FIFTH FIVE-YEAR REVIEW REPORT FOR FORT WAYNE REDUCTION DUMP SUPERFUND SITE ALLEN COUNTY, INDIANA

Prepared by

U.S. Environmental Protection Agency
Region 5
Chicago, Illinois

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Signed by: DOUGLAS BALLOTTI

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LIST OF ABBREVIATIONS & ACRONYMS

CD	Consent Decree
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
DOJ	Department of Justice
EPA	United States Environmental Protection Agency
ERC	Environmental Restrictive Covenant
ESD	Explanation of Significant Differences
FS	Feasibility Study
FYR	Five-Year Review
IAC	Indiana Administrative Code
ICs	Institutional Controls
IDEM	Indiana Department of Environmental Management
µg/L	Micrograms per liter
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
O&M	Operation and Maintenance
OM&M	Operation, Maintenance, and Monitoring
OU	Operable Unit
PAHs	Polycyclic Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
PCOCs	Potential Chemicals of Concern
PRP	Potentially Responsible Party
RA	Remedial Action
RAOs	Remedial Action Objectives
RCRA	Resources Conservation and Recovery Act
RD	Remedial Design
RD/RA	Remedial Design/Remedial Action
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RPM	Remedial Project Manager
Site	Fort Wayne Reduction Dump Superfund Site
UU/UE	Unlimited Use and Unrestricted Exposure

I. INTRODUCTION

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

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

This is the fifth FYR for the Fort Wayne Reduction Dump Superfund Site (site). EPA prepared this FYR report because hazardous substances, pollutants, or contaminants remain at the site above levels that allow for unlimited use and unrestricted exposure (UU/UE). The triggering action for this statutory review is the completion date of the previous FYR on September 5, 2014.

The site consists of one Operable Unit (OU), which will be addressed in this FYR.

This FYR was led by Lauren Bumba, EPA Region 5 Remedial Project Manager (RPM). Participants included Community Involvement Coordinator Charles Rodriguez and the Indiana Department of Environmental Management (IDEM) Project Manager Jessica Fliss. IDEM and the Potentially Responsible Party (PRP), Waste Management Inc., were notified of the initiation of the five-year review. The review began on October 9, 2018.

Site Background

The Fort Wayne Reduction Dump Superfund Site is located at 5225 Old Maumee Road, Fort Wayne, Indiana 46803. It lies along the south bank of the Maumee River approximately 1.1 miles east of the U.S. Highway 30 and Maumee River intersection, just east of Fort Wayne, Indiana. The 35-acre site is situated within the 100-year floodplain of the river. The site is bordered by the Maumee River to the north, the Norfolk and Western Railroad to the south, an auto parts stockyard to the southwest, Martin's Landfill to the northwest, and Herber Drain to the east. The communities of River Haven and Sunnymede Woods are directly east and south approximately 0.5 miles from the site. The site's location is shown in Figure 1 (see Appendix B).

Prior to 1967, the site was uncultivated farmland that may have been used for some limited waste disposal. Official operations as a waste disposal facility started in 1967, and the site continued to accept residential and industrial wastes until 1976. A recycling plant was built during this time; however, no records were kept on when operating began or ended. The plant was apparently inactive after February 1975, and the buildings were torn down in 1985. In 1984, Waste Management Inc. acquired Service Corporation of America (fka Fort Wayne Reduction, Inc. and National Recycling Corp.), which was then the owner and operator of the site.

Currently, primary land use in the area of the site is light industrial and commercial. An abandoned landfill and the Fort Wayne municipal wastewater treatment plant and sludge drying beds are located along the Maumee River in the vicinity of the site.

FIVE-YEAR REVIEW SUMMARY FORM

SITE IDENTIFICATION		
Site Name: Fort Wayne Reduction Dump		
EPA ID: IND980679542		
Region: 5	**State:** IN	**City/County:** Fort Wayne/Allen County

SITE STATUS	
NPL Status: Final	
Multiple OUs? No	**Has the site achieved construction completion?** Yes

REVIEW STATUS
Lead agency: EPA ***[If "Other Federal Agency", enter Agency name]*:**
Author name (Federal or State Project Manager): Lauren Bumba
Author affiliation: EPA, Region 5
Review period: 10/9/2018 - 1/29/2019
Date of site inspection: 12/18/2018
Type of review: Statutory
Review number: 5
Triggering action date: 9/5/2014
Due date *(five years after triggering action date)*: 9/5/2019

II. RESPONSE ACTION SUMMARY

Basis for Taking Action

During the Remedial Investigation (RI), 91 chemicals were detected in samples from various media across the site. As stated in the Record of Decision (ROD), it was not feasible to include all of these chemicals in the risk assessment (see Appendix A). Therefore, potential chemicals of concern (PCOCs) were selected to represent the hazards the site may pose to human health and the environment.

PCOCs were selected in the following manner. First, all chemicals with critical toxicity values were selected if they were detected in a media to which exposure could occur. Second, additional chemicals were selected if they were representative of the site (across media) or represented a significant contaminant source. Table 1 lists the 43 chemicals selected as PCOCs by media type for the Fort Wayne Reduction Dump Superfund Site.

Table 1: Potential Chemicals Of Concern Detected, By Media Type

Chemical	Onsite Surface Soil	Leachate Seeps	Leachate Seeps Sediment	Test Pits	Monitor-ing Wells	Product	Onsite Water Sediment	Onsite Surface Water
VOLATILE ORGANIC COMPOUNDS								
Acetone	NA*		x	x			x	
Benzene	NA	x		x	x		x	
Chlorobenzene	NA	x	x	x	x			
Chloroform	NA							x
1,1-Dichloroethane	NA	x		x		x		
1,1-Dichloroethene	NA	x						
Ethylbenzene	NA	x	x	x		x		
Methylene chloride	NA	x		x	x	x	x	
4-Methyl-2-pentanone	NA	x		x				
Tetrachloroethene	NA	x		x		x		
Toluene	NA	x	x	x	x		x	
1,1,1-Trichloroethane	NA	x		x		x		
Trichloroethene	NA	x	x	x		x	x	
Vinyl chloride	NA	x						
Xylenes	NA	x	x	x	x	x		
ACID EXTRACTABLES								
2,4-Dimethylphenol	x	x	x	x	x	x		
2-Methylphenol	x	x	x	x		x		x
4-Methylphenol	x	x	x	x		x		
Phenol	x	x	x	x		x		
BASE/NEUTRAL EXTRACTABLES								
Polycyclic Aromatic Hydrocarbons (PAHs)								
Benzo(a)anthracene	x		x	x			x	
Benzo(a)pyrene	x		x	x			x	
Benzo(b)fluoranthene	x		x	x			x	
Chrysene	x		x	x			x	
Dibenzo(a,h) anthracene				x			x	
Indeno(1,2,3-cd)pyrene	x		x	x			x	
Phthalates								
Bis(2-ethylhexyl) phthalate	x		x	x	x	x	x	
Dibutyl phthalate	x			x				
POLYCHLORINATED BIPHENYLS (PCBs)								
PCB	x		x					
INORGANICS								
Antimony	x			x		NA		
Arsenic	x	x		x	x	NA		
Barium	x	x	x	x	x	NA	x	x
Beryllium				x	x	NA		
Cadmium	x	x	x	x	x	NA	x	x
Chromium	x	x		x	x	NA		x
Copper		x	x	x	x	NA	x	
Cyanide		x		x	x	NA		x
Lead	x	x	x	x		NA	x	x
Manganese	x	x	x	x	x	NA	x	x
Mercury	x	x	x	x		NA		
Nickel	x	x	x	x	x	NA	x	x

Chemical	Onsite Surface Soil	Leachate Seeps	Leachate Seeps Sediment	Test Pits	Monitor-ing Wells	Product	Onsite Water Sediment	Onsite Surface Water
Silver	x		x	x	x	NA		
Vanadium	x	x	x	x	x	NA	x	
Zinc	x			x	x	NA		

*NA=Not Analyzed

The RI exposure assessment considered the potential exposure pathways by which humans and wildlife could come into contact with the PCOCs under current and future land use scenarios. Some of these potential exposure pathways were considered minor in terms of either the potential for release of contaminants or the-likelihood for exposure to occur. For example, the potential airborne release of contaminants from the site surface was low due to the cover on the site. Similarly, the groundwater was not considered a potential water supply source due to limited groundwater yield and availability of a municipal water supply.

The major exposure pathways identified can be divided into two major categories: exposures associated with the migration of contaminants to the Maumee River, and exposures associated with the use of the site. Based on the major exposure pathways identified, a risk characterization was completed. The eastern portion of the site was determined not to pose an unacceptable risk to human health or the environment because contaminant levels in the surface soils of this area were below levels indicating a direct contact threat. Concerns identified for the western portion are summarized in Table 2 below.

Table 2: Summary of Risk Characterization for Western Portion of Site

Exposure Pathway	Exposure Point	Exposed Population	Risk Characterization Summary
Direct Contact: Ingestion	Surface soil onsite	Trespassers	Reference dose exceeded by highest detected concentration of lead.
Direct Contact: Ingestion	Buried waste and subsurface soil	Construction workers, future site occupants	Concentrations of the following chemicals exceeded their risk-based target levels: cadmium, copper, chromium, lead, bis(2-ethylhexyl) phthalate, ethylbenzene, 2-methyl phenol, methylene chloride, PAHs, PCB, tetrachloroethene, and trichloroethene.
Direct Contact: Ingestion	Groundwater seep related sediment	Trespassers	Reference doses are not exceeded by any concentrations.
Direct Contact: Ingestion	Groundwater seeps	Trespassers	Reference dose exceeded by highest detected concentration of cadmium, 2-methyl phenol, 4-methyl phenol, phenol, and xylene.
Groundwater Migration: Discharge to Maumee River	Maumee River	Aquatic organisms	Acute aquatic criteria exceeded by groundwater, including seeps, prior to discharge to the river for the following chemicals: barium, cadmium, copper, 2,4-dimethyl phenol, ethylbenzene, 2-methyl phenol, 4-methyl phenol, methylene chloride, toluene, and xylene.

Exposure Pathway	Exposure Point	Exposed Population	Risk Characterization Summary
Groundwater Migration: Discharge to Maumee River	Maumee River	People who consume fish caught in Maumee River, people who swim in Maumee River	Projected contaminant levels in Maumee River (based on existing groundwater data) below levels of concern for fishing and swimming.

Response Actions

After separate and limited field investigations by both EPA and Service Corporation of America, the site was proposed for addition to the National Priorities List (NPL) in October 1984. The site was then formally listed on the NPL in June 1986.

A Remedial Investigation/Feasibility Study (RI/FS), including a Baseline Risk Assessment, was initiated in August 1986. The RI, dated January 7, 1988, concluded that remedial response actions were warranted for site media impacted by past disposal activities. These media included surface water, soils, and groundwater. The Feasibility Study (FS) identified applicable remedial technologies and screened them based on technical, environmental, public health, institutional criteria, and cost to recommend a remedial action alternative for the site.

EPA signed the ROD on August 26, 1988, which identified four Remedial Action Objectives (RAOs) for the site:

1) Surface Soil: To provide adequate protection of public health and the environment by limiting direct contact with, and erosion of, on-site surface soils in the western portion of the site.
2) Subsurface Soils/Wastes: To provide adequate protection of public health and the environment by limited direct contact with, and future releases to the Maumee River from, the subsurface soils and wastes in the western portion of the site.
3) Groundwater/Groundwater Seeps: To provide adequate protection of public health and the environment by limiting discharge of, and direct contact with, groundwater/groundwater seeps in the western portion of the site.
4) Municipal Landfill: Since no unacceptable public health or environmental risk has been associated with this area, the remedial action goals are to ensure future migration of groundwater will not present a threat to the river and adequate cover is present to prevent erosion resulting in a direct contact threat or washout of the wastes to the river.

Consistent with the RAOs, the ROD defined three OUs for the site: OU1, the eastern portion (municipal landfill); OU2, the western portion; and OU3, groundwater. However, for purposes of remedial action and reporting, the OUs were combined; therefore, all tracking in EPA's databases is reported as one overall OU. For purposes of discussing the remedies selected at the site, the following discussion is organized by the three originally envisioned OUs.

Eastern Portion Municipal Landfill (OU1)

The risk assessment for this area indicated that the contaminants did not present an unacceptable risk to human health and the environment by either direct contact with the surface soils or by migration of groundwater to the Maumee River. Therefore, the selected remedy for OU1 consisted of:

1) Soil cover designed for flood protection;
2) Installation of new groundwater monitoring wells;
3) Long-term groundwater monitoring; and
4) Access restrictions (fencing, warning signs, and deed restrictions).

Western Portion Soils (OU2) and Groundwater (OU3)

OU2 and OU3 were combined in the remedy description portion of the ROD because the groundwater on the western portion required treatment and groundwater on the eastern portion did not. The western portion of the site was where industrial, wire, liquid, and incinerator wastes were deposited. A large pit where liquid wastes were dumped was also located in this area, as were areas of buried drums. The selected remedy for OU2 and OU3 consisted of:

1) Excavation of approximately 4,600 drums;
2) Off-site incineration of drummed wastes;
3) Reconsolidation of soils/wastes on-site;
4) Soil cover;
5) Groundwater collection and treatment;
6) Flood protection and wetlands protection; and
7) Access restrictions (fencing, warning signs, and deed restrictions).

The ROD did not contain any site-specific groundwater cleanup criteria to determine when operation of the groundwater collection and treatment system could be terminated and groundwater allowed to discharge naturally to the Maumee River. Rather, the ROD indicated that the process of determining Alternate Concentration Limits would take place during the Remedial Design (RD).

As indicated in the ROD, the most significant exposure concern associated with the groundwater pathway was the potential acute toxicity to aquatic organisms due to contaminated groundwater migrating from the site into the Maumee River. Therefore, a process was developed by which IDEM would derive site-specific cleanup standards for protection of the Maumee River. In a June 20, 2008 letter to the PRP, IDEM documented that the following groundwater cleanup criteria would need to be attained to provide adequate protection of the Maumee River:

- Ethylbenzene 2,000 micrograms per liter (µg/L)
- Total Xylenes 626 µg/L
- 4-Methlyphenol 962 µg/L
- 2,4-Dimethlyphenol 2,700 µg/L

EPA issued an Explanation of Significant Differences (ESD) on September 14, 2010, which incorporated the above cleanup criteria into the selected remedy for the site. The ESD also described the process by which the criteria were developed.

Status of Implementation

Based on the ROD, the RD was prepared for construction of the remedy. A Consent Decree (CD) was lodged on February 22, 1989, which called for implementation of the Remedial Design/Remedial Action (RD/RA) by Service Corporation of America. The RD was completed in December 1989. Construction of the Remedial Action (RA) began in July 1991 and was completed in October 1994.

Eastern Portion Municipal Landfill (OU1)

The RA for the eastern portion of the site consisted of installing a Resource Conservation and Recovery Act (RCRA) Subtitle D landfill soil cover. Construction of the cap was performed from July 1991 through October 1991. Approximately 130,000 cubic yards of soil were transported to the site for construction of the soil cover, which consisted of a 30-inch thick clay cover and approximately 18 inches of topsoil to cover disturbed areas and promote growth of vegetation. A vegetative cover was sown over all disturbed areas to prevent erosion. Rip rap was placed along the Maumee River bank to the 100-year flood level.

New groundwater monitoring wells were installed around the eastern portion, and groundwater samples were collected quarterly in 1991 and 1992 in order to establish a baseline and then semi-annually in 1993 and 1994. Based on the results of these samples, no additional groundwater sampling was deemed necessary for the eastern portion of the site.

Western Portion Soils (OU2)

Phase I and Phase II construction activities consisted of installation of a geotextile wall, a biopolymer collection trench, and a vibrated beam vertical barrier. These activities were performed from September 1992 through December 1992. Phase III construction activities consisted of excavation of drums with appropriate disposal of their contents. Two areas were identified which contained drums within the western portion of the landfill: Area A (located on the east side) and Area B (located on the west side).

From April through October 1993, approximately 8,700 intact drums and approximately 1,900 drums that were not intact or empty were excavated from Area A. From February 1993 through August 1994, approximately 13,800 intact drums and approximately 3,800 not intact or empty drums were excavated from Area B. The number of drums excavated was much higher than originally estimated in the RI/FS. Drum contents were sampled, consolidated, and shipped to an appropriate disposal facility. The empty drums were crushed and buried in areas that had already been excavated free of drums.

A hybrid RCRA landfill soil cover was installed on the western portion of the site. Construction of the cover consisted of rough grading of the site to obtain the appropriate slope. A drainage blanket was constructed, which consisted of 12 inches of crushed limestone that was covered on the top and bottom with a geotextile. This drainage blanket was tied-in directly to the collection trench and was installed along the river to intercept any potential seeps. The entire western area was covered by a cohesive soil layer consisting of silty clay to a depth of 30 to 36 inches. Rip rap was placed in ditches and along the bank of the Maumee River. Four to six inches of topsoil was then placed over the entire site, and the area was seeded. The cover was constructed from July 1994 through October 1994.

Western Portion Groundwater (OU3)

A groundwater management system was installed to collect and treat impacted groundwater from the collection trench and to prevent groundwater from discharging to the Maumee River. Groundwater was collected from the collection trench via three extraction wells and pumped to a 20,000-gallon capacity holding tank located adjacent to the treatment building, located at the southwest corner of the site. The treated groundwater was then discharged via a sanitary sewer line to the City of Fort Wayne Wastewater Treatment Plant for final treatment and disposition.

The groundwater management system was monitored to ensure that permit compliance was met, and discharge monitoring reports were provided to EPA, IDEM, and the Fort Wayne City Utilities Water Pollution Control Plant. Operation of the groundwater collection and treatment system was suspended in July 2008 following a determination by EPA and IDEM that the groundwater cleanup criteria had been met.

Institutional Controls (ICs)

In order to limit the potential for human exposure to contaminated media, the 1988 ROD determined that deed restrictions would be required to control future property use and prohibit the use of groundwater or the installation of on-site wells for a water supply source. The following table identifies those areas that still do not support UU/UE at the site.

Table 3: Summary of Implemented ICs

Media, engineered controls, and areas that do not support UU/UE based on current conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date (or planned)
Groundwater at the site (approximately 35 acres)	Yes	Yes	Landfill parcel ID# 02-13-09-126-002.000-070 and ID# 02-13-09-201-001.000-040	Prohibit use of groundwater except as approved by EPA and IDEM; prohibit drinking water well installation	Environmental Restrictive Covenant (ERC), recorded May 12, 2012, at the Allen County Recorder's Office, Fort Wayne, IN
Surface water at the site (approximately 35 acres)	Yes	Yes	Landfill parcel ID# 02-13-09-126-002.000-070 and ID# 02-13-09-201-001.000-040	Prohibit use of surface water except as approved by EPA and IDEM	ERC, recorded May 12, 2012, at the Allen County Recorder's Office, Fort Wayne, IN
Landfill area (approximately 35 acres)	Yes	Yes	Landfill parcel ID# 02-13-09-126-002.000-070 and ID# 02-13-09-201-001.000-040	Prohibit residential development; prohibit interference with cap or other response measures; prohibit exposure	ERC, recorded May 12, 2012, at the Allen County Recorder's Office, Fort Wayne, IN

Other remedy components	Yes	Yes	Landfill parcel ID# 02-13-09-126-002.000-070 and ID# 02-13-09-201-001.000-040	Inspect and maintain the remedy components; maintain integrity of the fence	ERC, recorded May 12, 2012, at the Allen County Recorder's Office, Fort Wayne, IN

A map showing the area in which the ICs apply is included in Figure 3 (Appendix B).

Status of Access Restrictions and ICs: Access to the site is restricted by a fence. All required ICs at the site have been implemented.

Current Compliance: Based on the site inspection, monitoring data, and communication with Operation and Maintenance (O&M) personnel, no inappropriate land or groundwater use was observed. The ERC recorded in May 2012 is currently in place and effective, and EPA is not aware of site or media uses which are inconsistent with the stated objectives of the ICs and cleanup goals.

Long Term Stewardship: Long-term protectiveness at the site requires continued compliance with use restrictions to ensure the remedy continues to function as intended. To ensure proper maintenance and monitoring of the ICs that have been implemented at the site, long-term stewardship procedures were put in place in February 2009 as part of the revised Operation, Maintenance, and Monitoring (OM&M) Manual. The OM&M Manual includes regular inspection of the ICs and annual certification to EPA and IDEM that the ICs are in place and effective. The PRP has been in compliance with the revised OM&M Manual since its submittal.

Systems Operations/Operation & Maintenance

On September 25, 1995, EPA and IDEM conducted the pre-final inspection at the site. EPA determined that the remedy was constructed according to the RD/RA specifications and signed a Preliminary Close-Out Report on September 27, 1995. O&M activities have been conducted at the site since completion of construction. O&M activities include upkeep of the landfill cap to check for erosion, confirming that there is adequate vegetative growth, and verification of the integrity of the fence and the rip rap along the Maumee River.

Per the OM&M Manual, the operation, inspection, maintenance, repair, and monitoring activities conducted at the site are summarized and reported to EPA and IDEM on an annual basis. The OM&M Manual was revised in February 2009 to incorporate long-term stewardship procedures.

The PRP performs semi-annual inspections of the facility in accordance with the 2009 OM&M Manual and the 2012 ERC. Findings, observations, and any needed repairs noted during each inspection are recorded on an inspection form. Maintenance and repairs completed since the prior inspection are also noted. A copy of each inspection form is maintained in the site operations records.

O&M activities address the following areas:

- Landfill cover system;

- Surface water drainage ditches and discharge locations;
- Access roads;
- Site security system (fence, warning signs, gates, locks, any evidence of trespassing);
- ERC;
- Groundwater collection and treatment system; and
- Groundwater monitoring wells.

On June 30, 2008, the PRP notified EPA and IDEM that groundwater cleanup objectives for the site had been attained. The groundwater treatment system was placed in temporary standby mode on July 25, 2008 while two additional semi-annual sampling events were performed. The results confirmed that groundwater cleanup criteria had been attained on a sustained basis. Consequently, the PRP permanently terminated the operation of the groundwater treatment system. The process of how the treatment system would be terminated and decommissioned was documented in the 2009 OM&M Manual.

EPA concurred on the PRP's request to complete the demolition of the former treatment building on June 29, 2015. Demolition activities were conducted from August 12 through 24, 2015. Documentation on the building demolition was provided in the PRP's 2016 Annual Report.

III. PROGRESS SINCE THE LAST REVIEW

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

Table 4: Protectiveness Determinations/Statements from the 2014 FYR

OU #	Protectiveness Determination	Protectiveness Statement
OU1/Sitewide	Protective	The assessment of this five-year review for the Fort Wayne Reduction Dump site found that the remedy is protective of human health and the environment. The remedial measures currently in place are functioning as intended by the decision documents by eliminating the potential exposure pathways identified in the RI and ROD. A review of the ICs indicates compliance with the stated objectives of the 2012 ERC. No inappropriate land or groundwater use has been observed. Access to the site is restricted by the use of fencing. Long-term protectiveness at the site requires continued compliance with use restrictions to assure that the remedy continues to function as intended. To assure proper monitoring and enforcement of effective ICs, annual certification to EPA that the ICs are in place and effective is required.

No issues were identified during the 2014 FYR that affected the current or future protectiveness of the remedy. The following three issues and recommendations were identified during the 2014 FYR, but do not affect the protectiveness of the remedy:

1) The Settling Defendant [Waste Management Inc.] has requested that the 1989 CD be terminated. EPA is reviewing the request for a Certificate of Completion and termination of the CD, in consultation with IDEM and the Department of Justice (DOJ). In accordance with the terms of the CD, the Settling Defendant's obligation to continue to implement all remaining work required

by the CD, ROD, and Work Plan, including ongoing O&M activities, shall survive termination of the CD. The O&M activities for which the Settling Defendant is responsible are outlined in the site's 2009 OM&M Manual.

Update on Issue 1: EPA, IDEM, and DOJ reviewed the request for a Certificate of Completion and termination of the CD. EPA issued the Certificate of Completion on June 4, 2019.

2) The Settling Defendant has requested EPA's concurrence to complete demolition of the former treatment building that remains at the facility. In addition, the Settling Defendant has requested that the secondary containment area of the former holding tanks be demolished.

Update on Issue 2: EPA approved the request to complete the demolition of the former treatment building and the secondary containment area of the former holding tanks on June 29, 2015. Demolition activities were conducted from August 12 through 24, 2015. Photographic documentation on the building demolition was provided in the 2016 Annual Report from the Settling Defendant.

3) Existing monitoring wells that are no longer needed (as determined by EPA, in consultation with IDEM) will need to be properly abandoned as required under the State of Indiana regulation 312 Indiana Administrative Code (IAC) 13-10.

Update on Issue 3: EPA, in consultation with IDEM, requested the abandonment of all existing monitoring wells, except FW-1S, FW-2S and FW-2I, on June 29, 2015. On February 22, 2016, Troy Risk, Inc. abandoned the requested monitoring wells in accordance with 312 IAC 13-10-2 by filling each well with bentonite pellets from bottom to at least two feet below ground surface. Lawnscape of Fort Wayne, Indiana removed each well riser at least two feet below surface. The well abandonment report was provided to EPA in the 2016 Annual Report from the Settling Defendant.

IV. FIVE-YEAR REVIEW PROCESS

Community Notification, Involvement & Site Interviews

A public notice was made available by newspaper posting in the Fort Wayne Journal Gazette in Fort Wayne, Indiana on December 20, 2018, stating that there was a FYR and inviting the public to submit any comments to EPA (see Appendix C). EPA received no inquiries about the site during the FYR process. The results of the review and the report will be made available at the site information repository at the Allen County Library located at 900 Library Plaza in Fort Wayne, Indiana and online at www.epa.gov/superfund/fort-wayne-dump.

Data Review

The groundwater treatment system operated from February 1995 until July 2008 when, following a determination that the groundwater cleanup criteria had been attained, operation of the groundwater treatment system was discontinued. Additional groundwater monitoring continued on a semi-annual basis until May 2010 to verify that groundwater contaminant concentrations did not rebound. As the monitoring data in Appendix F show, the groundwater cleanup criteria were sustained on a continuous

basis from July 2005 through termination of the groundwater treatment system in 2008, and then throughout the period of verification monitoring (July 2008 through May 2010). Appendix F presents these data in both tabulated and graphical format for the period from 1995 to 2010. The graphs in Appendix F clearly depict the concentrations for each specific parameter over time compared to its established cleanup criterion.

Decommissioning of the groundwater treatment system, including demolition of the treatment plant building, was completed on August 24, 2015. Most of the groundwater monitoring wells were properly abandoned on February 22, 2016. Three on-site monitoring wells remain.

Site Inspection

The inspection of the site was conducted on December 18, 2018. In attendance were Lauren Bumba of EPA; Jessica Fliss of IDEM; Brad Norton (District Manager) and Christopher Fogt (Landfill Supervisor) of Waste Management Inc.; and Craig Lienhart of Troy Risk, Inc. The purpose of the inspection was to assess the protectiveness of the remedy.

Lauren Bumba and Jessica Fliss met with the PRP representatives at the site to conduct the inspection. The site inspection began with an interview of the PRP representatives. The results of this interview are incorporated into this FYR report and also are reflected in the Site Inspection Checklist in Appendix E. The inspection covered the entire site, including the eastern and western portions, the site perimeter and fence, and the monitoring wells. Photographs were taken of current site conditions and are included in Appendix E.

During the inspection, ponding was observed at two low-lying areas in the southern portion of the site due to a recent rain event. The PRP will be bringing in topsoil to build up these low areas in the summer of 2019. The following conditions were also noted during the inspection:

- The vegetative covers on both the eastern and western portions of the landfill are well vegetated, maintained, and in good condition;
- The remaining monitoring wells are locked and in good condition;
- The perimeter fencing is maintained and in good condition;
- Access gates to the fence are locked and secure; and
- Appropriate informational signs are posted.

During the interview, the PRP representatives suggested that EPA and IDEM consider the abandonment and removal of the remaining three monitoring wells, which are no longer in use. No complaints from nearby residents have been received by the PRP, IDEM, or EPA. Additionally, based on the site inspection and interviews, there are no site or media uses occurring which are incompatible with the stated objectives of the ICs.

V. TECHNICAL ASSESSMENT

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

Yes. A review of the available information indicates that the remedial measures currently in place are functioning as intended by the decision documents. The review of site-specific documentation, monitoring data, and the results of the site inspection all indicate that the remedy is protecting human health and the environment by eliminating potential exposure pathways at the site as identified in the RI

and ROD. The vegetative covers on both the eastern and western portions of the landfill are maintained and in good condition. Groundwater cleanup criteria have been attained and demolition of the groundwater treatment system was completed on August 24, 2015, with abandonment of most of the monitoring wells in February 2016. In addition, based on a review of the ICs for the site, the stated objectives of the 2012 ERC currently in place seem to be met.

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

Yes. The exposure assumptions, toxicity data, and RAOs used at the time of the remedy selection are still valid and have been addressed by the cleanup. The ROD did not specify cleanup levels; however, IDEM, in coordination with EPA, developed site-specific groundwater cleanup criteria to determine when operation of the site's groundwater collection and treatment system could be permanently terminated. These criteria were documented in the 2010 ESD. Since termination of the treatment system, groundwater is allowed to discharge naturally to the Maumee River.

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

No. There is no new information to suggest that the selected remedial measures currently in place are not protective. There have been no changes in the physical conditions of the site, and no new exposure pathways or receptors have been identified that would call into question the protectiveness of the remedy.

VI. ISSUES/RECOMMENDATIONS

No issues or recommendations that affect the protectiveness of the remedy were identified during this FYR.

OTHER FINDINGS

The following recommendations were identified during the FYR and may accelerate site close out, but do not affect current nor future protectiveness:

- During the inspection, ponding was observed at two low-lying areas in the southern portion of the site due to a recent rain event. The PRP will be bringing in topsoil to build up these low areas in the summer of 2019.
- Because the groundwater cleanup criteria have been attained and no additional sampling is planned, EPA and IDEM should consider requesting abandonment of the remaining three monitoring wells at the site.
- The next milestone for this site is deletion from the NPL. It is targeted for deletion by September 28, 2021.

VII. PROTECTIVENESS STATEMENT

OU1 & Sitewide Protectiveness Statement
Protectiveness Determination:

Protective
Protectiveness Statement: The remedy at the Fort Wayne Reduction Dump Superfund Site is protective of human health and the environment. The remedial measures currently in place are functioning as intended by the decision documents thereby eliminating the potential exposure pathways identified in the RI and ROD. The vegetative covers on both the eastern and western portions of the landfill are in good condition. Groundwater cleanup criteria have been attained and demolition of the groundwater treatment system was completed on August 24, 2015, with abandonment of most of the monitoring wells in February 2016. A review of the ICs indicates compliance with the stated objectives of the 2012 ERC. No inappropriate land or groundwater use has been observed. Access to the site is restricted by the use of fencing.

VIII. NEXT REVIEW

The next FYR report for the Fort Wayne Reduction Dump Superfund Site is required five years from the completion date of this review.

APPENDIX A – REFERENCE LIST

EPA (1988). *Record of Decision: Fort Wayne Reduction, Fort Wayne, Indiana*. Retrieved from https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=9100P43L.txt.

EPA (2010). *Explanation of Significant Differences: Fort Wayne Reduction Dump Superfund Site, Fort Wayne, Indiana*. Retrieved from https://semspub.epa.gov/src/document/05/381315.

EPA (2014). *Fourth Five-Year Review Report for Fort Wayne Reduction Dump, Fort Wayne, Indiana*. Retrieved from https://semspub.epa.gov/src/document/05/480185.

Troy Risk, Inc. (2017). *2016 Annual Report: Fort Wayne Reduction Site, 5225 Old Maumee Road, Fort Wayne, Indiana 46803, EPA ID No.: IND980679542*.

Troy Risk, Inc. (2018). *2017 Annual Report: Fort Wayne Reduction Site, 5225 Old Maumee Road, Fort Wayne, Indiana 46803, EPA ID No.: IND980679542*.

APPENDIX B – FIGURES

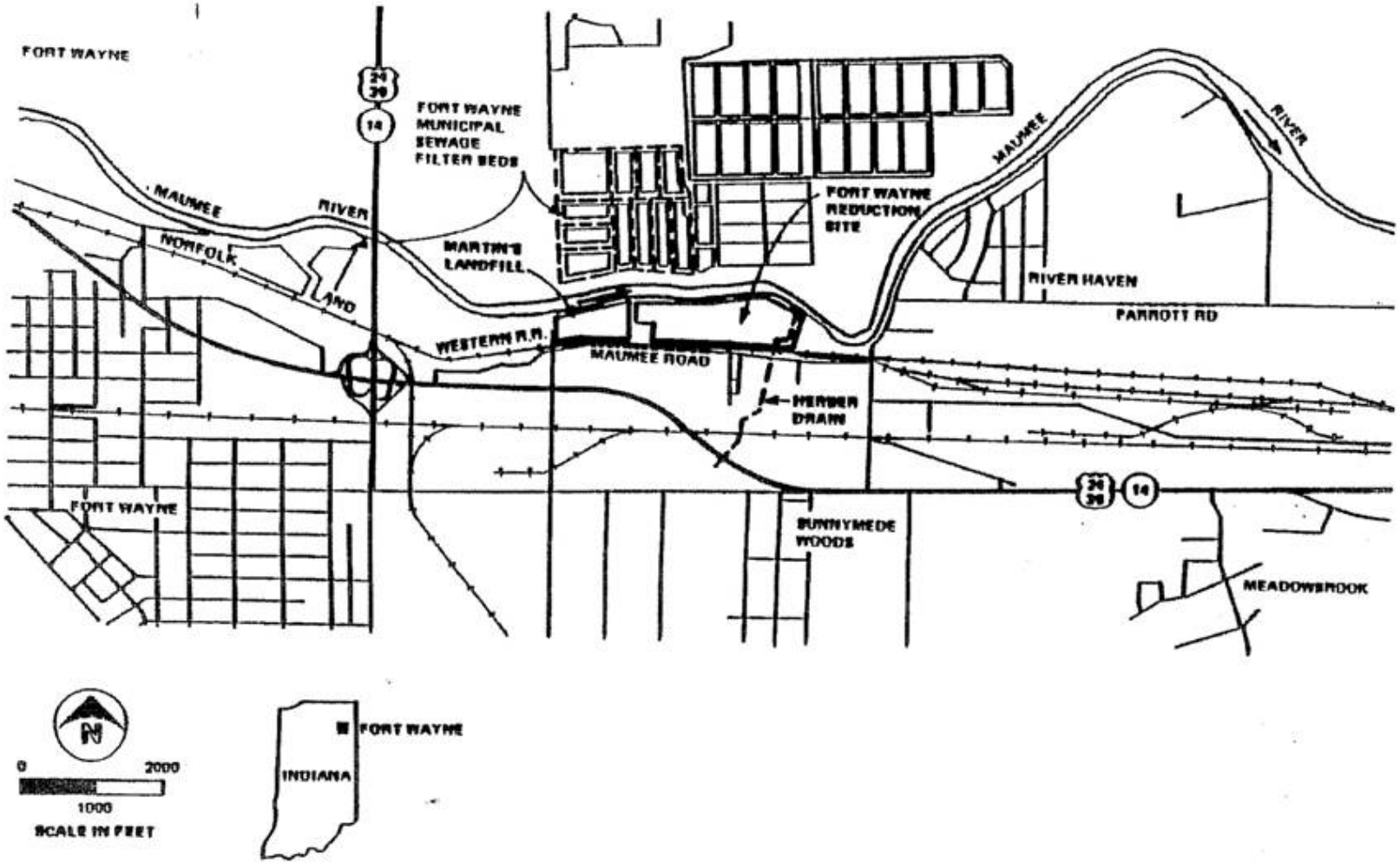


Figure 1-1
Location Map
Fort Wayne Reduction Site

SOURCE: Fort Wayne East USGS Quadrangle map

Site Location

Fort Wayne Reduction Site
5225 Old Maumee Road
Fort Wayne, Indiana

Project Number:	09.49
Drawing File:	Site Loc
Date:	May 4, 2012
Scale:	As Shown
Drawn By: CL	Checked by: PT

TROY RISK INC.

Figure 1

Site Map

Fort Wayne Reduction Site
5225 Old Maumee Road
Fort Wayne, Indiana

Aerial Imagery obtained from Google Earth (4/13/2016)

Project Number:	09.49
Drawing File:	Site Map
Date:	January 16, 2017
Scale:	As Shown
Drawn By: MR	Checked by: CL

TROY RISK INC.

Figure 2

Institutional (IC) Restrictions
Implemented Restrictions and Institutional Controls

Superfund
U.S. Environmental Protection Agency

Fort Wayne Reduction Dump
Allen County, IN

EPA ID# IND980679542

Legend

- Eastern Portion*
- Western Portion*
- IC Restrictions**
- Site Boundary

Source:
* ROD (1988)
** Declaration of Environmental Restrictive Covenants (2002)

N

Produced by Angela Rozinski
U.S. EPA Region 5 on Sept 23, 2009
Image Date: 2008

EPA Disclaimer: Please be advised that areas depicted in the map have been estimated. The map does not create any rights enforceable by any party. EPA may refine or change this data and map at any time.

GEOS
Groundwater Evaluation and Optimization System

Figure 3

APPENDIX C – PUBLIC NOTICE

EPA Begins Review of Fort Wayne Reduction Dump Site

Fort Wayne, Indiana

U.S. Environmental Protection Agency is conducting a five-year review of the Fort Wayne Reduction Dump Superfund Site located along the south bank of the Maumee River, approximately one mile east of the intersection with U.S. Highway 30. The Superfund law requires regular checkups of sites that have been cleaned up – with waste managed on-site – to make sure the cleanup continues to protect people and the environment. This is the fifth five-year review of this site.

The cleanup at this site consisted of digging up thousands of drums containing waste and incinerating the contents; installing a groundwater capture system to collect and treat groundwater before it enters the Maumee River; installing erosion mats and planting vegetation to reduce erosion during flooding; monitoring groundwater; constructing a fence, and placing deed restrictions on land use.

More information is available at the Allen County Public Library, 900 Library Plaza, Fort Wayne, and at www.epa.gov/superfund/fort-wayne-dump. The review should be completed next summer.

The five-year review is an opportunity for you to tell EPA about site conditions and any concerns you have. Contact:

Lauren Bumba	**Charles Rodriguez**
Remedial Project Manager	Community Involvement Coordinator
312-886-4844	312-886-7472
bumba.lauren@epa.gov	rodriguez.charles@epa.gov

You may also call EPA toll-free at 800-621-8431, 9:30 a.m. to 5:30 p.m., weekdays.

APPENDIX D – SITE CHRONOLOGY

Date	Event
October 1984	Site proposed for the NPL
February 1986	EPA released findings on groundwater quality samples from River Haven community residential wells
June 1986	Site finalized on the NPL
August 1986	RI initiated by EPA
May 1987	RI field activities completed
January 7, 1988	RI Report completed
May 2, 1988	FS completed
June 7, 1988	Public comment period on Proposed Plan ended
August 26, 1988	ROD issued
February 22, 1989	CD for RD/RA lodged
December 1989	RD submitted
September 1990	RA initiated
July 1991-October 1991	Eastern portion cap constructed
September 1992-December 1992	Western portion phase I and phase II (geotextile wall, collection trench, vibrated beam vertical barrier) constructed
February 1993-August 1994	Western portion phase III (drum removal) conducted
July 1994-October 1994	Western portion cap constructed
November 1993-October 1994	Western portion groundwater treatment system constructed
September 25, 1995	Pre-final inspection performed by EPA and IDEM
September 27, 1995	Preliminary Close-Out Report signed
July 2, 1999	First FYR completed
September 29, 2004	Second FYR completed
May 11, 2007	Formal request submitted by Waste Management Inc. to IDEM to develop site-specific groundwater cleanup criteria
March 27, 2008	IDEM transmitted site-specific groundwater cleanup criteria to EPA
June 30, 2008	Waste Management Inc. notified EPA and IDEM that groundwater cleanup objectives for the site have been attained
July 25, 2008	Groundwater treatment system placed in temporary standby mode while two additional semi-annual sampling events performed
November 4, 2008	First semi-annual compliance monitoring event
February 9, 2009	Transmittal of OM&M Manual to EPA and IDEM
April 16, 2009	Second semi-annual compliance monitoring event
September 9, 2009	Third FYR completed
September 23, 2009	Site-Wide Ready for Anticipated Use measure achieved
September 14, 2010	ESD issued
October 12, 2010	Waste Management Inc. submitted Notice of Completion
May 12, 2012	ERC recorded
September 5, 2014	Fourth FYR completed
June 29, 2015	EPA and IDEM approved demolition of the former treatment building and the secondary containment area of the former holding tanks and requested abandonment of all existing monitoring wells, except FW-1S, FW-2S, and FW-2I
December 18, 2018	Fifth FYR site inspection conducted
June 4, 2019	Certificate of Completion issued

APPENDIX E – SITE INSPECTION CHECKLIST

Five-Year Review Site Inspection Checklist

I. SITE INFORMATION	
Site name: Fort Wayne Reduction Dump	**Date of inspection:** 12/18/2018
Location and Region: Fort Wayne, Indiana (Region 5)	**EPA ID:** IND980679542
Agency, office, or company leading the five-year review: EPA	**Weather/temperature:** 40°, sunny

Remedy Includes: (Check all that apply)

- ☒ Landfill cover/containment
- ☒ Access controls
- ☒ Institutional controls
- ☒ Groundwater pump and treatment (shutdown)
- ☐ Surface water collection and treatment
- ☒ Other rip rap along river
- ☐ 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** Brad Norton (Name) District Manager (Title) 12/18/18 (Date)
   Interviewed ☒ at site ☐ at office ☐ by phone Phone no.
   Problems, suggestions; ☐ Report attached close-out of consent decree; abandonement of remaining 3 monitoring wells

2. **O&M staff** Christopher Fogt (Name) Landfill Supervisor (Title) 12/18/18 (Date)
   Interviewed ☒ at site ☐ at office ☐ by phone Phone no.
   Problems, suggestions; ☐ Report attached Damaged fence repaired in February 2017

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, etc.) Fill in all that apply.

Agency IDEM
Contact Jessica Fliss | Sr. Env. Manager | 12/18/18 | 317-233-2823
Name | Title | Date | Phone no.
Problems; suggestions; ☐ Report attached Fill in low spots on cap to prevent ponding of water during rain events; elevation study?

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.

N/A

III. ON-SITE DOCUMENTS & 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 Shutdown	☐ 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 Last discharge permit was allowed to expire in 2008 after termination of treatment system			
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 Groundwater monitoring discontinued in 2010 after meeting all groundwater cleanup criteria			
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 Operated in full compliand during operation of the groundwater treatment system			
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
☐ Other _____

2. **O&M Cost Records**

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

Total annual cost by year for review period if available

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

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

Describe costs and reasons: N/A

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

A. Fencing

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

B. Other Access Restrictions

1. **Signs and other security measures** ☐ Location shown on site map ☐ N/A
Remarks In place - good condition

C. Institutional Controls (ICs)

1. **Implementation and enforcement**

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

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

Type of monitoring (*e.g.*, self-reporting, drive by) Waste Management verifies compliance

Frequency Semi-annual inspections reported in annual reports to EPA/IDEM

Responsible party/agency Waste Management / EPA / IDEM

Contact Brad Norton (Name) District Manager (Title) 12/18/18 (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

N/A

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 Junkyards on both sides of site

VI. GENERAL SITE CONDITIONS

A. Roads ☒ Applicable ☐ N/A

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

Remarks Good conditions

B. Other Site Conditions

Remarks Bald eagle, blue heron, and several mallard ducks spotted near Maumee River

VII. LANDFILL COVERS ☒ Applicable ☐ N/A

A. Landfill Surface

1. **Settlement** (Low spots) ☒ Location shown on site map ☐ Settlement not evident
   Areal extent 10' x 10' Depth 1" - 2"
   Remarks 2 areas of low spots in southern portion of the site

2. **Cracks** ☐ Location shown on site map ☒ Cracking not evident
   Lengths____ Widths____ Depths____
   Remarks____

3. **Erosion** ☐ Location shown on site map ☒ Erosion not evident
   Areal extent____ Depth____
   Remarks____

4. **Holes** ☐ Location shown on site map ☒ Holes not evident
   Areal 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 (armored rock, concrete, etc.)** ☒ N/A
   Remarks Rip rap along river, stable

7. **Bulges** ☐ Location shown on site map ☒ Bulges not evident
   Areal extent____ Height____
   Remarks____

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

☒ Wet areas	☒ Location shown on site map	Areal extent	10' x 20'
☒ Ponding	☒ Location shown on site map	Areal extent	10' x 20'
☐ Seeps	☐ Location shown on site map	Areal extent	
☐ Soft subgrade	☐ Location shown on site map	Areal extent	

Remarks two low areas in southern portion of the site with ponding due to recent rain event; vegetation still healthy and established

9. **Slope Instability** ☐ Slides ☐ Location shown on site map ☒ No evidence of slope instability
Areal 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** ☐ Location shown on site map ☒ No evidence of settlement
Areal extent_____ Depth_____
Remarks_____

2. **Material Degradation** ☐ Location shown on site map ☒ No evidence of degradation
Material type_____ Areal extent_____
Remarks_____

3. **Erosion** ☐ Location shown on site map ☒ No evidence of erosion
Areal extent_____ Depth_____
Remarks_____

4. **Undercutting** ☐ Location shown on site map ☒ No evidence of undercutting
Areal extent_____ Depth_____
Remarks_____

5. **Obstructions** Type_____ ☒ No obstructions
☐ Location shown on site map Areal extent_____
Size_____
Remarks_____

6. **Excessive Vegetative Growth** Type Grasses
☒ No evidence of excessive growth
☐ Vegetation in channels does not obstruct flow
☐ Location shown on site map Areal 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. **Leachate Extraction Wells**
☐ 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** Areal extent_____ Depth_____ ☐ N/A
   ☐ Siltation not evident
   Remarks_____

2. **Erosion** Areal 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
   Areal extent_____ Depth_____
   Remarks_____

2. **Vegetative Growth** ☐ Location shown on site map ☐ N/A
   ☐ Vegetation does not impede flow
   Areal extent_____ Type_____
   Remarks_____

3. **Erosion** ☐ Location shown on site map ☐ Erosion not evident
   Areal 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
   Areal extent_____ Depth_____
   Remarks_____

2. **Performance Monitoring** Type of monitoring_____
   ☐ 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_____

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 System has been shutdown and decommissioned. All components have been removed from site.

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 Demolished in 2015.

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 Demolished in 2015.

6. **Monitoring Wells** (pump and treatment remedy)
   - ☒ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☒ Good condition
   - ☒ All required wells located ☐ Needs Maintenance ☐ N/A

   Remarks All wells abandoned except for FW-1S, FW-2S, and FW-2I. Discussion/approval needed to abandon 3 remaining wells.

D. Monitoring Data As of 2010

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

D. 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 which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.

XI. OVERALL OBSERVATIONS

A. Implementation of the Remedy

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

None, other than the minor issues noted earlier.

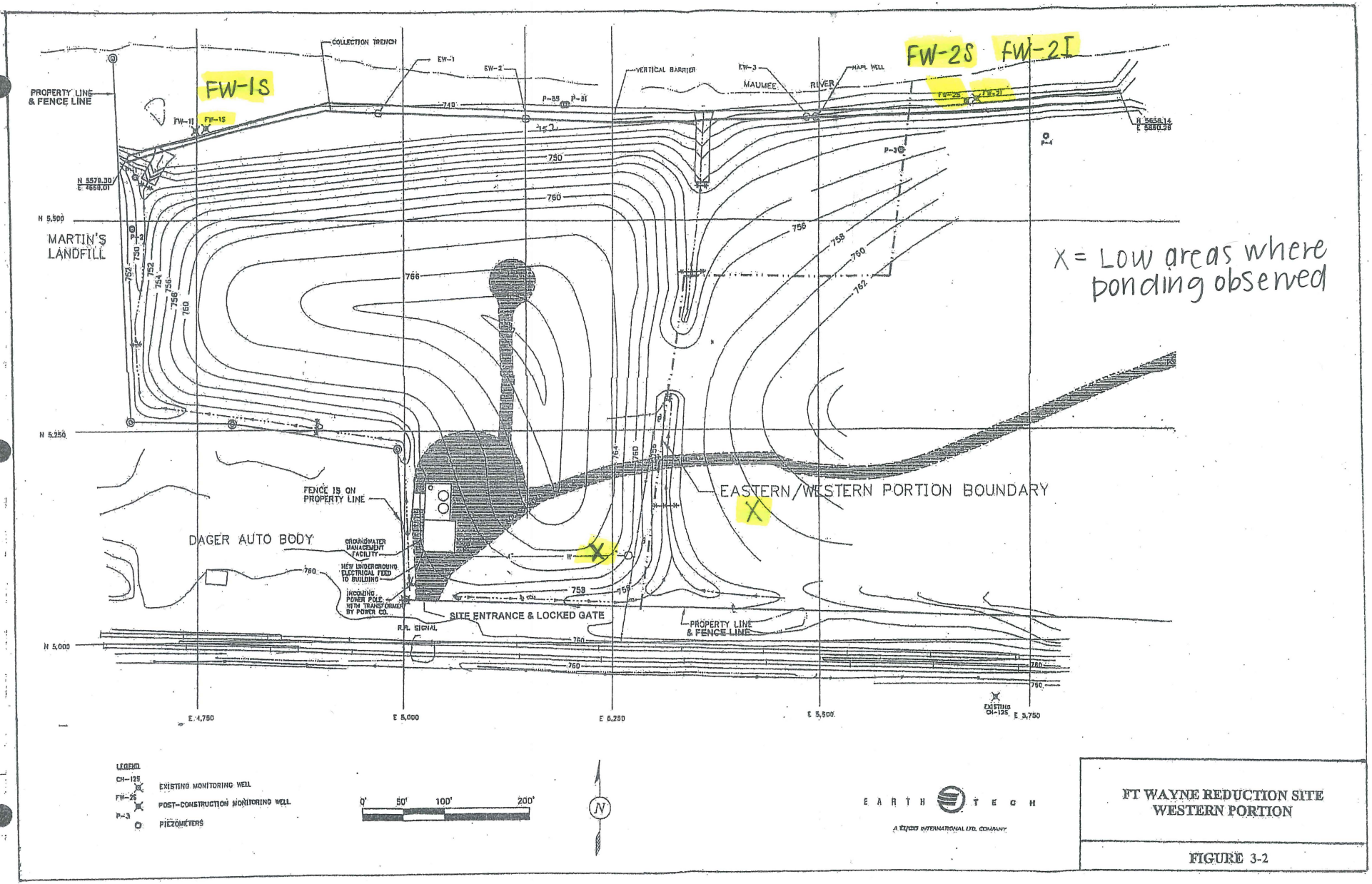
B. Adequacy of O&M

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

All cleanup criteria have been met. PRP will be bringing in topsoil in Spring 2019 to fill in low-lying areas noted in this inspection report.

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. None

D.	Opportunities for Optimization
	Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy. Abandonement of remaining monitoring wells.



FT WAYNE REDUCTION SITE
WESTERN PORTION

FIGURE 3-2

Photo 1: Automobile part stockyard location adjacent to the Fort Wayne Reduction Dump.

Photo 2: Landfill cover conditions looking north from the northwest corner of the site, along the Maumee River.

Photo 3: Landfill cover conditions looking north from the western portion of the site.

Photo 4: Landfill cover conditions looking east from the western portion of the site.

Photo 5: Location of monitoring well FW-1S in the northwest corner of the western portion of the site.

Photo 6: Landfill cover conditions looking east towards the boundary of the western and eastern portions of the site.

Photo 7: Monitoring well FW-2I in the eastern portion of the site.

Photo 8: Monitoring well FW-2S in the eastern portion of the site.

Photo 9: Grading along the northern portion of the cap, looking south.

Photo 10: Ponding observed in the eastern portion of the site, looking east.

Photo 11: Ponding observed along southern edge of the site, looking southwest.

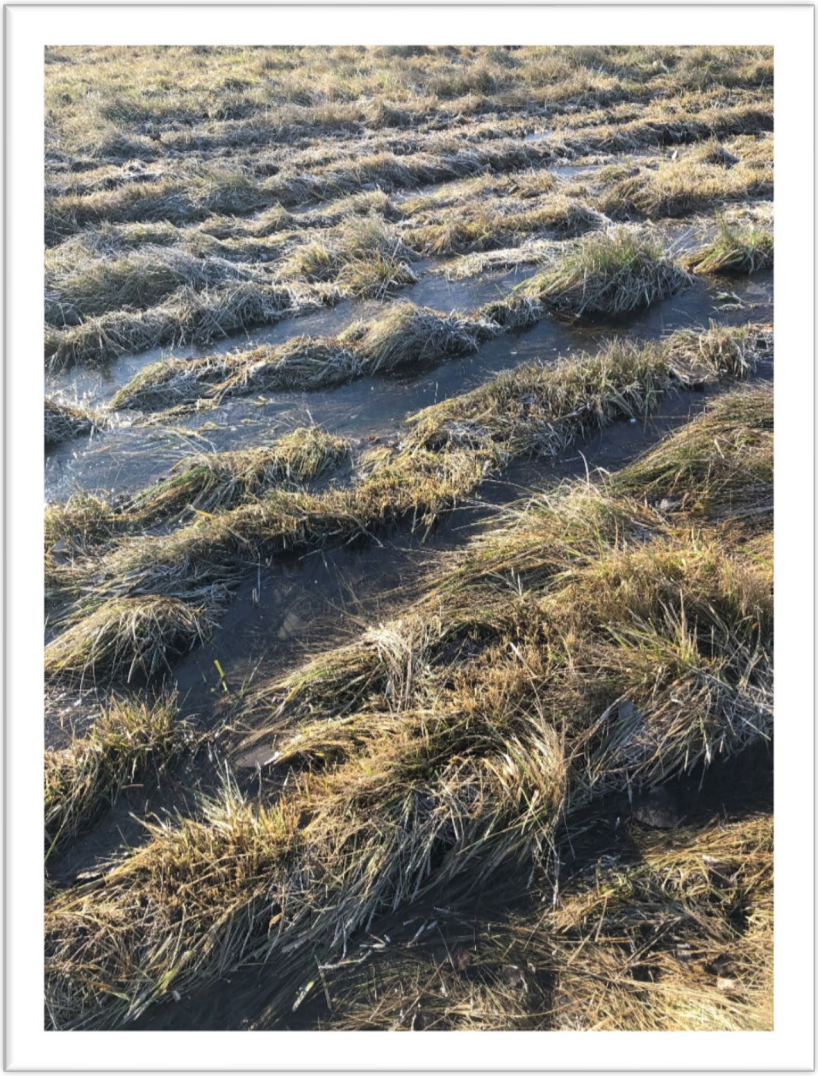


Photo 12: Close-up of ponding observed along southern edge of the site.

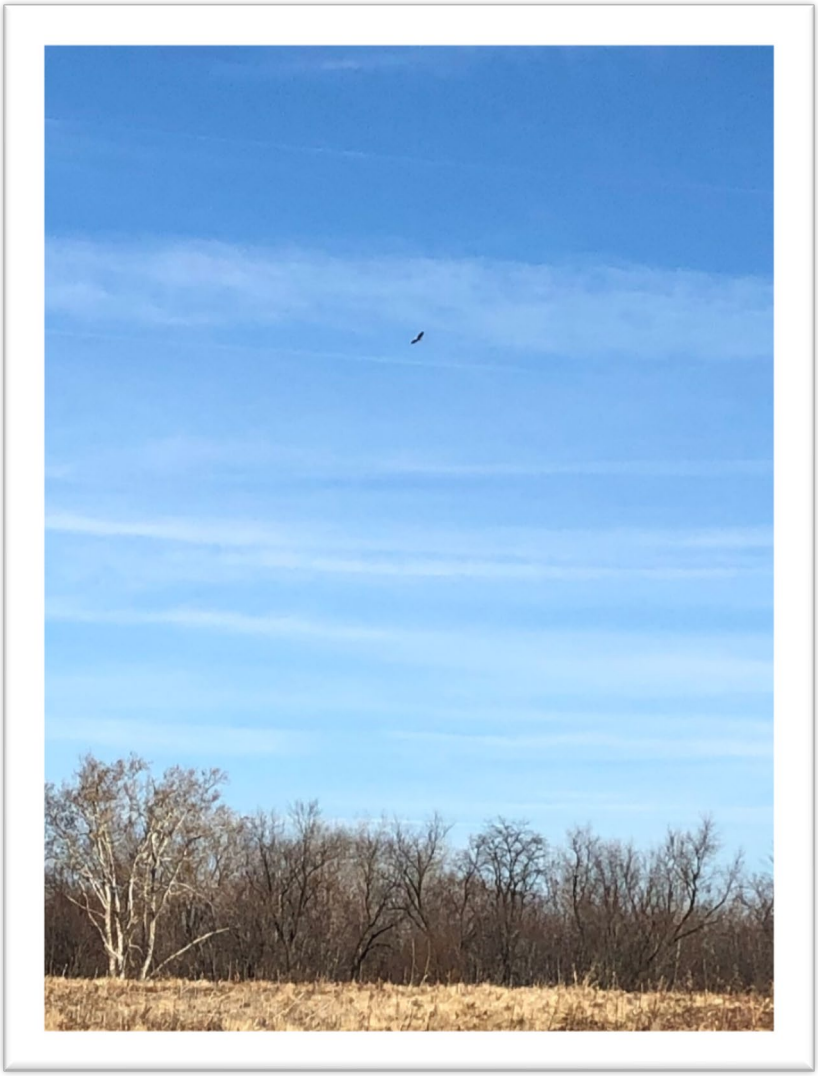


Photo 13: Bald eagle spotted flying over the site along the Maumee River.

Photo 14: Gated entrance to the site (and location of former groundwater treatment facility), looking southwest.

APPENDIX F – MONITORING DATA

TABLE 1
EXTRACTION WELL ANALYTICAL DATA SUMMARY
February 1995 - May 2010

Fort Wayne Reduction Site
Fort Wayne, Indiana

Monitoring Parameter	Units	Laboratory Quantification Limits Water (1)	IDEM FAV (2)	Site-Specific Groundwater Cleanup Criteria (3)	Maximum Detected Concentration	2/10/1995	8/7/1997	9/11/1997	11/28/1997	3/12/1998	6/9/1998			9/10/1998	12/7/1998			3/11/1999	6/29/1999			9/9/1999
						EW-1 & EW-2 COMPOSITE	EW-1 & EW-2 COMPOSITE	EW-1 & EW-2 COMPOSITE	EW-1 & EW-2 COMPOSITE	EW-1 & EW-2 COMPOSITE	EW-1 & EW-2 AVERAGE	EW-1 COMPOSITE	EW-2 COMPOSITE DUP	EW-1 & EW-2 COMPOSITE	EW-1 & EW-2 AVERAGE	EW-1 COMPOSITE	EW-2 COMPOSITE DUP	EW-1 & EW-2 COMPOSITE	EW-1 & EW-2 AVERAGE	EW-1 COMPOSITE	EW-2 COMPOSITE DUP	EW-1 & EW-2 COMPOSITE
pH	s.u.	0-14			7.15	6.70	6.9	6.9	6.9	6.2	6.66	6.69	6.63 NA	6.97	6.74	6.80	6.67 NA	6.53	7.04	7.08	6.99 NA	6.86
Total Suspended Solids	mg/L	0.4			760	760	128	96	78.4	188	130.5	130.5	NA	88	30.0	30.0	NA	150	47.6	47.6	NA	120
VOCS																						
VINYL CHLORIDE	µg/L	10.0	16400		82.8	82.8							NA									
CHLOROETHANE	µg/L	10.0	40000		18.2		18.2						NA									
ACETONE	µg/L	50.0	30000		759.7	759.7	314.2				64.3	64.3	NA		679.2	741.5	616.9					
CARBON DISULFIDE	µg/L	5.0	NL		9.4								NA									
METHYLENE CHLORIDE	µg/L	5.0	28000		272	87.8		272			14.6	14.6	NA		61.8	71.8	51.7					
cis-1,2-DICHLOROETHENE	µg/L	1.0	11000		69								NA									
1,1-DICHLOROEHTANE	µg/L	1.0	13200		16.4								NA									
2-BUTANONE	µg/L	10.0	240000		234.4	234.4	82.4				13.7	13.7	NA		142.9	142.8	142.9					
BENZENE	µg/L	5.0	1760		114.8		42.2		22.1	10.9	19.3	19.3	NA	7.7	19.5	19.8	19.1	18.2	14.8	14.5	15.0	88.5
TRICHLOROETHENE	µg/L	5.0	4600		5								NA									
1,2-DICHLOROETHANE	µg/L	5.0	14600		39	39							NA									
1,2-DICHLOROPROPANE	µg/L	5.0	8000		39.8								NA						38.1	36.3	39.8	
4-METHYL-2-PENTANONE	µg/L	5.0	NL		408.4	408.4	205.9	129.5					NA		148.8	140.2	157.4					
TOLUENE	µg/L	5.0	1680		659.5	659.5	287.6	198	9.8	8.1	65.1	65.1	NA		205.9	202.0	209.7	24.5	37.8	37.8	37.8	60.9
CHLOROBENZENE	µg/L	5.0	900		9								NA									5.3
ETHYL BENZENE	µg/L	5.0		2000	394	394	299.4	303	151.6	105.4	154.6	154.6	NA	14.2	147.1	149.8	144.3	78.1	47.9	44.5	51.3	118.5
TOTAL XYLENES	µg/L	5.0		**626**	**1611.6**	**1611.6**	**667.1**	**631.5**	405	197.3	501.7	501.7	NA	55.9	595.7	610.7	580.6	148.2	146.4	137.3	155.4	328.0
STYRENE	µg/L	5.0	5800		283.2			283.2			8.4	8.4	NA									
1,2-DICHLOROBENZENE	µg/L	5.0	260		6.1								NA									6.1
NAPHTHALENE (4)	µg/L	5.0	400		78.3	78.3	5.4		5.3				NA		12.5		24.5					
TRANS-1,2-DICHLOROETHENE	µg/L	1.0	19000		46.4										45.4	46.4	44					
1,2,4-TRIMETHYLBENZENE (5)	µg/L		620		24																	
TOTAL VOCs	µg/L					4356	1922	1817	594	322	842	842	0 0	78	2058	2126	0 1991 0	269	285	270	0 299 0	607
SVOCs																						
PHENOL	µg/L	10.0	2600		1127	114.4	65.0	136.8							635.2	654.0	616.4					
2-METHYLPHENOL	µg/L	10.0	1200		559	95.0	111.7	190.1							462.2	449.3	475.1	14.2				
4-METHYLPHENOL	µg/L	10.0		**962**	**2867**	**1486.5**	**1813.2**	**2720.1**			22.0	27.5	16.5		**2178.2**	**2124.6**	**2231.7**	152.5	49.8	50.5	49.0	16.3
2,4-DIMETHYLPHENOL	µg/L	10.0		**2700**	**6691**	1899.4	1984.0	**3557.2**	1599.6	247.3	473.5	585.0	362.0	83.9	2644.9	2537.4	**2752.3**	721	1465.2	1509.1	1421.2	**2727.8**
4-CHLORO-3-METHYLPHENOL	µg/L	10.0	130		18.8											18.8	12.6			11.5		
BIS(2-CHLOROISOPROPYL)ETHER	µg/L	10.0	NL		12																	
BIS(2-ETHYLHEXYL)PHTHALATE	µg/L	10.0	285		35.4																	
TOTAL SVOCs	µg/L					3595	3974	6604	1600	247	496	613	379	84	5920	5784	6088	888	1515	1571	1470	2744

NOTES:

s.u. = standard unit
mg/L = milligrams per liter
µg/L = micrograms per liter
ID = inadequate data
NL = not listed in criteria tables
SVOCs = Semi-Volatile Organic Compounds
VOCs = Volatile Organic Compounds
= not applicable or not reported
NA = not availible

RED NUMERICAL RESULTS (19.8) were flagged and qualified by the laboratory as estimated. This could only be confirmed for sampling events where an analytical data reported was available (see notes regarding data sources).

Blue Shading indicates that a concentration exceeded the Site-Specific Groundwater Cleanup Criteria (see note 3).

- Extraction well data from 1995 to 2000 represents the composite sample of the influent groundwater stream from all extraction wells. From 2001 to current and for select events (during the evaluation of the air stripper units) in 1999 and 2000, the data represents a sample from each extraction well influent groundwater stream that have been numerically averaged.

- Only those chemicals detected at least once are listed on this table. Blank cells indicate that the chemical was not detected. Raw Analytical data for carbon disulfide and trichloroethene were not available for 2/1995-3/1998, 9/1998, 3/1999, 9/1999, and 9/2000 to verify that these results were non-detect, although these compounds are not typically detected.

- "Averages" calculated based on individual analytical results for each extraction well influent. If the results were reported as "Non-Detect (ND)", then one-half the detection limit was used in the average calculations.

(1) Specific quantification limits are from Sherry Laboratories (formerly Edglo Laboratory), who serves as the analytical laboratory for the site. The laboratory quantification limits are related to the method detection limits and may be equal to or greater than the method detection limits. The limits are highly matrix dependent and those listed are provided as guidance and may not always be achievable; for example, when a sample must be diluted due to high concentrations.

(2) Indiana Department of Environmental Management Final Acute Values (IDEM FAVs) are shown only for monitoring parameters for which a site-specific cleanup criteria were not developed. The IDEM FAVs were provided during the August 16, 2007 meeting. However, it was observed that the FAVs were actually the criterion maximum concentration/secondary maximum concentration (CMC/SMC) values (which are 1/2 the FAV) for ethylbenzene, xylenes, 2,4-dimethylphenol, and 4- methylphenol (based on the calculations in the Fact Sheets for these four constituents); therefore, it was assumed that this was the case for the rest of the constituents and the CMC/SMC was multiplied by 2 to get the FAV.

(3) Site-Specific Groundwater Cleanup Criteria are the criteria approved by IDEM during the March 5, 2008 meeting and are based on the IDEM FAVs (see note 3) and Michigan Department of Environmental Quality (MDEQ) FAVs (specifically, 2,4-dimethylphenol). Criteria are protective of aquatic life under an acute exposure at the point of groundwater discharge to surface water. These cleanup criteria will be used to determine when groundwater has achieved and sustained concentrations in groundwater discharging to surface water that are considered safe for aquatic life, at which time the operation of the site's groundwater collection and treatment system may be terminated.

(4) Naphthalene reported on both the 8270 and 8260 analytical method data reports. For 12/7/98 sample, naphthalene only reported on 8270 analysis.
(5) 1,2,4-trimethylbenzene (TMB) is not included in the analyte list for this site, but was reported by the lab as a detected analyte for at least one sample. 1,2,4-TMB chemical was not listed as a detected chemical in the RI. The result for 1,2,4-TMB was flagged as estimated by the lab. For samples events where 1,2,4-TMB was not reported, the cell has been shaded.

Data reported in table from the following sources:

- Analytical data from laboratory analytical reports for June 1998, December 1998, June 1999, December 1999, June 2001, November/December 2001, January 2002, June 2002, December 2002, April 2003, October 2003, May 2004, November 2004, May 2005, November 2005, May 2006, November 2006, May 2007, November 2007, May 2008, November 2008, April 2009, October 2009, and May 2010.

- Data reported in the table for September 1998, March 1999, and September 1999 were reported in Table 2-3 Influent Analytical Data Summary from the Draft Five-Year Monitoring Report By Earth Tech, dated April 2000. Data reported for February 1995 to March 1998 are based Table 2-3 from the Five-Year Monitoring Report prepared by Earth Tech; no laboratory reports were available.

- Data from December 21, 2000; January 2001; and January 2002 obtained from laboratory electronic database files (not actual laboratory reports).

- Data from September 2000; December 18 and 27, 2000; and March 2001 obtained from a summary table provided by Earth Tech to Waste Management on October 6, 2004 via electronic mail in an attached Excel file named "Influent0904A.xls".
- Individual extraction well results for September 15 and 26, 2000; October 6 and 12, 2000; December 18 and 27, 2001 from February 15, 2001 letter from Earth Tech to James Forney, Waste Management, Inc., Re: Results of Bypassing the Air Stripper.

TABLE 1
EXTRACTION WELL ANALYTICAL DATA SUMMARY
February 1995 - May 2010

Fort Wayne Reduction Site
Fort Wayne, Indiana

Monitoring Parameter	Units	Laboratory Quantification Limits Water (1)	IDEM FAV (2)	Site-Specific Groundwater Cleanup Criteria (3)	Maximum Detected Concentration	12/8/1999				9/15/2000			10/6/2000			10/12/2000			12/18/2000			12/21/2000				12/27/2000		
						EW-1 & EW-2 AVERAGE	EW-1 COMPOSITE	EW-2 COMPOSITE	EW-1 COMPOSITE DUP	EW-1 & EW-2 AVERAGE	EW-1	EW-2	EW-1 & EW-2 AVERAGE	EW-1	EW-2	EW-1 & EW-2 AVERAGE	EW-1	EW-2	EW-1 & EW-2 AVERAGE	EW-1	EW-2	EW-1 & EW-2 AVERAGE	EW-1	EW-1 Dup	EW-2	EW-1 & EW-2 AVERAGE	EW-1	EW-2
pH	s.u.	0-14			7.15	6.76	6.75	6.76	NA	6.57	Not Reported		Not Reported			Not Reported			6.72	Not Reported		6.65	6.8	6.43	6.73	6.59	Not Reported	
Total Suspended Solids	mg/L	0.4			760	75.0	80.0		70.0	49.5	Not Reported		Not Reported			Not Reported			47	Not Reported		NA	NA	NA	NA	52	Not Reported	
VOCS																												
VINYL CHLORIDE	µg/L	10.0	16400		82.8																							
CHLOROETHANE	µg/L	10.0	40000		18.2																							
ACETONE	µg/L	50.0	30000		759.7																							
CARBON DISULFIDE	µg/L	5.0	NL		9.4																	5.1			9.4			
METHYLENE CHLORIDE	µg/L	5.0	28000		272																							
cis-1,2-DICHLOROETHENE	µg/L	1.0	11000		69																							
1,1-DICHLOROEHTANE	µg/L	1.0	13200		16.4																							
2-BUTANONE	µg/L	10.0	240000		234.4																							
BENZENE	µg/L	5.0	1760		114.8	32.7	32.2		33.2	31.1	56.1	6	26.2	47.2	5.2	9.3	9.8	8.8	33.6	31.5	35.6	88.2	88.1	88.3	12.3	93.6	97.4	89.7
TRICHLOROETHENE	µg/L	5.0	4600		5																							
1,2-DICHLOROETHANE	µg/L	5.0	14600		39																							
1,2-DICHLOROPROPANE	µg/L	5.0	8000		39.8																							
4-METHYL-2-PENTANONE	µg/L	5.0	NL		408.4																							
TOLUENE	µg/L	5.0	1680		659.5	100.6	104.1		97.0	6.2	9.8					6.7	7.7	5.6										
CHLOROBENZENE	µg/L	5.0	900		9																							
ETHYL BENZENE	µg/L	5.0		2000	394	117.6	117.0		118.2	54.5	103.4	5.6	70.4	138.2		8.1	9.5	6.6	76.6	73.4	79.7	187.7	202.1	173.2	17.0	180.4	234.3	126.5
TOTAL XYLENES	µg/L	5.0		626	1611.6	454.2	468.9		439.5	188.8	375		242.8	475.9	9.7	94.0	103.1	84.8	139.4	130.7	148	499.6	532.6	466.5	69.6	495.4	639.6	351.1
STYRENE	µg/L	5.0	5800		283.2																							
1,2-DICHLOROBENZENE	µg/L	5.0	260		6.1																							
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1,2,4-TRIMETHYLBENZENE (5)	µg/L		620		24																							
TOTAL VOCs	µg/L					705	722	0	688	280	544	12	339	661	15	118	130	106	249	236	263	781	823	728	108	769	971	567
SVOCs																												
PHENOL	µg/L	10.0	2600		1127	96.8	91.4		102.1													NA	NA	NA	NA			
2-METHYLPHENOL	µg/L	10.0	1200		559	122.5	118.8		126.2													NA	NA	NA	NA			
4-METHYLPHENOL	µg/L	10.0		962	2867	219.6	225.9		213.3	8.9	12.8											NA	NA	NA	NA			
2,4-DIMETHYLPHENOL	µg/L	10.0		2700	6691	4744.5	4595.8		4893.1	1285.1	2561.8	8.4	1876.3	3708.8	43.7	290.6	321.5	259.7	1877.3	1286.6	2468	NA	NA	NA	NA	3068.9	2465.5	3672.3
4-CHLORO-3-METHYLPHENOL	µg/L	10.0	130		18.8																	NA	NA	NA	NA			
BIS(2-CHLOROISOPROPYL)ETHER	µg/L	10.0	NL		12																							
BIS(2-ETHYLHEXYL)PHTHALATE	µg/L	10.0	285		35.4																					20	35.4	
TOTAL SVOCs	µg/L					5183	5032		5335	1294	2575	8	1876	3709	44	291	322	260	1877	1287	2468	0	0	0	0	3089	2501	3672

NOTES:

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- Individual extraction well results for September 15 and 26, 2000; October 6 and 12, 2000; December 18 and 27, 2001 from February 15, 2001 letter from Earth Tech to James Forney, Waste Management, Inc., Re: Results of Bypassing the Air Stripper.

TABLE 1
EXTRACTION WELL ANALYTICAL DATA SUMMARY
February 1995 - May 2010

Fort Wayne Reduction Site
Fort Wayne, Indiana

Monitoring Parameter	Units	Laboratory Quantification Limits Water (1)	IDEM FAV (2)	Site-Specific Groundwater Cleanup Criteria (3)	Maximum Detected Concentration	1/5/2001			1/12/2001			3/12/2001	6/29/2001				12/10/2001	12/10/2001		11/16/2001	1/24/2002			6/7/2002				12/5/2002			
						EW-1 & EW-2 AVERAGE	EW-1	EW-2	EW-1 & EW-2 AVERAGE	EW-1	EW-2	EW-1 & EW-2 AVERAGE	EW-1 & EW-2 AVERAGE	EW-1	EW-1 Dup	EW-2	EW-1 & EW-2 AVERAGE	EW-1	EW-1 Dup	EW-2	EW-1 & EW-2 AVERAGE	EW-1	EW-2	EW-1 & EW-2 AVERAGE	EW-1	EW-1 Dup	EW-2	EW-1 & EW-2 AVERAGE	EW-1	EW-1 Dup	EW-2
pH	s.u.	0-14			7.15	6.61	NA	6.61	6.43	6.41	6.45	6.7	6.39	6.32	6.32	6.53	6.25	5.98	5.98	6.79	7.04	6.92	7.15	6.69	6.74	6.74	6.59	6.60	6.51	6.51	6.79
Total Suspended Solids	mg/L	0.4			760	46.5	54	39	91	136	46	55	39	39	36	42	50	57	62	32	46	58	34	102	96	99	112	33.5	32.8	33.6	34
VOCS																															
VINYL CHLORIDE	µg/L	10.0	16400		82.8																			4.9			12.6				
CHLOROETHANE	µg/L	10.0	40000		18.2								9.5	14.7	13.4		4.9	7.6	6.6					5.5	11.1	5.0					
ACETONE	µg/L	50.0	30000		759.7																										
CARBON DISULFIDE	µg/L	5.0	NL		9.4																			1.0	2.1						
METHYLENE CHLORIDE	µg/L	5.0	28000		272												5.5			13.5											
cis-1,2-DICHLOROETHENE	µg/L	1.0	11000		69								0.8			1.4								4.7			13.1				
1,1-DICHLOROEHTANE	µg/L	1.0	13200		16.4								1.1			2.3								6.4	1.2	1.6	16.4				
2-BUTANONE	µg/L	10.0	240000		234.4							209.5																			
BENZENE	µg/L	5.0	1760		114.8	96.2	114.8	77.5	83.8	91.2	76.3	21.3	30.0	42.8	42.5	4.7	34.2	46.3	42.1	14.1	17.4	31	3.8	24.9	43.3	21.7	9.8	18.9	19.0	18.9	18.7
TRICHLOROETHENE	µg/L	5.0	4600		5																										
1,2-DICHLOROETHANE	µg/L	5.0	14600		39																										
1,2-DICHLOROPROPANE	µg/L	5.0	8000		39.8																										
4-METHYL-2-PENTANONE	µg/L	5.0	NL		408.4				4.5		6.5																				
TOLUENE	µg/L	5.0	1680		659.5				24.1		45.6	1	5.5	6.0	8.6	1.9	4.4			12.1	2.9	2.9	2.9	45.9	80.6	52.4	4.6	1.9	1.9	1.9	1.9
CHLOROBENZENE	µg/L	5.0	900		9							1	1.8	2.3	2.1	1.1	1.9	1.8	1.6	2.2	1.7	1.7	1.7	2.1	2.8	2.3	1.2	1.9	1.9	2.0	1.9
ETHYL BENZENE	µg/L	5.0		2000	394	177.9	218.3	137.4	188.5	171.8	205.2	8.5	62.5	85.4	93.5	8.7	165.1	77.8	76.8	340.6	46.2	46.2	46.2	49.6	77.2	52.8	18.8	50.0	49.8	49.8	50.3
TOTAL XYLENES	µg/L	5.0		626	1611.6	483.6	586.7	380.5	595.0	474.3	715.7	122.9	178.9	248.8	273.6	14.4	697.6	261.8	259.0	1572.0	165.5	165.5	165.5	140.4	246.0	148.2	27.0	223.6	230.4	232.7	207.8
STYRENE	µg/L	5.0	5800		283.2																										
1,2-DICHLOROBENZENE	µg/L	5.0	260		6.1																										
NAPHTHALENE (4)	µg/L	5.0	400		78.3							1.8					3.8			8.3								3.3	3.0	3.2	3.6
TRANS-1,2-DICHLOROETHENE	µg/L	1.0	19000		46.4																										
1,2,4-TRIMETHYLBENZENE (5)	µg/L		620		24																										
TOTAL VOCs	µg/L					758	920	595	896	737	1049	366	290	400	434	35	917	395	386	1963	234	247	220	285	464	284	104	300	306	309	284
SVOCs																															
PHENOL	µg/L	10.0	2600		1127																										
2-METHYLPHENOL	µg/L	10.0	1200		559																			8.4	10.1	9.9					
4-METHYLPHENOL	µg/L	10.0		962	2867																			9.2	11.7	10.8					
2,4-DIMETHYLPHENOL	µg/L	10.0		2700	6691	542.0	274.8	809.2	2237.4	2307.4	2167.4	397.5	1961.8	1896.8	2253.0	1735.6	**3414.8**	**3025.5**	**3251.9**	**3967.0**	769.9	1534.7		526.1	718.6	630.8	228.9	1166.0	1416.7	927.6	1153.6
4-CHLORO-3-METHYLPHENOL	µg/L	10.0	130		18.8																										
BIS(2-CHLOROISOPROPYL)ETHER	µg/L	10.0	NL		12																										
BIS(2-ETHYLHEXYL)PHTHALATE	µg/L	10.0	285		35.4																										
TOTAL SVOCs	µg/L					542	275	809	2237	2307	2167	398	1962	1897	2253	1736	3415	3026	3252	3967	770	1535	0	544	740	652	229	1166	1417	928	1154

NOTES:

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ID = inadequate data
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SVOCs = Semi-Volatile Organic Compounds
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Blue Shading indicates that a concentration exceeded the Site-Specific Groundwater Cleanup Criteria (see note 3).

- Extraction well data from 1995 to 2000 represents the composite sample of the influent groundwater stream from all extraction wells. From 2001 to current and for select events (during the evaluation of the air stripper units) in 1999 and 2000, the data represents a sample from each extraction well influent groundwater stream that have been numerically averaged.

- Only those chemicals detected at least once are listed on this table. Blank cells indicate that the chemical was not detected. Raw Analytical data for carbon disulfide and trichloroethene were not available for 2/1995-3/1998, 9/1998, 3/1999, 9/1999, and 9/2000 to verify that these results were non-detect, although these compounds are not typically detected.

- "Averages" calculated based on individual analytical results for each extraction well influent. If the results were reported as "Non-Detect (ND)", then one-half the detection limit was used in the average calculations.

(1) Specific quantification limits are from Sherry Laboratories (formerly Edglo Laboratory), who serves as the analytical laboratory for the site. The laboratory quantification limits are related to the method detection limits and may be equal to or greater than the method detection limits. The limits are highly matrix dependent and those listed are provided as guidance and may not always be achievable; for example, when a sample must be diluted due to high concentrations.

(2) Indiana Department of Environmental Management Final Acute Values (IDEM FAVs) are shown only for monitoring parameters for which a site-specific cleanup criteria were not developed. The IDEM FAVs were provided during the August 16, 2007 meeting. However, it was observed that the FAVs were actually the criterion maximum concentration/secondary maximum concentration (CMC/SMC) values (which are 1/2 the FAV) for ethylbenzene, xylenes, 2,4-dimethylphenol, and 4- methylphenol (based on the calculations in the Fact Sheets for these four constituents); therefore, it was assumed that this was the case for the rest of the constituents and the CMC/SMC was multiplied by 2 to get the FAV.

(3) Site-Specific Groundwater Cleanup Criteria are the criteria approved by IDEM during the March 5, 2008 meeting and are based on the IDEM FAVs (see note 3) and Michigan Department of Environmental Quality (MDEQ) FAVs (specifically, 2,4-dimethylphenol). Criteria are protective of aquatic life under an acute exposure at the point of groundwater discharge to surface water. These cleanup criteria will be used to determine when groundwater has achieved and sustained concentrations in groundwater discharging to surface water that are considered safe for aquatic life, at which time the operation of the site's groundwater collection and treatment system may be terminated.

(4) Naphthalene reported on both the 8270 and 8260 analytical method data reports. For 12/7/98 sample, naphthalene only reported on 8270 analysis.
(5) 1,2,4-trimethylbenzene (TMB) is not included in the analyte list for this site, but was reported by the lab as a detected analyte for at least one sample. 1,2,4-TMB chemical was not listed as a detected chemical in the RI. The result for 1,2,4-TMB was flagged as estimated by the lab. For samples events where 1,2,4-TMB was not reported, the cell has been shaded.

Data reported in table from the following sources:

- Analytical data from laboratory analytical reports for June 1998, December 1998, June 1999, December 1999, June 2001, November/December 2001, January 2002, June 2002, December 2002, April 2003, October 2003, May 2004, November 2004, May 2005, November 2005, May 2006, November 2006, May 2007, November 2007, May 2008, November 2008, April 2009, October 2009, and May 2010.

- Data reported in the table for September 1998, March 1999, and September 1999 were reported in Table 2-3 Influent Analytical Data Summary from the Draft Five-Year Monitoring Report By Earth Tech, dated April 2000. Data reported for February 1995 to March 1998 are based Table 2-3 from the Five-Year Monitoring Report prepared by Earth Tech; no laboratory reports were available.

- Data from December 21, 2000; January 2001; and January 2002 obtained from laboratory electronic database files (not actual laboratory reports).

- Data from September 2000; December 18 and 27, 2000; and March 2001 obtained from a summary table provided by Earth Tech to Waste Management on October 6, 2004 via electronic mail in an attached Excel file named "Influent0904A.xls".
- Individual extraction well results for September 15 and 26, 2000; October 6 and 12, 2000; December 18 and 27, 2001 from February 15, 2001 letter from Earth Tech to James Forney, Waste Management, Inc., Re: Results of Bypassing the Air Stripper.

TABLE 1
EXTRACTION WELL ANALYTICAL DATA SUMMARY
February 1995 - May 2010

Fort Wayne Reduction Site
Fort Wayne, Indiana

Monitoring Parameter	Units	Laboratory Quantification Limits Water (1)	IDEM FAV (2)	Site-Specific Groundwater Cleanup Criteria (3)	Maximum Detected Concentration	4/10/2003	4/10/2003	4/10/2003		10/22/2003				5/24/2004				11/18/2004				5/2/2005				11/7/2005			
						EW-1 & EW-2 AVERAGE	EW-1	EW-2	EW-2 Dup	EW-1 & EW-2 AVERAGE	EW-1	EW-1 Dup	EW-2	EW-1 & EW-2 AVERAGE	EW-1	EW-2	EW-2 Dup	EW-1 & EW-2 AVERAGE	EW-1	EW-2	EW-2 Dup	EW-1 & EW-2 AVERAGE	EW-1	EW-2	EW-2 Dup	EW-1 & EW-2 AVERAGE	EW-1	EW-1 Dup	EW-2
pH	s.u.	0-14			7.15	6.69	6.36	6.86	6.86	6.97	6.91	6.91	7.09	6.53	6.48	6.53	6.57	6.82	6.76	6.87	NA	6.76	6.71	6.79	6.79	6.83	6.84	6.84	6.80
Total Suspended Solids	mg/L	0.4			760	19	28	15	15	138	184	183	45.6	23.2	27	29	13.5	42.5	41.0	44.0	NA	44.0	36.0	52.0	NA	38.6	39.6	39.6	36.6
VOCS																													
VINYL CHLORIDE	µg/L	10.0	16400		82.8					32	48	48						12		16									
CHLOROETHANE	µg/L	10.0	40000		18.2					7	10	11						5		4									
ACETONE	µg/L	50.0	30000		759.7					241	330	390						280		413	397								
CARBON DISULFIDE	µg/L	5.0	NL		9.4																								
METHYLENE CHLORIDE	µg/L	5.0	28000		272					11	14	16						98		142	138								
cis-1,2-DICHLOROETHENE	µg/L	1.0	11000		69					27	39	40	3					47		69	68								
1,1-DICHLOROEHTANE	µg/L	1.0	13200		16.4					5	6	6	3					10		13	11								
2-BUTANONE	µg/L	10.0	240000		234.4					139	186	228						85		118	117								
BENZENE	µg/L	5.0	1760		114.8	5	8	4	4	69	97	101	9	5			5	27	14	35	33	5	11	3	2	7	10	6	6
TRICHLOROETHENE	µg/L	5.0	4600		5													4		2									
1,2-DICHLOROETHANE	µg/L	5.0	14600		39																								
1,2-DICHLOROPROPANE	µg/L	5.0	8000		39.8																								
4-METHYL-2-PENTANONE	µg/L	5.0	NL		408.4					179	255	278	4					73		102	101								
TOLUENE	µg/L	5.0	1680		659.5					243	285	289	155	5			4	86	17	122	118	2	3	1		1	2	1	1
CHLOROBENZENE	µg/L	5.0	900		9	3	9			5	6	6	2													1	2	1	1
ETHYL BENZENE	µg/L	5.0		2000	394	7	19			251	290	292	172	25	23	23	30	68	16	96	93	6	8	6	5	50	52	50	47
TOTAL XYLENES	µg/L	5.0		626	1611.6					766	938	944	617	76	69	75	84	283	70	398	381	19	29	17	10	40	44	41	36
STYRENE	µg/L	5.0	5800		283.2																								
1,2-DICHLOROBENZENE	µg/L	5.0	260		6.1																								
NAPHTHALENE (4)	µg/L	5.0	400		78.3					2			4																
TRANS-1,2-DICHLOROETHENE	µg/L	1.0	19000		46.4					1		1																	
1,2,4-TRIMETHYLBENZENE (5)	µg/L		620		24									2			2	24		24									
TOTAL VOCs	µg/L					15	36	4	4	1978	2404	2550	969	113	102	108	125	1102	117	1554	1457	32	51	27	17	100	110	99	91
SVOCs																													
PHENOL	µg/L	10.0	2600		1127					742	1127	1093		4		3		866	893	811	895								
2-METHYLPHENOL	µg/L	10.0	1200		559					336	481	478	49					532	545	492	559								
4-METHYLPHENOL	µg/L	10.0		962	2867					1910	2838	2867	26					1473	1518	1359	1541								
2,4-DIMETHYLPHENOL	µg/L	10.0		2700	6691	199	277	149	171	4691	6630	6691	753	54	42	58	61	2043	1973	2023	2132	68	192	4	8	282	287	275	285
4-CHLORO-3-METHYLPHENOL	µg/L	10.0	130		18.8																					6			9
BIS(2-CHLOROISOPROPYL)ETHER	µg/L	10.0	NL		12																								
BIS(2-ETHYLHEXYL)PHTHALATE	µg/L	10.0	285		35.4																								
TOTAL SVOCs	µg/L					199	277	149	171	7679	11076	11129	828	58	42	61	61	4914	4929	4685	5127	68	192	4	8	289	287	275	294

NOTES:

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(3) Site-Specific Groundwater Cleanup Criteria are the criteria approved by IDEM during the March 5, 2008 meeting and are based on the IDEM FAVs (see note 3) and Michigan Department of Environmental Quality (MDEQ) FAVs (specifically, 2,4-dimethylphenol). Criteria are protective of aquatic life under an acute exposure at the point of groundwater discharge to surface water. These cleanup criteria will be used to determine when groundwater has achieved and sustained concentrations in groundwater discharging to surface water that are considered safe for aquatic life, at which time the operation of the site's groundwater collection and treatment system may be terminated.

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- Analytical data from laboratory analytical reports for June 1998, December 1998, June 1999, December 1999, June 2001, November/December 2001, January 2002, June 2002, December 2002, April 2003, October 2003, May 2004, November 2004, May 2005, November 2005, May 2006, November 2006, May 2007, November 2007, May 2008, November 2008, April 2009, October 2009, and May 2010.

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EXTRACTION WELL ANALYTICAL DATA SUMMARY
February 1995 - May 2010

Fort Wayne Reduction Site
Fort Wayne, Indiana

Monitoring Parameter	Units	Laboratory Quantification Limits Water (1)	IDEM FAV (2)	Site-Specific Groundwater Cleanup Criteria (3)	Maximum Detected Concentration	5/8/2006				11/8/2006				5/8/2007				11/1/2007				5/13/2008				11/4/2008			
						EW-1 & EW-2 AVERAGE	EW-1	EW-2	EW-2 Dup	EW-1 & EW-2 AVERAGE	EW-1	EW-1 Dup	EW-2	EW-1 & EW-2 AVERAGE	EW-1	EW-2	EW-2 Dup	EW-1 & EW-2 AVERAGE	EW-1	EW-1 Dup	EW-2	EW-1 & EW-2 AVERAGE	EW-1	EW-2	EW-2 Dup	EW-1 & EW-2 AVERAGE	EW-1	EW-2	EW-2 Dup
pH	s.u.	0-14			7.15	6.69	6.67	6.73	6.67	6.72	6.78	6.77	6.62	7.02	6.97	7.07		6.71	6.58	6.75	6.80	6.33	6.23	6.34	6.41	6.89	6.86	6.80	7.00
Total Suspended Solids	mg/L	0.4			760	15.8	12.6	19.1	15.6	20.3	21.0	14.4	25.5	31.1	28.2	33.9		36.5	31.3	31.8	46.3	51	63	51	39	36	56	34	19
VOCS																													
VINYL CHLORIDE	µg/L	10.0	16400		82.8	5	4	5	5													14	13	14	16				
CHLOROETHANE	µg/L	10.0	40000		18.2	3	3	2	3					1	3														
ACETONE	µg/L	50.0	30000		759.7																								
CARBON DISULFIDE	µg/L	5.0	NL		9.4																								
METHYLENE CHLORIDE	µg/L	5.0	28000		272																					7	7.3	7.5	7.4
cis-1,2-DICHLOROETHENE	µg/L	1.0	11000		69	9	9	9	8													30	30	29	31	7	7.0	7.5	7.4
1,1-DICHLOROEHTANE	µg/L	1.0	13200		16.4	8	8	8	9					1	3							8	7.8	7.8	6.9				
2-BUTANONE	µg/L	10.0	240000		234.4																								
BENZENE	µg/L	5.0	1760		114.8	5	5	5	5	6	6	6	6	10	19	5	5	22	34	30	3	12	12	12	13	18	18	18	18
TRICHLOROETHENE	µg/L	5.0	4600		5																								
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4-METHYL-2-PENTANONE	µg/L	5.0	NL		408.4																								
TOLUENE	µg/L	5.0	1680		659.5									1	2	1	1	2	3	3	1	57	55	57	59	15	14	15	15
CHLOROBENZENE	µg/L	5.0	900		9	1	1	1	1					1	1	1	1	2	2	2	2								
ETHYL BENZENE	µg/L	5.0		2000	394									6	9	5	4	45	48	53	35	50	48	50	52	20	20	20	20
TOTAL XYLENES	µg/L	5.0		626	1611.6									35	42	31	31	74	78	87	57	103	100	100	110	190	190	191	190
STYRENE	µg/L	5.0	5800		283.2																								
1,2-DICHLOROBENZENE	µg/L	5.0	260		6.1																								
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TOTAL VOCs	µg/L					30	30	30	31	6	6	6	6	55	79	43	42	146	165	175	98	275	266	270	288	258	256	259	258
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PHENOL	µg/L	10.0	2600		1127																	7		11		92	88	88	99
2-METHYLPHENOL	µg/L	10.0	1200		559																	27	26	29	26	50	49	47	55
4-METHYLPHENOL	µg/L	10.0		962	2867													17	25	21		73	62	80	76	137	130	130	150
2,4-DIMETHYLPHENOL	µg/L	10.0		2700	6691	345	306	300	430	468	464	466	475	113	240	44	55	380	456	511	173	530	460	580	550	907	910	890	920
4-CHLORO-3-METHYLPHENOL	µg/L	10.0	130		18.8																								
BIS(2-CHLOROISOPROPYL)ETHER	µg/L	10.0	NL		12													7	12										
BIS(2-ETHYLHEXYL)PHTHALATE	µg/L	10.0	285		35.4																								
TOTAL SVOCs	µg/L					345	306	300	430	468	464	466	475	113	240	44	55	404	493	532	173	637	553	700	657	1185	1177	1155	1224

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(3) Site-Specific Groundwater Cleanup Criteria are the criteria approved by IDEM during the March 5, 2008 meeting and are based on the IDEM FAVs (see note 3) and Michigan Department of Environmental Quality (MDEQ) FAVs (specifically, 2,4-dimethylphenol). Criteria are protective of aquatic life under an acute exposure at the point of groundwater discharge to surface water. These cleanup criteria will be used to determine when groundwater has achieved and sustained concentrations in groundwater discharging to surface water that are considered safe for aquatic life, at which time the operation of the site's groundwater collection and treatment system may be terminated.

(4) Naphthalene reported on both the 8270 and 8260 analytical method data reports. For 12/7/98 sample, naphthalene only reported on 8270 analysis.
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Data reported in table from the following sources:

- Analytical data from laboratory analytical reports for June 1998, December 1998, June 1999, December 1999, June 2001, November/December 2001, January 2002, June 2002, December 2002, April 2003, October 2003, May 2004, November 2004, May 2005, November 2005, May 2006, November 2006, May 2007, November 2007, May 2008, November 2008, April 2009, October 2009, and May 2010.

- Data reported in the table for September 1998, March 1999, and September 1999 were reported in Table 2-3 Influent Analytical Data Summary from the Draft Five-Year Monitoring Report By Earth Tech, dated April 2000. Data reported for February 1995 to March 1998 are based Table 2-3 from the Five-Year Monitoring Report prepared by Earth Tech; no laboratory reports were available.

- Data from December 21, 2000; January 2001; and January 2002 obtained from laboratory electronic database files (not actual laboratory reports).

- Data from September 2000; December 18 and 27, 2000; and March 2001 obtained from a summary table provided by Earth Tech to Waste Management on October 6, 2004 via electronic mail in an attached Excel file named "Influent0904A.xls".
- Individual extraction well results for September 15 and 26, 2000; October 6 and 12, 2000; December 18 and 27, 2001 from February 15, 2001 letter from Earth Tech to James Forney, Waste Management, Inc., Re: Results of Bypassing the Air Stripper.

TABLE 1
EXTRACTION WELL ANALYTICAL DATA SUMMARY
February 1995 - May 2010

Fort Wayne Reduction Site
Fort Wayne, Indiana

Monitoring Parameter	Units	Laboratory Quantification Limits Water (1)	IDEM FAV (2)	Site-Specific Groundwater Cleanup Criteria (3)	Maximum Detected Concentration	4/17/2009				10/27/2009				5/5/2010			
						EW-1 & EW-2 AVERAGE	EW-1	EW-2	EW-2 Dup	EW-1 & EW-2 AVERAGE	EW-1	EW-2	EW-2 Dup	EW-1 & EW-2 AVERAGE	EW-1	EW-2	EW-2 Dup
pH	s.u.	0-14			7.15	6.95	6.94	6.97	6.94	6.48	6.34	6.54	6.56	6.43	6.41	6.43	6.46
Total Suspended Solids	mg/L	0.4			760	40	46	38	36	38	34	41	39	32	34	26	35
VOCS																	
VINYL CHLORIDE	µg/L	10.0	16400		82.8												
CHLOROETHANE	µg/L	10.0	40000		18.2												
ACETONE	µg/L	50.0	30000		759.7												
CARBON DISULFIDE	µg/L	5.0	NL		9.4												
METHYLENE CHLORIDE	µg/L	5.0	28000		272												
cis-1,2-DICHLOROETHENE	µg/L	1.0	11000		69												
1,1-DICHLOROEHTANE	µg/L	1.0	13200		16.4												
2-BUTANONE	µg/L	10.0	240000		234.4												
BENZENE	µg/L	5.0	1760		114.8	9.1	10	8.7	8.5	8.9	8.9	9.1	8.8	10	10	10	10
TRICHLOROETHENE	µg/L	5.0	4600		5												
1,2-DICHLOROETHANE	µg/L	5.0	14600		39												
1,2-DICHLOROPROPANE	µg/L	5.0	8000		39.8												
4-METHYL-2-PENTANONE	µg/L	5.0	NL		408.4												
TOLUENE	µg/L	5.0	1680		659.5												
CHLOROBENZENE	µg/L	5.0	900		9												
ETHYL BENZENE	µg/L	5.0		2000	394												
TOTAL XYLENES	µg/L	5.0		626	1611.6	15	17	14	14	37	37	37	36	29	29	28	29
STYRENE	µg/L	5.0	5800		283.2												
1,2-DICHLOROBENZENE	µg/L	5.0	260		6.1												
NAPHTHALENE (4)	µg/L	5.0	400		78.3												
TRANS-1,2-DICHLOROETHENE	µg/L	1.0	19000		46.4												
1,2,4-TRIMETHYLBENZENE (5)	µg/L		620		24												
TOTAL VOCs	µg/L					24	27	23	23	46	46	46	45	39	39	38	39
SVOCs																	
PHENOL	µg/L	10.0	2600		1127												
2-METHYLPHENOL	µg/L	10.0	1200		559												
4-METHYLPHENOL	µg/L	10.0		962	2867												
2,4-DIMETHYLPHENOL	µg/L	10.0		2700	6691	190	230	180	160	340	330	350	340	443	460	420	450
4-CHLORO-3-METHYLPHENOL	µg/L	10.0	130		18.8												
BIS(2-CHLOROISOPROPYL)ETHER	µg/L	10.0	NL		12												
BIS(2-ETHYLHEXYL)PHTHALATE	µg/L	10.0	285		35.4												
TOTAL SVOCs	µg/L					190	230	180	160	340	330	350	340	443	460	420	450

NOTES:

s.u. = standard unit
mg/L = milligrams per liter
µg/L = micrograms per liter
ID = inadequate data
NL = not listed in criteria tables
SVOCs = Semi-Volatile Organic Compounds
VOCs = Volatile Organic Compounds
= not applicable or r
NA = not availible

RED NUMERICAL RESULTS (19.8) were flagged and qualified by the laboratory as estimated. This could only be confirmed for sampling events where an analytical data reported was available (see notes regarding data sources).

Blue Shading indicates that a concentration exceeded the Site-Specific Groundwater Cleanup Criteria (see note 3).

- Extraction well data from 1995 to 2000 represents the composite sample of the influent groundwater stream from all extraction wells. From 2001 to current and for select events (during the evaluation of the air stripper units) in 1999 and 2000, the data represents a sample from each extraction well influent groundwater stream that have been numerically averaged.

- Only those chemicals detected at least once are listed on this table. Blank cells indicate that the chemical was not detected. Raw Analytical data for carbon disulfide and trichloroethene were not available for 2/1995-3/1998, 9/1998, 3/1999, 9/1999, and 9/2000 to verify that these results were non-detect, although these compounds are not typically detected.

- "Averages" calculated based on individual analytical results for each extraction well influent. If the results were reported as "Non-Detect (ND)", then one-half the detection limit was used in the average calculations.

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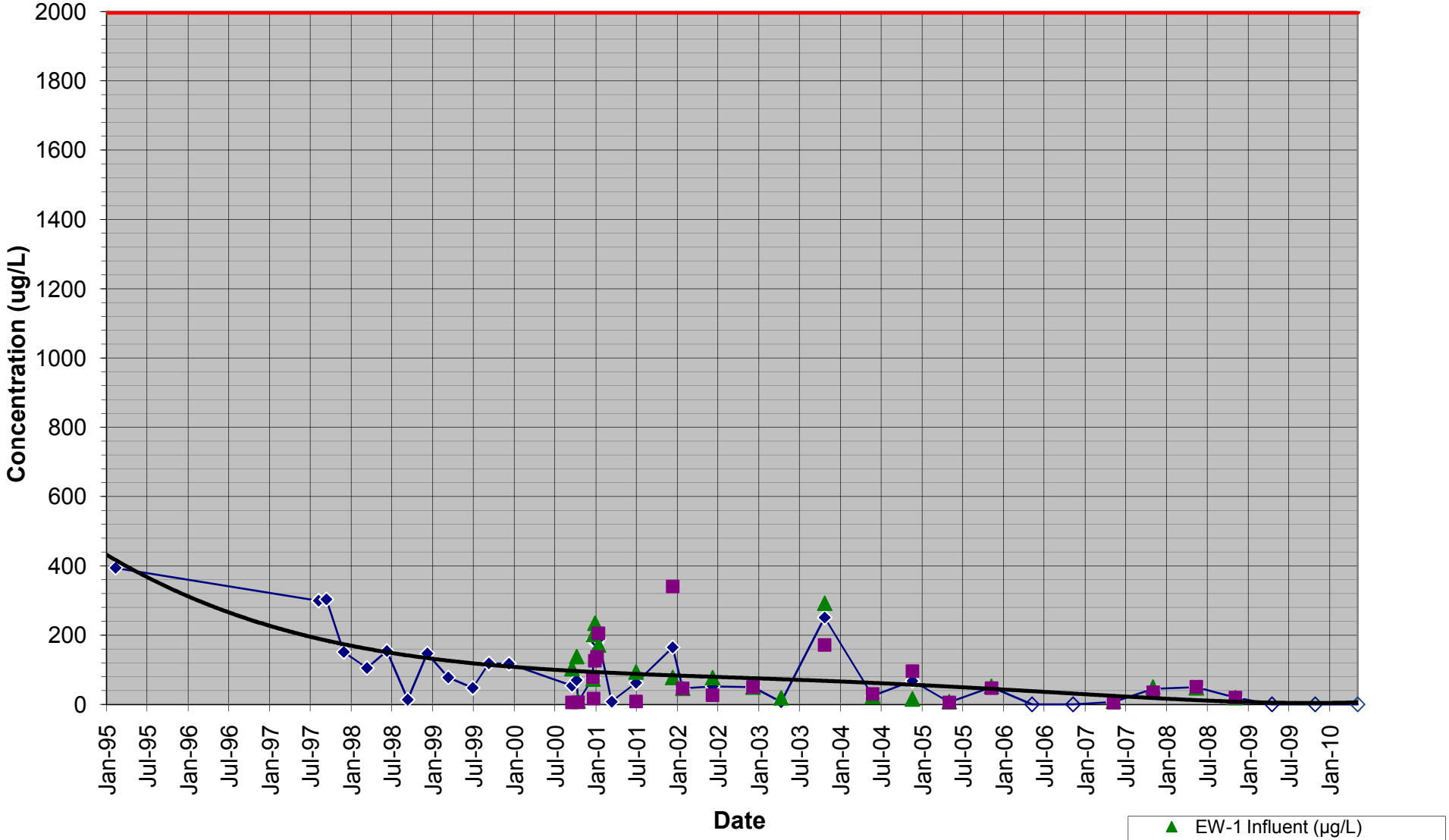
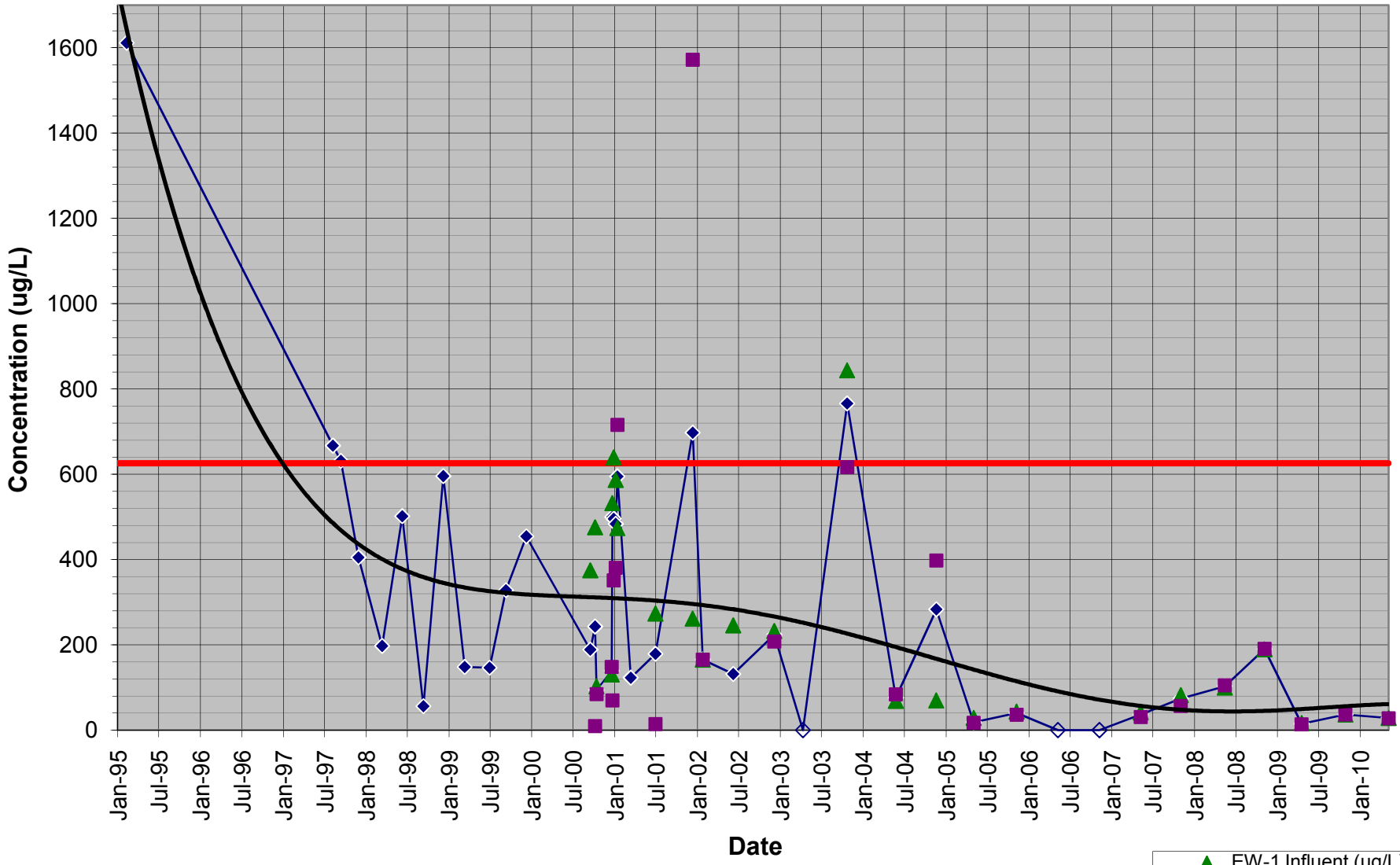
Graph 1
Ethylbenzene Influent Concentration Trend



NOTES:
Hollow points represent no detection of analyte.
Site-Specific Groundwater Cleanup Criteria = The criteria approved by IDEM during the March 5, 2008 meeting and are based on the IDEM FAVs and MDEQ FAVs. Criteria are protective of aquatic life under an acute exposure at the point of groundwater discharge to surface water. This cleanup criteria will be used to determine when groundwater has achieved and sustained concentrations in groundwater discharging to surface water that are considered safe for aquatic life, at which time the operation of the site's groundwater collection and treatment system may be terminated.
Influent Data = Data from 1995 to 2000 represents the composite sample of the influent groundwater stream from all extraction wells. From 2001 to current and for select events in 1999 and 2000, the data represents a sample from each extraction well influent groundwater stream that have been numerically averaged.

Graph 2
Total Xylenes Influent Concentration Trend



NOTES:
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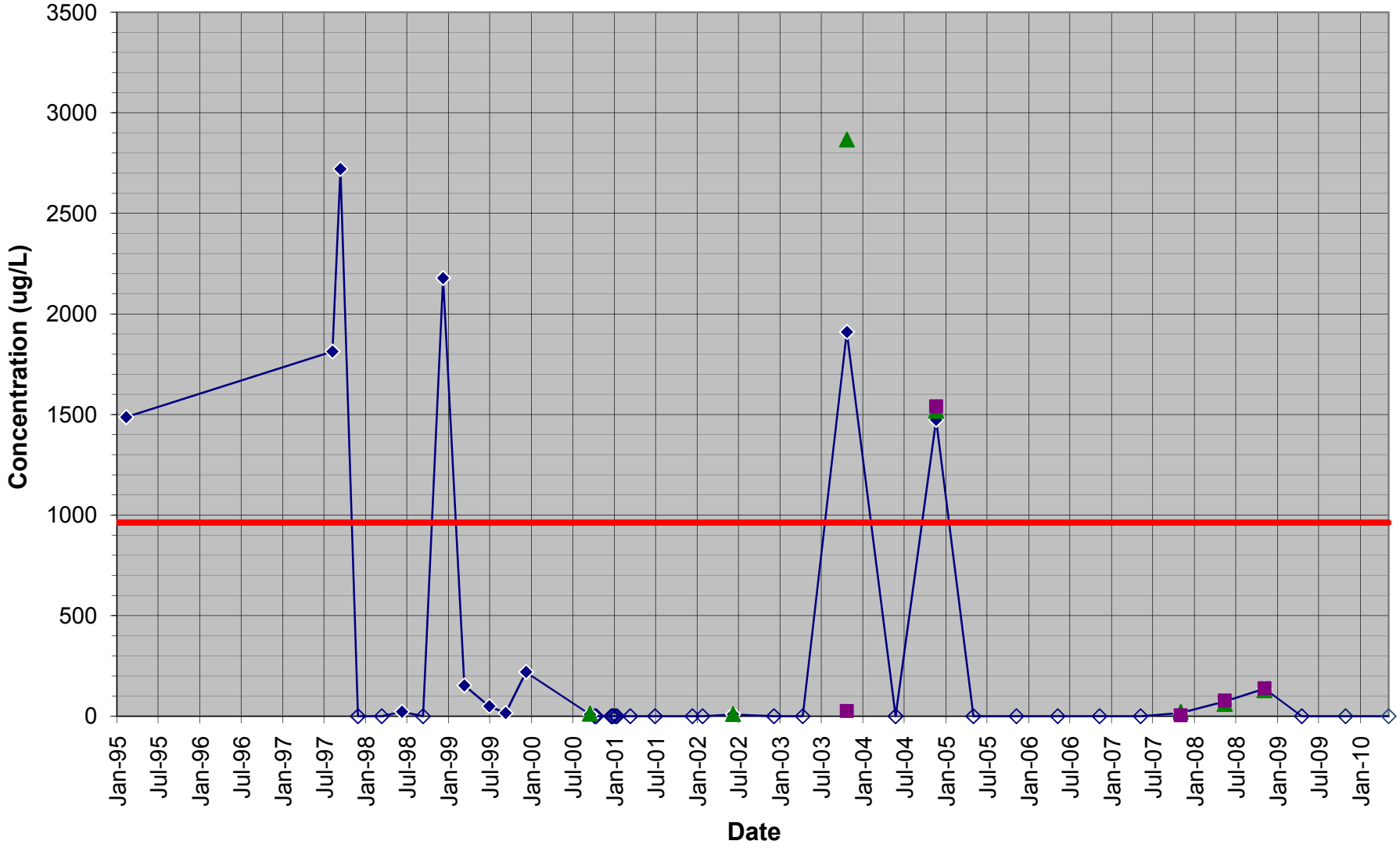
Graph 3
4-Methylphenol Influent Concentration Trend



NOTES:
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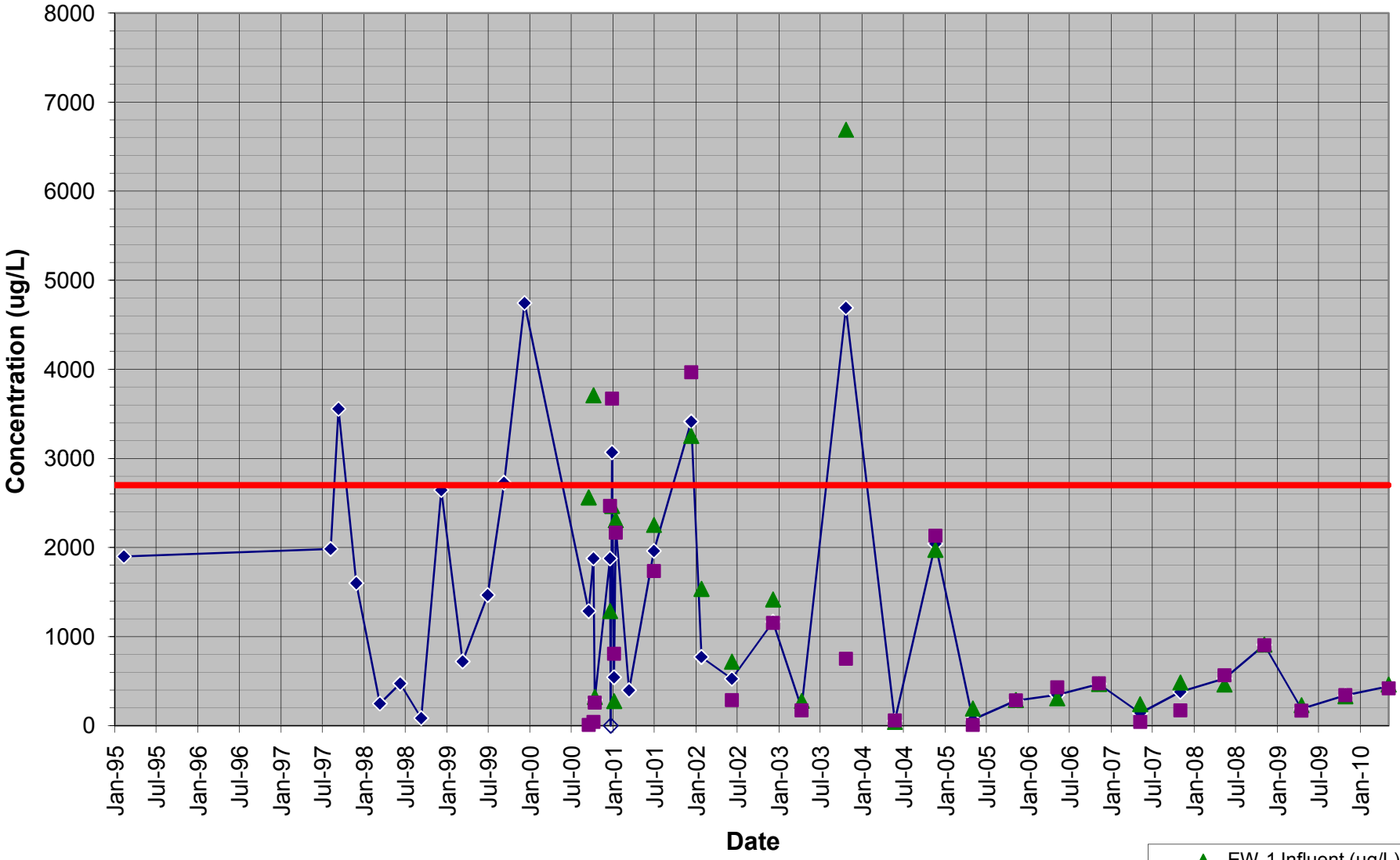
Graph 4
2,4-Dimethylphenol Influent Concentration Trend



NOTES:
Hollow points represent no detection of analyte.

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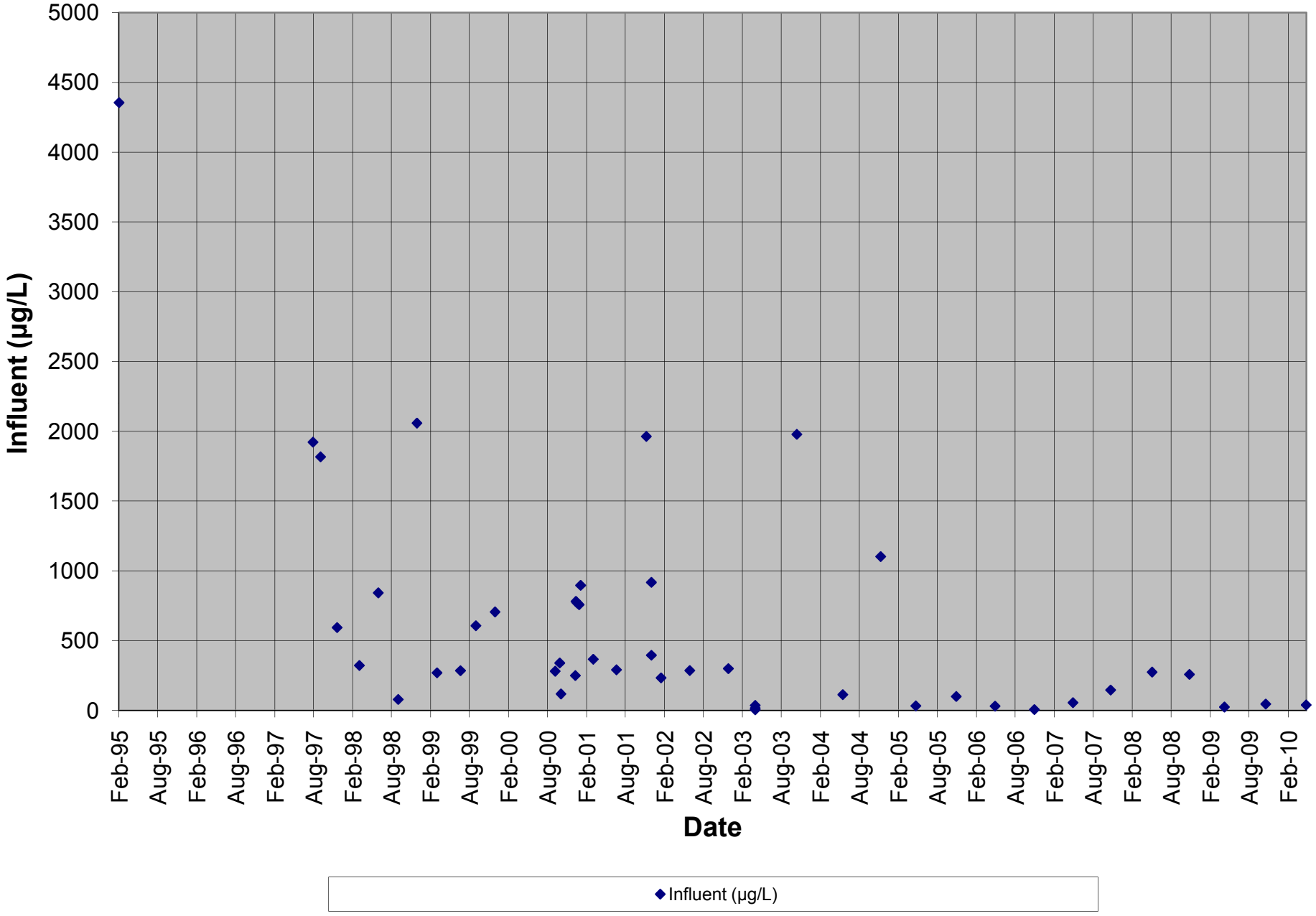
Graph 5
Total VOCs Influent Concentration Trend



Graph 6
Total SVOCs Influent Concentration Trend