MACTEC

engineering and constructing a better tomorrow

April 14, 2009

Mr. Kevin Houppert, LPG
Remediation Services Branch
Indiana Department of Environmental Management
100 North Senate Ave.
Indianapolis, IN 46204-2251

RE: Vapor Monitoring Report, Former TORX Facility
4366 North Old US 31, Rochester, Indiana
MACTEC Project Number 3359-08-2450

Dear Mr. Houppert:

Enclosed please find two paper copies and one electronic copy of the Vapor Monitoring Report for the Former TORX Facility, 4366 North Old US Route 31, Rochester, Indiana (Site). The vapor monitoring report details the activities that have been completed in the vicinity of the Site to define the nature and extent of the chemicals of concern in soil vapor.

Twelve vapor monitoring wells were drilled in December 2008 at eight residences. As many as three soil vapor probes were installed in each vapor monitoring well. Soil vapor samples collected from each soil vapor probe were analyzed for volatile organic compounds (VOCs) using EPA Method TO-15. VOCs were not detected at concentrations greater than the Residential – Soil Gas Screening Levels published in the IDEM Draft Vapor Intrusion Pilot Program Guidance (DVIPPG). Therefore, the vapor intrusion exposure pathway is considered incomplete and indoor air sampling at the residences is not warranted.

Since December 2008, MACTEC has attempted on two separate occasions to gain access to the resident located at 4163 Old North US 31. To date, the property owner has not responded to our requests for access. Therefore, the two vapor monitoring wells and the one sub-slab soil vapor probe that were proposed in the December 2008 Vapor Intrusion Work Plan were not installed. Subsequently, soil vapor samples, outdoor air samples, and/or indoor air samples were not collected from 4163 North Old US 31. Unless access is granted, future soil gas and/or air sampling activities area not planned at 4163 North Old US 31.

MACTEC Engineering and Consulting, Inc.
521 Byers Road, Suite 204, Miamisburg, OH 45342 • Phone: 937-859-3600 • Fax: 937-859-7951 www.mactec.com

If you have any questions regarding this report, please contact Paul Stork at 937-859-3600 or Mr. Jamie Schiff at 401-457-2422.

Sincerely,

MACTEC ENGINEERING AND CONSULTING, INC.

Paul J. Stork
Project Manager

Renee L Bicknell
For Dayne M Crowley with permission
Dayne M. Crowley
Chief Scientist

Megan M Machelski
For Laura Stirban with permission
Laura Stirban, LPG
Project Manager

Enclosures

cc: Mr. Jamie Schiff (Textron, Inc.)
Ms. Theresa Holz (U.S. EPA Region 5)

VAPOR MONITORING REPORT

FORMER TORX FACILITY, ROCHESTER, INDIANA

Submitted to:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Prepared for:

TEXTRON, INC.

April 14, 2009

VAPOR MONITORING REPORT

FORMER TORX FACILITY, ROCHESTER, INDIANA

Prepared for:

TEXTRON, INC.

Prepared by:

MACTEC ENGINEERING AND CONSULTING, INC.

Paul Stork
Project Manager

Renee L Bicknell
For Dayne M. Crowley with permission

Dayne M. Crowley
Chief Scientist

April 14, 2009

Project 3359-08-2450

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1.0 INTRODUCTION

Textron, Inc. retained MACTEC Engineering and Consulting, Inc. (MACTEC) to prepare this Vapor Monitoring Report for the Former TORX facility (Site) located at 4366 North Old US 31 in Rochester, Fulton County, Indiana.

This report and associated field work were completed in accordance with the Special Notice of Liability that the Indiana Department of Environmental Management (IDEM) sent to Textron, Inc. (Textron) on November 19, 2008. In the November 19, 2008 notification, IDEM required Textron to perform the following activities as part of the site investigation:

- Identify the Site characteristics;
- Define the nature and extent of soil, air, surface water and groundwater contamination at and emanating from the Site; and,
- Identify the risks posed by the Site.

The contents of this report have been organized in respect to the IDEM Draft Vapor Intrusion Pilot Program Guidance (DVIPPG). Previous soil and groundwater investigations performed by MACTEC are summarized in the *Site Investigation Report, Former TORX Facility, Rochester, Indiana,* dated December 19, 2008. The purpose of this report is to present activities completed to define the nature and extent of soil vapor in the vicinity of the Site.

1.1 PROJECT IDENTIFICATION

A site location map is attached as Figure 1. A site plan showing the approximate locations of vapor monitoring wells is attached as Figure 2. The potentiometric surface diagram for November 24, 2008 is attached as Figure 3. Figure 4 illustrates the approximate extent of volatile organic compounds (VOC) in groundwater, as determined based on results of groundwater sampling conducted at residences prior to completion of the subsurface investigation. All figures are presented in Appendix A.

1.2 OVERVIEW OF CURRENT SUBSURFACE CONDITIONS

Prior to January 1992 (approximately a forty year period), process wastewater and non-contact cooling water were discharged into the pond located to the west of the facility operations building

(plant). The source of the process wastewater included the caustic parts washer and the heat-treat washers. According to the *Site Status Report,* dated August 1, 1990, the wastewater was comprised of water and various quantities of lube oils, cutting oils, quench oils, water soluble oils, metal particles, and dirt.

Sampling performed in 1986 indicated that concentrations of heavy metals (cadmium, chromium, copper, and lead) and VOCs were detected in the samples collected from the wastewater discharge. At the time, process wastewater from the Site operations was discharged into the pond located to the west of the plant. Therefore, additional work was proposed to evaluate the environmental quality at the Site.

Between November 1989 and November 1992, a total of 19,525 tons of sludge and soil material were excavated from the inlet area of the onsite pond (southeastern portion). The sludge and soil material was dewatered, stabilized, and transported offsite for disposal. As of January 1992, onsite wastewater was discharged to an onsite wastewater treatment system and discharge to the pond was discontinued in January 1992.

Trichloroethene (TCE) concentrations detected during site assessment activities in 1988 and 1989 indicated that a source of TCE could be the former degreaser pit located beneath the plant floor. The degreaser pit, which was constructed of concrete, was approximately 70 square feet in area and 3 feet deep. The degreaser pit was reportedly filled with sand in 1968. The pond formerly used to collect process wastewater from onsite operations may also be a source of the TCE.

Based upon the results of offsite groundwater sampling completed between October and December 2008, VOCs have been detected in samples collected from wells 1,500 feet east of the Site and 4,000 feet south-southeast of the Site. The well located 4,000 feet south-southeast of the Site is located on the north side of the Tippecanoe River, adjacent to North Old US 31. The interpretation of the limits of the VOC plume, based on currently available sampling data and the assumption that those data represent a single continuous plume with a single source (as described above), is shown on Figure 4 in Appendix A. Because the offsite investigation is ongoing, the final interpretation of the lateral and longitudinal extents of the plume has not been made.

1.2.1 IDEM Notification

The *Site Assessment/Hydrogeological Assessment Report* detailed the 1986 and 1987 sampling activities and was submitted to IDEM on April 4, 1988. In addition, representatives of TORX met with IDEM on April 8, 1988 to discuss a residential well sampling program. Private water wells have been sampled since 1988.

2.0 SITE BACKGROUND AND BASELINE PROJECT ASSESSMENT

2.1 PAST AND CURRENT FACILITY OPERATIONS

Fasteners have been manufactured at the Site since 1946. Any parts which require metal finishing are sent offsite for processing.

The initial evidence of a release was detected during the groundwater, surface water, wastewater, and sludge sampling performed at the Site in 1986 and 1987. Although no recorded spill or release has been documented at the Site, the presence of TCE and TCE break-down products (cis-1,2-dichloroethene {DCE}, trans-1,2-DCE, and vinyl chloride) in the groundwater samples collected from the onsite monitoring wells indicate that the TCE plume may originate in the area of the Site.

2.2 PREVIOUSLY COMPLETED INVESTIGATIONS

Since 1986, numerous investigations have been performed at the Site. Not all of the investigations have been performed by the same environmental consulting firm. Since 2005, MACTEC has been the environmental consultant for the Site.

2.2.1 Environmental Activities Prior to 1993

Between 1987 and 1989, fifteen monitoring wells (MW-1 through MW-5, MW-6B, MW-6C, MW-7, MW-8, MW-9A, MW-9B, MW-9C, MW-10A, MW-10B, and MW-10C) were installed at the Site. Historically, chlorinated VOCs (cis-1,2-DCE, tetrachloroethene {PCE}, TCE, trans-1,2-DCE, vinyl chloride) have been detected at concentrations greater than MCLs in the groundwater samples collected from at least one of the monitoring wells located down-gradient of the pond and/or degreaser pit.

As early as May 1988, groundwater samples were collected from offsite wells that are located hydraulically downgradient of the Site. The offsite wells include 4079 Old US 31, 4163 Old US 31, 4327 Old US 31, and 4403 North Old US 31. VOCs were not detected in the groundwater samples collected from the offsite drinking wells.

By the end of 1992, remediation of the pond was completed. The sludge removed from the pond was transported offsite for disposal.

2.2.2 Groundwater Sampling – 1993 through 2006

Between 1993 and 2006, groundwater samples were collected from at least 12 of the 15 monitoring wells on an annual basis and from residential wells in the vicinity of the facility as documented in the *Site Investigation Report*. Since 1993, cis-1,2-DCE, TCE, and vinyl chloride have been detected at concentrations greater than current MCLs in the groundwater samples collected from at least one of the following monitoring wells: MW-3; MW-6B; MW-6C; MW-8; and MW-9.

2.2.3 Subsurface Investigation - 2007

In addition to the annual groundwater monitoring event, a passive soil gas survey was completed and new monitoring wells (MW-11, MW-12, and MW-13) were installed at the property located at 4327 North Old US 31 in 2007. Twelve passive soil gas samplers were installed along the west side of North Old US 31 and eight passive soil gas samplers were installed on that property in August 2007. Although the survey indicated that the highest VOC concentrations were in the vicinity of MW-6B and MW-6C, the sample gas concentrations on the 4327 North Old US 31 property were limited by the fine-grained sediments located in the unsaturated zone.

In November 2007, three soil borings were installed on the 4327 North Old US 31 property using the direct push drilling method. The soil borings were completed as monitoring wells MW-11, MW-12, and MW-13. The monitoring wells and the residential wells were sampled in October 2007. Cis-1,2-DCE, TCE, and vinyl chloride were detected in the groundwater samples collected from at least one of the following monitoring wells: MW-3, MW-6B; MW-6C; MW-11; MW-12 and MW-13. However, VOCs were not detected in the samples collected from the private drinking water wells.

2.2.4 Site Investigation - 2008

As part of the Site Investigation, MACTEC installed ten soil borings and four monitoring wells in October and November 2008 at two hydraulically downgradient properties, 4377 North Old US 31 and 4375 North Old US 31. In addition, groundwater samples were collected from the drinking water wells located on each property. Results from the investigation were detailed in the *Site Investigation Report*. Vinyl chloride was detected in groundwater samples collected from both properties. Based on the results of the Site Investigation, additional subsurface investigations were proposed to define the nature and extent of VOCs in soil vapor, surface water, and groundwater.

3.0 VAPOR MONITORING – DECEMBER 2008

In December 2008, offsite vapor monitoring was initiated to investigate the potential for soil vapor intrusion into offsite buildings and residences. As part of the offsite vapor monitoring investigations, 11 vapor monitoring wells (VMW) were installed at eight residences and one VMW was installed at the Site. The boring logs and well completion diagrams prepared for the investigation are included in Appendix B. The laboratory reports are included in Appendix C.

3.1 VAPOR MONITORING WELL - INSTALLATION

Between December 15 and 19, 2008, wells VMW-1 through VMW-12 were installed. The locations of the VMWs are shown on Figure 2.

As many as three intervals were screened at each VMW using Geoprobe® soil vapor probes. The placement of the soil vapor probes was based upon the depth to the first water bearing sediments (upper saturated zone), the depth of the nearest basement, and/or the depth of the nearest concrete slab. Generally, deep soil vapor probes were installed approximately 1.5 to 2 feet above the upper saturated zone, the intermediate soil vapor probes were installed at the approximate depth of the nearest basement (if present), and the shallow soil vapor probes were installed at the approximate depth of the nearest concrete slab (if present).

Each VMW was installed using 4.25-inch hollow-stem augers. Soil samples were collected continuously while drilling. One soil vapor probe was installed at each selected interval. The soil vapor probes were 0.45 feet in length and constructed of stainless steel. Polyethylene tubing (0.25-inch inner diameter) was attached to each probe using barbed metal fittings. Each probe with attached tubing was placed into the hollow-stem augers to the desired depth. The annular space 0.5 feet beneath each soil vapor probe and 0.5 feet above each soil vapor probe was filled with washed silica sand. A thin layer of granular bentonite was poured on top of each sand interval. The remaining annular space between the soil vapor probes and/ or ground surface was filled with bentonite chips. The VMWs were protected at the surface with flush-mount protective covers set in concrete. The tubing for each soil vapor probe was labeled to identify the corresponding screened interval.

The following summary table details the screened interval, location, and depth to the upper saturated zone at each VMW.

SCREENED INTERVALS FOR VAPOR MONITORING WELLS

Vapor Monitoring Well #	Location	Depth to Water (ft bg)	Screened Interval (ft bg)
VMW-1	4403 North Old US 31	27.0	19.0 - 19.5 24.5 - 25.0
VMW-2	4403 North Old US 31	26.0	4.5 - 5.0 14.5 - 15.0 23.5 - 24.0
VMW-3	4366 North Old US 31	26.0	4.5 - 5.0 14.5 - 15.0 23.5 - 24.0
VMW-4	3791 North Old US 31	15.4	7.0 - 7.5 13.5 - 14.0
VMW-5	3791 North Old US 31	15.0	7.0 - 7.5 13.5 - 14.0
VMW-6	4008 North Old US 31	10.0	9.0 - 9.5
VMW-7	3980 North Old US 31	10.0	4.5 - 5.0
VMW-8	3868 North Old US 31	19.0	4.5 - 5.0
VMW-9	3868 North Old US 31	15.0	4.5 - 5.0 13.0 - 13.5
VMW-10	1082 E 375 N	12.0	4.5 - 5.0 10.0 - 10.5
VMW-11	3796 North Old US 31	15.0	4.5 - 5.0 13.5 - 14.0
VMW-12	972 E 375 N	22.5	10.0 - 10.5 14.5 - 15.0 21.5 - 22.0

ft bg - feet below grade

Prepared By: RED
Checked By:

Each soil vapor probe was developed using a hand vacuum pump in an attempt to remove any fine-grained sediments from clogging the flow regulator required for soil vapor sampling. A minimum of three probe volumes was removed from each soil vapor probe. The development and sampling details for the soil vapor probes at each VMW are summarized in Table 1, which is located in Appendix D.

3.2 SOIL VAPOR SAMPLE COLLECTION

The VMWs were allowed to equilibrate a minimum of 48 hours prior to sampling. Between December 18 and December 22, 2008, soil vapor samples were collected from most of the newly installed soil vapor probes. Three of the soil vapor probes could not be sampled. The two soil vapor probes in VMW-11 were not sampled due to ice buildup in the flush-mount, and the deep soil vapor probe in VMW-12 was not sampled due to a blockage in the tubing.

The samples were collected over a 1-hour period using Summa® canisters. The flow rate during the sampling event did not exceed 100-ml/min in order to minimize the potential for vacuum extraction of the VOCs from the soil phase. At the end of the 1-hour sampling period, the Summa® canisters were submitted under chain-of -custody procedures to DataChem Laboratories in Cincinnati, Ohio. The soil vapor samples were analyzed for VOCs using EPA Method TO-15.

3.3 SOIL GAS SAMPLING RESULTS

Copies of laboratory analytical reports are provided in Appendix C. The analytical results are summarized on Table 2 in Appendix D. Figure 2 depicts the location of the VMWs in reference to the Site. A summary of the detected VOCs, soil gas results, and corresponding soil gas screening levels are presented on Table 2.

In accordance with the IDEM Draft Vapor Intrusion Pilot Program Guidance (DVIPPG), dated April 26, 2006, results from the soil gas survey were compared to Residential - Soil Gas Screening Levels. The Residential - Soil Gas Screening Levels for chlorinated compounds (TCE, cis-1,2-DCE, and vinyl chloride) were obtained from Table 7 in the DVIPPG. The Residential - Soil Gas Screening Levels for non-chlorinated compounds were calculated by multiplying the action levels in Table 2 of the DVIPPG (Indoor Air Action Levels – Residential) by 100. The most conservative Indoor Air Action Level located in Table 2 of the DVIPPG (chronic – 30 years) was used to calculate the Residential – Soil Gas Screening Levels.

Of the twenty-three VOCs that were detected during the December 2008 soil gas investigation, none of the concentrations exceeded their respective Residential – Soil Gas Screening Levels. The detected VOCs included: acetone; benzene; 2-butanone; carbon disulfide; chlorobenzene; cyclohexane; dichlorodifluoromethane; ethyl acetate; ethylbenzene; 4-ethyl toluene; Freon 113; heptane; hexane; methylene chloride; 2-propanol; propene; tetrahydrofuran; TCE; trichlorofluoromethane; 1,2,4-trimethylbenzene; 1,3,5-trimethylbenzene; toluene; and total xylenes.

However, of the detected compounds, only TCE is considered as a potentially Site-related chemical of concern. TCE was only detected in the intermediate and deep soil probes from VMW-3, located on the Site. The TCE concentrations ranged from 1.0 parts per billion per volume (ppbv) in the intermediate probe at VMW-3 to 4.0 ppbv in the deep probe at VMW-3. Vinyl chloride, cis-

1,2-DCE, and trans-1,2-DCE were not detected at concentrations greater than the laboratory reporting limit (1.0 ppbv) in any of the soil gas samples submitted for analyses. Therefore, vinyl chloride, cis-1,2-DCE, and trans-1,2 DCE are not included in Table 2.

Because gasoline was reported in the soil vapor samples collected from VMW-3, additional soil vapor samples were collected from the VMW-3 soil probes on December 23, 2008 to confirm the presence of gasoline compounds. Although, the presence of gasoline compounds was confirmed, reported concentrations in both sampling events were less than Residential – Soil Gas Screening Levels. In addition, gasoline compounds are not associated with the chemicals of concern at the Site.

4.0 CONCLUSIONS

In December 2008, MACTEC installed 24 soil vapor probes in 12 vapor monitoring wells (VMW-1 through VMW-12). Soil vapor samples were collected from 21 of the soil vapor probes in December 2008 and submitted to the laboratory for VOC analyses using TO-15. Three of the soil vapor probes were not sampled due to ice (VMW-11, two soil vapor probes) or a blockage in the tubing (VMW-12, deep soil vapor probe).

According to the laboratory report, vinyl chloride, cis-1,2-DCE, and trans-1,2-DCE were not detected in any of the soil gas samples submitted for analyses. TCE concentrations were detected only in the intermediate and deep soil probes from the VMW located on Site (i.e., VMW-3); however, reported concentrations were significantly less than the Residential – Soil Gas Screening Level of 22 ppbv. Other non-Site related VOCs were detected in the soil gas samples; however, all reported concentrations were less than the Residential – Soil Gas Screening Levels.

Sampling of monitoring wells VMW-11 and VMW-12 (deep soil vapor probe) is not considered necessary, based on the fact that these two VMWs are located the farthest from the Site and no Site-related contamination was reported in any vapor monitoring wells located between the Site and these two VMWs. Based on the results of this soil vapor investigation, the vapor intrusion exposure pathway is considered incomplete. Therefore, indoor air sampling at the residences is not warranted.

5.0 REFERENCES

Heritage Remediation/Engineering, Inc., 1989, *Site Investigation Report for TORX Products Camcar Division of Textron Inc. Rochester, Indiana,* March 20, 1989.

Heritage Remediation/Engineering, Inc., 1990, *Site Status Report for TORX Products Camcar Division of Textron Inc. Rochester, Indiana,* August 1, 1990.

Heritage Remediation/Engineering, Inc., 1991, *Site Status Report for TORX Products Camcar Division of Textron Inc. Rochester, Indiana,* October 8, 1991.

Heritage Remediation/Engineering, Inc., 1992, *Site Status Report for TORX Products Camcar Division of Textron Inc. Rochester, Indiana,* October 15, 1992.

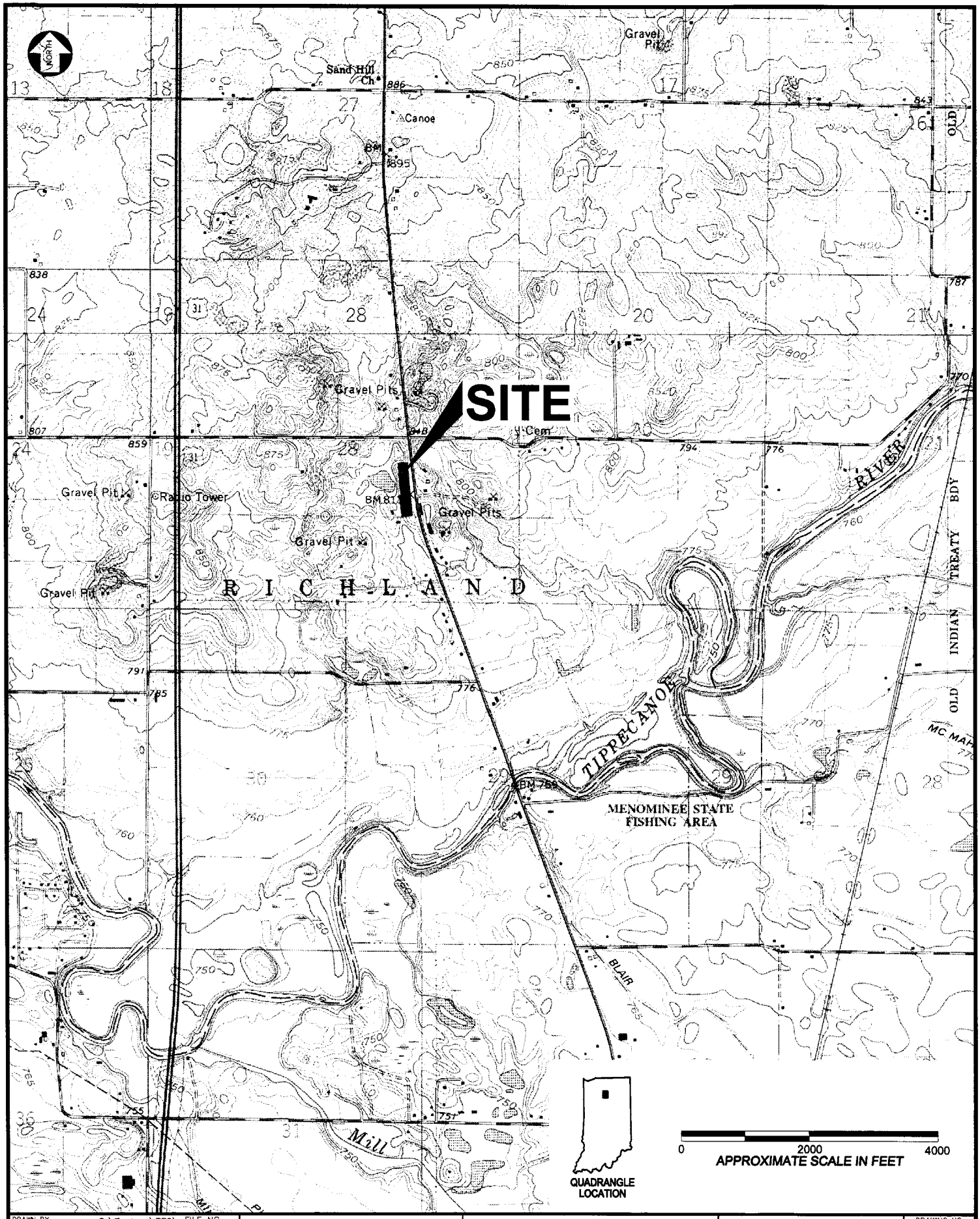
Indiana Department of Environmental Management (IDEM), 2006, *Draft Vapor Intrusion Pilot Program Guidance*, April 26, 2006.

MACTEC Engineering and Consulting, Inc. (MACTEC), 2008, *Site Investigation Report Former Textron Fastening Systems (TFS) Facility, Rochester, Indiana*, December 19, 2008.

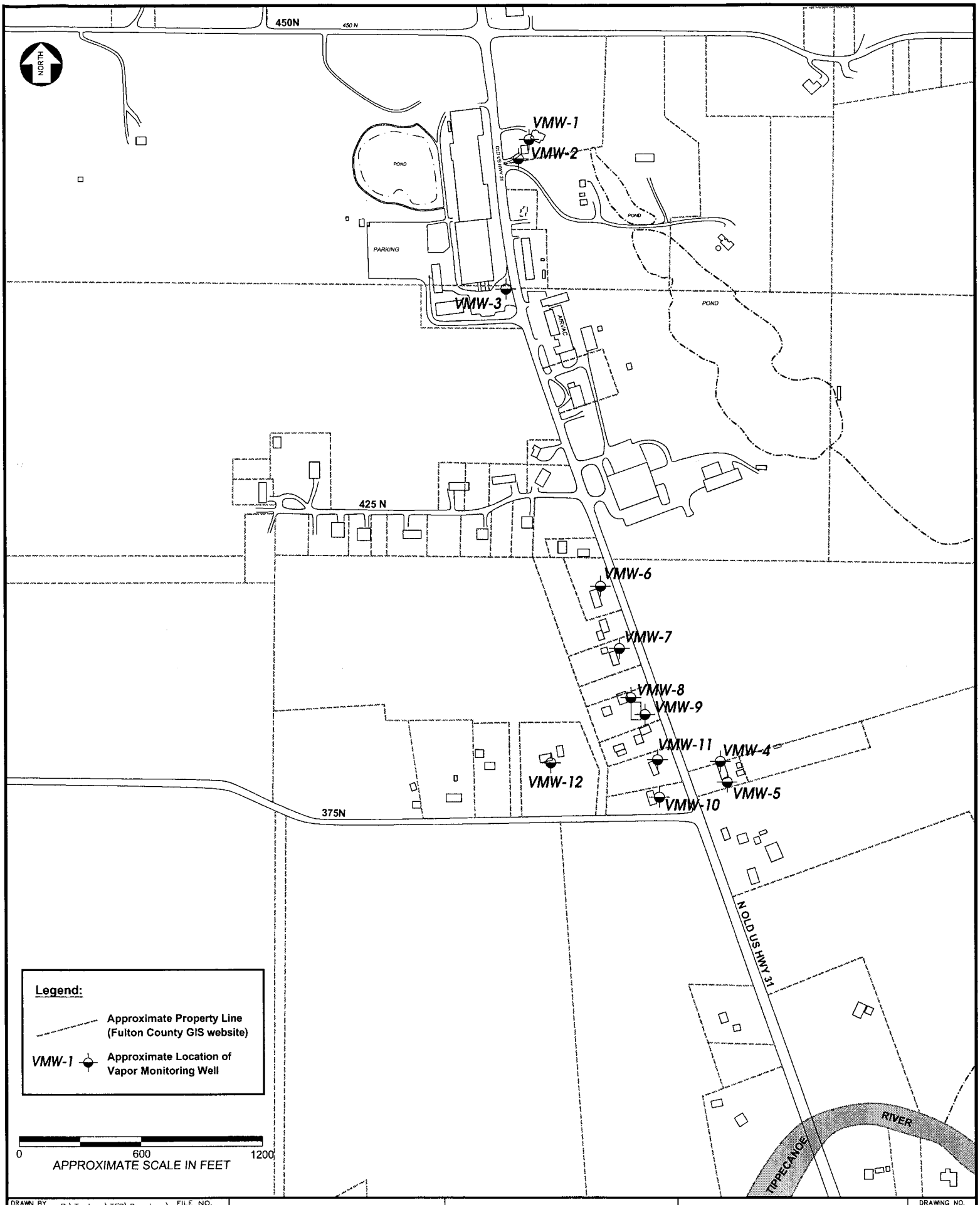
Process Engineering Group, Inc., 1988, *Site Assessment/Hydrogeological Assessment Report for TORX Products Camcar Division of Textron Inc. Rochester, Indiana,* April 4, 1988.

APPENDIX A

MAPS AND FIGURES



DRAWN BY: RLB	FILE NO.: P:\Textron\TFS\ Drawings\TFS Topo.dwg	FORMER TORX FACILITY 4366 NORTH OLD US ROUTE 31 ROCHESTER, INDIANA	MACTEC 521 Byers Road Suite 204 Miamisburg, Ohio 45342 (937) 859-3600 FAX (937) 859-7951	SITE LOCATION MAP	DRAWING NO.: 1
APPROVED BY: PJS	DATE: 12/15/2008				
SOURCE: USGS topographic quadrangles of Argos, IN, 1994 and Rochester, IN, 1992.					
PROJECT NO.: 3359 08 2450	SCALE: SEE ABOVE				SHEET 1 of 1



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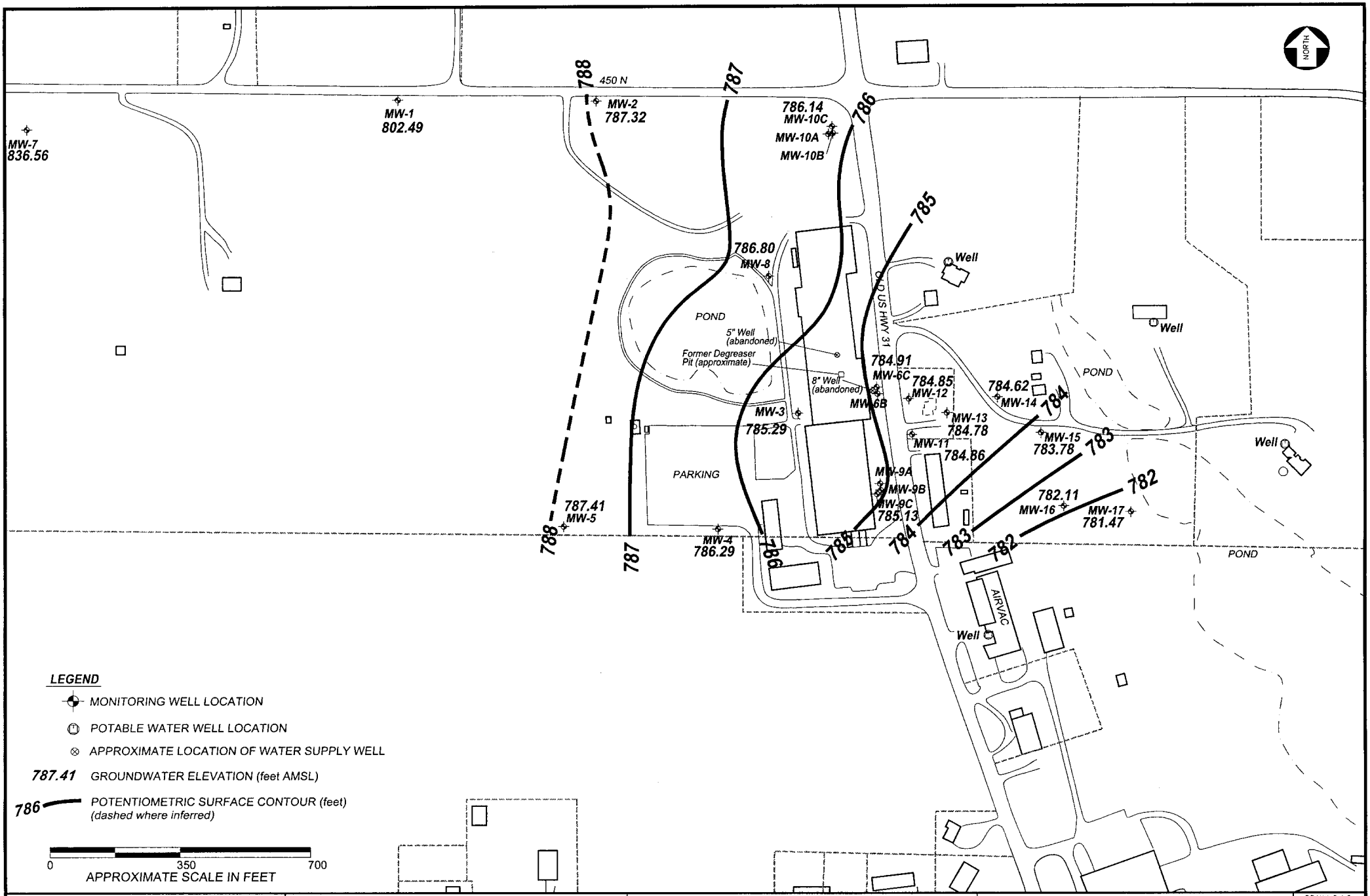
APPROVED BY: PJS	DATE: 02/06/2009				SHEET 1 of 1
SOURCE: Fulton County, IN GIS, 2005; Wilcox survey, 2008.					
PROJECT NO.: 3359 08 2450	SCALE: SEE ABOVE				



LEGEND

- MONITORING WELL LOCATION
- POTABLE WATER WELL LOCATION
- APPROXIMATE LOCATION OF WATER SUPPLY WELL
- 787.41 GROUNDWATER ELEVATION (feet AMSL)
- 786 POTENTIOMETRIC SURFACE CONTOUR (feet) (dashed where inferred)

0 350 700
APPROXIMATE SCALE IN FEET

DRAWN BY: RLB	FILE NO.: P:\Textron\TFS\Drawings\TFS Surveyed.dwg
APPROVED BY: PJS	DATE: 12/19/2008
SOURCE: MACTEC Notes 06/28/05; Fulton County, IN GIS, 2005; Wilcox survey, 2008.	
PROJECT NO.: 3359 08 2450	SCALE: SEE ABOVE

FORMER TORX FACILITY
4366 NORTH OLD US ROUTE 31
ROCHESTER, INDIANA

MACTEC
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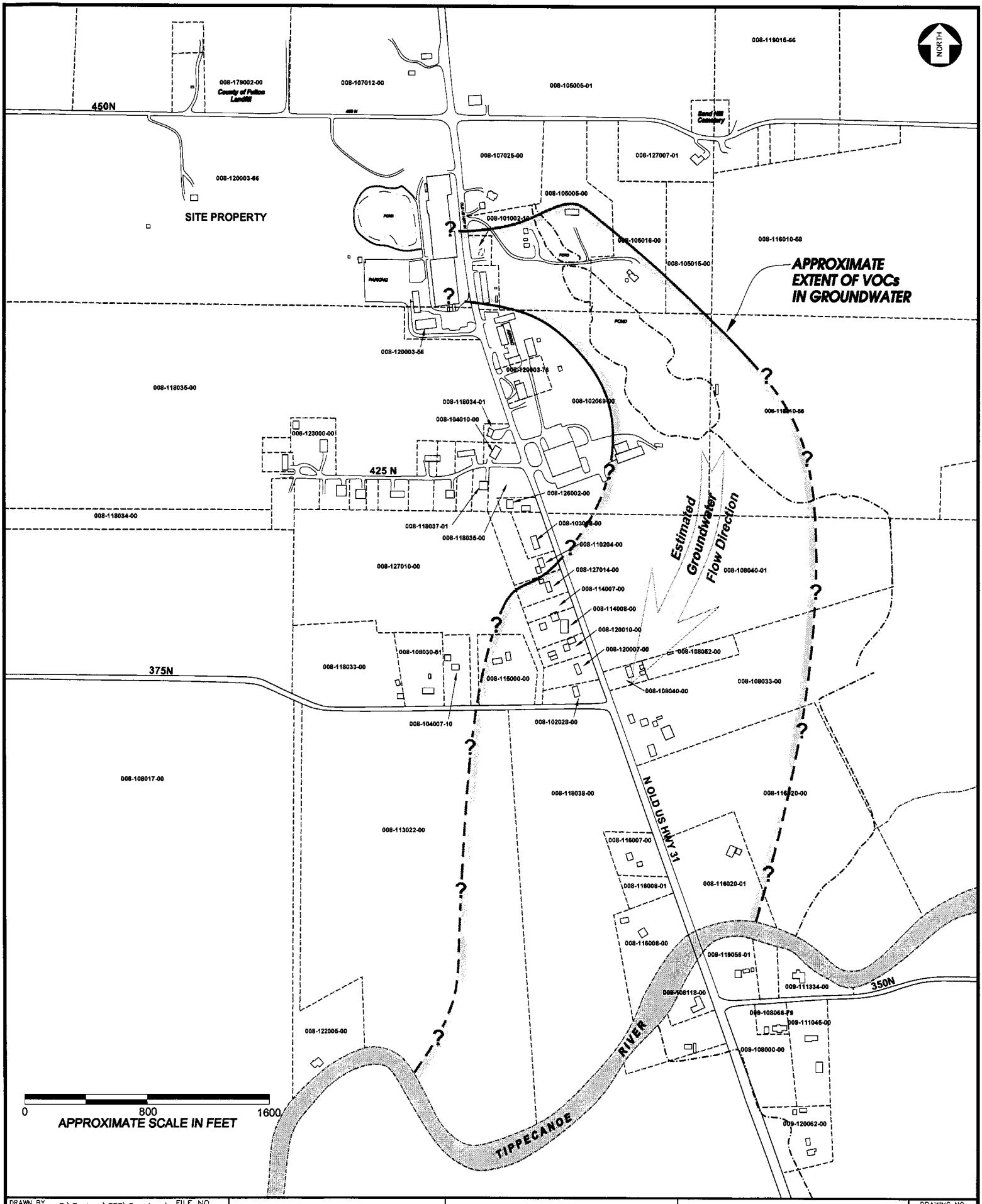
POTENTIOMETRIC SURFACE DIAGRAM NOVEMBER 24, 2008

DRAWING NO. 3

SHEET 1 of 1



DRAWN BY: RLB	FILE NO.: P:\Textron\TFS\Drawings\TFS Impacted Area wo Addresses.dwg	**FORMER TORX FACILITY** **4366 NORTH OLD US ROUTE 31** **ROCHESTER, INDIANA**	**APPROXIMATE EXTENT OF IMPACTED AREA**
APPROVED BY: PJS	DATE: 02/06/2009		
SOURCE: Fulton County, IN GIS, 2005; Wilcox survey, 2008.			
PROJECT NO.: 3359 08 2450	SCALE: SEE ABOVE		

MACTEC
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Miamisburg, Ohio 45342
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DRAWING NO. 4

SHEET 1 of 1

APPENDIX B

BORING LOGS AND WELL COMPLETION DIAGRAMS

BORING LOG / WELL CONSTRUCTION DIAGRAM

VMW-1

Client:	**Textron (former TORX Facility)**	Easting: **Not Surveyed**	Northing: **Not Surveyed**
Location:	**4403 North Old US Route 31** **Rochester, Indiana (northeast of storage bldg)**	▽ Depth to 1st water (feet BGL):	**27 ft.**
		▼ Static Water Depth (feet BGL): **N/A**	Elevation: **N/A**
Project Number:	**3359 08 2450**	Date: **N/A**	
Logged By:	**W.D. Gross**	Ground Surface Elevation (feet):	**Not Surveyed**
Date Drilled:	**12/15/2008**	Top of Casing Elevation (feet):	**Not Surveyed**

GRAPHIC LOG	DEPTH (FEET)	DESCRIPTION	WELL COMPLETION DATA	WELL CONSTRUCTION INFORMATION	SAMPLE INFORMATION TIME	SAMPLE DEPTH	SAMPLE RECOVERY	PID (PPM)	COMMENTS
	2	**SILTY CLAY** grading to **CLAYEY SILT,** some very fine sand, brown, moist.		Flushmount	1117	0-5	3.2/5.0	0.0	
								0.0	
	4	**NO RECOVERY**						NR	
		CLAYEY SILT, some very fine sand, brown, moist.						0.0	
	6	**SAND AND GRAVEL,** medium to coarse sand, fine gravel, brown, moist.		Bentonite Seal / Natural Collapse 2.0'–18.0' BGL	1122	5-10	0.8/5.0	NR	
	8	**NO RECOVERY**						NR	
	10	**CLAYEY SAND,** fine to coarse, brown, moist.		5/16"OD x 1/4"ID Nylon Tubing				0.0	
		SAND, fine, some silt, brown, moist.			1128	10-15	2.1/5.0		
	12	**SAND,** medium to coarse, gray, dry.						NR	
	14	**NO RECOVERY**						NR	
	16							0.0	
					1207	15-20	5.0/5.0	0.0	
	18	**SAND,** medium to coarse, gray, dry.		#5 Silica Sand 18.0'–20.0' BGL Screened Interval 19.0'–19.5' BGL				0.0	White Taped Tube
	20			Bentonite Seal 20.0'–24.0' BGL				0.0	
	22	**SAND,** fine to medium, light brown, dry.			1220	20-25	3.8/5.0		
		SAND, medium to coarse, light brown, dry.						0.0	
		SAND, medium to coarse, with fine gravel, dry.							
	24	**SAND,** fine, some fine gravel and coarse sand, dry.		#5 Silica Sand 24.0'–25.5' BGL Screened Interval 24.5'–25.0' BGL				NR	Blue Taped Tube
		NO RECOVERY							
		SILTY CLAY, brown, moist.						0.0	
	26	**SAND AND GRAVEL,** fine to coarse sand, fine gravel, brown-gray, moist to saturated.		Natural Collapse 25.5'–30.0' BGL	1309	25-30	2.9/5.0	0.0	
	28	**NO RECOVERY**						NR	
	30	**End of Boring**							
	32								

Driller:	**American Drilling Services**
Drilling/Sampling Method (type & size):	**3 1/4" HSA, continuous** **MacroCore sampling**
Screened Interval:	**19'-19.5'; 24.5'-25' BGL**
Screen Size:	**GeoProbe® Soil Vapor Probe**
Well Material:	**Stainless Steel**
Grout Type:	**Bentonite Seal**

Comments:
N/A - Not applicable
NR - No Recovery; PID not measured
Nylon tubing (0.25-inch ID) is attached to probe and extends to surface.

VMW-1

MACTEC
Miamisburg, Ohio Office: (937) 859-3600
Prepared By: RLB Checked By:

P:\Textron\Drawings\VMW Logs Dec08.dwg

BORING LOG / WELL CONSTRUCTION DIAGRAM

VMW-2

Client:	**Textron (former TORX Facility)**	Easting: **Not Surveyed**	Northing: **Not Surveyed**
Location:	**4403 North Old US Route 31 Rochester, Indiana (southwest of storage bldg)**	▽ Depth to 1st water (feet BGL):	**26 ft.**
		▼ Static Water Depth (feet BGL): **N/A**	Elevation: **N/A**
Project Number:	**3359 08 2450**	Date: **N/A**	
Logged By:	**W.D. Gross**	Ground Surface Elevation (feet):	**Not Surveyed**
Date Drilled:	**12/15/2008**	Top of Casing Elevation (feet):	**Not Surveyed**

GRAPHIC LOG	DEPTH (FEET)	DESCRIPTION	WELL COMPLETION DATA	WELL CONSTRUCTION INFORMATION	SAMPLE INFORMATION TIME	SAMPLE DEPTH	SAMPLE RECOVERY	PID (PPM)	COMMENTS
	0	**SILTY SAND & GRAVEL,** fill, brown, moist.		Flushmount				0.0	
	2	**NO RECOVERY**		Bentonite Seal 2.0'–4.0' BGL	1620	0-5	1.3/5.0	NR	
	4			#5 Silica Sand 4.0'–5.5' BGL Screened Interval 4.5'–5.0' BGL				NR	Red Taped Tube
	6	**SILTY SAND & GRAVEL,** fill, some clay, brown, moist.						0.0	
		SAND, fine to coarse, some fines, trace fine to coarse gravel, light brown, dry.			1629	5-10	2.0/5.0	NR	
	8	**NO RECOVERY**						NR	
	10			Bentonite Seal 5.5'–14.0' BGL					
		SAND, fine to coarse, some fines, trace fine to coarse gravel, light brown, dry grading to moist.		5/16"OD x 1/4"ID Nylon Tubing				0.0	
	12				1643	10-15	2.8/5.0	0.0	
	14	**NO RECOVERY**		#5 Silica Sand 14.0'–15.5' BGL Screened Interval 14.5'–15.0' BGL				NR	White Taped Tube
	16	**SAND,** fine to coarse, some fines, trace fine to coarse gravel, light brown, moist.						0.0	
		SILTY CLAY, brown, moist.						0.0	
		SILTY SAND, fine, light brown, dry.			1653	15-20	3.0/5.0		
	18	**NO RECOVERY**		Bentonite Seal 15.5'–23.0' BGL				NR	
	20	**SILTY SAND,** fine, light brown, dry.						0.0	
		SAND, fine to medium, some coarse sand, trace gravel, brown.			1704	20-25	3.2/5.0	0.0	
	22								
	24	**NO RECOVERY**		#5 Silica Sand 23.0'–25.8' BGL Screened Interval 23.5'–24.0' BGL				NR	Blue Taped Tube
	26	**SAND,** fine to coarse, trace fine gravel, brown, moist. Saturated at 25.5 ft.						0.0	
					1717	25-30	2.9/5.0	0.0	
	28	**NO RECOVERY**		Natural Collapse 25.8'–30.0' BGL				NR	
	30	**End of Boring**							
	32								

Driller:	**American Drilling Services**
Drilling/Sampling Method (type & size):	**3 1/4" HSA, continuous MacroCore sampling**
Screened Interval:	**4.5'-5'; 14.5'-15'; 23.5'-24' BGL**
Screen Size:	**GeoProbe® Soil Vapor Probe**
Well Material:	**Stainless Steel**
Grout Type:	**Bentonite Seal**

Comments:
N/A - Not applicable
NR - No Recovery; PID not measured
Nylon tubing (0.25-inch ID) is attached to probe and extends to surface.

VMW-2

MACTEC
Miamisburg, Ohio Office: (937) 859-3600
Prepared By: RLB Checked By: BSS

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BORING LOG / WELL CONSTRUCTION DIAGRAM

VMW-3

Client:	**Textron (former TORX Facility)**	Easting: **Not Surveyed**	Northing: **Not Surveyed**
Location:	**4366 North Old US Route 31 Rochester, Indiana**	▽ Depth to 1st water (feet BGL):	**26 ft.**
		▼ Static Water Depth (feet BGL): **N/A** Date: **N/A**	Elevation: **N/A**
Project Number:	**3359 08 2450**		
Logged By:	**R.E. Dornbusch**	Ground Surface Elevation (feet):	**Not Surveyed**
Date Drilled:	**12/16/2008**	Top of Casing Elevation (feet):	**Not Surveyed**

GRAPHIC LOG	DEPTH (FEET)	DESCRIPTION	WELL COMPLETION DATA	WELL CONSTRUCTION INFORMATION	SAMPLE INFORMATION: TIME	SAMPLE DEPTH	SAMPLE RECOVERY	PID (PPM)	COMMENTS
		TOPSOIL & SILTY CLAY, some sand, brown, moist.		Flushmount					
		SAND, fine to medium, brown, moist.							
	2	**NO RECOVERY**		Bentonite Seal 2.0'–4.0' BGL	1118	0-5	1.5/5.0	4.2	
	4			#5 Silica Sand 4.0'–5.5' BGL Screened Interval 4.5'–5.0' BGL					Red Taped Tube
		SAND, fine to medium, light brown, moist.							
	6	**SAND,** fine to coarse, trace gravel, brown, moist.							
		SAND, fine, some silt, light brown, moist.			1133	5-10	2.5/5.0	41	
	8	**NO RECOVERY**							
	10			Bentonite Seal 5.5'–14.0' BGL					
		SILT & SAND, very fine sand, light brown, moist.		5/16"OD x 1/4"ID Nylon Tubing					
	12				1144	10-15	3.1/5.0	215	
		SAND, fine to medium, light brown, moist.							
	14	**NO RECOVERY**		#5 Silica Sand 14.0'–15.5' BGL Screened Interval 14.5'–15.0' BGL					White Taped Tube
	16	**SAND,** fine to medium, light brown, moist.							
	18			Bentonite Seal 15.5'–23.0' BGL	1156	15-20	3.5/5.0	338	
		NO RECOVERY							
	20								
	22	**SAND,** fine to medium, light brown, moist.			1210	20-25	3.4/5.0	108	
	24	**NO RECOVERY**		#5 Silica Sand 23.0'–25.0' BGL Screened Interval 23.5'–24.0' BGL					Blue Taped Tube
		SAND, fine to medium, light brown, moist.							
	26	**SAND,** fine to medium, light brown, saturated.	▽	Natural Collapse 24.0'–30.0' BGL	1220	25-30	2.6/5.0	20	
	28	**NO RECOVERY**							
	30	**End of Boring**							
	32								

Driller:	**American Drilling Services**
Drilling/Sampling Method (type & size):	**3 1/4" HSA, continuous MacroCore sampling**
Screened Interval:	**4.5'-5'; 14.5'-15'; 23.5'-24' BGL**
Screen Size:	**GeoProbe® Soil Vapor Probe**
Well Material:	**Stainless Steel**
Grout Type:	**Bentonite Seal**

Comments:
N/A - Not applicable
NR - No Recovery; PID not measured
Nylon tubing (0.25-inch ID) is attached to probe and extends to surface.

VMW-3

MACTEC
Miamisburg, Ohio Office: (937) 859-3600
Prepared By: RLB Checked By: BSS

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BORING LOG / WELL CONSTRUCTION DIAGRAM

VMW-4

Client:	**Textron (former TORX Facility)**	Easting: **Not Surveyed**	Northing: **Not Surveyed**
Location:	**3791 North Old US Route 31 Rochester, Indiana**	▽ Depth to 1st water (feet BGL):	**15.4 ft.**
		▼ Static Water Depth (feet BGL): **N/A** Date: **N/A**	Elevation: **N/A**
Project Number:	**3359 08 2450**		
Logged By:	**R.E. Dornbusch**	Ground Surface Elevation (feet):	**Not Surveyed**
Date Drilled:	**12/17/2008**	Top of Casing Elevation (feet):	**Not Surveyed**

GRAPHIC LOG	DEPTH (FEET)	DESCRIPTION	WELL COMPLETION DATA	WELL CONSTRUCTION INFORMATION	SAMPLE INFORMATION: TIME	SAMPLE DEPTH	SAMPLE RECOVERY	PID (PPM)	COMMENTS
	0	**TOPSOIL & SILTY CLAY,** trace sand and gravel, brown, moist.		Flushmount					
	2	**SAND & GRAVEL,** fine to coarse, brown, moist.		Bentonite Seal 2.0'–6.5' BGL	0925	0-5	2.4/5.0	0.0	
	4	**NO RECOVERY**		5/16"OD x 1/4"ID Nylon Tubing					
	6	**SAND,** fine to medium, trace fine gravel, brown, moist.		#5 Silica Sand 6.5'–8.0' BGL Screened Interval 7.0'–7.5' BGL	0950	5-10	3.2/5.0	0.0	Red Taped Tube
	8	**NO RECOVERY**							
	10			Bentonite Seal 8.0'–13.0' BGL					
	12	**SAND,** fine to medium, brown, moist.			1005	10-15	3.4/5.0	0.0	
	14	**NO RECOVERY**		#5 Silica Sand 13.0'–15.0' BGL Screened Interval 13.5'–14.0' BGL					White Taped Tube
	16	**SAND,** fine to medium, brown, moist.							
		SAND, fine to medium, brown, saturated.			1020	15-20	2.2/5.0	0.0	
	18	**NO RECOVERY**		Natural Collapse 15.0'–20.0' BGL					
	20	**End of Boring**							
	22								
	24								
	26								
	28								
	30								
	32								

Driller:	**American Drilling Services**
Drilling/Sampling Method (type & size):	**3 1/4" HSA, continuous MacroCore sampling**
Screened Interval:	**7'-7.5'; 13.5'-14' BGL**
Screen Size:	**GeoProbe® Soil Vapor Probe**
Well Material:	**Stainless Steel**
Grout Type:	**Bentonite Seal**

Comments:
N/A - Not applicable
NR - No Recovery; PID not measured
Nylon tubing (0.25-inch ID) is attached to probe and extends to surface.

VMW-4

MACTEC
Miamisburg, Ohio Office: (937) 859-3600
Prepared By: RLB Checked By: BSS

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BORING LOG / WELL CONSTRUCTION DIAGRAM

VMW-5

Client:	**Textron (former TORX Facility)**	Easting: **Not Surveyed**	Northing: **Not Surveyed**
Location:	**3791 North Old US Route 31 Rochester, Indiana**	▽ Depth to 1st water (feet BGL):	**15.0 ft.**
		▼ Static Water Depth (feet BGL): **N/A**	Elevation: **N/A**
Project Number:	**3359 08 2450**	Date: **N/A**	
Logged By:	**R.E. Dornbusch**	Ground Surface Elevation (feet):	**Not Surveyed**
Date Drilled:	**12/17/2008**	Top of Casing Elevation (feet):	**Not Surveyed**

GRAPHIC LOG	DEPTH (FEET)	DESCRIPTION	WELL COMPLETION DATA	WELL CONSTRUCTION INFORMATION	SAMPLE INFORMATION: TIME	SAMPLE DEPTH	SAMPLE RECOVERY	PID (PPM)	COMMENTS
	0	**TOPSOIL,** trace sand and gravel, brown, moist.		Flushmount					
	2	**SAND,** fine to medium, brown, moist.		Bentonite Seal 2.0'–6.5' BGL	1215	0-5	2.0/5.0	0.0	
	4	**NO RECOVERY**		5/16"OD x 1/4"ID Nylon Tubing					
	6	**SAND,** fine to coarse, trace gravel, brown, moist.		#5 Silica Sand 6.5'–8.0' BGL Screened Interval 7.0'–7.5' BGL	1230	5-10	3.3/5.0	0.0	Red Taped Tube
	8	**NO RECOVERY**							
	10	**SAND,** fine to coarse, brown, moist.		Bentonite Seal 8.0'–13.0' BGL	1245	10-15	3.3/5.0	0.0	White Taped Tube
	12								
	14	**NO RECOVERY**		#5 Silica Sand 13.0'–15.0' BGL Screened Interval 13.5'–14.0' BGL					
	16	**SAND,** fine to coarse, brown, saturated.		Natural Collapse 15.0'–20.0' BGL	1300	15-20	2.3/5.0	0.0	
	18	**NO RECOVERY**							
	20	**End of Boring**							
	22								
	24								
	26								
	28								
	30								
	32								

Driller:	**American Drilling Services**
Drilling/Sampling Method (type & size):	**3 1/4" HSA, continuous MacroCore sampling**
Screened Interval:	**7'-7.5'; 13.5'-14' BGL**
Screen Size:	**GeoProbe® Soil Vapor Probe**
Well Material:	**Stainless Steel**
Grout Type:	**Bentonite Seal**

Comments:
N/A - Not applicable
NR - No Recovery; PID not measured
Nylon tubing (0.25-inch ID) is attached to probe and extends to surface.

VMW-5

MACTEC
Miamisburg, Ohio Office: (937) 859-3600
Prepared By: RLB Checked By:

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BORING LOG / WELL CONSTRUCTION DIAGRAM

VMW-6

Client:	**Textron (former TORX Facility)**	Easting: **Not Surveyed**	Northing: **Not Surveyed**
Location:	**4008 N Old US Route 31 Rochester, Indiana**	▽ Depth to 1st water (feet BGL):	**10.0 ft.**
		▼ Static Water Depth (feet BGL): **N/A**	Elevation: **N/A**
Project Number:	**3359 08 2450**	Date: **N/A**	
Logged By:	**R.E. Dornbusch**	Ground Surface Elevation (feet):	**Not Surveyed**
Date Drilled:	**12/17/2008**	Top of Casing Elevation (feet):	**Not Surveyed**

GRAPHIC LOG	DEPTH (FEET)	DESCRIPTION	WELL COMPLETION DATA	WELL CONSTRUCTION INFORMATION	SAMPLE INFORMATION: TIME	SAMPLE DEPTH	SAMPLE RECOVERY	PID (PPM)	COMMENTS
		TOPSOIL, trace sand, brown, moist.		Flushmount					
	2	**SAND,** fine to coarse, some silt and clay, brown, moist.		Bentonite Seal 2.0'–8.5' BGL 5/16"OD x 1/4"ID Nylon Tubing	1509	0-5	3.4/5.0	0.0	
	4	**NO RECOVERY**							
	6	**SAND,** fine to coarse, some silt and clay, brown, moist.			1520	5-10	3.4/5.0	0.0	
	8	**CLAYEY SAND,** fine, brown, moist.		#5 Silica Sand 8.5'–10.0' BGL Screened Interval 9.0'–9.5' BGL					
		NO RECOVERY							Red Taped Tube
	10								
	12	**CLAYEY SAND,** fine to medium, brown, very moist to saturated.		Natural Collapse 10.0'–15.0' BGL	1537	10-15	2.6/5.0	0.0	
	14	**NO RECOVERY**							
	16	**End of Boring**							
	18								
	20								
	22								
	24								
	26								
	28								
	30								
	32								

Driller:	**American Drilling Services**
Drilling/Sampling Method (type & size):	**3 1/4" HSA, continuous MacroCore sampling**
Screened Interval:	**9'-9.5' BGL**
Screen Size:	**GeoProbe® Soil Vapor Probe**
Well Material:	**Stainless Steel**
Grout Type:	**Bentonite Seal**

Comments:
N/A - Not applicable
NR - No Recovery; PID not measured
Nylon tubing (0.25-inch ID) is attached to probe and extends to surface.

VMW-6

MACTEC
Miamisburg, Ohio Office: (937) 859-3600
Prepared By: RLB Checked By: BSS

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BORING LOG / WELL CONSTRUCTION DIAGRAM

VMW-7

Client:	**Textron (former TORX Facility)**	Easting: **Not Surveyed**	Northing: **Not Surveyed**
Location:	**3980 N Old US Route 31 Rochester, Indiana**	▽ Depth to 1st water (feet BGL):	**10.0 ft.**
		▼ Static Water Depth (feet BGL): **N/A** Date: **N/A**	Elevation: **N/A**
Project Number:	**3359 08 2450**		
Logged By:	**R.E. Dornbusch**	Ground Surface Elevation (feet):	**Not Surveyed**
Date Drilled:	**12/18/2008**	Top of Casing Elevation (feet):	**Not Surveyed**

GRAPHIC LOG	DEPTH (FEET)	DESCRIPTION	WELL COMPLETION DATA	WELL CONSTRUCTION INFORMATION	SAMPLE INFORMATION: TIME	SAMPLE DEPTH	SAMPLE RECOVERY	PID (PPM)	COMMENTS
	2	**TOPSOIL SILTY CLAY,** trace sand, brown, moist.		Flushmount 5/16"OD x 1/4"ID Nylon Tubing					
		CLAYEY SAND, fine to coarse, brown, moist.							
	4	**NO RECOVERY**		Bentonite Seal 2.0'–4.0' BGL	0823	0-5	2.2/5.0	0.0	
				#5 Silica Sand 4.0'–5.5' BGL					
	6	**CLAYEY SAND,** fine to coarse, brown, moist.		Screened Interval 4.5'–5.0' BGL					Red Taped Tube
	8	**NO RECOVERY**		Bentonite Seal 5.5'–10.0' BGL	0836	5-10	2.6/5.0	0.0	
	10	**CLAYEY SAND,** fine to coarse, brown, saturated.							
	12	**SILTY CLAY,** trace sand, stiff, brown, moist.							
		SILTY CLAY, trace sand, trace fine gravel, stiff, gray, moist.		Natural Collapse 10.0'–15.0' BGL	0849	10-15	3.8/5.0	0.0	
	14	**NO RECOVERY**							
		End of Boring							
	16								
	18								
	20								
	22								
	24								
	26								
	28								
	30								
	32								

Driller:	**American Drilling Services**
Drilling/Sampling Method (type & size):	**3 1/4" HSA, continuous MacroCore sampling**
Screened Interval:	**4.5'-5' BGL**
Screen Size:	**GeoProbe® Soil Vapor Probe**
Well Material:	**Stainless Steel**
Grout Type:	**Bentonite Seal**

Comments:
N/A - Not applicable
NR - No Recovery; PID not measured
Nylon tubing (0.25-inch ID) is attached to probe and extends to surface.

VMW-7

MACTEC
Miamisburg, Ohio Office: (937) 859-3600
Prepared By: RLB Checked By: RJS
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BORING LOG / WELL CONSTRUCTION DIAGRAM

VMW-8

Client:	**Textron (former TORX Facility)**	Easting: **Not Surveyed**	Northing: **Not Surveyed**
Location:	**3868 N Old US Route 31 Rochester, Indiana**	▽ Depth to 1st water (feet BGL):	**19.0 ft.**
		▼ Static Water Depth (feet BGL): **N/A** Date: **N/A**	Elevation: **N/A**
Project Number:	**3359 08 2450**		
Logged By:	**R.E. Dornbusch**	Ground Surface Elevation (feet):	**Not Surveyed**
Date Drilled:	**12/18/2008**	Top of Casing Elevation (feet):	**Not Surveyed**

GRAPHIC LOG	DEPTH (FEET)	DESCRIPTION	WELL COMPLETION DATA	WELL CONSTRUCTION INFORMATION	SAMPLE INFORMATION: TIME	SAMPLE DEPTH	SAMPLE RECOVERY	PID (PPM)	COMMENTS
	0	**TOPSOIL,** trace sand, brown, moist.		Flushmount 5/16"OD x 1/4"ID Nylon Tubing Bentonite Seal 2.0'-4.0' BGL #5 Silica Sand 4.0'-5.5' BGL Screened Interval 4.5'-5.0' BGL	0933	0-5	4.0/5.0	0.0	Red Taped Tube
	2	**CLAYEY SAND,** fine to coarse, brown, moist.							
	4	**NO RECOVERY**							
	6	**SAND,** fine to coarse, brown, moist.			0942	5-10	2.9/5.0	0.0	
		CLAYEY SAND, fine to coarse, brown, moist.							
	8	**SAND,** fine to coarse, brown, moist.							
		NO RECOVERY							
	10	**SILTY CLAY,** with sand, stiff, brown, moist.			0953	10-15	4.0/5.0	0.0	
	12	**SILTY CLAY,** trace sand, trace gravel, stiff, brown, moist.		Bentonite Seal 5.0'-20.0' BGL					
	14	**NO RECOVERY**							
	16	**SILTY CLAY,** trace sand, trace gravel, stiff, gray, very moist with thin saturated sand seam.			1005	15-20	4.0/5.0	0.0	
	18								
	20	**NO RECOVERY**							
		End of Boring							
	22								
	24								
	26								
	28								
	30								
	32								

Driller:	**American Drilling Services**
Drilling/Sampling Method (type & size):	**3 1/4" HSA, continuous MacroCore sampling**
Screened Interval:	**4.5'-5' BGL**
Screen Size:	**GeoProbe® Soil Vapor Probe**
Well Material:	**Stainless Steel**
Grout Type:	**Bentonite Seal**

Comments:
N/A - Not applicable
NR - No Recovery; PID not measured
Nylon tubing (0.25-inch ID) is attached to probe and extends to surface.

VMW-8

MACTEC
Miamisburg, Ohio Office: (937) 859-3600
Prepared By: RLB Checked By: JSS

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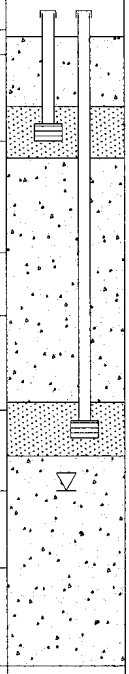
BORING LOG / WELL CONSTRUCTION DIAGRAM

VMW-9

Client:	**Textron (former TORX Facility)**	Easting: **Not Surveyed**	Northing: **Not Surveyed**
Location:	**3868 North Old US Route 31 Rochester, Indiana**	▽ Depth to 1st water (feet BGL):	**15.0 ft.**
		▼ Static Water Depth (feet BGL): **N/A** Date: **N/A**	Elevation: **N/A**
Project Number:	**3359 08 2450**		
Logged By:	**R.E. Dornbusch**	Ground Surface Elevation (feet):	**Not Surveyed**
Date Drilled:	**12/18/2008**	Top of Casing Elevation (feet):	**Not Surveyed**

GRAPHIC LOG	DEPTH (FEET)	DESCRIPTION	WELL COMPLETION DATA	WELL CONSTRUCTION INFORMATION	SAMPLE INFORMATION TIME	SAMPLE DEPTH	SAMPLE RECOVERY	PID (PPM)	COMMENTS
	0	**TOPSOIL,** trace sand, brown, moist.		Flushmount					
	2	**CLAYEY SAND,** fine to coarse, brown, moist.		Bentonite Seal 2.0'–4.0' BGL	1025	0-5	2.5/5.0	0.0	
	4	**NO RECOVERY**		#5 Silica Sand 4.0'–5.5' BGL Screened Interval 4.5'–5.0' BGL					Red Taped Tube
	6	**SAND,** fine to coarse, brown, moist.			1030	5-10	3.2/5.0	0.0	
	8	**NO RECOVERY**		Bentonite Seal 5.5'–12.5' BGL					
	10	**SAND,** fine to coarse, brown, moist.		5/16"OD x 1/4"ID Nylon Tubing	1038	10-15	2.7/5.0	0.0	
	12			#5 Silica Sand 12.5'–14.0' BGL Screened Interval 13.0'–13.5' BGL					White Taped Tube
	14	**NO RECOVERY**							
	16	**SAND,** fine to coarse, brown, saturated.		Bentonite Seal 14.0'–20.0' BGL	1050	15-20	2.2/5.0	0.0	
	18	**NO RECOVERY**							
	20	**End of Boring**							
	22								
	24								
	26								
	28								
	30								
	32								

Driller:	**American Drilling Services**
Drilling/Sampling Method (type & size):	**3 1/4" HSA, continuous MacroCore sampling**
Screened Interval:	**4.5'-5'; 13'-13.5' BGL**
Screen Size:	**GeoProbe® Soil Vapor Probe**
Well Material:	**Stainless Steel**
Grout Type:	**Bentonite Seal**

Comments:
N/A - Not applicable
NR - No Recovery; PID not measured
Nylon tubing (0.25-inch ID) is attached to probe and extends to surface.

VMW-9

MACTEC
Miamisburg, Ohio Office: (937) 859-3600
Prepared By: RLB Checked By: [illegible]

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BORING LOG / WELL CONSTRUCTION DIAGRAM

VMW-10

Client:	**Textron (former TORX Facility)**	Easting: **Not Surveyed**	Northing: **Not Surveyed**
Location:	**1082 E 375 N** **Rochester, Indiana**	▽ Depth to 1st water (feet BGL):	**12.0 ft.**
		▼ Static Water Depth (feet BGL): **N/A**	Elevation: **N/A**
Project Number:	**3359 08 2450**	Date: **N/A**	
Logged By:	**R.E. Dornbusch**	Ground Surface Elevation (feet):	**Not Surveyed**
Date Drilled:	**12/18/2008**	Top of Casing Elevation (feet):	**Not Surveyed**

GRAPHIC LOG	DEPTH (FEET)	DESCRIPTION	WELL COMPLETION DATA	WELL CONSTRUCTION INFORMATION	SAMPLE INFORMATION: TIME	SAMPLE DEPTH	SAMPLE RECOVERY	PID (PPM)	COMMENTS
	0	**TOPSOIL SILTY CLAY,** trace sand, brown, moist.		Flushmount					
	2	**SAND,** fine to coarse, brown, moist.		Bentonite Seal 2.0'–4.0' BGL	1120	0-5	3.0/5.0	0.0	Red Taped Tube
	4	**NO RECOVERY**		#5 Silica Sand 4.0'–5.5' BGL					
	6	**SAND,** fine to coarse, brown, moist.		Screened Interval 4.5'–5.0' BGL Bentonite Seal 5.5'–9.5' BGL 5/16"OD x 1/4"ID Nylon Tubing	1130	5-10	2.9/5.0	0.0	
	8	**NO RECOVERY**		#5 Silica Sand 9.5'–11.0' BGL					White Taped Tube
	10	**SAND,** fine to coarse, brown, moist.		Screened Interval 10.0'–10.5' BGL					
	12	**SAND,** fine to coarse, brown, saturated.			1136	10-15	2.6/5.0	0.0	
	14	**NO RECOVERY**		Bentonite Seal 11.0'–15.0' BGL					
	16	**End of Boring**							
	18								
	20								
	22								
	24								
	26								
	28								
	30								
	32								

Driller:	**American Drilling Services**
Drilling/Sampling Method (type & size):	**3 1/4" HSA, continuous** **MacroCore sampling**
Screened Interval:	**4.5'-5'; 10'-10.5' BGL**
Screen Size:	**GeoProbe® Soil Vapor Probe**
Well Material:	**Stainless Steel**
Grout Type:	**Bentonite Seal**

Comments:
N/A - Not applicable
NR - No Recovery; PID not measured
Nylon tubing (0.25-inch ID) is attached to probe and extends to surface.

VMW-10

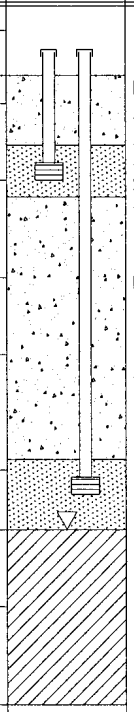
MACTEC
Miamisburg, Ohio Office: (937) 859-3600
Prepared By: RLB Checked By:

P:\Textron\Drawings\VMW Logs Dec08.dwg

BORING LOG / WELL CONSTRUCTION DIAGRAM

VMW-11

Client:	**Textron (former TORX Facility)**	Easting: **Not Surveyed**	Northing: **Not Surveyed**
Location:	**3796 North Old US Route 31 Rochester, Indiana**	▽ Depth to 1st water (feet BGL):	**15.0 ft.**
		▼ Static Water Depth (feet BGL): **N/A** Date: **N/A**	Elevation: **N/A**
Project Number:	**3359 08 2450**		
Logged By:	**R.E. Dornbusch**	Ground Surface Elevation (feet):	**Not Surveyed**
Date Drilled:	**12/18/2008**	Top of Casing Elevation (feet):	**Not Surveyed**

GRAPHIC LOG	DEPTH (FEET)	DESCRIPTION	WELL COMPLETION DATA	WELL CONSTRUCTION INFORMATION	SAMPLE INFORMATION: TIME	SAMPLE DEPTH	SAMPLE RECOVERY	PID (PPM)	COMMENTS
	0	**TOPSOIL**, trace sand, brown, moist.		Flushmount					
		CLAYEY SAND, fine to coarse, brown, moist.							
	2	**SAND**, fine to coarse, brown, moist.		Bentonite Seal 2.0'–4.0' BGL	1210	0-5	2.8/5.0	0.0	
	4	**NO RECOVERY**		#5 Silica Sand 4.0'–5.5' BGL					Red Taped Tube
	6	**SAND**, fine to coarse, brown, moist.		Screened Interval 4.5'–5.0' BGL	1222	5-10	2.8/5.0	0.0	
	8	**NO RECOVERY**		Bentonite Seal 5.5'–13.0' BGL					
	10			5/16"OD x 1/4"ID Nylon Tubing					
	12	**SAND**, fine to coarse, trace silt, brown, moist.			1235	10-15	3.3/5.0	0.0	White Taped Tube
	14	**NO RECOVERY**		#5 Silica Sand 13.0'–15.0' BGL					
	16	**SAND**, fine to coarse, brown, saturated.		Screened Interval 13.5'–14.0' BGL					
	18	**NO RECOVERY**		Natural Collapse 15.0'–20.0' BGL	1249	15-20	2.2/5.0	0.0	
	20	**End of Boring**							
	22								
	24								
	26								
	28								
	30								
	32								

Driller:	**American Drilling Services**
Drilling/Sampling Method (type & size):	**3 1/4" HSA, continuous MacroCore sampling**
Screened Interval:	**4.5'-5'; 13.5'-14' BGL**
Screen Size:	**GeoProbe® Soil Vapor Probe**
Well Material:	**Stainless Steel**
Grout Type:	**Bentonite Seal**

Comments:
N/A - Not applicable
NR - No Recovery; PID not measured
Nylon tubing (0.25-inch ID) is attached to probe and extends to surface.

VMW-11

MACTEC
Miamisburg, Ohio Office: (937) 859-3600
Prepared By: RLB Checked By:

BORING LOG / WELL CONSTRUCTION DIAGRAM

VMW-12

Client:	Textron (former TORX Facility)	Easting: Not Surveyed	Northing: Not Surveyed
Location:	972 E 375 N Rochester, Indiana	▽ Depth to 1st water (feet BGL):	22.5 ft.
		▼ Static Water Depth (feet BGL): N/A Date: N/A	Elevation: N/A
Project Number:	3359 08 2450		
Logged By:	R.E. Dornbusch	Ground Surface Elevation (feet):	Not Surveyed
Date Drilled:	12/18/2008	Top of Casing Elevation (feet):	Not Surveyed

GRAPHIC LOG	DEPTH (FEET)	DESCRIPTION	WELL COMPLETION DATA	WELL CONSTRUCTION INFORMATION	SAMPLE INFORMATION: TIME	SAMPLE DEPTH	SAMPLE RECOVERY	PID (PPM)	COMMENTS
	0	**TOPSOIL**, trace sand, brown, moist.		Flushmount					
		CLAYEY SAND, fine to coarse, brown, moist.							
	2	**SAND**, fine to coarse, trace gravel, brown, moist.			1408	0-5	1.7/5.0	0.0	
	4	**NO RECOVERY**		Bentonite Seal 2.0'–9.5' BGL					
	6	**SAND**, fine to coarse, brown, moist.		5/16"OD x 1/4"ID Nylon Tubing	1428	5-10	2.8/5.0	0.0	
	8	**NO RECOVERY**							
	10	**SAND**, fine to coarse, brown, moist.		#5 Silica Sand 9.5'–11.0' BGL Screened Interval 10.0'–10.5' BGL					Red Taped Tube
	12	**SAND**, fine to coarse, some fine gravel, brown, moist.		Bentonite Seal 11.0'–14.0' BGL	1435	10-15	3.0/5.0	0.0	
	14	**NO RECOVERY**		#5 Silica Sand 14.0'–15.5' BGL Screened Interval 14.5'–15.0' BGL					White Taped Tube
	16	**SAND**, fine to coarse, some fine gravel, brown, moist.							
		SAND, fine to coarse, brown, moist.		Bentonite Seal 15.5'–21.0' BGL	1449	15-20	2.8/5.0	0.0	
	18	**NO RECOVERY**							
	20	**SAND**, fine to coarse, trace fine gravel, brown, moist.		#5 Silica Sand 21.0'–22.5' BGL Screened Interval 21.5'–22.0' BGL					Blue Taped Tube
	22	**SAND**, fine to coarse, trace fine gravel, brown, saturated.			1503	20-25	3.0/5.0	0.0	
	24	**NO RECOVERY**		Natural Collapse 22.5'–25.0' BGL					
		End of Boring							
	26								
	28								
	30								
	32								

Driller:	American Drilling Services
Drilling/Sampling Method (type & size):	3 1/4" HSA, continuous MacroCore sampling
Screened Interval:	10'-10.5'; 14.5'-15'; 21.5'-22' BGL
Screen Size:	GeoProbe® Soil Vapor Probe
Well Material:	Stainless Steel
Grout Type:	Bentonite Seal

Comments:
N/A - Not applicable
NR - No Recovery; PID not measured
Nylon tubing (0.25-inch ID) is attached to probe and extends to surface.

VMW-12

MACTEC
Miamisburg, Ohio Office: (937) 859-3600
Prepared By: RLB Checked By:

APPENDIX C

LABORATORY REPORTS

DATA CHEM LABORATORIES, INC.

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Submitted To:

Rusty Dornbusch
Mactec Engineering & Consulting
521 Byers Road; Suite 204
Miamisburg, OH 45342

Reference Data:

Sample Location:	Torx, Rochester, IN
Sample Type:	Canister
Client Sample No.:	MTR-VMW3-V4.5-5.0 122308 through Blank
PO #:	200822965
Method Reference:	TO-15
Sample Set ID#:	08-M-7036
DATACHEM Lab No.:	08-39592 through 08-39608
Sample Receipt Date:	12/24/2008
Analysis Date:	12/29-31/2008

Sample condition was acceptable upon receipt except where noted.

The above numbered samples were analyzed for volatile organic compounds by EPA method TO-15 using an Entech 7100 Cryogenic Preconcentrator and a Hewlett-Packard GC/MS/DS operating in the scan mode.

Quantitation is based upon average response factors generated from a five-point curve. The results are provided in the enclosed data table. Results relate only to the items tested and are not blank corrected.

Mark Johnson

Data Table PPBV

Client #	MTR-VMW3-V4.5-5.0 122308	MTR-VMW3-V14.5-15.0 122308	MTR-VMW3-V23.5-24.0 122308	MTR-VMW4-V7.0-7.5 122208	RPL
DCL #	08-39592	08-39593	08-39594	08-39595	
Propene	ND	ND	ND	ND	1
Dichlorodifluoromethane	4	4	4	ND	1
Freon 114	ND	ND	ND	ND	1
Chloromethane	ND	ND	ND	ND	1
1,3-Butadiene	ND	ND	ND	ND	1
Vinyl Chloride	ND	ND	ND	ND	1
Bromomethane	ND	ND	ND	ND	1
Chloroethane	ND	ND	ND	ND	1
Trichlorofluoromethane	1	1	2	ND	1
2-Propanol	ND	ND	1	ND	1
1,1-Dichloroethene	ND	ND	ND	ND	1
Freon 113	ND	ND	ND	ND	1
Acetone	14	27	6	24	1
Carbon Disulfide	2	1	ND	ND	1
Methylene Chloride	1	ND	ND	1	1
MTBE	ND	ND	ND	ND	1
Trans 1,2-Dichloroethene	ND	ND	ND	ND	1
Vinyl Acetate	ND	ND	ND	ND	1
Hexane	1	ND	ND	2	1
1,1-Dichloroethane	ND	ND	ND	ND	1
Cis-1,2-Dichloroethene	ND	ND	ND	ND	1
2-Butanone	2	3	ND	3	1
Ethyl Acetate	ND	ND	ND	ND	1
Chloroform	ND	ND	ND	ND	1
Tetrahydrofuran	ND	ND	ND	1	1
1,1,1-Trichloroethane	ND	ND	ND	ND	1
Cyclohexane	ND	ND	ND	2	1
Carbon Tetrachloride	ND	ND	ND	ND	1
Heptane	1	ND	ND	3	1
Benzene	3	3	2	3	1
1,2-Dichloroethane	ND	ND	ND	ND	1
Trichloroethene	ND	1	4	ND	1
1,2-Dichloropropane	ND	ND	ND	ND	1
1,4 Dioxane	ND	ND	ND	ND	1
Bromodichloromethane	ND	ND	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	ND	ND	1

ND indicates not detected at or above the RPL value.

Data Table PPBV

Client #	MTR-VMW3-V4.5-5.0 122308	MTR-VMW3-V14.5-15.0 122308	MTR-VMW3-V23.5-24.0 122308	MTR-VMW4-V7.0-7.5 122208	RPL
DCL #	08-39592	08-39593	08-39594	08-39595	
4-Methyl 2-Pentanone	ND	ND	ND	ND	1
Toluene	24	32	6	19	1
trans-1,3-Dichloropropene	ND	ND	ND	ND	1
1,1,2-Trichloroethane	ND	ND	ND	ND	1
Tetrachloroethene	ND	ND	ND	ND	1
2-Hexanone	ND	ND	ND	ND	1
Dibromochloromethane	ND	ND	ND	ND	1
1,2-Dibromoethane	ND	ND	ND	ND	1
Chlorobenzene	1	3	5	1	1
Ethylbenzene	2	4	ND	3	1
M&P Xylene	7	15	ND	12	1
O Xylene	2	5	1	4	1
Styrene	ND	ND	ND	ND	1
Bromoform	ND	ND	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	1
4-Ethyl Toluene	ND	ND	ND	ND	1
1,3,5-Trimethylbenzene	ND	ND	ND	1	1
1,2,4-Trimethylbenzene	1	2	ND	3	1
1,3-Dichlorobenzene	ND	ND	ND	ND	1
1,4-Dichlorobenzene	ND	ND	ND	ND	1
Benzyl Chloride	ND	ND	ND	ND	1
1,2-Dichlorobenzene	ND	ND	ND	ND	1
1,2,4-Trichlorobenzene	ND	ND	ND	ND	1
Hexachlorobutadiene	ND	ND	ND	ND	1

ND indicates not detected at or above the RPL (reporting limit) value.

Internal Standard-Surrogate Recovery

% Rec Bromochloromethane	93	97	96	94
% Rec 1,4-Difluorobenzene	90	92	89	89
% Rec Chlorobenzene-d5	95	96	90	92
% Rec Bromofluorobenzene	105	107	105	103

Acceptable Internal Standard and Surrogate recovery range between 60-140.

Data Table PPBV

Client #	MTR-VMW4-V13.5-14.0 122208	MTR-VMW5-V7.0-7.5 122208	MTR-VMW5-V13.5-14.0 122208	MTR-VMW6-V9.0-9.5 122208	RPL
DCL #	08-39596	08-39597	08-39598	08-39599	
Propene	ND	ND	ND	**24**	**1**
Dichlorodifluoromethane	ND	ND	ND	ND	**1**
Freon 114	ND	ND	ND	ND	**1**
Chloromethane	ND	ND	ND	ND	**1**
1,3-Butadiene	ND	ND	ND	ND	**1**
Vinyl Chloride	ND	ND	ND	ND	**1**
Bromomethane	ND	ND	ND	ND	**1**
Chloroethane	ND	ND	ND	ND	**1**
Trichlorofluoromethane	ND	ND	ND	ND	**1**
2-Propanol	ND	ND	ND	ND	**1**
1,1-Dichloroethene	ND	ND	ND	ND	**1**
Freon 113	ND	ND	ND	**2**	**1**
Acetone	**4**	**4**	**3**	ND	**1**
Carbon Disulfide	ND	ND	ND	**6**	**1**
Methylene Chloride	**2**	**1**	ND	**12**	**1**
MTBE	ND	ND	ND	ND	**1**
Trans 1,2-Dichloroethene	ND	ND	ND	ND	**1**
Vinyl Acetate	ND	ND	ND	ND	**1**
Hexane	ND	ND	ND	**14**	**1**
1,1-Dichloroethane	ND	ND	ND	ND	**1**
Cis-1,2-Dichloroethene	ND	ND	ND	ND	**1**
2-Butanone	ND	ND	ND	ND	**1**
Ethyl Acetate	ND	ND	ND	ND	**1**
Chloroform	ND	ND	ND	ND	**1**
Tetrahydrofuran	ND	ND	ND	ND	**1**
1,1,1-Trichloroethane	ND	ND	ND	ND	**1**
Cyclohexane	ND	ND	ND	**7**	**1**
Carbon Tetrachloride	ND	ND	ND	ND	**1**
Heptane	ND	**1**	ND	**7**	**1**
Benzene	**1**	**2**	**1**	**5**	**1**
1,2-Dichloroethane	ND	ND	ND	ND	**1**
Trichloroethene	ND	ND	ND	ND	**1**
1,2-Dichloropropane	ND	ND	ND	ND	**1**
1,4 Dioxane	ND	ND	ND	ND	**1**
Bromodichloromethane	ND	ND	ND	ND	**1**
cis-1,3-Dichloropropene	ND	ND	ND	ND	**1**

ND indicates not detected at or above the RPL value.

Data Table PPBV

Client #	MTR-VMW4-V13.5-14.0 122208	MTR-VMW5-V7.0-7.5 122208	MTR-VMW5-V13.5-14.0 122208	MTR-VMW6-V9.0-9.5 122208	RPL
DCL #	08-39596	08-39597	08-39598	08-39599	
4-Methyl 2-Pentanone	ND	ND	ND	ND	1
Toluene	**5**	**10**	**11**	**51**	1
trans-1,3-Dichloropropene	ND	ND	ND	ND	1
1,1,2-Trichloroethane	ND	ND	ND	ND	1
Tetrachloroethene	ND	ND	ND	ND	1
2-Hexanone	ND	ND	ND	ND	1
Dibromochloromethane	ND	ND	ND	ND	1
1,2-Dibromoethane	ND	ND	ND	ND	1
Chlorobenzene	**3**	**2**	**3**	**2**	1
Ethylbenzene	ND	**1**	ND	**2**	1
M&P Xylene	ND	**3**	**1**	**7**	1
O Xylene	ND	**1**	ND	**2**	1
Styrene	ND	ND	ND	ND	1
Bromoform	ND	ND	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	1
4-Ethyl Toluene	ND	ND	ND	ND	1
1,3,5-Trimethylbenzene	ND	ND	ND	**1**	1
1,2,4-Trimethylbenzene	ND	**1**	ND	**3**	1
1,3-Dichlorobenzene	ND	ND	ND	ND	1
1,4-Dichlorobenzene	ND	ND	ND	ND	1
Benzyl Chloride	ND	ND	ND	ND	1
1,2-Dichlorobenzene	ND	ND	ND	ND	1
1,2,4-Trichlorobenzene	ND	ND	ND	ND	1
Hexachlorobutadiene	ND	ND	ND	ND	1

ND indicates not detected at or above the RPL (reporting limit) value.

Internal Standard-Surrogate Recovery

% Rec Bromochloromethane	93	95	95	97
% Rec 1,4-Difluorobenzene	87	90	89	92
% Rec Chlorobenzene-d5	88	92	92	97
% Rec Bromofluorobenzene	100	104	102	100

Acceptable Internal Standard and Surrogate recovery range between 60-140.

Data Table PPBV

Client #	MTR-VMW7-V4.5-5.0 122208	MTR-VMW8-V4.5-5.0 122208	MTR-VMW9-V4.5-5.0 122208	MTR-VMW9-V13.5-14.0 122208	RPL
DCL #	08-39600	08-39601	08-39602	08-39603	
Propene	**67**	**33**	ND	ND	1
Dichlorodifluoromethane	ND	ND	ND	ND	1
Freon 114	ND	ND	ND	ND	1
Chloromethane	ND	ND	ND	ND	1
1,3-Butadiene	ND	ND	ND	ND	1
Vinyl Chloride	ND	ND	ND	ND	1
Bromomethane	ND	ND	ND	ND	1
Chloroethane	ND	ND	ND	ND	1
Trichlorofluoromethane	ND	ND	ND	ND	1
2-Propanol	ND	ND	ND	ND	1
1,1-Dichloroethene	ND	ND	ND	ND	1
Freon 113	**2**	**2**	ND	ND	1
Acetone	ND	ND	ND	**18**	1
Carbon Disulfide	**3**	**6**	ND	**2**	1
Methylene Chloride	**14**	**16**	**2**	**2**	1
MTBE	ND	ND	ND	ND	1
Trans 1,2-Dichloroethene	ND	ND	ND	ND	1
Vinyl Acetate	ND	ND	ND	ND	1
Hexane	**10**	**5**	ND	ND	1
1,1-Dichloroethane	ND	ND	ND	ND	1
Cis-1,2-Dichloroethene	ND	ND	ND	ND	1
2-Butanone	ND	**1**	ND	ND	1
Ethyl Acetate	ND	ND	ND	ND	1
Chloroform	ND	ND	ND	ND	1
Tetrahydrofuran	ND	**2**	ND	ND	1
1,1,1-Trichloroethane	ND	ND	ND	ND	1
Cyclohexane	**6**	**4**	ND	ND	1
Carbon Tetrachloride	ND	ND	ND	ND	1
Heptane	**4**	**2**	ND	ND	1
Benzene	**4**	**3**	**2**	**2**	1
1,2-Dichloroethane	ND	ND	ND	ND	1
Trichloroethene	ND	ND	ND	ND	1
1,2-Dichloropropane	ND	ND	ND	ND	1
1,4 Dioxane	ND	ND	ND	ND	1
Bromodichloromethane	ND	ND	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	ND	ND	1

ND indicates not detected at or above the RPL value.

Data Table PPBV

Client #	MTR-VMW7-V4.5-5.0 122208	MTR-VMW8-V4.5-5.0 122208	MTR-VMW9-V4.5-5.0 122208	MTR-VMW9-V13.5-14.0 122208	RPL
DCL #	08-39600	08-39601	08-39602	08-39603	
4-Methyl 2-Pentanone	ND	ND	ND	ND	1
Toluene	**59**	**24**	**31**	**42**	1
trans-1,3-Dichloropropene	ND	ND	ND	ND	1
1,1,2-Trichloroethane	ND	ND	ND	ND	1
Tetrachloroethene	ND	ND	ND	ND	1
2-Hexanone	ND	ND	ND	ND	1
Dibromochloromethane	ND	ND	ND	ND	1
1,2-Dibromoethane	ND	ND	ND	ND	1
Chlorobenzene	ND	ND	ND	**3**	1
Ethylbenzene	**2**	ND	ND	**1**	1
M&P Xylene	**8**	**3**	ND	**4**	1
O Xylene	**3**	ND	ND	**2**	1
Styrene	ND	ND	ND	ND	1
Bromoform	ND	ND	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	1
4-Ethyl Toluene	ND	ND	ND	**1**	1
1,3,5-Trimethylbenzene	**1**	ND	ND	ND	1
1,2,4-Trimethylbenzene	**3**	**1**	ND	**2**	1
1,3-Dichlorobenzene	ND	ND	ND	ND	1
1,4-Dichlorobenzene	ND	ND	ND	ND	1
Benzyl Chloride	ND	ND	ND	ND	1
1,2-Dichlorobenzene	ND	ND	ND	ND	1
1,2,4-Trichlorobenzene	ND	ND	ND	ND	1
Hexachlorobutadiene	ND	ND	ND	ND	1

ND indicates not detected at or above the RPL (reporting limit) value.

Internal Standard-Surrogate Recovery

% Rec Bromochloromethane	101	102	103	100
% Rec 1,4-Difluorobenzene	96	97	97	93
% Rec Chlorobenzene-d5	101	98	100	94
% Rec Bromofluorobenzene	103	103	100	97

Acceptable Internal Standard and Surrogate recovery range between 60-140.

Data Table PPBV

Client #	MTR-VMW10-V4.5-5.0 122308	MTR-VMW10-V10.0-10.5 122308	MTR-VMW12-V10.0-10.5 122308	MTR-VMW12-V14.5-15.0 122308	RPL
DCL #	08-39604	08-39605	08-39606	08-39607	
Propene	ND	ND	ND	ND	1
Dichlorodifluoromethane	ND	ND	ND	ND	1
Freon 114	ND	ND	ND	ND	1
Chloromethane	ND	ND	ND	ND	1
1,3-Butadiene	ND	ND	ND	ND	1
Vinyl Chloride	ND	ND	ND	ND	1
Bromomethane	ND	ND	ND	ND	1
Chloroethane	ND	ND	ND	ND	1
Trichlorofluoromethane	ND	ND	ND	ND	1
2-Propanol	ND	ND	ND	4	1
1,1-Dichloroethene	ND	ND	ND	ND	1
Freon 113	ND	ND	ND	ND	1
Acetone	ND	ND	ND	7	1
Carbon Disulfide	ND	ND	ND	ND	1
Methylene Chloride	3	ND	ND	4	1
MTBE	ND	ND	ND	ND	1
Trans 1,2-Dichloroethene	ND	ND	ND	ND	1
Vinyl Acetate	ND	ND	ND	ND	1
Hexane	1	ND	1	2	1
1,1-Dichloroethane	ND	ND	ND	ND	1
Cis-1,2-Dichloroethene	ND	ND	ND	ND	1
2-Butanone	ND	ND	ND	ND	1
Ethyl Acetate	ND	ND	ND	3	1
Chloroform	ND	ND	ND	ND	1
Tetrahydrofuran	1	ND	ND	ND	1
1,1,1-Trichloroethane	ND	ND	ND	ND	1
Cyclohexane	ND	ND	ND	ND	1
Carbon Tetrachloride	ND	ND	ND	ND	1
Heptane	ND	ND	ND	ND	1
Benzene	1	ND	3	4	1
1,2-Dichloroethane	ND	ND	ND	ND	1
Trichloroethene	ND	ND	ND	ND	1
1,2-Dichloropropane	ND	ND	ND	ND	1
1,4 Dioxane	ND	ND	ND	ND	1
Bromodichloromethane	ND	ND	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	ND	ND	1

ND indicates not detected at or above the RPL value.

Data Table PPBV

Client #	MTR-VMW10-V4.5-5.0 122308	MTR-VMW10-V10.0-10.5 122308	MTR-VMW12-V10.0-10.5 122308	MTR-VMW12-V14.5-15.0 122308	RPL
DCL #	08-39604	08-39605	08-39606	08-39607	
4-Methyl 2-Pentanone	ND	ND	ND	ND	1
Toluene	22	8	21	9	1
trans-1,3-Dichloropropene	ND	ND	ND	ND	1
1,1,2-Trichloroethane	ND	ND	ND	ND	1
Tetrachloroethene	ND	ND	ND	ND	1
2-Hexanone	ND	ND	ND	ND	1
Dibromochloromethane	ND	ND	ND	ND	1
1,2-Dibromoethane	ND	ND	ND	ND	1
Chlorobenzene	1	2	ND	ND	1
Ethylbenzene	ND	ND	ND	ND	1
M&P Xylene	3	ND	1	1	1
O Xylene	1	ND	ND	ND	1
Styrene	ND	ND	ND	ND	1
Bromoform	ND	ND	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	1
4-Ethyl Toluene	ND	ND	ND	ND	1
1,3,5-Trimethylbenzene	ND	ND	ND	ND	1
1,2,4-Trimethylbenzene	2	ND	ND	ND	1
1,3-Dichlorobenzene	ND	ND	ND	ND	1
1,4-Dichlorobenzene	ND	ND	ND	ND	1
Benzyl Chloride	ND	ND	ND	ND	1
1,2-Dichlorobenzene	ND	ND	ND	ND	1
1,2,4-Trichlorobenzene	ND	ND	ND	ND	1
Hexachlorobutadiene	ND	ND	ND	ND	1

ND indicates not detected at or above the RPL (reporting limit) value.

Internal Standard-Surrogate Recovery

% Rec Bromochloromethane	99	98	95	96
% Rec 1,4-Difluorobenzene	95	92	91	92
% Rec Chlorobenzene-d5	96	95	93	93
% Rec Bromofluorobenzene	104	100	104	101

Acceptable Internal Standard and Surrogate recovery range between 60-140.

Data Table PPBV

Client #	08-39608				**RPL**
DCL #	Blank	Lab Blank			
Propene	ND	ND			1
Dichlorodifluoromethane	ND	ND			1
Freon 114	ND	ND			1
Chloromethane	ND	ND			1
1,3-Butadiene	ND	ND			1
Vinyl Chloride	ND	ND			1
Bromomethane	ND	ND			1
Chloroethane	ND	ND			1
Trichlorofluoromethane	ND	ND			1
2-Propanol	ND	ND			1
1,1-Dichloroethene	ND	ND			1
Freon 113	ND	ND			1
Acetone	ND	ND			1
Carbon Disulfide	ND	ND			1
Methylene Chloride	ND	ND			1
MTBE	ND	ND			1
Trans 1,2-Dichloroethene	ND	ND			1
Vinyl Acetate	ND	ND			1
Hexane	ND	ND			1
1,1-Dichloroethane	ND	ND			1
Cis-1,2-Dichloroethene	ND	ND			1
2-Butanone	ND	ND			1
Ethyl Acetate	ND	ND			1
Chloroform	ND	ND			1
Tetrahydrofuran	ND	ND			1
1,1,1-Trichloroethane	ND	ND			1
Cyclohexane	ND	ND			1
Carbon Tetrachloride	ND	ND			1
Heptane	ND	ND			1
Benzene	ND	ND			1
1,2-Dichloroethane	ND	ND			1
Trichloroethene	ND	ND			1
1,2-Dichloropropane	ND	ND			1
1,4 Dioxane	ND	ND			1
Bromodichloromethane	ND	ND			1
cis-1,3-Dichloropropene	ND	ND			1

ND indicates not detected at or above the RPL value.

Data Table PPBV

Client #	08-39608				RPL
DCL #	Blank	Blank			
4-Methyl 2-Pentanone	ND	ND			1
Toluene	ND	ND			1
trans-1,3-Dichloropropene	ND	ND			1
1,1,2-Trichloroethane	ND	ND			1
Tetrachloroethene	ND	ND			1
2-Hexanone	ND	ND			1
Dibromochloromethane	ND	ND			1
1,2-Dibromoethane	ND	ND			1
Chlorobenzene	ND	ND			1
Ethylbenzene	ND	ND			1
M&P Xylene	ND	ND			1
O Xylene	ND	ND			1
Styrene	ND	ND			1
Bromoform	ND	ND			1
1,1,2,2-Tetrachloroethane	ND	ND			1
4-Ethyl Toluene	ND	ND			1
1,3,5-Trimethylbenzene	ND	ND			1
1,2,4-Trimethylbenzene	ND	ND			1
1,3-Dichlorobenzene	ND	ND			1
1,4-Dichlorobenzene	ND	ND			1
Benzyl Chloride	ND	ND			1
1,2-Dichlorobenzene	ND	ND			1
1,2,4-Trichlorobenzene	ND	ND			1
Hexachlorobutadiene	ND	ND			1

ND indicates not detected at or above the RPL (reporting limit) value.

Internal Standard-Surrogate Recovery

% Rec Bromochloromethane	95	101		
% Rec 1,4-Difluorobenzene	91	99		
% Rec Chlorobenzene-d5	92	101		
% Rec Bromofluorobenzene	102	107		

Acceptable Internal Standard and Surrogate recovery range between 60-140.

Mark Johnson
Analyst

Reviewer

DATA CHEM LABORATORIES, INC. 08-M-7036

DataChem Laboratories
Field Chain-of-Custody Record

Page 1 of 2

Cooler Temp: _____ (Lab only)

08375

Client Contact Name & Address:	PO Number:	Project No.:	Project Name:	Sampler: (Signature)
MACTEC 521 Byers Rd Suite 204 Miamisburg, OH 45342 Phone: (937) 859-3600 Fax: (937) 859-7951 Billing Address (*if different than above*): MACTEC A/P 1105 Lakewood Pkwy Suite 300 Alpharetta, GA 30004	200822965	33590B2450	Tonx, Rochester, IN	

Sample Number	Site ID	Date	Time	08- Lab Sample Number	Preservation	Sample Type	Analysis Requested: TO-15	No. of Containers
	MTR-VMW3-V4.5-5.0 122308	12/23/08	1035-1135	39592	none	vapor	X	1
	MTR-VMW3-V14.5-15.0 122308	12/23/08	1030-1130	39593			X	1
	MTR-VMW3-V23.5-24.0 122308	12/23/08	1026-1126	39594			X	1
	MTR-VMW4-V7.0-7.5 122208	12/22/08	0913-1013	39595			X	1
	MTR-VMW4-V13.5-14.0 122208	12/22/08	0923-1023	39596			X	1
	MTR-VMW5-V7.0-7.5 122208	12/22/08	1048-1148	39597			X	1
	MTR-VMW5-V13.5-14.0 122208	12/22/08	1045-1145	39598			X	1
	MTR-VMW6-V9.0-9.5 122208	12/22/08	1404-1504	39599			X	1
	MTR-VMW7-V4.5-5.0 122208	12/22/08	1348-1448	39600			X	1
	MTR-VMW8-V4.5-5.0 122208	12/22/08	1436-1536	39601			X	1

Notes:

Relinquished by: (Signature)	Time / Date	Received by: (Signature)	Time / Date
	1038 12/24/08		
Relinquished by: (Signature)	Time / Date	Received by: (Signature)	Time / Date
Relinquished by: (Signature)	Time / Date	Received by: (Signature) 1058	Time / Date 12/24/08

Ship to: **DataChem Laboratories**
4388 Glendale - Milford Road
Cincinnati, Ohio 45242
Phone: 513.733.5336
Fax: 513.733.5347

Carrier / Airbill #

Date / Time:

DATA CHEM LABORATORIES, INC.

7036

DataChem Laboratories
Field Chain-of-Custody Record

Page 1 of 2

08376

Cooler Temp: _____ (Lab only)

Client Contact Name & Address:	PO Number:	Project No.:	Project Name:	Sampler: (Signature)
Mactec 521 Byers Rd suite 204 Miamisburg, OH 45342 Phone: (937) 859-3600 Fax: (937) 859-7951 Billing Address (*if different than above*): MACTEC A/P 1105 Lakewood Pkwy, Suite 300 Alpharetta, GA 30004	200822965	3359082450	Torx, Rochester IN	

Sample Number	Site ID	Date	Time	DS - Lab Sample Number	Preservation	Sample Type	Analysis Requested: TO-15	Analysis Requested	Analysis Requested	Analysis Requested	Analysis Requested	Analysis Requested	Analysis Requested	Analysis Requested	Analysis Requested	No. of Containers
	MTR-VMW9-V4.5-5.0 122208	12/22/08	1505-1605	39602	None	Vapor	X									1
	MTR-VMW9-V13.5-14.0 122208	12/22/08	1503-1603	39603			X									1
	MTR-VMW10-V4.5-5.0 122308	12/23/08	0815-0915	39604			X									1
	MTR-VMW10-V10.0-10.5 122308	12/23/08	0815-0915	39605			X									1
	MTR-VMW12-V10.5-10.5 122308	12/23/08	0951-1051	39606			X									1
	MTR-VMW12-V14.5-15.0 122308	12/23/08	0840-0940	39607			X									1
	Blank	—	—	39608			X									1

Notes:

Relinquished by: (Signature)	Time / Date	Received by: (Signature)	Time / Date
	1058 12/24/08		
Relinquished by: (Signature)	Time / Date	Received by: (Signature)	Time / Date
Relinquished by: (Signature)	Time / Date	Received by: (Signature)	Time / Date: 10:58 12/24/08

Ship to: **DataChem Laboratories**
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Phone: 513.733.5336
Fax: 513.733.5347

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Date / Time:

DATA CHEM LABORATORIES, INC.

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Submitted To:

Rusty Dornbusch
Mactec Engineering & Consulting
521 Byers Road; Suite 204
Miamisburg, OH 45342

Reference Data:

Sample Location:	Torx, Rochester, IN
Sample Type:	Canister
Client Sample No.:	MTR-VMW1-V24.5-25.0 121808 through MRT-VMW3-V23.5-
PO #:	200822965
Method Reference:	TO-15
Sample Set ID#:	08-M-6987
DATACHEM Lab No.:	08-39236 through 08-39243
Sample Receipt Date:	12/19/2008
Analysis Date:	12/19-26/2008

Sample condition was acceptable upon receipt except where noted.

The above numbered samples were analyzed for volatile organic compounds by EPA method TO-15 using an Entech 7100 Cryogenic Preconcentrator and a Hewlett-Packard GC/MS/DS operating in the scan mode.

Quantitation is based upon average response factors generated from a five-point curve. The results are provided in the enclosed data table. Results relate only to the items tested and are not blank corrected.

Mark Johnson

Data Table PPBV

Client #	MTR-VMW1-V24.5-25.0 121808	MTR-VMW1-V19.0-19.5121808	MTR-VMW2-V4.5-5.0121808	MTR-VMW2-V14.5-15.0121808	RPL
DCL #	08-39236	08-39237	08-39238	08-39239	
Propene	ND	ND	ND	ND	1
Dichlorodifluoromethane	**23**	**50**	ND	ND	1
Freon 114	ND	ND	ND	ND	1
Chloromethane	ND	ND	ND	ND	1
1,3-Butadiene	ND	ND	ND	ND	1
Vinyl Chloride	ND	ND	ND	ND	1
Bromomethane	ND	ND	ND	ND	1
Chloroethane	ND	ND	ND	ND	1
Trichlorofluoromethane	ND	ND	ND	ND	1
2-Propanol	ND	ND	ND	ND	1
1,1-Dichloroethene	ND	ND	ND	ND	1
Freon 113	ND	ND	ND	ND	1
Acetone	**10**	**14**	**14**	**19**	1
Carbon Disulfide	ND	ND	ND	ND	1
Methylene Chloride	ND	ND	ND	ND	1
MTBE	ND	ND	ND	ND	1
Trans 1,2-Dichloroethene	ND	ND	ND	ND	1
Vinyl Acetate	ND	ND	ND	ND	1
Hexane	ND	ND	ND	1	1
1,1-Dichloroethane	ND	ND	ND	ND	1
Cis-1,2-Dichloroethene	ND	ND	ND	ND	1
2-Butanone	**1**	ND	**3**	**4**	1
Ethyl Acetate	ND	ND	ND	ND	1
Chloroform	ND	ND	ND	ND	1
Tetrahydrofuran	ND	ND	ND	ND	1
1,1,1-Trichloroethane	ND	ND	ND	ND	1
Cyclohexane	ND	ND	ND	ND	1
Carbon Tetrachloride	ND	ND	ND	ND	1
Heptane	ND	ND	ND	**1**	1
Benzene	ND	ND	**2**	**2**	1
1,2-Dichloroethane	ND	ND	ND	ND	1
Trichloroethene	ND	ND	ND	ND	1
1,2-Dichloropropane	ND	ND	ND	ND	1
1,4 Dioxane	ND	ND	ND	ND	1
Bromodichloromethane	ND	ND	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	ND	ND	1

ND indicates not detected at or above the RPL value.

Data Table PPBV

Client #	MTR-VMW1-V24.5-25.0 121808	MTR-VMW1-V19.0-19.5121808	MTR-VMW2-V4.5-5.0121808	MTR-VMW2-V14.5-15.0121808	RPL
DCL #	08-39236	08-39237	08-39238	08-39239	
4-Methyl 2-Pentanone	ND	ND	ND	ND	1
Toluene	4	9	15	14	1
trans-1,3-Dichloropropene	ND	ND	ND	ND	1
1,1,2-Trichloroethane	ND	ND	ND	ND	1
Tetrachloroethene	ND	ND	ND	ND	1
2-Hexanone	ND	ND	ND	ND	1
Dibromochloromethane	ND	ND	ND	ND	1
1,2-Dibromoethane	ND	ND	ND	ND	1
Chlorobenzene	5	ND	1	2	1
Ethylbenzene	ND	ND	ND	2	1
M&P Xylene	1	3	2	5	1
O Xylene	2	1	1	2	1
Styrene	ND	ND	ND	ND	1
Bromoform	ND	ND	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	1
4-Ethyl Toluene	ND	ND	ND	ND	1
1,3,5-Trimethylbenzene	ND	ND	ND	ND	1
1,2,4-Trimethylbenzene	ND	ND	ND	1	1
1,3-Dichlorobenzene	ND	ND	ND	ND	1
1,4-Dichlorobenzene	ND	ND	ND	ND	1
Benzyl Chloride	ND	ND	ND	ND	1
1,2-Dichlorobenzene	ND	ND	ND	ND	1
1,2,4-Trichlorobenzene	ND	ND	ND	ND	1
Hexachlorobutadiene	ND	ND	ND	ND	1

ND indicates not detected at or above the RPL (reporting limit) value.

Internal Standard-Surrogate Recovery

% Rec Bromochloromethane	103	98	95	96
% Rec 1,4-Difluorobenzene	121	102	103	100
% Rec Chlorobenzene-d5	109	98	95	96
% Rec Bromofluorobenzene	97	108	103	106

Acceptable Internal Standard and Surrogate recovery range between 60-140.

Data Table PPBV

Client #	MTR-VMW2-V23.5-24.0121808	MTR-VMW3-V4.5-5.0121908	MTR-VMW3-V14.5-15.0121908	MTR-VMW3-V23.5-24.0121908	**RPL**
DCL #	08-39240	08-39241	08-39242	08-39243	
Propene	ND	ND	ND	ND	1
Dichlorodifluoromethane	ND	3	3	3	1
Freon 114	ND	ND	ND	ND	1
Chloromethane	ND	ND	ND	ND	1
1,3-Butadiene	ND	ND	ND	ND	1
Vinyl Chloride	ND	ND	ND	ND	1
Bromomethane	ND	ND	ND	ND	1
Chloroethane	ND	ND	ND	ND	1
Trichlorofluoromethane	ND	ND	1	1	1
2-Propanol	ND	ND	1	ND	1
1,1-Dichloroethene	ND	ND	ND	ND	1
Freon 113	ND	ND	ND	ND	1
Acetone	12	13	33	ND	1
Carbon Disulfide	ND	1	ND	ND	1
Methylene Chloride	ND	3	1	ND	1
MTBE	ND	ND	ND	ND	1
Trans 1,2-Dichloroethene	ND	ND	ND	ND	1
Vinyl Acetate	ND	ND	ND	ND	1
Hexane	2	2	1	ND	1
1,1-Dichloroethane	ND	ND	ND	ND	1
Cis-1,2-Dichloroethene	ND	ND	ND	ND	1
2-Butanone	4	3	5	ND	1
Ethyl Acetate	ND	ND	ND	ND	1
Chloroform	ND	ND	ND	ND	1
Tetrahydrofuran	ND	ND	ND	ND	1
1,1,1-Trichloroethane	ND	ND	ND	ND	1
Cyclohexane	ND	1	ND	ND	1
Carbon Tetrachloride	ND	ND	ND	ND	1
Heptane	1	3	2	ND	1
Benzene	1	5	4	ND	1
1,2-Dichloroethane	ND	ND	ND	ND	1
Trichloroethene	ND	ND	ND	3	1
1,2-Dichloropropane	ND	ND	ND	ND	1
1,4 Dioxane	ND	ND	ND	ND	1
Bromodichloromethane	ND	ND	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	ND	ND	1

ND indicates not detected at or above the RPL value.

Data Table PPBV

Client #	MTR-VMW2-V23.5-24.0121808	MTR-VMW3-V4.5-5.0121908	MTR-VMW3-V14.5-15.0121908	MTR-VMW3-V23.5-24.0121908	**RPL**
DCL #	08-39240	08-39241	08-39242	08-39243	
4-Methyl 2-Pentanone	ND	ND	ND	ND	**1**
Toluene	**9**	**31**	**37**	**8**	**1**
trans-1,3-Dichloropropene	ND	ND	ND	ND	**1**
1,1,2-Trichloroethane	ND	ND	ND	ND	**1**
Tetrachloroethene	ND	ND	ND	ND	**1**
2-Hexanone	ND	ND	ND	ND	**1**
Dibromochloromethane	ND	ND	ND	ND	**1**
1,2-Dibromoethane	ND	ND	ND	ND	**1**
Chlorobenzene	**5**	**1**	**2**	**1**	**1**
Ethylbenzene	ND	**3**	**4**	ND	**1**
M&P Xylene	**2**	**10**	**14**	ND	**1**
O Xylene	**2**	**3**	**5**	ND	**1**
Styrene	ND	ND	ND	ND	**1**
Bromoform	ND	ND	ND	ND	**1**
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	**1**
4-Ethyl Toluene	ND	ND	ND	ND	**1**
1,3,5-Trimethylbenzene	ND	ND	**1**	ND	**1**
1,2,4-Trimethylbenzene	ND	ND	ND	ND	**1**
1,3-Dichlorobenzene	ND	ND	ND	ND	**1**
1,4-Dichlorobenzene	ND	ND	ND	ND	**1**
Benzyl Chloride	ND	ND	ND	ND	**1**
1,2-Dichlorobenzene	ND	ND	ND	ND	**1**
1,2,4-Trichlorobenzene	ND	ND	ND	ND	**1**
Hexachlorobutadiene	ND	ND	ND	ND	**1**

ND indicates not detected at or above the RPL (reporting limit) value.

Internal Standard-Surrogate Recovery

% Rec Bromochloromethane	100	93	102	112
% Rec 1,4-Difluorobenzene	115	98	115	121
% Rec Chlorobenzene-d5	106	98	108	111
% Rec Bromofluorobenzene	98	110	105	103

Acceptable Internal Standard and Surrogate recovery range between 60-140.

Data Table PPBV

Client #					**RPL**
DCL #	Blank				
Propene	ND				**1**
Dichlorodifluoromethane	ND				**1**
Freon 114	ND				**1**
Chloromethane	ND				**1**
1,3-Butadiene	ND				**1**
Vinyl Chloride	ND				**1**
Bromomethane	ND				**1**
Chloroethane	ND				**1**
Trichlorofluoromethane	ND				**1**
2-Propanol	ND				**1**
1,1-Dichloroethene	ND				**1**
Freon 113	ND				**1**
Acetone	ND				**1**
Carbon Disulfide	ND				**1**
Methylene Chloride	ND				**1**
MTBE	ND				**1**
Trans 1,2-Dichloroethene	ND				**1**
Vinyl Acetate	ND				**1**
Hexane	ND				**1**
1,1-Dichloroethane	ND				**1**
Cis-1,2-Dichloroethene	ND				**1**
2-Butanone	ND				**1**
Ethyl Acetate	ND				**1**
Chloroform	ND				**1**
Tetrahydrofuran	ND				**1**
1,1,1-Trichloroethane	ND				**1**
Cyclohexane	ND				**1**
Carbon Tetrachloride	ND				**1**
Heptane	ND				**1**
Benzene	ND				**1**
1,2-Dichloroethane	ND				**1**
Trichloroethene	ND				**1**
1,2-Dichloropropane	ND				**1**
1,4 Dioxane	ND				**1**
Bromodichloromethane	ND				**1**
cis-1,3-Dichloropropene	ND				**1**

ND indicates not detected at or above the RPL value.

Data Table PPBV

Client #					RPL
DCL #	Blank				
4-Methyl 2-Pentanone	ND				1
Toluene	ND				1
trans-1,3-Dichloropropene	ND				1
1,1,2-Trichloroethane	ND				1
Tetrachloroethene	ND				1
2-Hexanone	ND				1
Dibromochloromethane	ND				1
1,2-Dibromoethane	ND				1
Chlorobenzene	ND				1
Ethylbenzene	ND				1
M&P Xylene	ND				1
O Xylene	ND				1
Styrene	ND				1
Bromoform	ND				1
1,1,2,2-Tetrachloroethane	ND				1
4-Ethyl Toluene	ND				1
1,3,5-Trimethylbenzene	ND				1
1,2,4-Trimethylbenzene	ND				1
1,3-Dichlorobenzene	ND				1
1,4-Dichlorobenzene	ND				1
Benzyl Chloride	ND				1
1,2-Dichlorobenzene	ND				1
1,2,4-Trichlorobenzene	ND				1
Hexachlorobutadiene	ND				1

ND indicates not detected at or above the RPL (reporting limit) value.

Internal Standard-Surrogate Recovery

% Rec Bromochloromethane	96			
% Rec 1,4-Difluorobenzene	98			
% Rec Chlorobenzene-d5	96			
% Rec Bromofluorobenzene	109			

Acceptable Internal Standard and Surrogate recovery range between 60-140.

Mark Johnson
Analyst

Reviewer

8 of 8

08-M-6982

DataChem Laboratories
Field Chain-of-Custody Record

Page 1 of _____

Cooler Temp: _____ (Lab only)

07694

Client Contact Name & Address:	PO Number:	Project No.:	Project Name:	Sampler: (Signature)
Master 521 Byers Rd. Suite 204 Miamisburg, OH 45342 Phone: (937) 859-3600 Fax: (937) 859-7451 Billing Address (*if different than above*): Master NP 1105 Lakewood Pkwy Suite 300 Alpharetta, GA 30004	2008229655	335908 2450 ~~335908 2450~~ (WD)	TOXX, Rochester IN	

Sample Number	Site ID	Date	Time	Lab Sample Number	Preservation	Sample Type	Analysis Requested: TO-15	No. of Containers
	MTR-VMW1-V24.5-25.0 121808	12/18/08	1153-1253	08-39236	NONE	Air-Summa Can	✓	1
	MTR-VMW1-V19.0-19.5 121808	12/18/08	1520-1620	39237	NONE	Air-Vapor	✓	1
	MTR-VMW2-V14.5-15.0 121808	12/18/08	1607-1707	39238	NONE	Air-Vapor	✓	1
	MTR-VMW2-V19.5-20.0 121808	12/18/08	1439-1539	39239	NONE	Air-Vapor	✓	1
	MTR-VMW2-V23.5-24.0 121808	12/18/08	1605-1705	39240	NONE	Air-Vapor	✓	1
	MTR-VMW3-V14.5-15.0 121908	12/19/08	0919-1019	39241	NONE	Air-Vapor	✓	1
	MTR-VMW3-V19.5-20.0 121908	12/19/08	0927-1027	39242	NONE	Air-Vapor	✓	1
	MTR-VMW3-V23.5-24.0 121908	12/19/08	0935-1035	39243	NONE	Air-Vapor	✓	1

Notes:

Relinquished by: (Signature)	Time / Date	Received by: (Signature)	Time / Date
	1800 12/19/08	Mark Johnson	12/19/08 1800
Relinquished by: (Signature)	Time / Date	Received by: (Signature)	Time / Date
Relinquished by: (Signature)	Time / Date	Received by: (Signature)	Time / Date

Ship to: **DataChem Laboratories**
4388 Glendale - Milford Road
Cincinnati, Ohio 45242
Phone: 513.733.5336
Fax: 513.733.5347

Carrier / Airbill #

Date / Time:

APPENDIX D

TABLES

Table 1

Comprehensive Summary of Vapor Monitoring Well Construction Details
Former TORX Facility, 4366 North Old US 31, Rochester, Indiana

Vapor Monitoring Well	Address	House Foundation (ie Crawl-Space, Slab, or Basement)	Basement Celing Height (feet)	Estimated Slab Thickness (inches)	Vapor Prove Screened Interval (ft. BGL)	Length of Nylon Tubing (feet)	Sand Pack Interval (inches)	"Dead Volume" of Sand Pack and Nylon Tubing (cubic inches)	Cubic Inches per stroke of hand pump	3 Purge Volumes (cubic inches)	Total Number of pumps with hand pump	Date Sampled
VMW - 1	4403 N Old US Hwy 31	Sub-grade room	8	4	19 to 19.5	30	24	294.76	2	884.28	442	12/18/2008
					24.5 to 25	35	18	228.43	2	685.30	343	12/18/2008
VMW - 2	4403 N Old US Hwy 31	Sub-grade room	8	4	4.5 to 5	15	18	216.65	2	649.96	325	12/18/2008
					14.5 to 15	25	18	222.54	2	667.63	334	12/18/2008
					23.5 to 24	34	34	412.57	2	1237.71	619	12/18/2008
VMW - 3	4366 N Old US Hwy 31	Slab	NA	Unknown	4.5 to 5	15	18	216.65	2	649.96	325	12/19/2008 12/23/2008
					14.5 to 15	25	18	222.54	2	667.63	334	12/19/2008 12/23/2008
					23.5 to 24	34	24	297.12	2	891.35	446	12/19/2008 12/23/2008
VMW - 4	3791 N Old US Hwy 31	Basement	8	4	7 to 7.5	17.5	18	218.12	2	654.37	327	12/22/2008
					13.5 to 14	24	24	291.23	2	873.68	437	12/22/2008
VMW - 5	3791 N Old US Hwy 31	Basement	8	4	7 to 7.5	17.5	18	218.12	2	654.37	327	12/22/2008
					13.5 to 14	24	24	291.23	2	873.68	437	12/22/2008
VMW - 6	4008 N Old US Hwy 31	Basement	8	4	9 to 9.5	19.5	18	219.30	2	657.91	329	12/22/2008
VMW - 7	3980 N Old US Hwy 31	Crawl-Space	NA	NA	4.5 to 5	15	18	216.65	2	649.96	325	12/22/2008
VMW - 8	3868 N Old US Hwy 31	Slab	NA	4	4.5 to 5	15	18	216.65	2	649.96	325	12/22/2008
VMW - 9	3868 N Old US Hwy 31	Slab	NA	4	4.5 to 5	15	18	216.65	2	649.96	325	12/22/2008
					13.5 to 14	24	18	221.95	2	665.86	333	12/22/2008
VMW - 10	1082 E 375 N	Crawl-Space	NA	NA	4.5 to 5	15	18	216.65	2	649.96	325	12/23/2008
					10 to 10.5	21	18	220.19	2	660.56	330	12/23/2008
VMW - 11	3796 N Old US Hwy 31	Crawl-Space	NA	NA	4.5 to 5	15	18	216.65	2	649.96	325	Frozen, NS
					13.5 to 14	24	24	291.23	2	873.68	437	Frozen, NS
VMW - 12	972 E 375 N	Basement	8	4	10 to 10.5	21	18	220.19	2	660.56	330	12/23/2008
					14.5 to 15	25	18	222.54	2	667.63	334	12/23/2008
					21.5 to 22	32	18	226.67	2	680.00	340	Blockage, NS

Notes:

"Dead Volume" Purge formula = $([(PI*R^2)*SPT]*0.3)+((PI*r^2)*LT)$, R = Radius of Borehole = 3.5 inches, r = radius of tubing = 0.125 inches, SPT = Sand pack interval (thickness) in inches, LT = Length of Tubing in inches, and Porosity of #5 sand in borehole annulus estimated to be 0.3.

Basement information based on conversation with resident.

Concrete slab thickness estimate based on standard building practices.

"NA" indicates Not Applicable

"NS" indicates Not Sampled

PB:WDG
CB:PB

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Table 2

Comprehensive Summary of Volitile Organic Compounds Detected in the Soil Gas Collected from the Vapor Monitoring Wells
Former TORX Facility, Rochester, Indiana

(Results reported in parts per billion by volume, ppbv)

Vapor Monitoring Well and Screen Interval (Ft BGS)	Sample ID	Sample Date	Acetone	Benzene	2-Butanone	Carbon Disulfide	Chlorobenzene	Cyclohexane	Dichlorodifluoromethane	Ethyl Acetate	Ethylbenzene	4-Ethyl Toluene	Freon 113	Heptane	Hexane	Methylene Chloride	2-Propanol (Isopropyl Alcohol)	Propene (Propylene)	Tetrahydrofuran	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Toluene	Total Xylenes
VMW-1 (19-19.5)	MTR-VMW1-V19.0-19.5 121808	12/18/08	14	<1	<1	<1	<1	<1	50	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	9	3
VMW-1 (24.5-25)	MTR-VMW1-V24.5-25.0 121808	12/18/08	10	<1	1	<1	5	<1	23	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	4	1
VMW-2 (4.5-5)	MTR-VMW2-V4.5-5.0 121808	12/18/08	14	2	3	<1	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	15	2
VMW-2 (14.5-15)	MTR-VMW2-V14.5-15.0 121808	12/18/08	19	2	4	<1	2	<1	<1	<1	2	<1	<1	1	1	<1	<1	<1	<1	<1	<1	1	<1	14	5
VMW-2 (23.5-24)	MTR-VMW2-V23.5-24.0 121808	12/18/08	12	1	4	<1	5	<1	<1	<1	<1	<1	<1	1	2	<1	<1	<1	<1	<1	<1	<1	<1	9	2
VMW-3 (4.5-5)	MTR-VMW3-V4.5-5.0 121908	12/19/08	13	5	3	1	1	1	3	<1	3	<1	<1	3	2	3	<1	<1	<1	<1	<1	<1	<1	31	13
	MTR-VMW3-V4.5-5.0 122308	12/23/08	14	3	2	2	1	<1	4	<1	2	<1	<1	1	1	1	<1	<1	<1	<1	1	1	<1	24	9
VMW-3 (14.5-15)	MTR-VMW3-V14.5-15.0 121908	12/19/08	33	4	5	<1	2	<1	3	<1	4	<1	<1	2	1	1	1	<1	<1	<1	1	<1	1	37	19
	MTR-VMW3-V14.5-15.0 122308	12/23/08	27	3	3	1	3	<1	4	<1	4	<1	<1	<1	<1	<1	<1	<1	<1	1	1	2	<1	32	20
VMW-3 (23.5-24)	MTR-VMW3-V23.5-24.0 121908	12/19/08	<1	<1	<1	<1	1	<1	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	3	1	<1	<1	8	<1
	MTR-VMW3-V23.5-24.0 122308	12/23/08	6	2	<1	<1	5	<1	4	<1	<1	<1	<1	<1	<1	<1	1	<1	<1	4	2	<1	<1	6	1
VMW-4 (7-7.5)	MTR-VMW4-V7.0-7.5 122208	12/22/08	24	3	3	<1	1	2	<1	<1	3	<1	<1	3	2	1	<1	<1	1	<1	<1	3	1	19	16
VMW-4 (13.5-14)	MTR-VMW4-V13.5-14.0 122208	12/22/08	4	1	<1	<1	3	<1	<1	<1	<1	<1	<1	<1	<1	2	<1	<1	<1	<1	<1	<1	<1	5	<1
VMW-5 (7-7.5)	MTR-VMW5-V7.0-7.5 122208	12/22/08	4	2	<1	<1	2	<1	<1	<1	1	<1	<1	1	<1	1	<1	<1	<1	<1	<1	1	<1	10	4
VMW-5 (13.5-14)	MTR-VMW5-V13.5-14.0 122208	12/22/08	3	1	<1	<1	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	11	1
VMW-6 (9-9.5)	MTR-VMW6-V9.0-9.5 122208	12/22/08	<1	5	<1	6	2	7	<1	<1	2	<1	2	7	14	12	<1	24	<1	<1	<1	3	1	51	9
VMW-7 (4.5-5)	MTR-VMW7-V4.5-5.0 122208	12/22/08	<1	4	<1	3	<1	6	<1	<1	2	<1	2	4	10	14	<1	67	<1	<1	<1	3	1	59	11
VMW-8 (4.5-5)	MTR-VMW8-V4.5-5.0 122208	12/22/08	<1	3	1	6	<1	4	<1	<1	<1	<1	2	2	5	16	<1	33	2	<1	<1	1	<1	24	3
VMW-9 (4.5-5)	MTR-VMW9-V4.5-5.0 122208	12/22/08	<1	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2	<1	<1	<1	<1	<1	<1	<1	31	<1
VMW-9 (13.5-14)	MTR-VMW9-V13.5-14.0 122208	12/22/08	18	2	<1	2	3	<1	<1	<1	1	1	<1	<1	<1	2	<1	<1	<1	<1	<1	2	<1	42	6
VMW-10 (4.5-5)	MTR-VMW10-V4.5-5.0 122208	12/22/08	<1	1	<1	<1	1	<1	<1	<1	<1	<1	<1	<1	1	3	<1	<1	1	<1	<1	2	<1	22	4
VMW-10 (10-10.5)	MTR-VMW10-V10.0-10.5 122208	12/22/08	<1	<1	<1	<1	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	8	<1
VMW-11 (4.5-5)	Not Sampled[1]	12/22/08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
VMW-11 (13.5-14)	Not Sampled[1]	12/22/08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
VMW-12 (10-10.5)	MTR-VMW12-V10.0-10.5 122208	12/22/08	<1	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	<1	<1	<1	<1	<1	<1	<1	<1	21	1
VMW-12 (14.5-15)	MTR-VMW12-V14.5-15.0 122208	12/22/08	7	4	<1	<1	<1	<1	<1	3	<1	<1	<1	<1	2	4	4	<1	<1	<1	<1	<1	<1	9	1
VMW-12 (21.5-22)	Not Sampled[2]	12/22/08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Blank	Blank	12/22/08	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	IDEM Residential Soil-Gas Screening Levels [3]		140,000	78	17,000	23,000	1,300	180,000	NAL	91,000	24,000	NAL	NAL	NAL	5,900	1,200	NAL	NAL	NAL	22	NAL	130	130	140,000	2,400

Notes:
Only compounds detected at concentrations greater than the laboratory detection limit (1.0 ppbv) are listed in this table.
Bolded Concentration exceeds laboratory detection limit "Ft BGS" indicates Feet Below Ground Surface "NAL" indicates there is no IDEM Soil Gas Screening Level for the compound

[1] VMW-11 wells could not be sampled due to ice build-up in protective cover; Analytical results are recorded as "NS"

[2] VMW-12 (21.5-22) could not be sampled due to blockage in vapor well tubing; Analytical results are recorded as "NS"

[3] Screening Levels taken from IDEM Draft Vapor Intrusion Pilot Program Study; Chlorinated Compounds from "Table 7 Residential Screening Levels for Chlorinated Compounds", Non-Chlorinated compound screening levels from "Table 1 Screeing Levels for Benzene" or derived from multiplying 100 times the compound's respective residential, 30 year, indoor air action level in Table 2 (see Section 5.0, Page 8-9 of IDEM text).

PB:WDG
CP:PJS