55
1,2-dichloroethane	1.0	1.0	0.72	0.66	0.39 J	2.1	1.2	1.6	1.1	U0.5	0.96	U0.5	1.3	0.75	0.64	1.4	0.928	U0.5	1.2	0.98	1.0	0.85	1.5	1.6	0.84	0.90 J	0.90 J	0.92 J	0.91 J	1.1	1.3	1.6
1,2-Dichloroethene (total)	0.87	0.52	0.28 J	0.11 J	U0.5	0.92	0.83	1.1	0.95	0.83	0.49 J	1.2	1.1	0.98	0.26 J	0.74	0.691	1	0.69	1.1	0.72	0.92	0.62	0.7	0.19 J	NR	NR	NR	NR	NR	NR	NR
cis-1,2-dichloroethene	0.45J	0.23 J	0.17 J	U0.5	U0.5	0.49 J	0.46 J	0.55	0.56	0.38 J	0.21 J	*0.66*	*0.60 J*	0.57	*0.097 J*	*0.45 J*	*0.387 J*	0.68	0.44 J	*0.69*	*0.48 J*	0.57	0.45J	0.45 J	*0.19 J*	U0.24	0.63 J	0.58 J	U 0.71	U 0.71	0.71 J	0.71 J
trans-1,2-dichloroethene	0.42J	0.33 J	0.10 J	0.13 J	U0.5	0.43 J	0.36 J	0.5	0.35 J	0.45 J	0.28 J	*0.58*	*0.45 J*	0.41 J	*0.16 J*	*0.29 J*	*0.304 J*	0.36 J	0.25 J	*0.38 J*	*0.24 J*	0.35 J	0.17J	0.24 J	U0.5	0.36 J	U0.20	0.23 J	U 0.67	U 0.67	U 0.67	U 0.67
2-Butanone	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	3.1	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U0.55	U2.6	U2.6	U 2.6	U 2.6	U 2.6	U 2.6
2-hexanone	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	63 B	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	19 J	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	U0.16	U2.0	U2.0	U 3.3	U 3.3	U 3.3	U 3.3
Acetone	4.2	4.6 B	3.4	U2.5	U2.5	5.2 B	3.3 B	2.5 B	4.3 B	8.5	3.3 B	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5	13 B	0.58 J	U2.5	1.2 J	8.8 B	U2.5	1.8 JB	2.7 B	U2.5	4.5 J	4.6 J	U 3.4	U 3.4	3.4 J	4.7 J
Benzene	28	5.0	4.6	1.7	U0.5	20	15 B	25	22	20	4.4	22	19	15	1.3	18	11.4	19	19	20	15	23	21	23	7.5	21	20	20	15	16	16	12
Carbon Disulfide	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.0732 J	0.073 J	U0.5	U0.5	U0.5	U0.5	U0.5	0.060 J	0.099 J	U0.21	U0.53	U0.53	U 0.88	U 0.88	U 0.88	U 0.88
Carbon Tetrachloride	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.059 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.14	U0.56	U0.56	U 0.88	U 0.88	U 0.88	U 0.88
Chlorobenzene	7.2	0.7	0.76	0.39 J	0.13 J	6.3	5.1	8.7	9.1	6.2	2.1	9.3	9.4	7.1	0.94	8.1	5.95	10	9.4	11	8.3	12	13	14	4.7	13	14	15	13	13	13	9.3
Chloroethane	2.7	0.78	0.65	U0.5	0.44 J	U0.5	1.3	1.8	1.8	1.2	0.63	1.4	2.9	0.98	0.46 J	1.2	0.807	1.3	1.2	1.3	1.0	1.5	0.83	1.1	0.42 J	1.2	1.3	1.4	0.95 J	1.3	U 0.90	U 0.90
Chloromethane																						0.11 J	U0.5	U0.5	U0.5	U0.28	U0.38	U0.90	U 0.90	U 0.90	U 0.90	U 0.90
Dichlorodifluoromethane																												0.78 J	1.2	1.2	U 0.83	U 0.83
Ethylbenzene	0.64	U0.5	U0.5	U0.5	U0.5	0.19 J	0.13 J	0.47 J	0.40 J	0.17	0.13 J	0.25 J	0.42 J	0.2 J	U0.5	0.15 J	0.35 J	0.39 J	0.16 J	0.33 J	0.19 J	0.21 J	0.21J	0.15 J	U0.5	U0.23	U0.25	U0.25	U 0.51	U 0.51	U 0.51	U 0.51
Methylene Chloride	0.29J	0.37 JB	U0.5	U0.5	U0.5	0.52 B	0.38 J	0.5	0.4 J	0.34 J	0.27 JB	0.5	0.35 J	U0.5	U0.5	U0.5	0.538 B	0.27 J	0.41 J	0.40 JB	0.35 JB	0.30 J	0.29JB	0.27 JB	0.070JB	U0.13	U0.94	U0.94	U 0.36	U 0.36	U 0.89	U 0.89
Styrene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.0452 J	0.046 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.097	U0.22	U0.22	U 0.47	U 0.47	U 0.47	U 0.47
Tetrachloroethene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.086 J	U0.5	U0.5	0.202 J	0.060 J	0.10 J	0.10 J	0.10 J	U0.5	0.11J	0.074 J	0.060 J	U0.15	U0.24	U0.24	U 0.47	U 0.47	U 0.47	U 0.47
Toluene	U0.5	0.19 J	0.19 J	U0.5	U0.5	0.29 J	U0.5	0.13 J	0.14 J	U0.5	0.12 J	0.15 J	0.13 J	U0.5	U0.5	U0.5	0.257 JB	0.23 JB	0.12 J	0.20 J	0.15 J	0.16 JB	0.14J	0.15 J	0.059 J	0.19 J	U0.16	0.16 J	U 0.46	U 0.46	U 0.46	0.56 J
Total xylene	5.9	0.13 J	0.33 J	U0.5	0.12 J	1.2	0.78	4.1	2.7	0.2 J	0.73	0.63	2.7	0.59	0.061 J	0.21 J	1.24	1.8 B	0.46 J	1.5	0.67	0.99	0.72	1.1	U0.5	0.92 J	0.57 J	0.52 J	U 0.89	U 0.89	U 0.89	U 0.89
m,p-xylene	U1.0	U1.0	U1.0	U1.0	U1.0	0.3 J	U1.0	1.5	0.96 J	U1.0	0.31 J	*0.28 J*	*1.1*	*0.22 J*	U1.0	*0.10 J*	*0.693 J*	0.84JB	0.29 J	0.81 J	*0.33 J*	0.53 J	0.38J	0.34 J	*U1.0*	NR	NR	NR	NR	NR	NR	NR
o-xylene	U0.5	U0.5	U0.5	U0.5	U0.5	0.87 J	0.78	2.5	1.7	0.2 J	0.41 J	*0.32 J*	*1.4*	*0.36 J*	*0.061 J*	*0.11 J*	0.549	0.99	0.17 J	*0.69*	*0.34 J*	0.46 J	0.34J	0.73	*U0.5*	NR	NR	NR	NR	NR	NR	NR
Trichloroethene	0.9	0.68	0.49 J	0.53	0.25 J	1	0.88	1.1	0.99	0.9	0.54	1.0	1.1	0.65	0.37 J	0.84	0.565	0.63	0.76	*0.65*	0.64	0.52	0.58	0.49 J	0.23 J	0.49 J	0.60 J	0.51 J	U 0.69	U 0.69	U 0.69	0.80 J
Vinyl Acetate																									0.20 J	U0.22	U0.37	U0.37	U 0.81	U 0.81	U 0.81	U 0.81
Vinyl Chloride	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.13 J	0.16 J	U0.5	U0.5	U0.5	0.15 J	0.13 J	U0.5	U0.5	0.153 J	U0.5	U0.5	U0.5	0.11 J	U0.5	U0.5	0.095 J	U0.5	U0.23	U0.17	U0.17	U 0.88	U 0.88	U 0.88	U 0.88
Total VOCs	53.71	9.68	10.72	3.42	0.67	33.92	29.89	46.3	40.74	39.6	10.66	38.43	39.5	27.9	3.7	31.58	42.42	35.1	33.55	38.05	28.43	41.65	39.35	43.43	13.63	36.4	36.6	37.6	30.4	33.7	31.2	24.1

All results in ug/L

Table 4B
Tybouts Corner Landfill
Off-Site Groundwater Monitoring Wells Analytical Results

TY120B

Parameter	2/06	5/06	8/06	11/06	2/07	5/07	8/07	11/07	2/08	5/08	11/08	5/09	11/09	5/10	11/10	5/11	12/11	5/12	11/12	5/13	11/13	5/14	11/14	5/15	11/15	5/16	11/16	5/17	11/17	5/18	11/18	5/19
1,1-dichloroethane	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	NS	U0.5	NS	U0.5	NS	U0.5	NS	U0.5	NS	U0.12	NS	U0.34	NS	U0.63	NS	U0.63
1,2-dichloroethane	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.036 J	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.21		U0.24		U0.57		U0.57
1,2-Dichloroethene (total)	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		NR		NR		NR		NR
cis-1,2-dichloroethene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.24		U0.30		U0.71		U0.71
trans-1,2-dichloroethene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.17		U0.20		U0.67		U0.67
Acetone	U2.5	1.3 JB	U2.5	U2.5	U2.5	2.9 B	2.7 B	2.8 B	3.8	1.2 JB	U2.5	U2.5	U2.5	U2.5	U2.5	U2.5		15 B		1.6 J		U0.5		1.0 JB		U2.5		U3.1		U3.4		4.6 J
Benzene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.12 JB	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.11		U0.18		U0.60		U0.60
Carbon Disulfide	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		0.030 J		U0.5		U0.5		U0.5		U0.21		U0.53		U0.88		U0.88
Chlorobenzene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		0.024 J		U0.14		U0.15		U0.50		U0.50
Chloroethane	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.21		U0.58		U0.90		U0.90
Ethylbenzene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.13 J	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.23		U0.25		U0.51		U0.51
Methylene Chloride	U0.5	0.15 JB	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.11 JB	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		0.078 JB		U0.13		U0.94		U0.36		U0.89
Toluene	U0.5	U0.5	0.28 J	U0.5	U0.5	0.21 J	U0.5	0.12 J	U0.5	U0.5	U0.5	U0.5	U0.5	0.34 J	U0.5	U0.5		0.11 JB		0.058 J		0.069 J		0.042 J		U0.15		U0.16		U0.46		0.48 J
Total xylene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	1.1	U0.5	U0.5		0.16 JB		U0.5		U0.5		U0.5		U0.49		U0.27		U0.89		U0.89
m,p-xylene	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	0.66 J	U1.0	U1.0		0.16 JB		U1.0		U1.0		U1.0		NR		NR		NR		NR
o-xylene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.37 J	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		NR		NR		NR		NR
Trichloroethene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.14		U0.20		U0.69		U0.69
Vinyl Chloride	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.23		U0.17		U0.88		U0.88
Total VOCs	0	0	0	0	0	0	0	0	0	3.8	0	0	1.1	0	0	0		0		0		0		0		0		0		0		0

TY-114

Parameter	2/06	5/06	8/06	11/06	2/07	5/07	8/07	11/07	2/08	5/08	11/08	5/09	11/09	5/10	11/10	5/11	12/11	5/12	11/12	5/13	11/13	5/14	11/14	5/15	11/15	5/16	11/16	5/17	11/17	5/18	11/18	5/19
1,1-dichloroethane	0.62	0.61	U0.5	U0.5	0.76	0.71	0.65	0.78	0.5	0.43 J	0.32 J	0.72	0.40 J	U0.5	0.53	0.27 J	NS	0.31 J	NS	0.18	NS	0.16 J	NS	0.096 J	NS	U0.12	NS	U0.34	NS	U0.63	NS	U0.63
1,2-dichloroethane	U0.5	0.23 J	0.16 J	0.24 J	U0.5	U0.5	U0.5	0.33 J	U0.5	U0.5	U0.5	U0.5	U0.5	0.12 J	0.36 J	U0.5		0.40 J		U0.5		U0.5		U0.5		U0.21		U0.24		0.73 J		U 0.57
1,2-Dichloroethene (total)	0.39J	0.44 J	U0.5	0.59	0.54	0.49 J	0.57	0.53	0.48 J	0.33 J	0.28 J	0.72	0.44 J	0.39 J	0.36 J	U0.5		0.21 J		0.12 J		0.19 J		U0.5		NR		NR		NR		NR
cis-1,2-dichloroethene	0.20 J	0.19 J	U0.5	0.25 J	0.32 J	0.27 J	0.32 J	0.32 J	0.25 J	0.18 J	0.17 J	0.5	0.32 J	0.25 J	0.24 J	U0.5		0.14 J		0.12 J		0.19 J		U0.5		U0.24		U0.30		U0.71		U 0.71
trans-1,2-dichloroethene	0.18 J	0.28 J	U0.5	0.34 J	0.22 J	0.22 J	0.25 J	0.18 J	0.22 J	0.14 J	0.10 J	0.23 J	0.12 J	0.15 J	0.13 J	U0.5		0.067 J		U0.5		U0.5		U0.5		U0.17		U0.20		U0.67		U 0.67
Acetone	U2.5	3.3 B	3.2	U2.5	U2.5	5.7 B	3.4 B	2.9 B	5.3 B	5.9	2.3 JB	U2.5	6.1	0.97 J	3.2	U2.5		14 B		4.2		1.4		2.4 JB		U2.5		U3.1		U3.4		4.4 J
Benzene	1.3	1.2	0.27 J	1.1	1.7	1.1	1.2 B	2.2	1.3	0.76	0.72	1.3	1.1	1.7	3.6	1.8		2.2		1.8		1.5		0.98		1.5		1.2		1.2		0.90 J
Bromodichloromethane	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.25 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.13		U0.57		U0.64		U0.64
Carbon Disulfide	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.61	0.22 J	U0.5	U0.5	0.041 J	U0.5	U0.5		0.058 J		U0.5		0.096 J		0.041 J		U0.21		U0.53		U0.88		U0.88
Chlorobenzene	1.6	1.3	0.35 J	1.5	2.2	1.8	1.8	2.2	1.5	1.1	0.84	2.1	1.4	1.8	2.2	1.7		1.7		1.4		1.8		0.98		1.4		1.2		1.2		0.85 J
Chloroethane	U0.5	0.25 J	U0.5	U0.5	0.23 J	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.40 J	U0.5		U0.5		U0.5		U0.5		U0.5		U0.21		U0.58		U0.90		U0.90
Chloroform	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	1.0	1.0	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.17		U0.27		U0.60		U0.60
Ethylbenzene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.044 J	0.050 J	U0.5		U0.5		0.080 J		U0.5		U0.5		U0.23		U0.25		U0.51		U0.51
Methylene Chloride	U0.5	0.33 JB	U0.5	U0.5	U0.5	0.27 JB	U0.5	0.1 J	0.26 J	0.2 J	0.30 JB	U0.5	U0.5	U0.5	U0.5	U0.5		0.072 J		0.24 JB		U0.5		0.16 JB		U0.13		U0.94		U0.36		U0.89
Toluene	0.13 J	0.14 J	0.19 J	U0.5	0.12 J	0.32 J	0.12 J	0.37 J	0.31 J	0.19 J	0.11 J	0.15 J	0.13 J	U0.5	U0.5	U0.5		0.17 JB		0.31 J		0.095 J		0.18 J		U0.15		U0.16		U0.46		U0.46
Total xylene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.13 J	0.22 J	U0.5		0.18 JB		0.41 J		U0.5		U0.5		U0.49		U0.27		U0.89		U0.89
m,p-xylene	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	0.12 J	0.10 J	U1.0		0.18 JB		0.29 J		U1.0		U1.0		NR		NR		NR		NR
o-xylene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.058 J	0.11 J	U0.5		U0.5		0.12 J		U0.5		U0.5		NR		NR		NR		NR
Trichloroethene	0.12 J	U0.5	U0.5	0.16 J	0.15 J	0.13 J	0.22 J	0.24 J	0.19 J	0.19 J	U0.5	0.15 J	0.17 J	0.085 J	0.16 J	U0.5		U0.5		U0.5		U0.5		U0.5		U0.14		U0.20		U0.69		U0.69
Vinyl Chloride	0.22 J	0.20 J	U0.5	0.22 J	0.33 J	0.36 J	U0.5	0.27 J	0.21 J	0.17 J	U0.5	0.27 J	0.25 J	0.19 J	0.23 J	U0.5		0.12 J		U0.5		U0.5		U0.5		U0.23		U0.17		U0.88		U0.88
Total VOCs	3.52	3.11	3.2	3.19	5.2	3.61	4.22	5.71	4.3	9.37	1.56	4.84	8.6	3.5	9.53	3.5		3.9		7.58		4.7		1.96		2.9		2.4		2.4		0

All results in ug/L

Table 4B
Tybouts Corner Landfill
Off-Site Groundwater Monitoring Wells Analytical Results

TY-104

Parameter	2/06	5/06	8/06	11/06	2/07	5/07	8/07	11/07	2/08	5/08	11/08	5/09	11/09	5/10	11/10	5/11	12/11	5/12	11/12	5/13	11/13	5/14	11/14	5/15	11/15	5/16	11/16	5/17	11/17	5/18	11/18	5/19
1,1-dichloroethane	U0.5		Not Sampled			U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.24 J	U0.5	NS	U0.5	NS	U0.5	NS	U0.5	NS	U0.5	NS	U0.12	NS	U0.34	NS	U0.63	NS	U0.63
1,2-dichloroethane	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	5.7	U0.5		U0.5		U0.5		U0.5		U0.5		U0.21		U0.24		0.76 J		U 0.57
1,2-Dichloroethene (total)	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.16 J	U0.5		U0.5		U0.5		U0.5		U0.5		NR		NR		NR		NR
cis-1,2-dichloroethene	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.10 J	U0.5		U0.5		U0.5		U0.5		U0.5		U0.24		U0.30		U0.71		U0.71
trans-1,2-dichloroethene	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.055 J	U0.5		U0.5		U0.5		U0.5		U0.5		U0.17		U0.20		U0.67		U0.67
2-Butanone	U2.5					U2.5	1.9 J	U2.5	U2.5	U2.5	U2.5	1.8 J	U2.5	U2.5	U2.5	U2.5		0.34 J		U2.5		U2.5		U2.5		U0.55		U2.6		U2.6		U2.6
Acetone	5.8					U2.5	3.7 B	4.5 B	9.7 B	5.5	6.1 B	8.1	6.6	0.85 J	0.78 J	U 2.5		9.5 B		3.5		2.3 JB		2.1 JB		U2.5		4.2 J		U3.4		4.4 J
Benzene	U0.5					0.14 J	0.67 B	0.68	0.78	0.14 J	0.12 J	0.18 J	U0.5	U0.5	1.3	U0.5		U0.5		U0.5		U0.5		0.038 J		U0.11		0.25 J		1.2		U 0.60
Carbon Disulfide	U0.5					U0.5	0.42 J	0.64	1.1	1.1	2.2	0.23 J	0.14 J	0.072 J	0.034 J	U0.5		0.039 J		0.057 J		U0.5		0.15 J		U0.21		U0.53		U0.88		U0.88
Chlorobenzene	U0.5					0.11 J	0.95	0.6	0.13 J	0.27 J	U0.5	0.21 J	U0.5	U0.5	2.7	U0.5		U0.5		U0.5		U0.5		U0.5		U0.14		0.19 J		2.1		U 0.50
Chloroethane	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.21		U0.58		U0.90		U0.90
Chloroform	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.17		U0.27		U0.60		U0.60
Ethylbenzene	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.091 J	U0.5		U0.5		U0.5		U0.5		U0.5		U0.23		U0.25		U0.51		U0.51
Methylene Chloride	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		0.023 J		0.086 JB		0.023 J		0.029 J		U0.13		U0.94		U0.36		U0.89
Tetrachloroethene						U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.11 J	U0.5		U0.5		U0.5		U0.5		U0.5		U0.15		U0.24		U0.47		U0.47
Toluene	1.2					0.94	0.40 J	0.62	0.39 J	0.19 J	0.25 J	0.18 J	0.37 J	U0.5	U0.5	U0.5		0.10 JB		0.43 J		0.051 JB		0.054 J		U0.15		1.7		U0.46		U0.46
Total xylene	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		0.17 JB		U0.5		U0.5		U0.5		U0.49		1.2 J		U0.89		U0.89
m,p-xylene	U1.0					U1.0	U1.0	U1.0	U1.0	U1.0	U0.5	U0.5	U0.5	U0.5	U1.0	U0.5		0.17 JB		U1.0		U1.0		U1.0		NR		NR		NR		NR
o-xylene	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		NR		NR		NR		NR
Trichloroethene	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.14		U0.20		U0.69		U0.69
Vinyl Chloride	U0.5					U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5		U0.5		U0.5		U0.5		U0.5		U0.23		U0.17		U0.88		U0.88
Total VOCs	7					0.94	1.62	2.54	1.88	6.6	2.2	8.1	6.6	0	9.70	0		0		3.5		0		0		0		1.7		3.3		0

Supplemental wells

	February 2006			May 2011			May 2016		
Well ID	**TY-116A**	**TY-116B**	**TY-116C**	**TY-116A**	**TY-116B**	**TY-116C**	**TY-116A**	**TY-116B**	**TY-116C**
All results in ug/L	No detections							ND	ND
1,1-dichloroethane	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.12	U0.12	U0.12
1,2-dichloroethane	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.21	U0.21	U0.21
1,2-Dichloroethene (total)	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	NR	NR	NR
cis-1,2-dichloroethene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.24	U0.24	U0.24
trans-1,2-dichloroethene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.17	U0.17	U0.17
Acetone	U2.5	U2.5	U2.5	U2.5	U2.5	2.9	U2.5	U2.5	U2.5
Benzene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.11	U0.11	U0.11
Carbon Disulfide	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.21	U0.21	U0.21
Chlorobenzene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.14	U0.14	U0.14
Chloroethane	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.21	U0.21	U0.21
Chloroform	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.17	U0.17	U0.17
Ethylbenzene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.23	U0.23	U0.23
Methylene Chloride	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.13	U0.13	U0.13
Toluene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	0.26 J	U0.15	U0.15
Total xylene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.49	U0.49	U0.49
m,p-xylene	U1.0	U1.0	U1.0	U1.0	U1.0	U1.0	NR	NR	NR
o-xylene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	NR	NR	NR
Trichloroethene	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.14	U0.14	U0.14
Vinyl Chloride	U0.5	U0.5	U0.5	U0.5	U0.5	U0.5	U0.23	U0.23	U0.23
Total VOCs	0	0	0	0	0	2.9	0	0	0

5/16	11/16	5/17	5/18
TY-119A	**TY-119A**	**TY-119A**	**TY-119A**
ND	**ND**	**ND**	**ND**
U0.12	U0.34	U0.34	U0.63
U0.21	U0.24	U0.24	U0.57
NR	NR	NR	NR
U0.24	U0.30	U0.30	U0.71
U0.17	U0.20	U0.20	U0.67
U2.5	3.5 J	U3.1	U3.4
U0.11	U0.18	U0.18	U0.60
U0.21	U0.53	U0.53	U0.88
U0.14	U0.15	U0.15	U0.50
U0.21	U0.58	U0.58	U0.90
U0.17	U0.27	U0.27	U0.60
U0.23	U0.25	U0.25	U0.51
U0.13	U0.94	U0.94	U0.36
U0.15	U0.16	U0.16	U0.46
U0.49	U0.27	U0.27	U0.89
NR	NR	NR	NR
NR	NR	NR	NR
U0.14	U0.20	U0.20	U0.69
U0.23	U0.17	U0.17	U0.88
0	0	0	0

All results in ug/L

Figure 4
MW-01

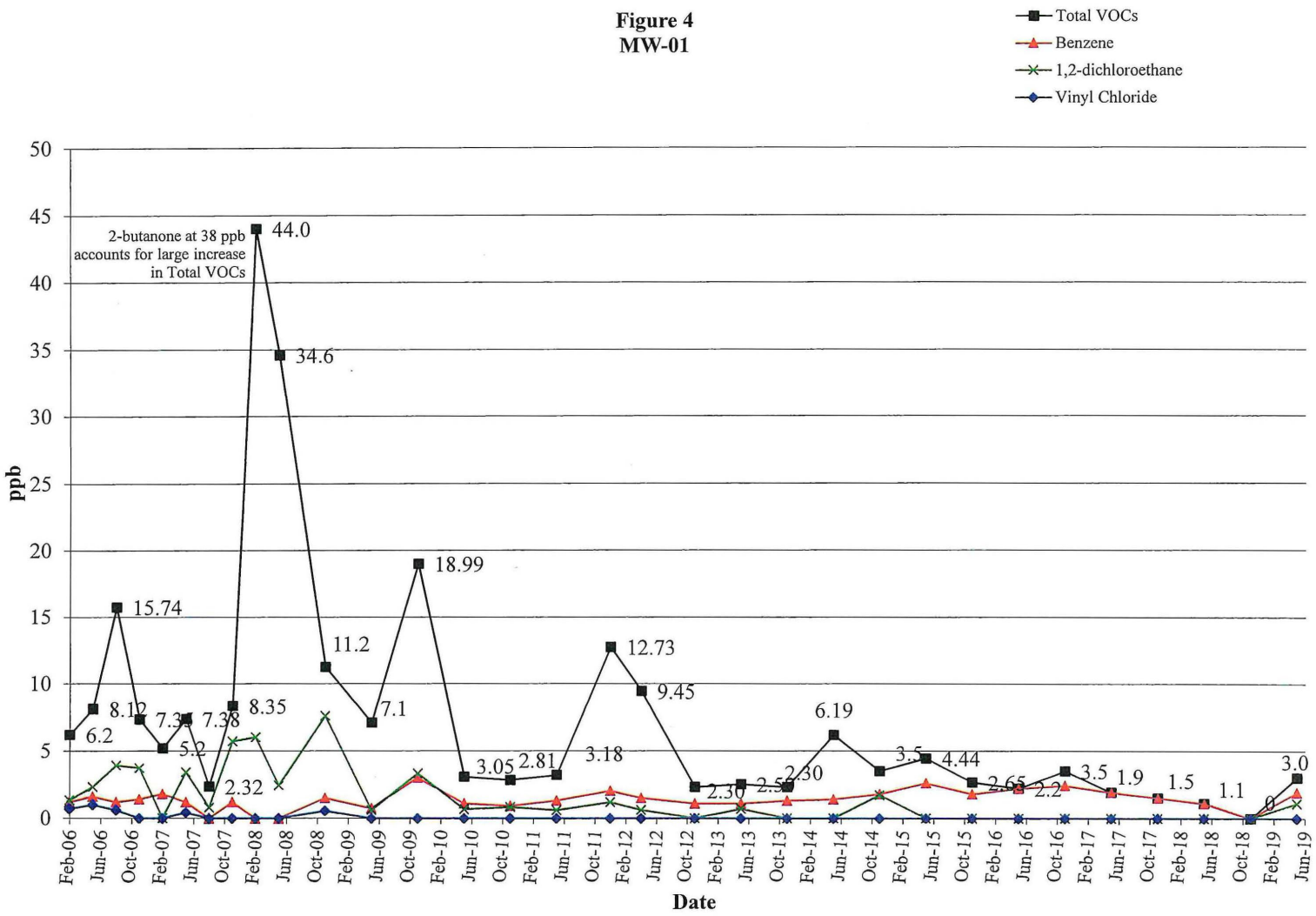


Figure 5
MW-02

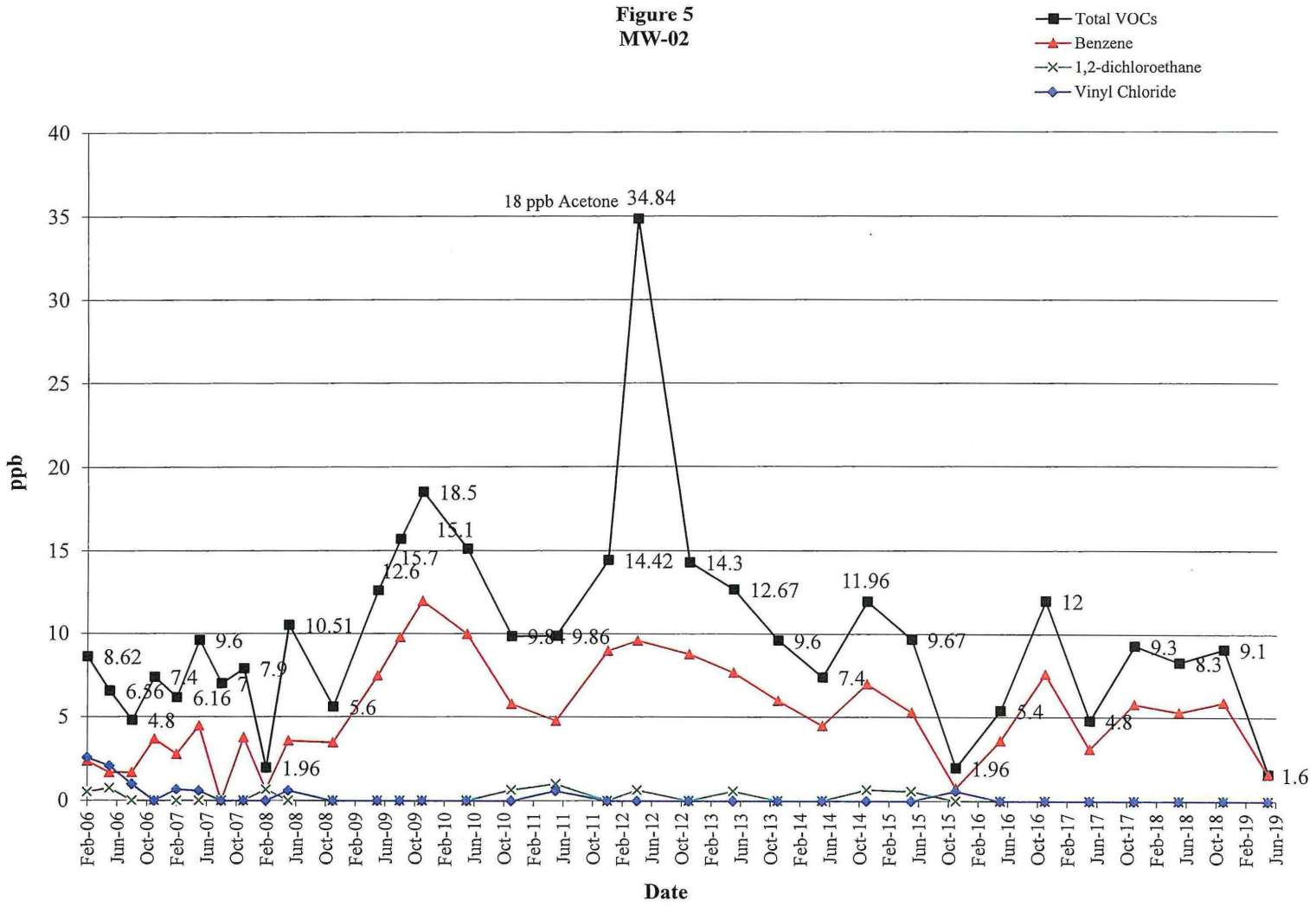


Figure 6
MW-04

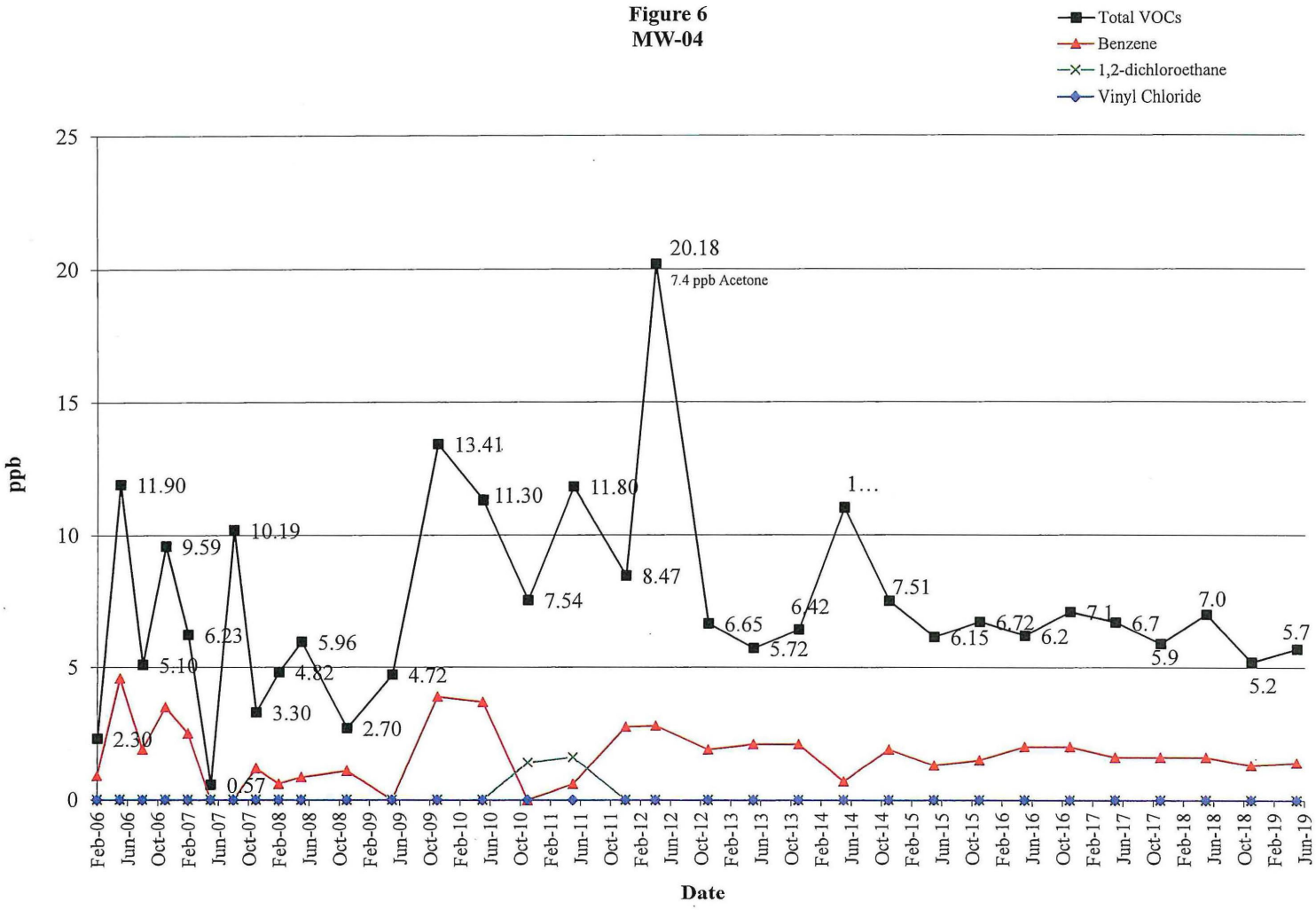


Figure 7
MW-05

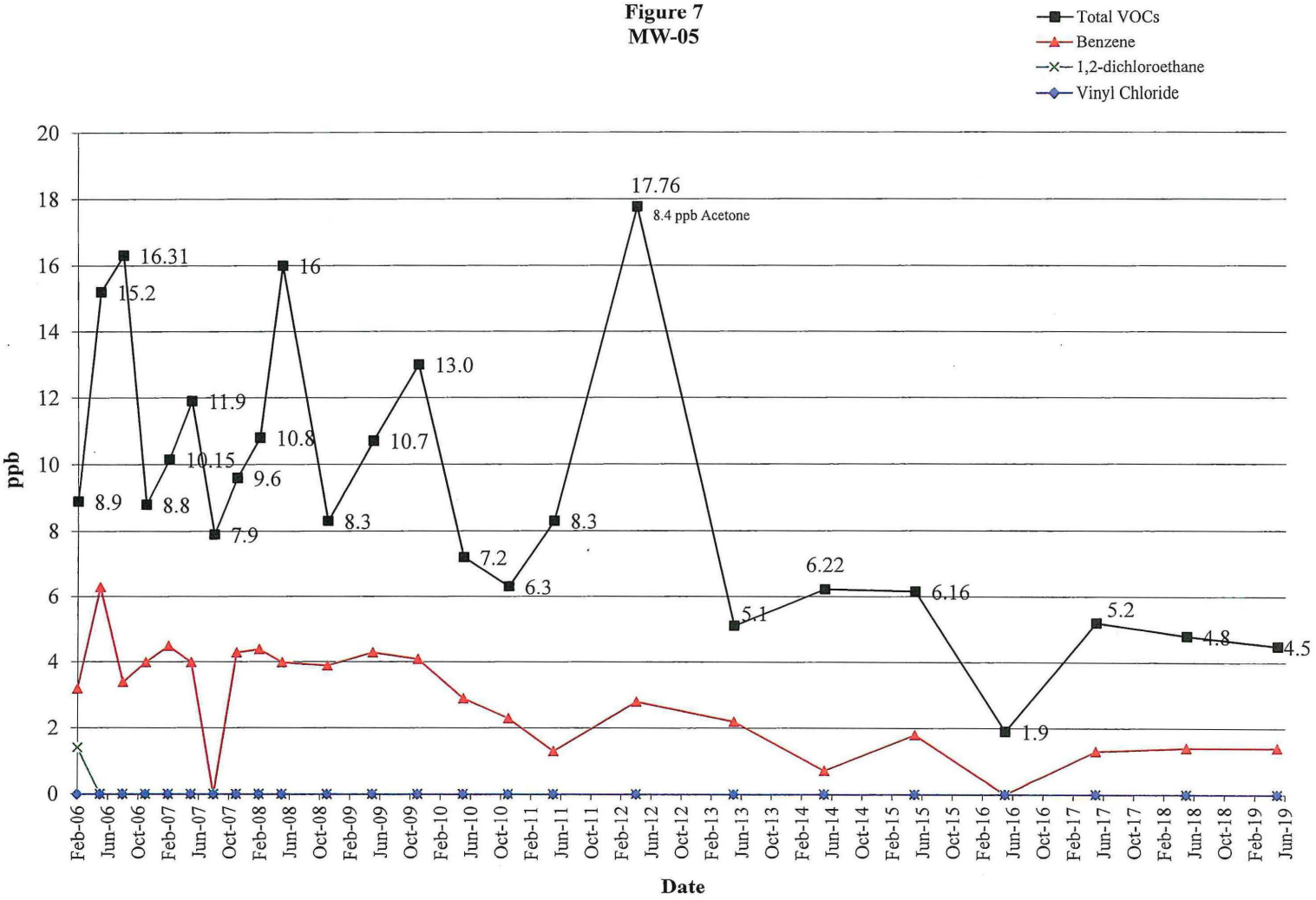


Figure 8
MW-03/IW-02

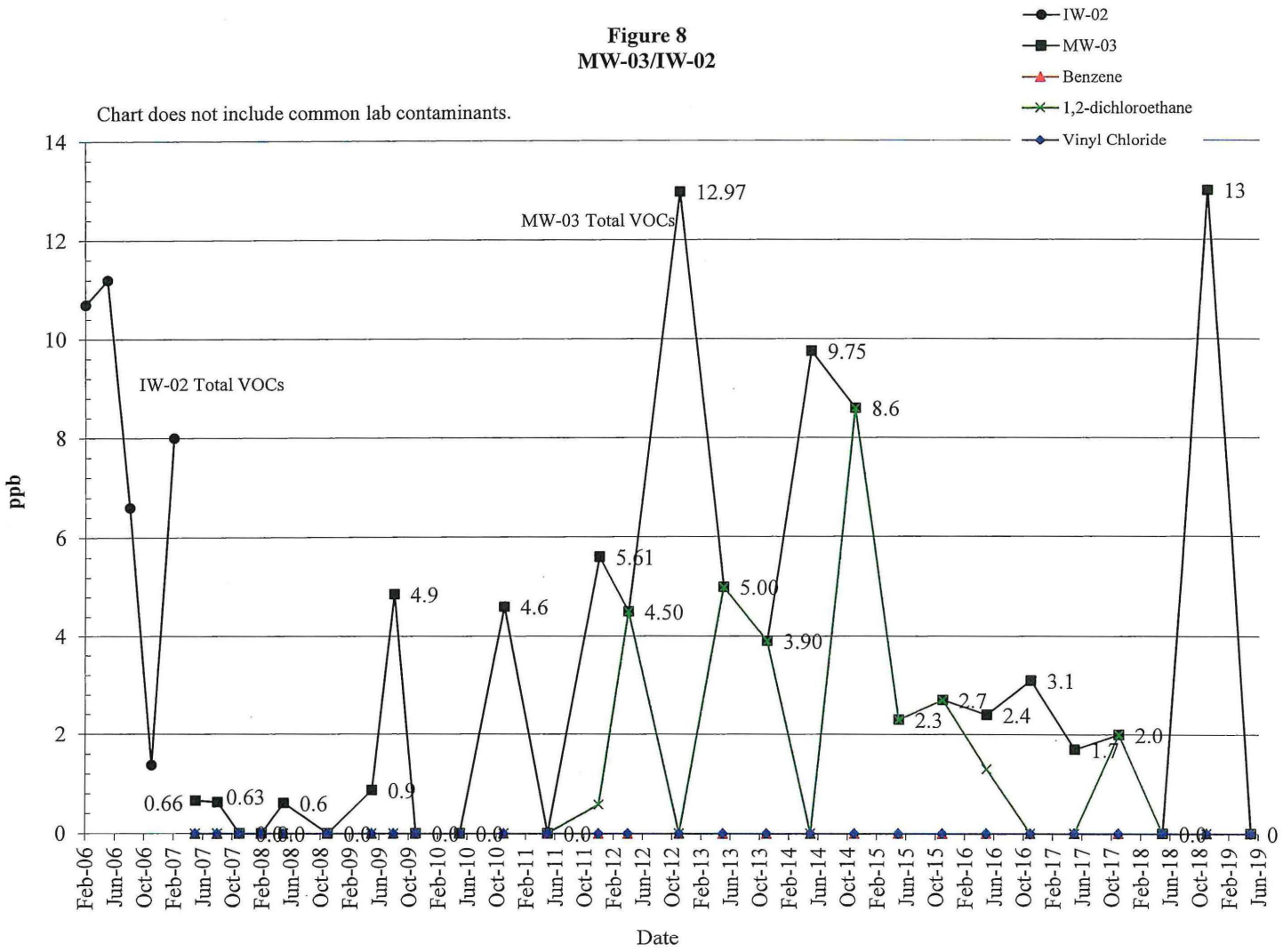


Figure 9
MW-10/IW-01

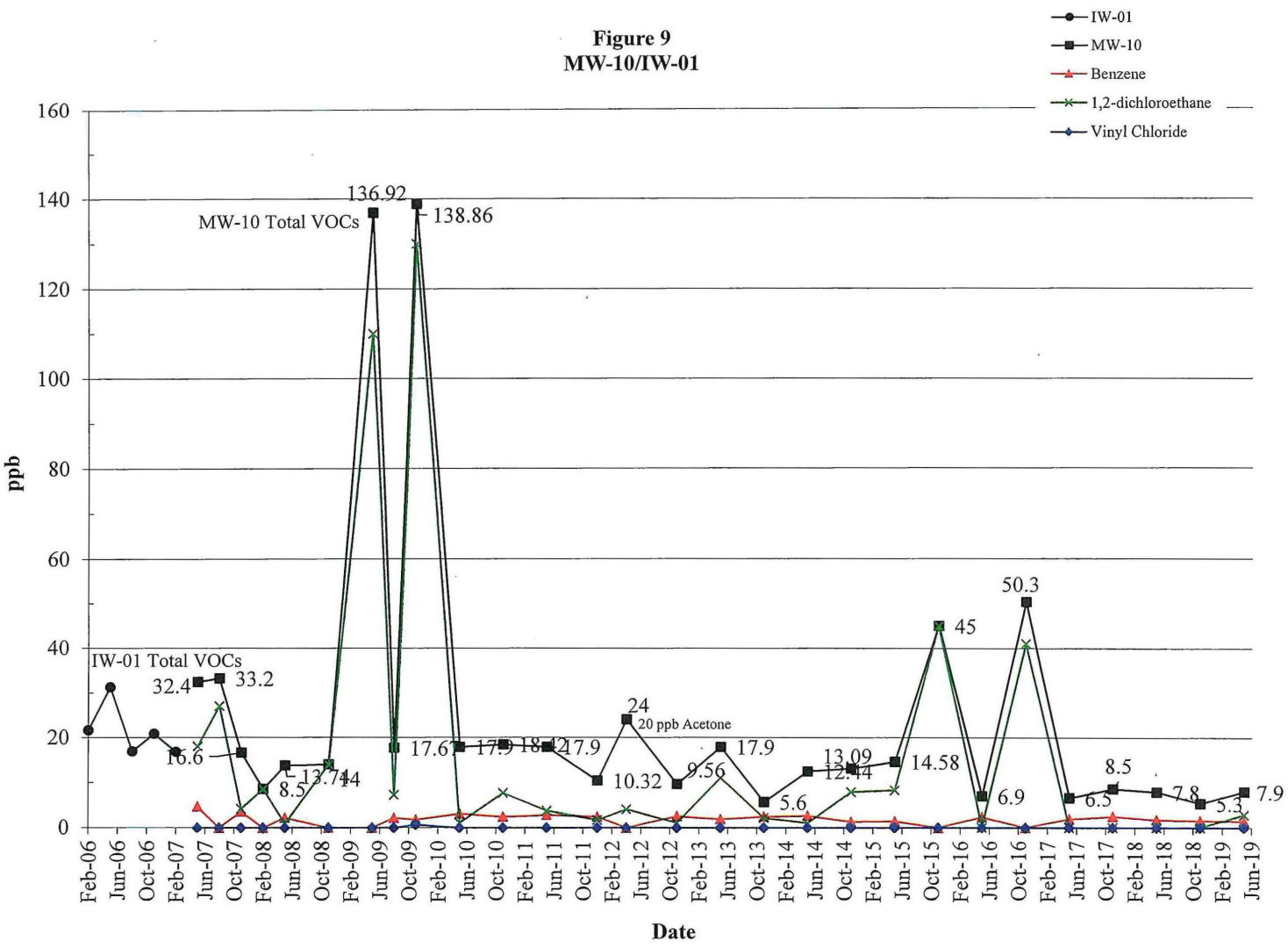


Figure 10
TY-205/IW-03

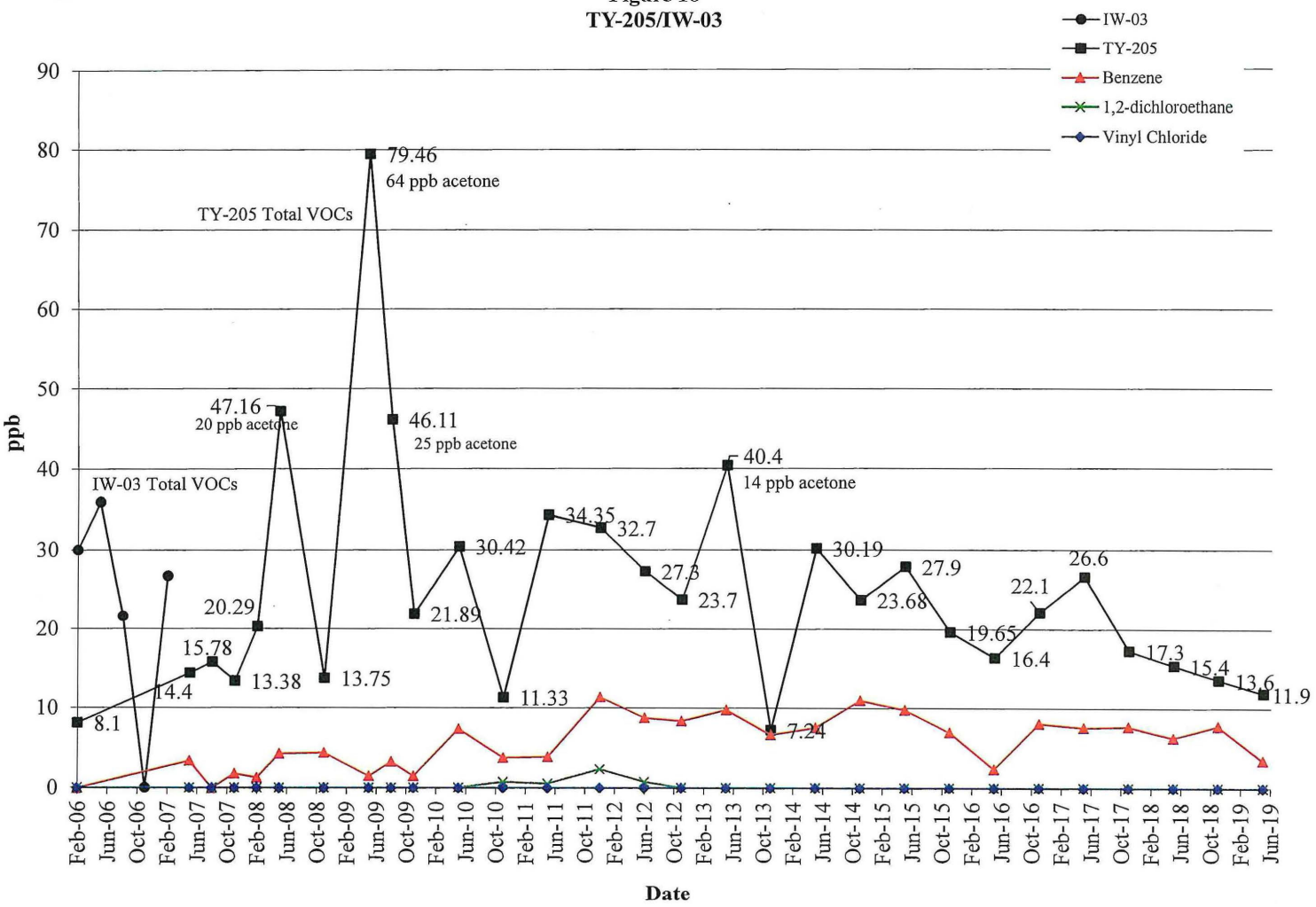


Figure 11
MW-09/IW-04

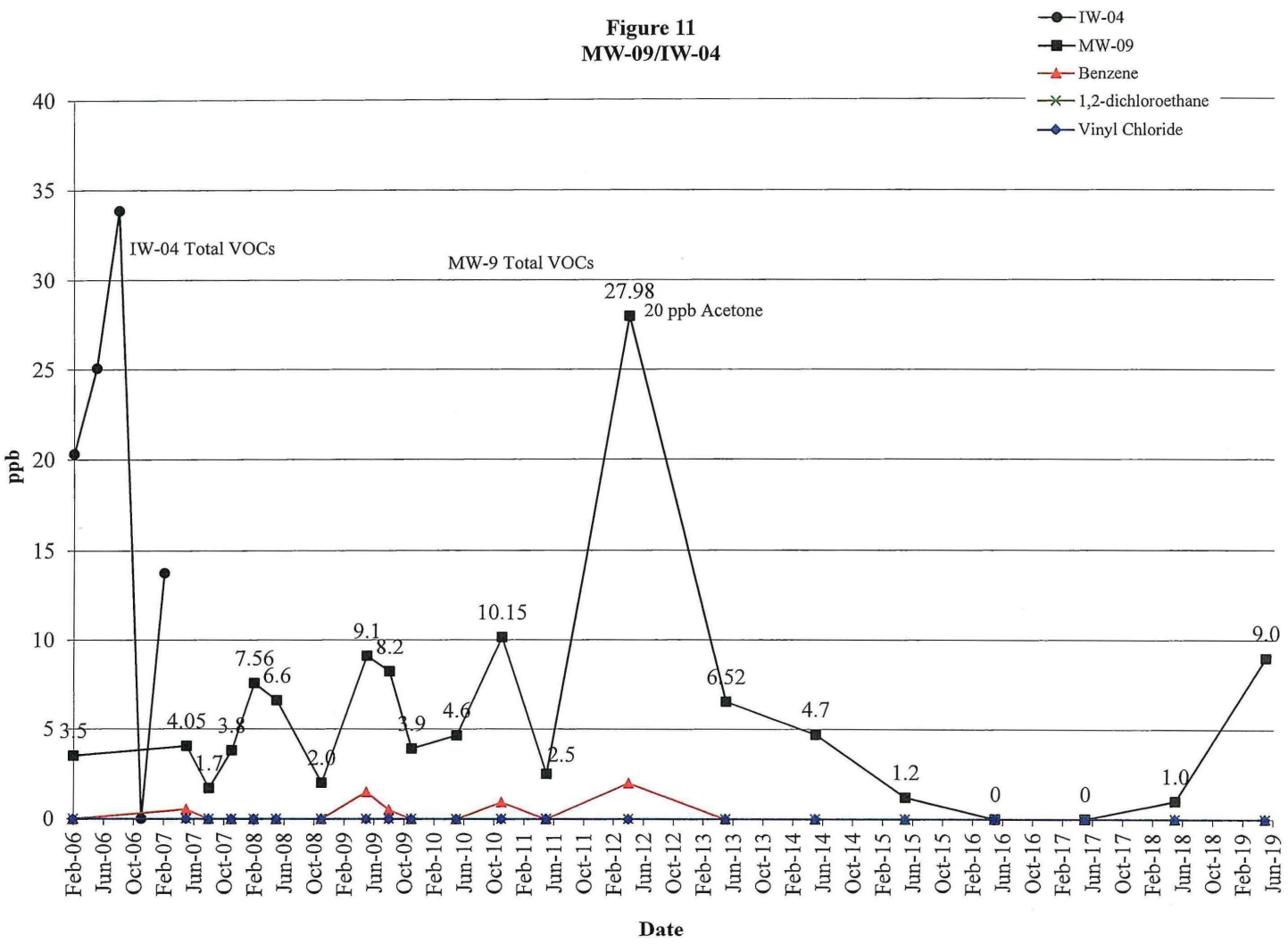


Figure 12
TY-204/TY-104

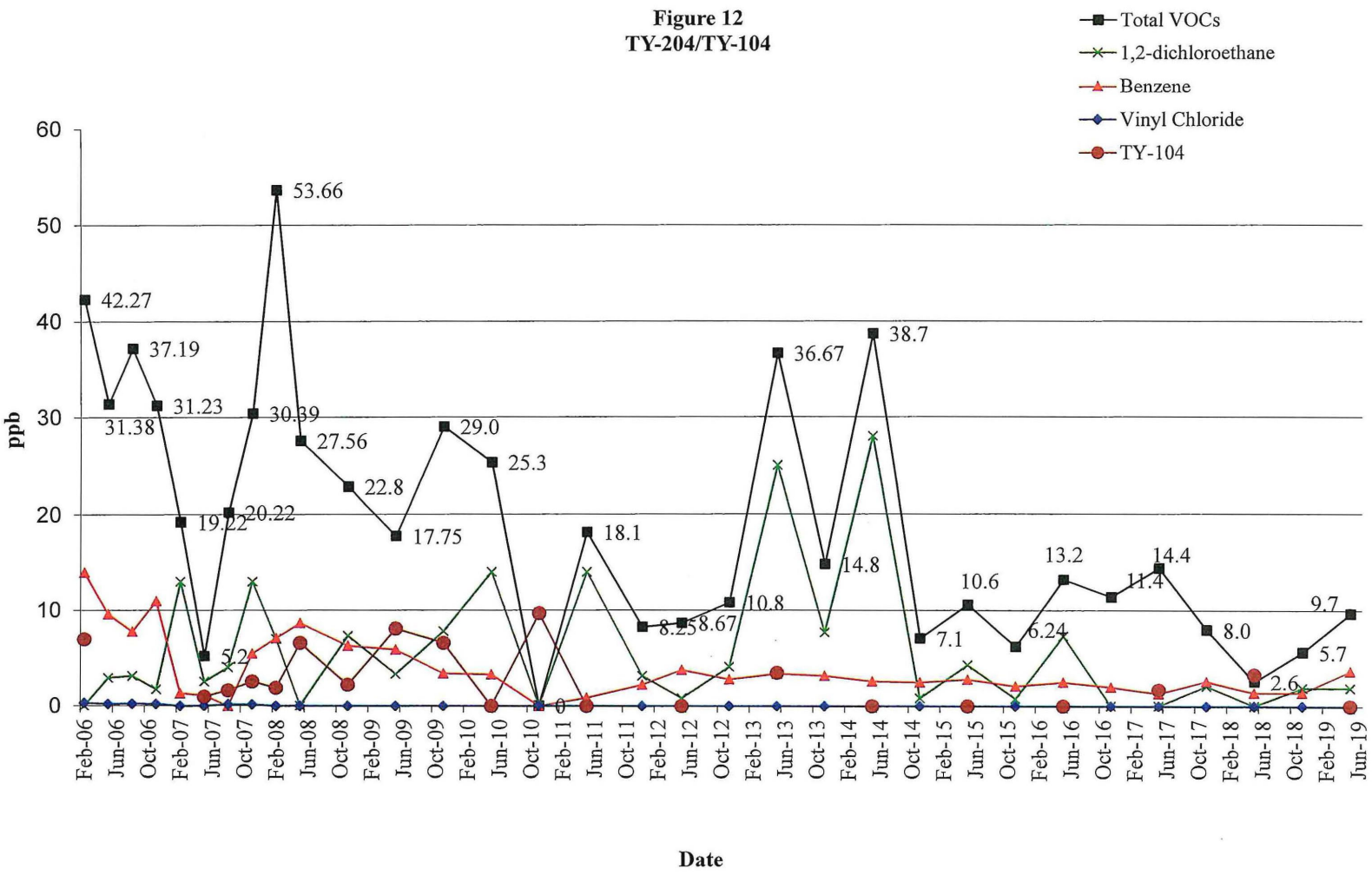


Figure 13
TY-119B

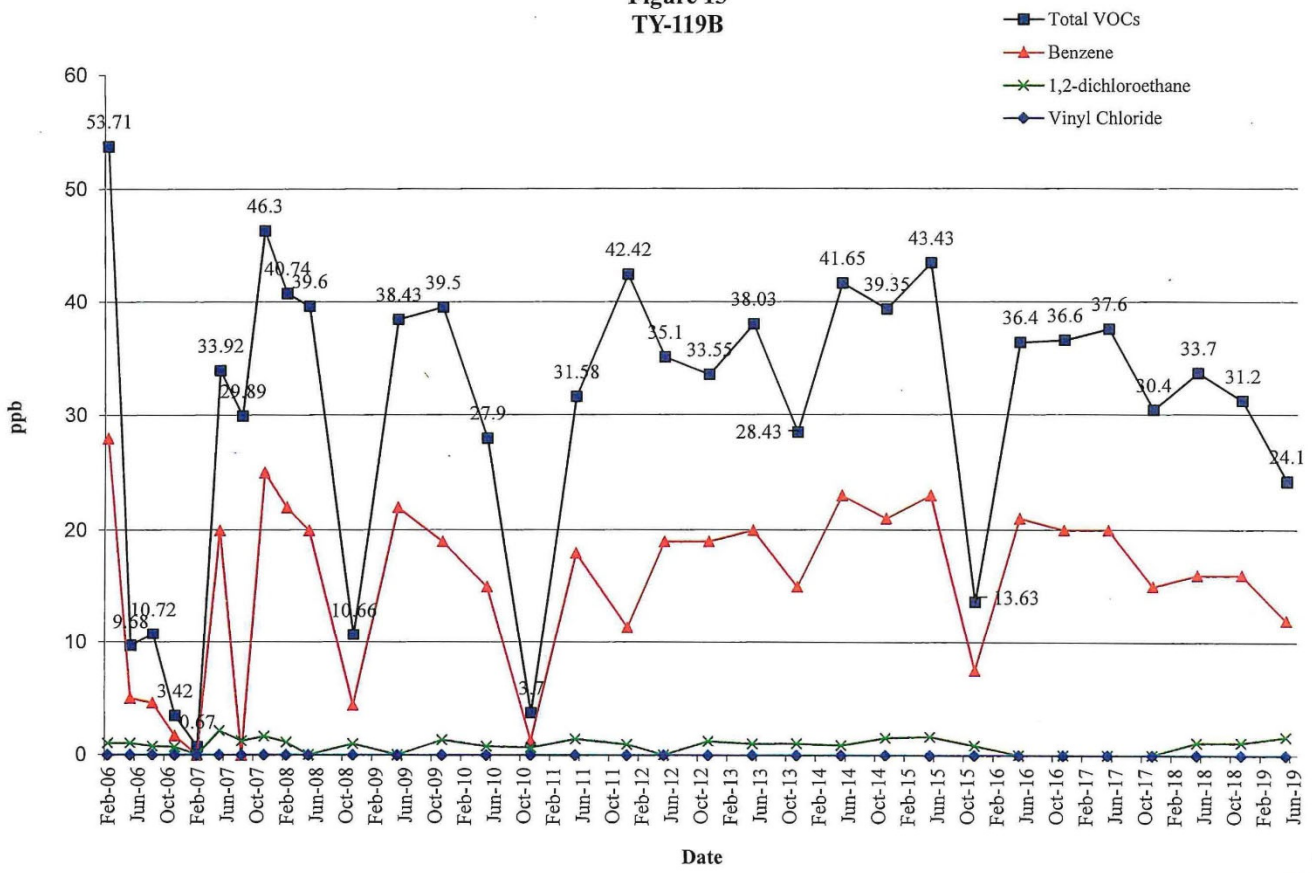


Figure 14
TY-114

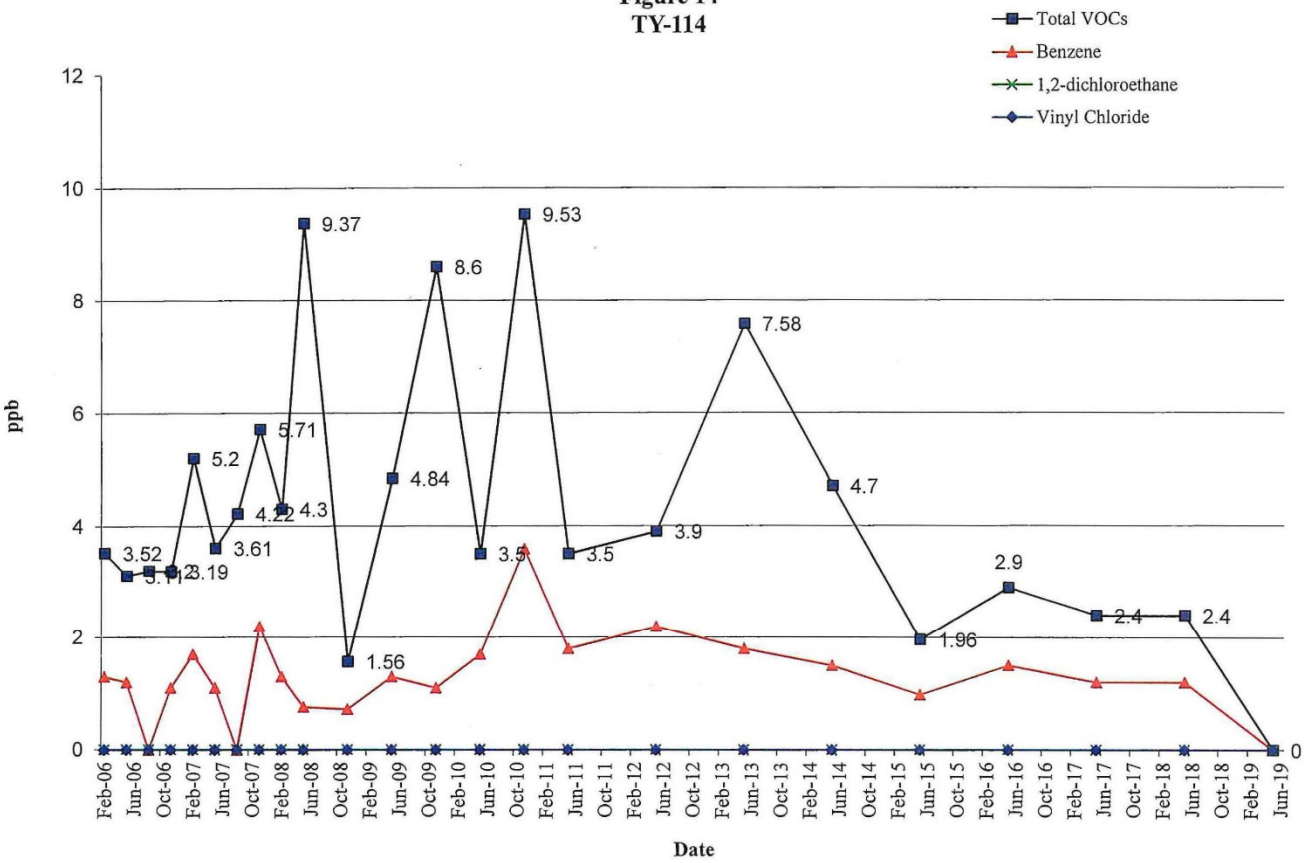


Table 9
Tybouts Corner Landfill
PGMW Inspection and Monitoring Record
Second Quarter 2019

PGMW	LEL (%)	FID (ppm)	PID (ppm)	Venting/ Sealed	Integrity	Comments
PGMW-1						1Q
PGMW-2	0	4.3	0	Open	Good	2Q
PGMW-3						3Q
PGMW-4						4Q
PGMW-5						1Q
PGMW-6	0	159	0	Open	good	2Q
PGMW-7	>100	Flameout	0	Closed	good	Every quarter
PGMW-8						4Q
PGMW-9						1Q
PGMW-10	0	0	0	Open	good	2Q
PGMW-11						3Q
PGMW-12						4Q
PGMW-13						1Q
PGMW-14	0	0	0	Closed	Good	2Q 4Q
PGMW-15						3Q

Table 2
Tybouts Corner Landfill
PGMW Inspection and Monitoring Record
First Quarter 2019

PGMW	LEL (%)	FID (ppm)	PID (ppm)	Venting/ Sealed	Integrity	Comments
PGMW-1	0	1.5	0	Open	good	1Q
PGMW-2						2Q
PGMW-3						3Q
PGMW-4						4Q
PGMW-5	0	0.7	0	Sealed	good	1Q
PGMW-6						2Q
PGMW-7	0.1	6.5	0	Sealed	good	1Q/2Q/3Q/4Q

PGMW	LEL (%)	FID (ppm)	PID (ppm)	Venting/ Sealed	Integrity	Comments
PGMW-8						4Q
PGMW-9	0	0	0	Open	Good	1Q
PGMW-10						2Q
PGMW-11						3Q
PGMW-12						4Q
PGMW-13	0	0	0	Open	Good	1Q
PGMW-14						2Q 4Q
PGMW-15						3Q

Table 6
Tybouts Corner Landfill
PGMW Inspection and Monitoring Record
Fourth Quarter 2018

PGMW	LEL (%)	FID (ppm)	PID (ppm)	Venting/ Sealed	Integrity	Comments
PGMW-1						1Q
PGMW-2						2Q
PGMW-3						3Q
PGMW-4	0	0	0	open	good	4Q
PGMW-5						1Q
PGMW-6						2Q
PGMW-7	>100	Flameout	0	sealed	good	Every quarter
PGMW-8	0	0	0	sealed	good	4Q
PGMW-9						1Q
PGMW-10						2Q
PGMW-11						3Q
PGMW-12	0	0	0	open	good	4Q
PGMW-13						1Q
PGMW-14	0	0	0	sealed	good	2Q 4Q
PGMW-15						3Q

Table 2
Tybouts Corner Landfill
PGMW Inspection and Monitoring Record
Third Quarter 2018

PGMW	LEL (%)	FID (ppm)	PID (ppm)	Venting/ Sealed	Integrity	Comments
PGMW-1						1Q
PGMW-2						2Q
PGMW-3	10	2633	0	Open	good	3Q
PGMW-4						4Q
PGMW-5						1Q
PGMW-6						2Q

PGMW	LEL (%)	FID (ppm)	PID (ppm)	Venting/ Sealed	Integrity	Comments
PGMW-7	>100	flameout	0	Closed	good	1Q/2Q/3Q/4Q
PGMW-8						4Q
PGMW-9						1Q
PGMW-10						2Q
PGMW-11	0	0	0	Open	good	3Q
PGMW-12						4Q
PGMW-13						1Q
PGMW-14						2Q 4Q
PGMW-15	0	0	0	Closed	good	3Q

Table 9
Tybouts Corner Landfill
PGMW Inspection and Monitoring Record
Second Quarter 2018

PGMW	LEL (%)	FID (ppm)	PID (ppm)	Venting/ Sealed	Integrity	Comments
PGMW-1						1Q
PGMW-2	0	0	0	Open	Good	2Q
PGMW-3						3Q
PGMW-4						4Q
PGMW-5						1Q
PGMW-6	0	0	0	Open	good	2Q
PGMW-7	>100	Flameout	0	Closed	good	Every quarter
PGMW-8						4Q
PGMW-9						1Q
PGMW-10	0	0	0	Open	good	2Q
PGMW-11						3Q
PGMW-12						4Q
PGMW-13						1Q
PGMW-14	0	0	0	Closed	Good	2Q 4Q
PGMW-15						3Q

Table 6
Tybouts Corner Landfill
PGMW Inspection and Monitoring Record
Fourth Quarter 2017

PGMW	LEL (%)	FID (ppm)	PID (ppm)	Venting/ Sealed	Integrity	Comments
PGMW-1						1Q
PGMW-2						2Q
PGMW-3						3Q
PGMW-4	0	0	0	open	good	4Q
PGMW-5						1Q
PGMW-6						2Q
PGMW-7	>100	Flameout	0.5	sealed	good	Every quarter
PGMW-8	0	0	0	sealed	good	4Q
PGMW-9						1Q
PGMW-10						2Q
PGMW-11						3Q
PGMW-12	0	0	0	open	good	4Q
PGMW-13						1Q
PGMW-14	0	0	0	sealed	good	2Q 4Q
PGMW-15						3Q

Table 2
Tybouts Corner Landfill
PGMW Inspection and Monitoring Record
Third Quarter 2017

PGMW	LEL (%)	FID (ppm)	PID (ppm)	Venting/ Sealed	Integrity	Comments
PGMW-1						1Q
PGMW-2						2Q
PGMW-3	1	279	0	Open	good	3Q
PGMW-4						4Q
PGMW-5						1Q
PGMW-6						2Q
PGMW-7	0	0	0	open	good	1Q/2Q/3Q/4Q

PGMW	LEL (%)	FID (ppm)	PID (ppm)	Venting/ Sealed	Integrity	Comments
PGMW-8						4Q
PGMW-9						1Q
PGMW-10						2Q
PGMW-11	0	0	0	Open	good	3Q
PGMW-12						4Q
PGMW-13						1Q
PGMW-14						2Q 4Q
PGMW-15	0	0	0	Sealed	good	3Q

Table 9

Tybouts Corner Landfill
PGMW Inspection and Monitoring Record
Second Quarter 2017

PGMW	LEL (%)	FID (ppm)	PID (ppm)	Venting/ Sealed	Integrity	Comments
PGMW-1						1Q
PGMW-2	0	0	0	open	okay	2Q
PGMW-3						3Q
PGMW-4						4Q
PGMW-5						1Q
PGMW-6	0	0	0	open	okay	2Q
PGMW-7	0	0	0	open	okay	Every quarter
PGMW-8						4Q
PGMW-9						1Q
PGMW-10	0	0	0	open	okay	2Q
PGMW-11						3Q
PGMW-12						4Q
PGMW-13						1Q
PGMW-14	0	0	0	sealed	okay	2Q 4Q
PGMW-15						3Q

Table 6
Tybouts Corner Landfill
PGMW Inspection and Monitoring Record
Fourth Quarter 2016

PGMW	LEL (%)	FID (ppm)	PID (ppm)	Venting/ Sealed	Integrity	Comments
PGMW-1						1Q
PGMW-2						2Q
PGMW-3						3Q
PGMW-4	0	0	0	open	good	4Q
PGMW-5						1Q

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PGMW	LEL (%)	FID (ppm)	PID (ppm)	Venting/ Sealed	Integrity	Comments
PGMW-6						2Q
PGMW-7	0	210	0	open	good	Every quarter
PGMW-8	0	0	0	sealed	good	4Q
PGMW-9						1Q
PGMW-10						2Q
PGMW-11						3Q
PGMW-12	0	0	0	open	good	4Q
PGMW-13						1Q
PGMW-14	0	0	0	sealed	good	2Q 4Q
PGMW-15						3Q

Table 2
Tybouts Corner Landfill
PGMW Inspection and Monitoring Record
Third Quarter 2016

PGMW	LEL (%)	FID (ppm)	PID (ppm)	Venting/ Sealed	Integrity	Comments
PGMW-1						1Q
PGMW-2						2Q
PGMW-3	0	0	0	Open	good	3Q
PGMW-4						4Q
PGMW-5						1Q
PGMW-6						2Q
PGMW-7	>1000	Flameout	0	Open	good	1Q/2Q/3Q/4Q
PGMW-8						4Q
PGMW-9						1Q
PGMW-10						2Q

PGMW	LEL (%)	FID (ppm)	PID (ppm)	Venting/ Sealed	Integrity	Comments
PGMW-11	0	0	0	Open	good	3Q
PGMW-12						4Q
PGMW-13						1Q
PGMW-14						2Q 4Q
PGMW-15	0	0	0	Sealed	good	3Q

Table 9
Tybouts Corner Landfill
PGMW Inspection and Monitoring Record
Second Quarter 2016

PGMW	LEL (%)	FID (ppm)	PID (ppm)	Venting/ Sealed	Integrity	Comments
PGMW-1						1Q
PGMW-2	0	0	0	open	okay	2Q
PGMW-3						3Q
PGMW-4						4Q
PGMW-5						1Q
PGMW-6	0	0	0	open	okay	2Q
PGMW-7	0	0	0	open	okay	Every quarter
PGMW-8						4Q
PGMW-9						1Q
PGMW-10	0	0	0	open	okay	2Q
PGMW-						3Q
PGMW-12						4Q
PGMW-13						1Q
PGMW-14	0	0	0	sealed	okay	2Q 4Q
PGMW-15						3Q

Table 2
Tybouts Corner Landfill
PGMW Inspection and Monitoring Record
First Quarter 2016

PGMW	LEL (%)	FID (ppm)	PID (ppm)	Venting/ Sealed	Integrity	Comments
PGMW-1	0	132	0	open	good	1Q
PGMW-2						2Q
PGMW-3						3Q
PGMW-4						4Q
PGMW-5	0	182	0	sealed	good	1Q
PGMW-6						2Q
PGMW-7	6	1800	0	open	good	Every quarter
PGMW-8						4Q
PGMW-9	0	0	0	open	good	1Q
PGMW-10						2Q
PGMW-11						3Q

PGMW	LEL (%)	FID (ppm)	PID (ppm)	Venting/ Sealed	Integrity	Comments
PGMW-12						4Q
PGMW-13	0	0	0	open	good	1Q
PGMW-14						2Q 4Q
PGMW-15						3Q

Table 2

Tybouts Corner Landfill
PGMW Inspection and Monitoring Record
Third Quarter 2015

PGMW	LEL (%)	FID (ppm)	PID (ppm)	Venting/ Sealed	Integrity	Comments
PGMW-1						1Q
PGMW-2						2Q
PGMW-3	0	0	0	Open	good	3Q
PGMW-4						4Q
PGMW-5						1Q
PGMW-6						2Q
PGMW-7	6	1330	0	Open	good	1Q/2Q/3Q/4Q
PGMW-8						4Q
PGMW-9						1Q
PGMW-10						2Q
PGMW-11	0	0	0	Open	good	3Q

PGMW	LEL (%)	FID (ppm)	PID (ppm)	Venting/ Sealed	Integrity	Comments
PGMW-12						4Q
PGMW-13						1Q
PGMW-14						2Q 4Q
PGMW-15	0	0	0	Sealed	good	3Q

Table 9
Tybouts Corner Landfill
PGMW Inspection and Monitoring Record
Second Quarter 2015

PGMW	LEL (%)	FID (ppm)	PID (ppm)	Venting/ Sealed	Integrity	Comments
PGMW-1						1Q
PGMW-2	11	0	0	open	good	2Q
PGMW-3						3Q
PGMW-4						4Q
PGMW-5						1Q
PGMW-6	0	0	0	open	good	2Q
PGMW-7						3Q
PGMW-8						4Q
PGMW-9						1Q
PGMW-10	0	0	0	open	good	2Q
PGMW-11						3Q
PGMW-12						4Q
PGMW-13						1Q
PGMW-14	0	0	0	sealed	good	2Q 4Q
PGMW-15						3Q

The results of the PGMW monitoring indicate that the integrity of the PGMWs is satisfactory. PGMW-2 is along Route 1 where the monitoring routinely detects higher levels of methane in the system monitoring probes.