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January 4, 2010

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

RE: Phase 2 Further Site Investigation Work Plan
TORX Facility, 4366 North Old US Route 31, Rochester, Indiana
MACTEC Project Number 3359-09-2469

Dear Mr. Houppert:

Enclosed, please find two paper copies and one CD of the Phase 2 Further Site Investigation Work Plan prepared for the TORX Facility, 4366 North Old US Route 31, Rochester, Indiana. We would like to receive your comments on this work plan at your earliest convenience. The investigation is planned to commence beginning January 26, 2010.

If you have any questions regarding this report, please contact me or Mr. Jamie Schiff at 401-457-2422.

Sincerely,

MACTEC ENGINEERING AND CONSULTING, INC.

Paul J. Stork

MACTEC Electronic Signature

Paul J. Stork
Project Manager

MACTEC Electronic Signature

Dayne M. Crowley, PG
Chief Scientist

Authorized by attached email
Laura Stirban, LPG
Project Manager

Enclosures

Cc: Mr. Jamie Schiff (Textron, Inc.)

Marhelski, Megan

From: Stirban, Laura
Sent: Monday, January 04, 2010 1:46 PM
To: Stork, Paul; Crowley, Dayne
Cc: Marhelski, Megan
Subject: Phase 2 FSI Work Plan

This e-mail is intended to acknowledge that I have reviewed and approved the Phase 2 FSI Work Plan for the Torx facility. I will sign the report upon return to the office on January 6, 2010.

Laura Stirban

FILE COPY

PHASE 2
FURTHER SITE INVESTIGATION WORK PLAN

TORX FACILITY
4366 NORTH OLD US HIGHWAY 31
ROCHESTER, INDIANA

Prepared for:

TEXTRON, Inc.

Prepared by:

MACTEC Engineering and Consulting, Inc.

Miamisburg, Ohio

January 4, 2010

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1.0 INTRODUCTION

This Investigation Work Plan has been prepared by MACTEC Engineering & Consulting, Inc. (MACTEC) to describe the additional phase of the Further Site Investigation work (Phase 2 FSI) to complete the delineation of the nature and extent of VOCs in soil and groundwater beneath the TORX facility in Rochester, Indiana (Site) and surrounding downgradient properties located east and southeast of the Site. In addition, this plan details the source investigation to be performed on the TORX facility and the vapor intrusion investigations that will be conducted at the TORX facility and at 4163 North Old US Highway 31.

This work is being conducted in accordance with the Indiana Department of Environmental Management (IDEM) Risk Integrated System of Closure (RISC) User Guide. This Investigation Work Plan describes the soil, groundwater, and vapor sample collection activities that will be conducted to define the nature and extent of volatile organic compounds (VOCs) in the subsurface.

1.1 PROJECT IDENTIFICATION

Facility Information

- Site Name: TORX facility
- State Cleanup Site Number: 7100149
- Mailing Address: 4366 North Old US Highway 31, Rochester, Indiana 46975
- Telephone Number: Contact Mr. Jamieson Schiff, Textron, Inc, 40 Westminster Street, Providence, RI 02903 (401) 457-2422

A site location map is attached as Figure 1.

Current Owner Information

- Current Owner/Operator Name: Acument Global Technologies, Camcar LLC-Rochester Operations
- Mailing Address: 4366 North Old US Highway 31, Rochester, Indiana 46975
- Telephone Number: (574) 223-3131

2.0 SITE BACKGROUND

This section of the Investigation Work Plan describes the Site history, including a property description and summary of the historical manufacturing processes, hazardous materials use, and previous environmental investigations. In addition, this section includes a description of Site geographic and geologic information.

2.1 SITE DESCRIPTION

The Site, which occupies approximately 96 acres to the west of North Old US Highway 31 and to the south of Route E 450 N, is located at 4366 North Old US Highway 31, in Rochester, Fulton County, Indiana. The Site is comprised of one large production building, a parking lot east of the plant building, and a pond/lagoon located west of the plant building and north of the parking lot. The Site features are shown on Figure 2. Two auxiliary buildings are located south of the parking lot. The size of the production facility is approximately 78,000 square feet. The former main water supply was provided by an 8-inch supply well located east of the production building along Old US Highway 31. Water is currently supplied to the Site from two production wells located west of the production building. Waste water is processed through a treatment system and discharged to a septic system located north of the production building. The Site is currently operated by Acument Global Technologies/Camcar, LLC who produces a similar product as had been historically manufactured at this Site.

2.1.1 Surrounding Properties

The Site is located in an area mixed with commercial and residential property uses. Figure 3 presents the location of the Site and surrounding properties. Nearby property usage is presented below according to geographic location with respect to the Site: north, east, south, and west.

North: North of the Site across Route E 450 N and west of North Old US Highway 31 is the former Fulton County Landfill, which is now closed.

East: The Site fronts North Old US Highway 31 to the east. Across North Old Highway 31 is a mix of industrial and residential properties.

South: Approximately 1,000 feet south of the Site along Route E 425 N are single-family residential properties.

West: West of the Site and wastewater lagoon is a wooded area, contained within the Site boundaries. The wooded area extends west to new US Highway 31.

2.1.2 Geographic Information

The Site is located in Fulton County, Indiana. The *Rochester, Indiana Quadrangle* indicates that the highest elevation at the Site is approximately 875 feet MSL near the north central portion of the Site, and that the topographic surface east of that point slopes to the east toward North Old US Highway 31. West and south of the 875 foot MSL high point, the land slopes to the south. Surface water and groundwater follows regional topography and flows east/southeast toward the Tippecanoe River, located approximately 4,900 feet southeast of the Site.

2.1.3 Geologic Information

The TORX facility is located within the Northern Lake and Moraine Physiographic Region, at the border of the Steuben Morainal Lake Area and the Kankakee Outwash and Lacustrine Plain. The bedrock underlying the Site consists of limestone and dolomite of the Lower Devonian Traverse and Detroit River formations. Bedrock dips northeastward into the Michigan basin.

Several soil investigations have been completed at the Site that have more thoroughly characterized Site geology. The surface of the bedrock exists between 95 feet below ground surface near well nest MW-39 to 208 feet below ground surface near well MW-33 (Figure 4). Unconsolidated material, of primarily glacial and glaciofluvial origin overlies the bedrock. The unconsolidated sediments beneath the Site and surrounding area consist of interbedded coarse-grained, permeable sediments (sands and gravels) and fine-grained, low permeable sediments (silts and clays) that overlie the limestone bedrock. Generally, the fine-grained deposits appear to be discontinuous. A relatively continuous, fine-grained unit is located across a large portion of the study area at the bedrock surface. The coarse-grained units are thickest near the Tippecanoe River (between 70 feet and 100 feet thick) and beneath the Site (between 120 feet and 130 feet thick). The coarse-grained units consist primarily of fine to coarse sands with occasional gravel. The thickest fine-grained units were identified in the vicinity of the Eastern Pond (maximum thickness of 32 feet) and between the Site and the Tippecanoe River west of North Old US Highway 31 (maximum thickness of 50 feet). The fine-grained units consist primarily of clay (sandy) and silts (clayey/sandy).

Numerous abandoned and active sand and gravel mining operations are located within a half-mile radius of the Site.

2.1.4 Hydrogeology

Groundwater near the Site is primarily withdrawn from unconsolidated aquifers of sand and gravel. Domestic and industrial wells near the Site tend to be drilled to depths between 50 and 170 feet deep. Groundwater generally exists under semi-confined conditions, although some areas where groundwater is unconfined are common. The regional hydraulic gradient was expected to be south-southwestward toward the Tippecanoe River; however, subsequent testing of monitoring wells installed at the TORX facility indicated an east-southeasterly direction of groundwater flow. The identified direction of groundwater flow is generally to the southeast. However, the shallow overburden aquifer also has a dominant easterly component.

Excluding well MW-7 (which is the monitoring well located furthest to the northwest), the depth to the groundwater in the overburden aquifer ranges from 3 feet above ground surface (artesian conditions) along the western side of the Eastern Pond to approximately 37 feet below ground along E 450N (MW-18 well nest). Static water levels exist between 748 to 804 feet MSL.

The sand and gravel aquifers underlying the Site are currently utilized as domestic and industrial water sources. During the Further Site Investigation (MACTEC, 2009), two high capacity wells were identified on the Site, seven high capacity wells were identified within 2-miles of the Site, and 92 low volume wells were identified within 1-mile of the Site (Figure 5). There were no records for municipal wells within 2-miles of the Site.

2.2 SITE HISTORY

The Site was used to manufacture fasteners since about 1946. The Site was operated by Textron from mid-1950's to 2006 when the facility was purchased by Acument Global Technologies/Camcar, LLC. Inside the production facility is a production line where fasteners have been made. The facility did not conduct plating operations; therefore, any parts which required metal finishing were sent off-site for processing. Inside the production area, the facility also included a parts washer and heat treatment area. As documented in the 1988 Preliminary Site Inspection Report, the facility discharged approximately 125,000 gallons per day of wastewater to the on-site pond/lagoon (Process Engineering Group, Inc.

1988).

TCE has reportedly not been used at the facility since 1968. According to the 1988 Site Assessment/Hydrogeological Assessment Report, at the time of the initial subsurface investigations in 1987, the following products were used on-site.

- NuKote Thinner (1,1,1-trichloroethane [1,1,1-TCA])
- Auto Blanket Wash (tetrachloroethene [PCE])
- Offset roller cleaner (fluorotrichloromethane)
- Ordnance Oil 300 cutting oil (extreme pressure additive)
- Deveco 220 cleaner (caustic)
- Isopropyl alcohol
- Methanol
- Lube (methylene chloride)
- Extruding oil (extreme pressure additive and sulfurized oil)
- Parts washer (glycol ethers)
- Tap magic cutting fluid (1,1,1-TCA)

2.3 PREVIOUSLY COMPLETED INVESTIGATIONS

Since 1986, numerous investigations have been performed at the Site. Results of previous investigations performed prior to the 2009 FSI are summarized in the Investigation Work Plan prepared by MACTEC and submitted to IDEM in January 2009. Between 1986 and 2008, samples have been collected from the process wastewater, the on-site pond (surface water and sludge), 15 on-site monitoring wells, on-site production wells, nearby private drinking water wells, soils near the former degreaser pit and on-site pond, 7 off-site monitoring wells, soil gas downgradient of monitoring wells MW-6B and MW-6C (soil gas samples), and near the Eastern Pond (discrete groundwater samples).

Historically, the chemicals of concern detected in the samples submitted for laboratory analyses have been cis-1,2-DCE, TCE, and vinyl chloride. Table 1 summarizes the results of the annual groundwater sampling events performed between 2004 and 2008. Table 2 summarizes the results of the potable water samples collected after 2003. Remediation efforts that have been completed to date include the removal of approximately 19,000 tons of sludge and soil excavated from the on-site pond. Most recent Site investigation activities consisted of a vapor intrusion investigation and groundwater investigation. Results of these recent investigations are summarized in the following subsections.

2.3.1 Vapor Intrusion Investigation

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 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 was considered incomplete and indoor air sampling at the residences was not performed. The locations of the vapor monitoring wells are shown on Figure 4, and the laboratory results are summarized on Table 3.

The vapor intrusion pathway was not evaluated for the property at 4163 Old North US 31 due to lack of access.

2.3.2 Further Site Investigation (MACTEC, 2009)

As part of the Further Site Investigation, two aquifers (overburden and bedrock), and the Eastern Pond were evaluated for VOCs and/or select metals between December 2008 and June 2009. The identified direction of groundwater flow is generally to the southeast. However, the shallow overburden aquifer also has a dominant easterly component. As a result of the easterly component and the measured vertical hydraulic gradients, the detected VOC plume migrates east toward the Eastern Pond, and then migrates south toward the Tippecanoe River.

First FSI Monitoring Event

The following Site-related VOCs were detected at concentrations greater than corresponding USEPA MCLs in one or more groundwater samples during overburden sampling activities.

- 1,1-DCE
- cis-1,2-DCE
- TCE
- Vinyl chloride

VOCs were not detected in the deep overburden monitoring wells or in the bedrock monitoring wells. Metals were not detected at concentrations greater than USEPA MCLs in the groundwater samples collected from the overburden or bedrock aquifer. The locations of the monitoring wells are shown on Figure 4. The results of the sampling are summarized in Table 4 (Overburden VOCs), Table 5 (Overburden Metals), and Table 6 (Bedrock VOCs).

Drinking Water Monitoring

Between January and June 2009, drinking water samples were collected from 15 residential wells at the request of the USEPA and/or property owners and analyzed for VOCs. The samples were collected at the following street addresses.

- 4910 North Old US Highway 31 (Map ID# 65)
- 4909 North Old US Highway 31 (Map ID# 64)
- 4833 North Old US Highway 31 (Map ID# 69)
- 4690 North Old US Highway 31 (Map ID# 66)
- 4016 North Old US Highway 31 (Map ID# 18)
- 1302 E 350N (Map ID# 35)
- 60 E 375N (Map ID# 49)
- 343 E 375N (Map ID# 38)
- 501 E 425N (Map ID# 11)
- 581 E 425N (Map ID# 15)
- 719 E 425N (Map ID# 16)
- 116 E 450N (Map ID# 54)
- 1019 E 450N (Map ID# 79)
- 120/128 E 450N (Map ID# 55)
- 1995 E 450N (Map ID# 84)

The residential well locations are shown on Figure 5. VOCs were not detected in the drinking water samples collected from the 15 residential wells. The property addresses, sample collection dates, and analytical results are summarized in Table 2.

In addition, between January and June 2009, quarterly drinking water samples were collected from the residential properties that have previously tested positive for Site related-VOCs and analyzed for VOCs .

The following properties previously tested positive for VOCs and have treatment systems.

- 3597 North Old US Highway 31 (Map ID# 34)
- 3791 North Old US Highway 31 (Map ID# 30)
- 1082 E 375N (Map ID# 25)
- 3796 North Old US Highway 31 (Map ID# 24)
- 3842 North Old US Highway 31 (Map ID# 23)
- 3868 North Old US Highway 31 (Map ID# 22)

These six properties currently have whole house water treatment systems that remove the VOCs from the potable water prior to distribution within the home. Two samples were collected from each location: one pretreatment and one post-treatment. Vinyl chloride was detected in the pre-treatment drinking water samples collected from five of the six residential wells, and cis-1,2-DCE was detected in the pre-treatment drinking water sample collected from one of the six residential well. No VOCs were detected in the post-treatment samples. The post-treatment samples are representative of water used in those residences. The data indicate the treatment systems are effectively removing VOCs. The property addresses, sample collection dates, and analytical results are summarized in Table 7.

Eastern Pond Evaluation

Cis-1,2-dichloroethene (cis-1,2-DCE) was the only Site-related VOC detected in the surface water and sediment samples collected from the Eastern Pond. The surface water detection was less than the USEPA MCL, which is less than the ambient water quality criterion for this compound, and the sediment detection was less than the Risk Integrated System of Closure (RISC) residential standard for soil. The sample locations are shown on Figure 6.

2.3.3 Second FSI Monitoring Event –2009

The second FSI monitoring event was completed on September 4, 2009. Groundwater samples were collected from the 104 monitoring wells screened in the overburden aquifer, the six monitoring wells screening in the bedrock aquifer, and from the potable water well located at 4375 North Old US Highway 31. Prior to purging the potable water well at 4375 North Old US Highway 31, the well pump and associated piping and wiring were removed.

All samples were analyzed for VOCs using USEPA Method SW8260B. In addition, the groundwater samples collected from the following wells were also analyzed for dissolved and total metals (cadmium, chromium, copper, lead) using USEPA Method SW6020A.

MW-18(38.6)
MW-18(63)
MW-18(164)
MW-19(33)
MW-19(53)
MW-19(118)
MW-20(35)
MW-20(51)
MW-20(124)
MW-20(155)
MW-21(40.2)
MW-21(128)
MW-21(155.3)
MW-22(37)
MW-22(67.7)
MW-22(130.7)

Total and dissolved metals were not detected at concentrations greater than the laboratory detection limits, which ranged from 0.002 milligrams per liter (mg/l) to 0.005 mg/l.

Thirteen VOCs were detected in at least one groundwater sample collected from the overburden monitoring wells. The following VOCs were detected at concentrations greater than corresponding USEPA MCLs in one or more of the groundwater samples collected from the overburden monitoring wells.

- 1,1-DCE
- cis-1,2-DCE
- TCE
- Vinyl chloride

In addition, vinyl chloride was detected in the primary and duplicate samples collected from the potable water well located at 4375 North Old US Highway 31 at concentrations greater than the USEPA MCL and the IDEM industrial RISC standard. The results of the second FSI monitoring event are summarized in Table 4 (Overburden VOCs), Table 5 (Overburden Metals), and Table 6 (Bedrock VOCs).

The most recent VOC concentrations detected in the media samples collected since 2008 are summarized in Figure 7 (groundwater and drinking water) and Figure 8 (sediment, surface water, and soil gas).

3.0 STATEMENT OF WORK

This section of the Work Plan describes the investigation objectives and the proposed investigation schedule.

3.1 INVESTIGATION OBJECTIVES

The objective of this investigation is to fully characterize the nature and extent of Site-related VOCs in soil and groundwater. The overall goal of the Phase 2 FSI is to accomplish the following

- Evaluate the VOC concentrations in the source areas (former degreaser, former septic areas, former dry wells, and within the former footprint of the on-site pond located to the west of the TORX production building)
- Define the southern and southeastern extents of the groundwater plume originating from the TORX facility
- Evaluate the seasonal variations in groundwater levels and VOC concentrations (Third and Fourth Groundwater Monitoring Event)
- Evaluate the distribution of VOCs in groundwater near the potable water well located at 4375 North Old US Highway 31 (property purchased by Textron)
- Evaluate the potential for vapor intrusion at the Site and at the property located at 4163 North Old US Highway 31
- Abandon the potable well located at 4377 North Old US Highway 31 to prevent the potential for VOCs to migrate into the bedrock aquifer

Previous investigations have identified two potential source areas of VOC contamination in soil and groundwater: 1) a former degreaser pit that was located within the production building and was abandoned in 1968; and 2) the pond located to the west of the TORX production building (on-site pond). In addition to the previously identified potential sources, the following potential sources will be investigated: (1) former north septic system located immediately north of the manufacturing building; (2) former south septic system located north of well nest MW-9; and (3) former dry wells located in the southern portion of the manufacturing building and to the west of the northern portion of the manufacturing building. The potential sources are shown on Figure 2.

3.2 SCOPE OF WORK

The following activities will be completed during the Phase 2 FSI.

1. Health and safety plan preparation
2. Soil boring installation, soil collection, and vertical groundwater profiling

3. Field screening measurements and soil sample submittal
4. Monitoring well installation
5. Monitoring well sampling (Third and Fourth FSI Monitoring Event)
6. Vapor intrusion investigation
7. Potable water well abandonment

3.3 CONTRACTOR INFORMATION

At the present time, MACTEC is in the process of soliciting bids from drilling contractors. Copies of the bid documents are included as Appendix A to this document. Following evaluation of the bids and contractor selection, MACTEC will submit to IDEM of the name, address, telephone number, and qualifications of the selected drilling contractor.

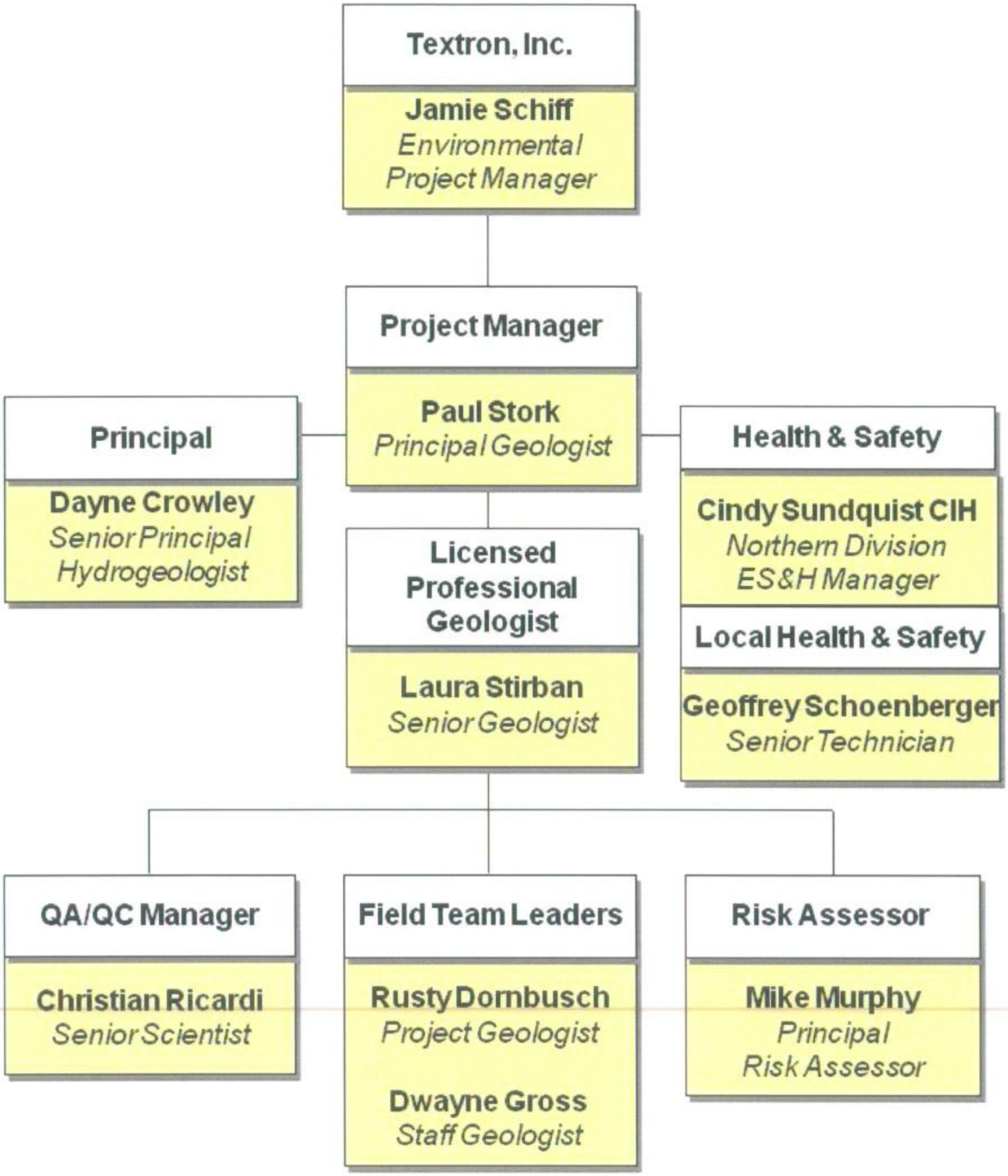
MACTEC will contract Territorial Engineering LLC (Territorial) in Walkerton, Indiana to survey horizontal and vertical control coordinates of the newly-installed monitoring well locations. Territorial performed the survey work for the initial FSI.

MACTEC's field investigation will be directed by Ms. Laura Stirban, L.P.G. and Mr. Paul Stork. Ms. Stirban is a licensed Professional Geologist in the State of Indiana. Mr. Stork has over 22 years experience in the performance of subsurface investigations in glacial terrains. Ms. Stirban's and Mr. Stork's contact information is as follows.

Ms. Laura Stirban
46850 Magellan Dr.
Novi, MI 48377
(248) 926-4008, ext 3056

Mr. Paul Stork
521 Byers Rd, Ste 204
Miamisburg, OH 45342
(937) 859-3600, ext 223

The following is an organizational chart for the Phase 2 FSI investigation.



3.4 SCHEDULE

The third FSI monitoring event commenced during the first week of December 2009. Drilling activities will begin once IDEM has approved this Work Plan. MACTEC anticipates that the drilling and well installation activities will require approximately 30 calendar days to complete.

The vapor intrusion investigations will occur during the drilling activities. We anticipate approximately six working days will be required for completion of the vapor intrusion investigation at each location.

Two weeks following completion of the drilling activities, the fourth FSI monitoring event will be performed. It is anticipated that the fourth FSI monitoring event will be completed in three weeks. The off-site laboratory, analytical results from the groundwater monitoring wells, data validation, and entry into a database will take approximately 6 to 10 weeks to complete. The proposed schedule is presented in Appendix B.

4.0 TECHNICAL APPROACH

Soil, groundwater, soil vapor, and indoor/outdoor air sampling will be performed to further evaluate the nature and extent of contamination. Results of the field investigation will be included in the Phase 2 FSI Report, which will be submitted to Textron and IDEM.

4.1 HEALTH AND SAFETY PLAN DEVELOPMENT

Prior to mobilizing to the Site, MACTEC will prepare a Site-specific health and safety plan to govern our sampling activities. We have assumed that Level D personnel protective equipment (PPE) will be appropriate for all field work. In addition, MACTEC will contact Indiana 811 and request that member utilities mark their lines in the vicinity of the proposed soil borings. A MACTEC representative will mark each soil boring location and attempt to meet with the owners of the properties where the borings are proposed to confirm that the locations will not be in conflict with any subsurface utilities.

4.2 SOIL BORINGS

MACTEC proposes to install a maximum of 38 soil borings at and around the Site to evaluate potential source areas and to delineate the extent of COCs in groundwater and soil. Due to height and width limitations inside the TORX production building, the soil borings located in the interior of the building will be advanced using the direct-push drilling method. The outside soil borings will be drilled using either the hollow-stem auger (HSA) drilling method or Rotosonic^{TM} drilling method.

The proposed soil boring locations, along with the method of installation and justification for placement, are summarized in Table 8. Please note that two soil borings will be drilled at each boring location identified as B53 through B62. The locations of the proposed boring are shown on Figure 9 (on-site soil borings) and Figure 10 (off-site soil borings). The following subsections detail our proposed soil and groundwater collection activities for each drilling method.

4.2.1 Direct-Push Soil Borings

In order to minimize the potential for encountering underground utilities, the concrete surface at each inside boring location (B64 through B75) will be cored and a hand auger will be used to collect soil samples to an estimated depth of 4 feet. During hand augering, soil samples will be collected every 6-

inches in accordance with IDEM Supplemental Guidance for Sampling Soil and Waste Samples for VOCs (5035A Supplemental Guidance) dated March 20, 2008.

After the locations have been cleared for underground utilities, a 4-foot long steel dual tube sampling system will be hydraulically advanced at 4-foot intervals into the soil to obtain continuous soil samples. The interior macro-core sampler will be lined with a new disposable acetate liner for each 4-foot interval. The sampler will then be extracted from the borehole and dissembled to remove the acetate lines. The acetate liner will be placed onto aluminum foil and split lengthwise to access the soil core. Upon recovery of the soil core, the soil core will be "cut" near the longitude midpoint to form two discrete soil cores up to 24-inches long, depending on sample recovery. Soil samples will be collected in accordance with IDEM 5035A Supplemental Guidance using two low-concentration (water preserved) vials and one-high concentration (methanol preserved) vial. Low-concentration samples will either be frozen or analyzed at the laboratory within 48-hours of sample collection. A separate 2-ounce (oz) soil jar will be collected for field screening and for percent solids analyses. Soil samples will be selected for laboratory analyses based on the field screening measurements. All soil samples will be screened with a portable organic vapor analyzer (OVA) for the presence of organic vapors. The soil sample with the greatest organic vapor reading will be selected for VOC analyses. If organic vapors are not detected, then the sample immediately above the water table will be selected.

Once the upper saturated zone is penetrated, one discrete water sample will be collected using a stainless steel screen or dedicated PVC screen. The stainless steel screens will be decontaminated between use and/or a new PVC screen will be utilized for each sample interval. After the screen has been installed, the boreholes will be developed by purging five well volumes. Development activities will include the use of either a peristaltic pump or a stainless steel check valve fitted with dedicated polyethylene tubing.

After development has been completed, a groundwater sample will be collected, immediately placed in a cooler with ice, and submitted to the on-site mobile laboratory for VOC analyses using EPA Method 8260B.

4.2.2 Hollow-Stem Auger Borings

MACTEC is proposing to utilize the hollow-stem auger (HSA) drilling technique paired with the slotted hollow-stem auger (SHSA) method because it is the most effective drilling technique for obtaining representative soil samples in the unsaturated zone and for vertically profiling of VOC concentrations in the saturated zone. The horizontal and vertical distribution of VOC concentrations in the unsaturated zone will help to evaluate the source(s) of VOCs in groundwater.

Two soil borings will be drilled at each boring location identified as B53 through B62. The first soil boring will be drilled using the HSA drilling method with 2 ¼-inch augers, and the second soil boring will be drilled using the SHSA drilling method with 4 ½-inch augers. The purpose for drilling two soil borings at each boring location identified as B53 through B62 is to visually characterize and sample the soil prior to performing vertical aquifer profiling. Soil samples cannot be collected during groundwater vertical profiling because during SHSA drilling a polyethylene plug is inserted into the lead auger to prevent heaving sands within the augers. Therefore, soil samples will be collected from the first boring and then groundwater samples for vertical profiling will be collected from an offset boring located within 10-feet from the first boring. Soil boring B63 is being drilled in order to collect soil samples to be used in the feasibility study and will only be drilled using 2 1/4–inch augers.

In the unsaturated zone, one soil sample will be collected every two feet using an assembled standard split-barrel sampler. The soil samples will be collected in accordance with IDEM 5035A Supplemental Guidance using two low-concentration (water preserved) vials and one high-concentration (methanol preserved) vial. Low-concentration samples will either be frozen or analyzed at the laboratory within 48-hours of sample collection. A separate 2 oz soil jar will be collected for field screening and for percent solids analyses. Soil samples will be selected for laboratory analyses based on the field screening measurements. All soil samples will be screened with a portable OVA for the presence of organic vapors. The soil sample with the greatest organic vapor content will be selected for VOC analyses. If organic vapors are not detected, then the sample immediately above the water table will be selected.

During the drilling and soil sample collection from the HSA borings, the geologist will pay close attention to the organic vapor screening concentrations and soil type recovered from the subsurface. Should significant organic vapor screening concentrations (sustained 50 parts per million {ppm} or greater) be detected in permeable soil above a cohesive, fine grain (i.e., lower permeability) layer, the HSA drilling operations will halt and the soil boring will be sealed with bentonite slurry grout. An off-set soil boring will then be drilled using an outer casing (using either HSA or Rotosonic^{TM}) to complete the boring to the proposed depth.

Ideally, MACTEC proposes to collect samples from each drilling location to a depth at which VOCs are not detected in groundwater. Based on the current groundwater sampling results, the maximum drill depth is estimated to be 60 feet below grade. However, the total drilling depth will be dependent upon the occurrence of heaving sands and the maximum drilling depth reached using the 2 ¼-inch HSA augers. Vertical groundwater profiling will not proceed any deeper than soil sample collection in order to minimize the chance of penetrating a clay-rich soil layer.

The SHSA method will be used to collect groundwater samples at an estimated interval of 10 feet. The SHSA consists of standard borehole advancement using HSA drilling technique (the most commonly-used drilling technique in the environmental field), with the exception that the lead auger has been slotted to allow the infiltration of groundwater into the auger string. Once the screened lead auger has penetrated the water table, groundwater will enter the auger pipe string through the slots. The augers typically used by MACTEC are specially-developed with O-ring seals to form a water-tight seal in the auger string.

In order to obtain groundwater samples that are comparable to samples obtained from a permanent well, the "auger well" will be developed to remove fine sediments and to produce a direct flow from the aquifer materials into the augers. Development will be performed using a surge-block development technique and, if required, over pumping.

Once the "auger well" is flowing freely and the groundwater recovered during development is generally clear of suspended sediments, groundwater will be purged from the well casing and groundwater samples will be collected. In order to minimize purging volumes (i.e., three casing volumes of groundwater should be purged from the well prior to sampling), a submersible pump fitted with a packer will be used. The packer and pump assembly will be lowered into the augers to just above the lead auger, the packer will be inflated to seal the portion of the augers beneath the packer, and groundwater will be pumped from the sealed portion of the augers. Using this technique, only the volume corresponding to the sealed portion of the augers must be purged. A submersible pump capable of pumping groundwater at variable flow rates (such as the Keck variable-flow submersible pump or Grundfos Redi-Flo™ pump) will be used to develop the well and to obtain low-flow groundwater samples with minimal agitation. The samples will be collected directly from the discharge tubing from the submersible pump into (for analyses of VOCs) 40-milliliter "VOA Vials" with butyl rubber septums.

Once groundwater samples have been obtained at a specified interval, the augers will be advanced to the next desired sampling interval, and the development and groundwater sampling procedures will be repeated, eventually resulting in a set of groundwater samples obtained from discrete vertical intervals. The groundwater samples collected from each sample interval will be immediately placed on ice and submitted to the on-site mobile laboratory (under chain of custody procedures) for VOC analyses using EPA Method 8260B.

4.2.3 Rotosonic™ Borings

Soil borings B48 through B52 will be drilled using the Rotosonic™ drilling method. As many as four monitoring wells will be installed in each Rotosonic™ soil boring. At each location, the soil will be visually characterized and groundwater samples will be collected at an estimated 10 foot interval for vertical profiling of the aquifer. The Rotosonic™ drilling technique is very effective at advancing drill pipe through unconsolidated deposits and for collecting soil samples at depths greater than 100 to 200-feet below ground surface. Another benefit to Rotosonic™ drilling is the ability to set a "surface" casing by over drilling the current drill pipe with the next larger size drill pipe. Surface casing would be used in the event that a confining (clay-rich) unit is encountered beneath a sampling interval with VOC concentrations greater than MCLs. The surface casing would be set in the confining unit to prevent the cross contamination of the lower unit prior to extracting the Rotosonic™ drill pipe. This casing will minimize the potential for VOCs to migrate into the borehole and into the permeable unit beneath the confining unit.

Rotosonic™ drilling typically uses two sets of drill pipe to advance the borehole and collect the soil cores for lithology and characterization. The drill pipe is advanced at 10-foot intervals, starting at the ground surface. The inner barrel of the drill stem is referred to as the sample barrel. Typically, the sample barrel is constructed of a 10-foot long, 4-inch inner diameter (I.D.) steel pipe, threaded at each end. Attached to the sample barrel is a removable drill bit with tungsten carbide button bits. First, the sample barrel is advanced to a depth of 10-feet below ground surface. Then the outer barrel, which is typically 2-inches larger in I.D. than the sample barrel outer diameter (O.D.), is advanced over the sample barrel to the same depth as the sample barrel. Once the outer barrel is in place, the sample barrel is removed and the soil sample is vibrated into a plastic sleeve for sample description and characterization. During the over drilling of the outer barrel, water and air are forced through the drill head and into the drill pipe to "wash" away the soils between the sample barrel and the outer barrel. The amount of water used to drill the interval will be metered and recorded for future groundwater sample collection purposes.

Once the inner sampling barrel has penetrated the water table, an inflatable packer equipped with a 2-inch stainless steel screen will be used to effectively convert the outer drill pipe into a temporary well. To reduce the amount of fine grained sediment in the groundwater interval to be sampled, the packer/screen assembly will be developed by over-pumping to remove fine sediments and to produce a direct flow from the aquifer materials into the packer/screen assembly. Once the packer/screen assembly is flowing freely and the groundwater recovered during development is generally devoid of suspended sediments, groundwater will be purged from the formation and groundwater samples will be collected.

In order to minimize purging volumes (i.e., three casing volumes groundwater should be purged from the borehole prior to sampling), a submersible pump fitted with an inflatable packer is used to reduce the length of open well subject to sampling. The inflatable packer and pump assembly is lowered into the outer drill pipe to the bottom of the borehole, the outer barrel is then retracted approximately 4 feet, and the packer is inflated to seal the portion of the drill pipe above the packer, and groundwater is pumped from beneath the sealed portion of the outer barrel. Using this technique, only the volume of water corresponding to the sealed portion beneath the packer and the outer drill pipe must be purged of three casing volumes.

Groundwater samples will be analyzed for VOCs by SW846 Method 8260B. To fill the sample containers, samples are collected directly from the discharge tubing from the submersible pump into 40-milliliter (mL) glass vials with butyl rubber septums.

Once groundwater samples have been obtained, the drill pipe will be advanced to the next desired sampling interval, and the development and groundwater sampling procedures are repeated. The groundwater samples collected from each sample interval will be immediately placed on ice and submitted to the on-site mobile laboratory (under chain of custody procedures) for VOC analyses using EPA Method 8260B.

4.2.4 Soil Sample Selection

The unsaturated soil sample with the greatest organic vapor reading from each direct push soil boring and from each HSA soil boring will be selected VOC analyses. If organic vapors are not detected, then the sample submitted immediately above saturation will be submitted for VOC analyses. Soil samples collected from the following intervals (in specific types of borings) will be submitted to the laboratory for metals analyses (cadmium, chromium, copper, lead):

- Between 2-feet and 4-feet below grade (direct push borings)
- Between 10 and 12-feet below grade (HSA soil borings)
- Immediately above saturation (direct push and HSA soil borings)

The 2 to 4-foot sample interval is proposed for analyses because that is the most likely soil interval (beneath the gravel backfill) to be impacted by a surface release. The 10 to 12-foot interval is proposed because it is beneath the bottom of the pond. Finally, the soil sample located immediately above saturation is proposed to evaluate if metals may have leach to this depth. Refer to Section 5 for laboratory analysis information.

4.3 MONITORING WELLS

Permanent monitoring wells will be installed at select direct-push soil borings, at the SHSA borings, and at the Rotosonic borings. Monitoring well installation details are discussed below.

4.3.1 Direct-Push Soil Borings

If on-site laboratory results indicate that groundwater collected from a direct push soil boring exceeds the applicable IDEM RISC industrial default closure levels, then one monitoring well will be installed in that direct push soil boring. Due to clearance limitations within the production building, the monitoring wells will be installed using direct-push equipment. Therefore, the inside diameter of the monitoring well will be less than 2 inches (i.e., the I.D. of the well will be between ¾-inch to 1½-inch upon the limitation of tooling utilized by the drilling contractor).

4.3.2 Slotted Hollow-Stem Auger Soil Borings

One 2-inch I.D. monitoring well will be installed at each SHSA drilling location where VOC concentrations in groundwater exceed the applicable IDEM RISC industrial default closure levels. If a well is installed in a SHSA boring, it will be screened in the zone with the greatest VOC concentrations that exceeded the IDEM RISC industrial default closure levels.

At this time, clustered monitoring wells are not proposed. If field screenings or on-site laboratory data indicate their need , the clustered monitoring wells will consist of two to three groundwater monitoring wells set at various intervals in the same general vicinity (typically, within 5 to 15-feet of each other). Clustered wells in the overburden will be set using Rotosonic™ or SHSA drilling techniques using the appropriate drill pipe or augers for the installation of the groundwater monitoring well.

4.3.3 Rotosonic™ Soil Borings

As many as four "nested" monitoring wells will be installed in each Rotosonic™ soil boring. The number of monitoring wells installed at each location will depend on the vertical distribution of VOCs and the location of clay-rich soil layers. Each well nest may consist (if Site data indicates the need) of a shallow monitoring well, an intermediate monitoring well, a deep monitoring well, and a well installed on top of bedrock. Nested wells will aid in the evaluation of the degree of separation or hydraulic connectivity of each of the units and the depth of VOCs in groundwater. Nested groundwater monitoring wells will consist of two to four 2-inch groundwater monitoring wells set at various intervals within the same borehole in the overburden. Nested wells will be set using the appropriate drill pipe size for the installation of multiple monitoring wells. A typical construction diagram of a well nest is presented in Figure 11.

4.3.4 Monitoring Well Materials

Groundwater monitoring wells set in Rotosonic™ or SHSA soil borings will be constructed using 2-inch I.D. Schedule 40 PVC riser and 0.010-inch factory-slotted screen. Typically, the screen will be 5-feet in length.

The annular space around the screen and approximately 2 feet above the well screen will be filled with pre-washed #5 sand or equivalent that is graded similarly to match the well screen size. At no time, under anticipated field conditions, will the sand pack extend above 3 feet below grade. The annular space above the sand will either be backfilled with grout or bentonite chips hydrated with potable water.

The ground water monitoring wells will be completed with either a flush-mounted protective cover or an above-ground protective cover. The flush-mounted protective covers will be set in a concrete pad appropriately sized to the flush-mounted protective cover.

The aboveground protective covers will be set in sona tubes forms with a minimum concrete thickness of 4-inches around the protective cover. The sona tube form will placed a minimum of 2.7-feet below ground surface (bgs) and extend approximately 0.3-feet above ground surface.

4.3.5 Monitoring Well Development and Purging

Prior to development and sampling activities, the groundwater level will be measured in the newly installed and existing monitoring wells. The depth to water will be measured from a surveyed reference point. The volume of water within each well will be calculated using the depth to groundwater measurement and the total depth of the monitoring well. Development and purging techniques will be accomplished by pumping or manually bailing techniques. The technique used will be based on the diameter of the monitoring well and the volume of water required to be removed. Monitoring wells less than 2-inches in diameter will be bailed with a disposable polyethylene bailer, and monitoring wells greater than or equal to 2-inches in diameter will be pumped with a submersible pump fitted with dedicated polyethylene tubing.

The newly installed monitoring wells will be developed a minimum of 24-hours after installation. Development activities prior to 24-hours may affect the well seal. During development, water quality (temperature, pH, and specific conductance) will be measured and a minimum of five well volumes of water will be removed. Development will continue until at least five well volumes have been removed and the water quality measurements have stabilized within approximately 10 percent variance over three successive measurement intervals.

Groundwater samples will be collected from all the monitoring wells a minimum of 24-hours after the completion of development activities. Prior to the collection of groundwater samples, water quality (temperature, pH, and specific conductance) will be measured and a minimum of three well volumes of water will be evacuated. Samples will be collected once a minimum of three well volumes have been removed or the water quality measurements have stabilized within approximately 10 percent variance over three successive measurement intervals.

4.3.6 Monitoring Well Sampling

To evaluate the seasonal variation in groundwater elevations and VOC concentrations in groundwater, quarterly groundwater monitoring has been implemented. Two FSI monitoring events were completed in (May 2009 and September 2009), and the third FSI monitoring event commenced in December 2009. ~~MACTEC anticipates that the fourth FSI monitoring event will be completed in March 2010, following~~ installation of the Phase 2 FSI monitoring wells.

All groundwater samples will be submitted to ALS Laboratories (an off-site, fixed-base laboratory) for VOC analyses using USEPA Method SW8260B. In addition, the groundwater samples collected from the following wells will also be analyzed for dissolved metals (cadmium, chromium, copper, lead) using USEPA Method SW6020A.

MW-18(38.6)
MW-18(63)
MW-18(164)
MW-19(33)
MW-19(53)
MW-19(118)
MW-20(35)
MW-20(51)
MW-20(124)
MW-20(155)
MW-21(40.2)
MW-21(128)
MW-21(155.3)
MW-22(37)
MW-22(67.7)
MW-22(130.7)

The monitoring wells listed above surround the source area at the TORX facility and would be anticipated to detect metals in the groundwater, should the source area have leached metals to the groundwater.

4.4 SOIL BORING AND WELL SURVEY

MACTEC will retain the services of a professional surveyor to establish the top of casing elevation and ground surface elevation for each monitoring well and the ground surface elevation for each soil boring. In addition, the surveyor will determine the horizontal coordinates of the monitoring wells and soil borings using US State Plane Coordinates, North American Datum of 1927 (NAD83), Indiana East Zone, US feet. Upon request, the horizontal coordinates can also be provided in latitude and longitude. The vertical coordinates of the monitoring wells will be tied to the North American Vertical Datum of 1988 (NAVD88).

4.5 VAPOR INTRUSION INVESTIGATION

An investigation will be completed to evaluate potential for vapor intrusion at the residence located at 4163 North Old US Highway 31. Pending results of source investigation soil and groundwater sample results, potential for vapor intrusion may also be completed at the TORX facility.

4.5.1 Vapor Intrusion Investigation – 4163 North Old US Highway 31

Based on the second FSI monitoring event (completed in September 2009), the TCE and vinyl chloride concentrations detected in the monitoring wells adjacent to 4163 North Old US Highway 31 exceeded the residential groundwater screening levels listed in the IDEM Draft Vapor Intrusion Pilot Program Guidance (DVIPPG).

As part of the vapor intrusion investigation at 4163 North Old US Highway 31, MACTEC proposes to complete the following.

- Install one sub-slab vapor probe inside the house and collect one sub-slab soil vapor sample from inside of the house
- Collect one indoor air samples from the general living area
- Collect one indoor air sample from the basement and/or crawl space
- Collect one outdoor air sample

Prior to sample collection, a detailed survey of the building and the activities of the occupants will be performed and the Indoor Air Building Survey Checklist included in the DVIPPG will be completed. The sub-slab soil vapor probe will ideally be installed in the northern portion of the house, which is closest to the VOC groundwater plume. The indoor air samples will be collected from the general living area and basement and/or crawl space. In addition to the indoor air samples, one outdoor air sample will be collected to evaluate background conditions. The exact sample locations will be determined in the field. The outdoor air sample location will be based on data collected from a weather station installed at 4377 N Old US Highway 31.

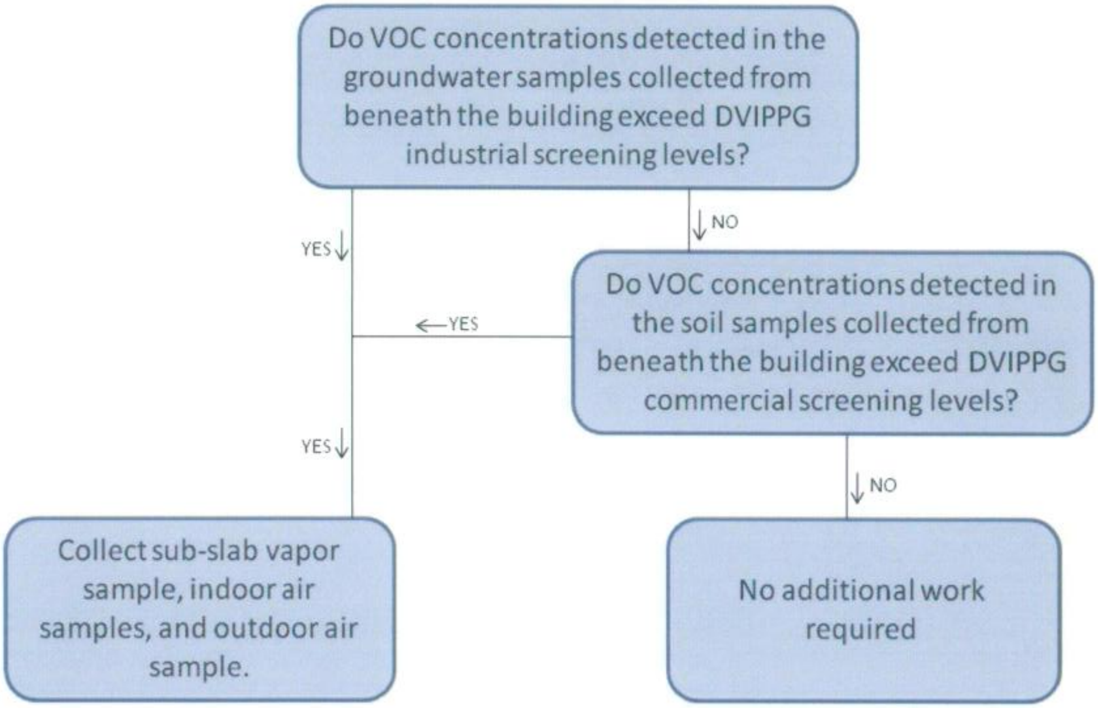
MACTEC proposes to simultaneously collect one sub-slab soil vapor sample, two indoor air samples, and one outdoor air sample for a period of 24 hours.

4.5.2 Vapor Intrusion Investigation- TORX Production Facility

The VOCs detected in the groundwater samples collected adjacent to the TORX production facility during the first FSI monitoring events did not exceed DVIPPG industrial screening levels. Therefore, MACTEC does not propose to collect soil vapor or indoor air samples within the TORX production facility until groundwater and soil samples are collected from beneath the production facility and analyzed for VOCs. If groundwater concentrations beneath the production facility exceed DVIPPG industrial screening levels or the soil concentrations exceed commercial soil screening levels, then indoor air and sub-slab soil vapor samples will be collected.

The following flow chart illustrates our proposed vapor intrusion investigation for the TORX production facility.

VAPOR INTRUSION INVESTIGATION FOR
TORX PRODUCTION BUILDING



If soil and/or groundwater screening levels are exceeded, then MACTEC proposes to complete the following.

- Install one sub-slab vapor probe in the area where the greatest VOC concentrations in soil and/or groundwater were detected (based on the multiplication factor by which the VOC concentrations exceed the applicable screening levels)
- Collect two indoor air samples in the vicinity of the sub-slab soil probe
- Collect one indoor air sample in the office area
- Collect one indoor air sample in the northern portion of the facility
- Collect one indoor air sample in the southern portion of the facility
- Collect one outdoor air sample

Prior to sample collection, a detailed survey of the building and the activities of the occupants will be performed and the Indoor Air Building Survey Checklist included in the DVIPPG will be completed. MACTEC proposes to simultaneously collect the sub-slab soil vapor sample, indoor air samples, and the outdoor air sample for a period of 24 hours.

4.5.3 Sub-slab Vapor Probe Installation

The sub-slab soil vapor sampling will include the installation of a sub-slab vapor probe. Using a hand-held drill equipped with a masonry bit, one sub-slab soil vapor probe will be installed by drilling a one- to two-inch diameter hole through the concrete slab to approximately six inches into the sub-base. Once the hole is completed, steel tubing connected to Swagelok® connectors will be inserted approximately 2 inches into the sub-base. The annular space between the steel tubing and sub-base will be filled with sand to approximately the bottom of the slab. Assuming that the slab is approximately six to eight inches think, two inches of granular bentonite, which will be lightly hydrated with distilled water, will then be placed above the sand, two inches of fast setting cement will be placed above the bentonite, and a sodium silicate coating will be placed on the cement. The construction details for a typical sub-slab soil vapor probe are shown in detail on Figure 12.

After the cement grout has cured (approximately 72 hours), a leak test will be conducted to make sure that a representative sample of soil gas is being collected. To prepare for the leak test, one to three volumes of air will be purged from the vapor probe. The maximum flow rate will not exceed 200 milliliters per minute (ml/min) in order to minimize the potential for vacuum extraction of the volatile organic compounds from the soil phase. Following the purging of the vapor probe, the vapor probe will be leak tested using a five gallon helium chamber and a portable helium monitoring device. If greater than 10 percent of helium is detected in the vapor probe, the surface connectors will be tightened and additional sodium silicate will be added to the annular space and the probe will be re-tested. If helium is detected during the re-test at greater than 10 percent, the vapor probe will be abandoned and an additional vapor probe will be installed next to the abandoned vapor probe.

Once the sub-slab vapor probe is installed and leak testing has been completed, a sub-slab soil vapor sample will be collected. The sub-slab soil vapor sample will be collected using pre-cleaned, flow controlled, evacuated, 6-liter, stainless steel Summa® canisters, which will be placed on the ground adjacent to the monitoring point location. The 6-liter Summa® canisters will be equipped with flow regulators and a vacuum gauge.

4.5.4 Soil Vapor and Air Sampling Procedures and Document Custody

After the leak tests are completed at the sub-slab vapor probe, the vapor probe, indoor air, and outdoor air will be sampled over a 24-hour period using 6-liter Summa® canisters. The flow rate during the sampling event will not exceed 200-ml/min in order to minimize the potential for vacuum extraction of the VOCs from the soil phase.

Prior to collecting a sample from each sub-slab vapor probe, each sub-slab vapor probe will be developed and purged using the following procedure.

- A new pair of disposable gloves will be worn at each sub-slab soil vapor probe.
- Carefully remove protective caps to avoid causing foreign material to enter the soil vapor probe.
- Purging of the soil vapor probe will be accomplished by pumping or manual vacuum extraction techniques, depending on the volume of vapors required to be evacuated from the sample train. Development activities can be initiated after a minimum period of approximately 72 hours to allow seal materials around the sub-slab vapor probe to properly set up. Purging will be performed at a rate that will minimize excessive agitation of sub-slab vapors.
- If pumping is used to complete development or purging activities, new, disposable sections of tubing will be used to evacuate vapors from the soil vapor probe. The pump will be properly calibrated prior to being connected to the soil vapor probe.
- Purging activities will be considered complete when a minimum of three sample train volumes of vapors have been evacuated.

When sampling the sub-slab vapor probes and indoor/outdoor air, personnel will follow the procedures below:

- Wear new disposable gloves. A fresh pair of gloves will be worn at each sample location.
- Vapor and air sampling may be initiated immediately after purging activities have been completed.
- Sample collection shall be performed in such a way as to minimize unnecessary agitation of the sample.
- Sample containers will be labeled in a legible fashion that should remain clear even when wet. The labels will, at minimum, exhibit the following information:
    - Sample identification number
    - Date and time of collection
    - Analyses required
    - Project or collector's name

A chain of custody will reflect the above identifiers and the number of sample containers from each location. These sample identifiers will be shown on laboratory data reports. These identifiers will be traceable from time of sampling to final data summary reports.

4.5.5 Indoor and Outdoor Air Sampling

The air samples will be collected using pre-cleaned, flow controlled, evacuated, 6-liter, stainless steel Summa® canisters, which will be placed between three and five feet above the floor and/or ground. The outdoor air sample(s) will be collected at a location that is at least 15 feet upwind from the building of interest, approximately 5 feet above the ground, and away from obvious potential VOC sources (parked vehicles, fuel tanks, etc.). The indoor air samples will be biased toward potential high-use areas. The exact locations of the air samples will be determined in the field.

Sampling for the outdoor ambient air sample will begin between one and two hours prior to the commencement of indoor air sampling.

4.5.6 Laboratory Analysis – Soil Vapor and Air

The sub-slab soil vapor sample(s) and air samples will be analyzed for VOCs using EPA Method TO-15. The samples will be sent to an off-site laboratory, ALS Laboratory Group in Cincinnati, Ohio, for analysis within the required analytical method holding time (30 days).

Proper sample container preparation and sample preservation measures in the field are important to prevent sample composition from being altered by contamination, degradation, biologic transformation, chemical interactions, or other factors during the time between sample collection and analysis. The sample container will be prepared by the laboratory in accordance with EPA TO-15 procedures and will be certified as pre-cleaned.

The sub-slab soil vapor and air samples will be analyzed on a 14-day turn-around time. Once received, MACTEC will compare analytical results for the soil vapor sample(s) to Screening Levels for Chlorinated Compounds for sub-slab and indoor samples (IDEM DVIPPG, Appendix VIII, Table 7). The samples collected at property 4163 North Old US Highway 31 will be compared to residential screening levels, and the samples collected at the TORX production facility will be compared to industrial screening levels.

4.6 POTABLE WELL ABANDONMENT

To prevent the potential for VOCs to migrate to bedrock, the potable water well located at 4377 North Old US Highway 31 will be permanently abandoned in accordance with 312 Indiana Administrative

Code (IAC) Title 312:13-10-2 (Final Rule Concerning the Regulation of Water Well Drilling). Although the potable water well does not appear to be registered with IDNR, the contractor who installed the well provided MACTEC with the water well record. According to the water well record, the borehole diameter is 8 inches and the well is cased with 5-inch PVC from ground surface to 164 feet below grade. The well is open bedrock from 164 to 215 feet below grade.

In accordance with IAC Title 312:13-10-2, the following steps will be completed to abandon the potable water well.

1. The well pump and ancillary pump equipment will be disconnected and removed from the well.
2. The well will be chlorinated as per 312 IAC 13-9-1.
3. The well will be plugged from the bottom to 2 feet below ground surface in accordance with 312 IAC 13-9-1 using neat cement, bentonite slurry, or medium or coarse grade bentonite from the bottom of the well to ground surface.
4. The well casing will be cut at 2 feet below grade.
5. A 10-inch diameter cement plug will be constructed over the borehole and the cement plug with covered with a natural clay material to ground surface.

5.0 PREVIOUSLY DETAILED INFORMATION

The following information was detailed in the initial FSI Investigation Work Plan that was prepared by MACTEC and submitted to IDEM in January 2009.

- Field Documentation (Section 4.10)
- Laboratory Analysis and Data Management (Section 6.0)
- Sample and Document Custody (Section6.0)
- Calibration Procedures (Section 8.0)
- Internal Quality Control (Section 9.0)
- Data Reduction, Validation and Reporting (Section 10.0)
- Performance and System Audits (Section 11.0)
- Preventative Maintenance (Section 12.0)
- Procedures to Assess Data Precision, Accuracy and Completeness (Section 13.0)
- Corrective Actions (Section 14.0)
- Quality Assurance Reports to Management (Section 15.0)

The above-mentioned Sections, the Vapor Intrusion Investigation Work Plan (submitted to IDEM in December 2008) and the additions detailed below will apply to and will be utilized during the Phase 2 FSI.

5.1 ANALYTICAL METHODS

The groundwater split samples collected during vertical aquifer profiling and the groundwater samples collected from the permanent monitoring wells will be sent to ALS Laboratories. The primary chemicals subject to the investigation include VOCs and dissolved metals (cadmium, chromium, copper, and lead). Groundwater samples submitted to ALS Laboratories will be analyzed for one or more of the following methods:

- VOCs using USEPA Method 8260B
- Dissolved metals (cadmium, chromium, copper, and lead) using USEPA Method 6020A

Soil samples collected will be analyzed for one or more of the following methods:

- VOCs using USEPA Method 5035/8260B
- Metals (cadmium, chromium, copper, lead) using USEPA Method 6020S

Air and vapor samples collected in support of vapor intrusion investigations will be analyzed for VOCs using the USEPA Method TO-15

5.2 TARGET COMPOUNDS AND DETECTION LIMITS

A listing of target compounds, MDLs, and RLs is presented in Table 9 (low concentration VOCs in soil), Table 10 (high concentration VOCs in soil), Table 11 (metals in soil), Table 12 (VOCs in groundwater), Table 13 (metals in groundwater), and Table 14 (VOCs in air).

5.3 DATA REPORTING REQUIREMENTS

Laboratory results will be reported in a full data deliverable equivalent to a USEPA Contract Laboratory Program (CLP) type data deliverable package. Data deliverable reports will include all sample collection documents, QC summary information, raw data, and supporting notebook documentation specified in IDEM RISC Technical Guide - Appendix 2 (IDEM, 2001). Data QC summary information will meet specifications for organic analyses reporting in Appendix II of the IDEM Guideline to the Performance and Presentation of Analytical Data (IDEM, 1998).

5.4 PROJECT QUALITY CONTROL OBJECTIVES

Project specific QC limits have been established for laboratory control samples, surrogate spikes, matrix spikes, and field replicates. QC limits are presented on Table 15. These limits will be used to evaluate precision and accuracy of laboratory data during data validation activities described in Section 14 of the initial FSI Investigation Work Plan.

5.5 FIELD SAMPLE ID NUMBERS

A unique field sample number will be assigned to each sample that is collected. Formats for field sample numbers for groundwater samples and soil borings are described in the initial FSI Investigation Work Plan. The following describes the format for field sample numbers associated with vapor samples and air samples.

Soil Vapor Samples

Soil vapor samples collected from the sub-slab vapor probes will be identified as P. Soil vapor samples collected from vapor probe P-Z at 4366 North Old US Highway on January 25, 2010 would be identified as **MTR-4366NHWY31-PZ-V012510** (MACTEC-TORX-Rochester- Probe number-Vapor month date year).

Indoor Air Samples

Indoor air samples collected will be identified as IA. Indoor air samples collected from 4366 North Old US Highway 31 on January 25, 2010 would be identified as **MTR-4366NHWY31-IA012510-#1** (MACTEC-TORX-Rochester- address-Indoor Air month date year - sample number).

Outdoor Air Samples

Outdoor (ambient) air samples collected will be identified as AA. An outdoor (ambient) air sample collected from 4366 North Old US Highway 31 on January 25, 2010 would be identified as **MTR-4366NHWY31-AA012510** (MACTEC-TORX-Rochester- address - Ambient Air month date year).

5.6 FIELD INSTRUMENTATION

Following is a partial list of possible field equipment that requires periodic calibration.

- Electronic Water Quality Meters (pH, conductivity, and temperature)
- Photoionization Detectors (PID)
- Explosimeter
- Field Flame Ionization Detectors (FID)
- Portable Helium Monitoring Device

5.7 EQUIPMENT CALIBRATION

Field equipment utilized in the Phase 2 FSI will be calibrated as described in Investigation Work Plan, Former TORX Facility, MACTEC, January 2009.

Portable Helium Monitoring Device

The portable helium monitoring device is used to leak test sub-slab soil vapor probes. The device shall be calibrated at the beginning of each day of use or after maintenance or repair. The battery power supply shall be recharged each evening prior to the next day of instrument use. The device will be used to identify helium in the sub-slab soil vapor probes.

5.8 REPORTING

Results of the drilling, well installation, soil sample collection, vertical groundwater profiling, FSI monitoring events, vapor intrusion investigation, and potable well abandonment will be evaluated and submitted to Textron and IDEM for review. If applicable water, soil, and/or indoor air standards are exceeded, Textron will evaluate the need for additional work.

6.0 REFERENCES

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TABLES

Table 1

Comprehensive Summary of the Results of the Annual Groundwater Sampling Events
Performed Between 2004 and 2008
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

(Results reported in micrograms per liter, ug/l)

Monitoring Well Number	Sample Date[1]	Benzene	Carbon Disulfide	Chlorobenzene	Chloroethane	1,1 Dichloroethene	1,2 Dichloroethene (Cis)	1,2 Dichloroethene (Trans)	1,2 Dichloroethene (Cis and Trans)	Ethylbenzene	Tetrachloroethene	Toluene	1,1,1-Trichloro ethane	Trichloroethene	Total Xylenes	Vinyl Chloride
MW-1	08/24/04	**2.1**	NA	**5.8**	**1.2**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	07/14/05	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
	06/22/06	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
	10/22/07	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
	11/24/08	<1.0	<1.0	**4.56**	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
MW-2	08/24/04	<1.0	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	07/14/05	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
	06/22/06	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
	10/22/07	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
	11/24/08	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
MW-3	06/14/89	NL	NL	NL	NL	NL	NL	NL	**37,000**	<5,000	<5,000	<5,000	<2,500	<1,000	<5,000	**22,000**
	05/30/90	NL	NL	NL	NL	NL	NL	NL	**5,600**	<0.5	<0.5	**20**	<0.5	<0.5	**1.5**	**2,800**
	06/04/91	NL	NL	NL	NL	NL	NL	NL	**4,022**	<0.5	<0.5	**12**	<0.5	**6.5**	**0.76**	**9,200**
	04/30/92	NL	NL	NL	NL	NL	NL	NL	**20**	<1.0	<1.0	**8.1**	**4.3**	<1.0	<1.0	**220**
	05/20/93	NL	NL	NL	NL	NL	NL	NL	**291.7**	<1.0	<1.0	**5.9**	<1.0	<1.0	<1.0	**1,700**
	06/17/94	NL	NL	NL	NL	NL	NL	NL	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**2.9**
	07/11/95	NL	NL	NL	NL	NL	NL	NL	**1.7**	<1.0	<1.0	**2.8**	<1.0	<1.0	<1.0	<1.0
	09/11/96	NL	NL	NL	NL	NL	NL	NL	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	07/17/97	NL	NL	NL	NL	NL	NL	NL	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	04/28/98	NL	NL	NL	NL	NL	NL	NL	<1.0	<1.0	<1.0	**1.9**	<1.0	<1.0	<1.0	<1.0
	06/10/99	NL	NL	NL	NL	NL	NL	NL	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	05/09/00	NL	NL	NL	NL	NL	NL	NL	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	07/10/01	NL	NL	NL	NL	NL	NL	NL	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	05/16/02	NL	NL	NL	NL	NL	NL	NL	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	05/30/03	NL	NL	NL	NL	NL	NL	NL	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	08/24/04	<1.0	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	07/14/05	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
	06/22/06	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
	10/22/07	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	**26.9**
	11/25/08	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	**564**
MW-4	11/25/08	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
MW-5	11/25/08	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0

Table 1 (continued)

Comprehensive Summary of the Results of the Annual Groundwater Sampling Events Performed Between 2004 and 2008
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

(Results reported in micrograms per liter, ug/l)

Monitoring Well Number	Sample Date[1]	Benzene	Carbon Disulfide	Chlorobenzene	Chloroethane	1,1 Dichloroethene	1,2 Dichloroethene (Cis)	1,2 Dichloroethene (Trans)	1,2 Dichloroethene (Cis and Trans)	Ethylbenzene	Tetrachloroethene	Toluene	1,1,1-Trichloro ethane	Trichloroethene	Total Xylenes	Vinyl Chloride
MW-6B	06/14/89	NL	NL	NL	NL	NL	NL	NL	1,300	NL	<250	<250	<120	<50	<250	3,200
	05/29/90	NL	NL	NL	NL	NL	NL	NL	144	NL	<0.5	<0.5	<0.5	4.9	<0.5	9.5
	06/03/91	NL	NL	NL	NL	NL	NL	NL	111	NL	<0.5	<0.5	<0.5	<0.5	<0.5	6.5
	04/29/92	NL	NL	NL	NL	NL	NL	NL	104.3	NL	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	05/20/93	NL	NL	NL	NL	NL	NL	NL	58.1	NL	<1.0	<1.0	<1.0	<1.0	<1.0	2.9
	06/16/94	NL	NL	NL	NL	NL	NL	NL	41.5	NL	<2.0	<2.0	<2.0	<2.0	<2.0	1.6
	07/11/95	NL	NL	NL	NL	NL	NL	NL	48.5	NL	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	09/10/96	NL	NL	NL	NL	NL	NL	NL	44	NL	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	07/18/97	NL	NL	NL	NL	NL	NL	NL	32	NL	<1.0	<1.0	<1.0	<1.0	<1.0	1.6
	04/28/98	NL	NL	NL	NL	NL	NL	NL	28	NL	<1.0	1.8	1.1	<1.0	<1.0	1.1
	06/09/99	NL	NL	NL	NL	NL	NL	NL	23	NL	2.2	8.1	2.6	2.4	4.1	<1.0
	05/09/00	NL	NL	NL	NL	NL	NL	NL	17	NL	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	07/06/01	NL	NL	NL	NL	NL	NL	NL	10	NL	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	05/15/02	NL	NL	NL	NL	NL	NL	NL	30	NL	<1.0	<1.0	<1.0	<1.0	<1.0	13
	05/30/03	NL	NL	NL	NL	NL	NL	NL	11	NL	<1.0	<1.0	<1.0	<1.0	<1.0	11
	08/25/04	<1.0	NA	<1.0	<1.0	<1.0	76	2.6	78.6	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	31
	07/14/05	<1.0	3.1	<1.0	<5.0	<1.0	96.2	<1.0	96.2	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	31.1
	06/22/06	<1.0	<1.0	<1.0	<5.0	<1.0	62.6	2.2	65	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	13.8
	10/22/07	<1.0	2.33	<1.0	<5.0	<1.0	43.7	<1.0	43.7	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	12.4
	11/25/08	<1.0	<1.0	<1.0	<5.0	<1.0	137	1.04	138	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	28.6
MW-6C	06/14/89	NL	NL	NL	NL	NL	NL	NL	10	NL	4.4	<1.0	<0.5	43	<1.0	58
	05/29/90	NL	NL	NL	NL	NL	NL	NL	2.8	NL	2.1	<0.5	<0.5	29	<0.5	8.5
	06/03/91	NL	NL	NL	NL	NL	NL	NL	31	NL	2.2	<0.5	<0.5	35	<0.5	55
	04/29/92	NL	NL	NL	NL	NL	NL	NL	35	NL	1.5	1.5	<1.0	26	<1.0	24
	05/20/93	NL	NL	NL	NL	NL	NL	NL	38	NL	2.5	<1.0	<1.0	49	<1.0	22
	06/17/94	NL	NL	NL	NL	NL	NL	NL	3.9	NL	1.4	<1.0	<1.0	23	<1.0	18
	07/11/95	NL	NL	NL	NL	NL	NL	NL	29	NL	1.1	<1.0	<1.0	15	<1.0	270
	09/10/96	NL	NL	NL	NL	NL	NL	NL	1,500	NL	<50	<1.0	<50	98	<50	860
	07/18/97	NL	NL	NL	NL	NL	NL	NL	1,600	NL	<50	<50	<50	<50	<50	4,100
	04/28/98	NL	NL	NL	NL	NL	NL	NL	2,800	NL	<50	<50	<50	54	<50	2,300
	06/09/99	NL	NL	NL	NL	NL	NL	NL	9,100	NL	<200	<200	<200	<200	<200	5,500
	05/09/00	NL	NL	NL	NL	NL	NL	NL	4,500	NL	<200	<200	<200	<200	<200	1,200

Table 1 (continued)

Comprehensive Summary of the Results of the Annual Groundwater Sampling Events
Performed Between 2004 and 2008
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

(Results reported in micrograms per liter, ug/l)

Monitoring Well Number	Sample Date[1]	Benzene	Carbon Disulfide	Chlorobenzene	Chloroethane	1,1 Dichloroethene	1,2 Dichloroethene (Cis)	1,2 Dichloroethene (Trans)	1,2 Dichloroethene (Cis and Trans)	Ethylbenzene	Tetrachloroethene	Toluene	1,1,1-Trichloro ethane	Trichloroethene	Total Xylenes	Vinyl Chloride
MW-6C	07/10/01	NL	NL	NL	NL	NL	NL	NL	**7,700**	NL	<200	<200	<200	<200	<200	**1,700**
	05/16/02	NL	NL	NL	NL	NL	NL	NL	**4,100**	NL	<400	<400	<400	<400	<400	**13,000**
	05/30/03	NL	NL	NL	NL	NL	NL	NL	**7,100**	NL	<200	<200	<200	<200	<200	**2,000**
	08/25/04	<10	NA	<10	<10	<10	**4,400**	**26**	**4,426**	<10	<10	<10	<10	**11**	<10	**1,700**
	07/14/05	<1.0	<1.0	<1.0	<5.0	1.5	**2,690**	**10.5**	**2,701**	<1.0	**2.1**	<1.0	<1.0	**6.6**	<2.0	**590**
	06/22/06	<1.0	<1.0	<1.0	<5.0	**3.6**	**4,480**	**30.2**	**4,510**	<1.0	**3.2**	<1.0	<1.0	**10.8**	<2.0	**806**
	10/22/07	<1.0	<1.0	<1.0	<5.0	**3.11**	**3,520**	**13.8**	**3,534**	<1.0	<1.0	<1.0	<1.0	**1.99**	<2.0	**1,640**
	11/25/08	<1.0	<1.0	<1.0	<5.0	**13.3**	**10,900**	**77.6**	**10,978**	<1.0	**1.70**	<1.0	<1.0	**4.90**	<2.0	**1,070**
	11/25/08	<1.0	<1.0	<1.0	<5.0	**13.9**	**11,600**	**74.1**	**11,674**	<1.0	**1.85**	<1.0	<1.0	**4.97**	<2.0	**1,200**
MW-7	11/24/08	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
MW-8	06/14/89	NL	NL	NL	NL	NL	NL	NL	**2.9**	<1.0	<1.0	<1.0	<0.5	<0.2	<1.0	<0.5
	05/30/90	NL	NL	NL	NL	NL	NL	NL	**8.5**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	06/04/91	NL	NL	NL	NL	NL	NL	NL	**27**	<0.5	<0.5	**0.56**	<0.5	<0.5	<0.5	<0.5
	04/30/92	NL	NL	NL	NL	NL	NL	NL	**19**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	05/20/93	NL	NL	NL	NL	NL	NL	NL	**10**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**4.8**
	06/17/94	NL	NL	NL	NL	NL	NL	NL	**8.6**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**2.1**
	07/11/95	NL	NL	NL	NL	NL	NL	NL	**4.7**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	09/11/96	NL	NL	NL	NL	NL	NL	NL	**3.7**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	07/18/97	NL	NL	NL	NL	NL	NL	NL	**4.1**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.2**
	04/28/98	NL	NL	NL	NL	NL	NL	NL	**6.8**	<1.0	<1.0	**1.8**	<1.0	<1.0	<1.0	**1.3**
	06/10/99	NL	NL	NL	NL	NL	NL	NL	**2**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	05/09/00	NL	NL	NL	NL	NL	NL	NL	**1.1**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	07/10/01	NL	NL	NL	NL	NL	NL	NL	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	05/16/02	NL	NL	NL	NL	NL	NL	NL	**1.8**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	05/30/03	NL	NL	NL	NL	NL	NL	NL	**2.3**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	08/24/04	<1.0	NA	<1.0	<1.0	<1.0	**1.1**	<1.0	**1.1**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	07/14/05	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
	06/22/06	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
	10/22/07	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
	11/24/08	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0

Table 1 (continued)

Comprehensive Summary of the Results of the Annual Groundwater Sampling Events Performed Between 2004 and 2008
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

(Results reported in micrograms per liter, ug/l)

Monitoring Well Number	Sample Date[1]	Benzene	Carbon Disulfide	Chlorobenzene	Chloroethane	1,1 Dichloroethene	1,2 Dichloroethene (Cis)	1,2 Dichloroethene (Trans)	1,2 Dichloroethene (Cis and Trans)	Ethylbenzene	Tetrachloroethene	Toluene	1,1,1-Trichloro ethane	Trichloroethene	Total Xylenes	Vinyl Chloride
MW-9A	08/25/04	<1.0	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	07/14/05	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.8**	<2.0	<1.0
	06/22/06	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.1**	<2.0	<1.0
	10/22/07	<1.0	**3.68**	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.17**	<2.0	<1.0
	11/25/08	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
MW-9B	08/25/04	<1.0	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	07/14/05	<1.0	**24.6**	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
	06/22/06	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
	10/22/07	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
	11/25/08	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
MW-9C	06/14/89	NL	NL	NL	NL	NL	NL	NL	**3**	<1.0	**1.4**	<1.0	<0.5	**96**	<1.0	<0.5
	05/30/90	NL	NL	NL	NL	NL	NL	NL	<0.5	<0.5	<0.5	<0.5	<0.5	**110**	<0.5	<0.5
	06/03/91	NL	NL	NL	NL	NL	NL	NL	<0.5	<0.5	<0.5	<0.5	<0.5	**27**	<0.5	<0.5
	04/30/92	NL	NL	NL	NL	NL	NL	NL	**1.4**	<1.0	<1.0	<1.0	<1.0	**130**	<1.0	<5.0
	05/19/93	NL	NL	NL	NL	NL	NL	NL	**2.7**	<1.0	**1.2**	<1.0	<1.0	**99**	<1.0	<1.0
	06/17/94	NL	NL	NL	NL	NL	NL	NL	**2.4**	<2.0	**1.1**	<2.0	<2.0	**87**	<2.0	<2.0
	07/11/95	NL	NL	NL	NL	NL	NL	NL	**2.7**	<1.0	**1**	<1.0	<1.0	**59**	<1.0	<1.0
	09/11/96	NL	NL	NL	NL	NL	NL	NL	<5.0	<5.0	<5.0	<5.0	<5.0	**49**	<5.0	<5.0
	07/18/97	NL	NL	NL	NL	NL	NL	NL	**2.3**	<1.0	<1.0	<1.0	<1.0	**37**	<1.0	<1.0
	04/28/98	NL	NL	NL	NL	NL	NL	NL	**1.3**	<1.0	**1.2**	**1.7**	**1**	**23**	<1.0	<1.0
	06/10/99	NL	NL	NL	NL	NL	NL	NL	**1.1**	<1.0	**3.1**	**11**	**2.8**	**17**	**4.9**	<1.0
	05/08/00	NL	NL	NL	NL	NL	NL	NL	<1.0	<1.0	<1.0	<1.0	<1.0	**6.1**	<1.0	<1.0
	07/10/01	NL	NL	NL	NL	NL	NL	NL	<1.0	<1.0	<1.0	<1.0	<1.0	**9**	<1.0	<1.0
	05/16/02	NL	NL	NL	NL	NL	NL	NL	<1.0	<1.0	<1.0	<1.0	<1.0	**6.8**	<1.0	<1.0
	05/29/03	NL	NL	NL	NL	NL	NL	NL	<1.0	<1.0	<1.0	<1.0	<1.0	**10**	<1.0	<1.0
	08/24/04	<1.0	NA	<1.0	<1.0	<1.0	**1.3**	<1.0	**1.3**	<1.0	<1.0	<1.0	<1.0	**5.0**	<1.0	<1.0
	07/14/05	<1.0	**4.2**	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**6.6**	<2.0	<1.0
	06/22/06	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**3.8**	<2.0	<1.0
	10/22/07	<1.0	**3.81**	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**4.85**	<2.0	<1.0
	11/25/08 (2)	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**2.51**	<2.0	<1.0
	11/25/08 (2)	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**2.61**	<2.0	<1.0

Table 1 (continued)

Comprehensive Summary of the Results of the Annual Groundwater Sampling Events
Performed Between 2004 and 2008
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

(Results reported in micrograms per liter, ug/l)

Monitoring Well Number	Sample Date[1]	Benzene	Carbon Disulfide	Chlorobenzene	Chloroethane	1,1 Dichloroethene	1,2 Dichloroethene (Cis)	1,2 Dichloroethene (Trans)	1,2 Dichloroethene (Cis and Trans)	Ethylbenzene	Tetrachloroethene	Toluene	1,1,1-Trichloro ethane	Trichloroethene	Total Xylenes	Vinyl Chloride
MW-10A	08/25/04	<1.0	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	07/14/05	<1.0	**3.1**	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
	06/22/06	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
	10/22/07	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
	11/24/08	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
MW-10B	08/25/04	<1.0	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	07/14/05	<1.0	**6.3**	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
	06/22/06	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
	10/22/07	<1.0	**9.24**	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
	11/24/08	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
MW-10C	08/25/04	<1.0	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	07/14/05	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
	06/22/06	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
	10/22/07	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
	11/24/08	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
MW-11	10/22/07	<1.0	**15.6**	<1.0	<5.0	<1.0	**34.8**	<1.0	34.8	<1.0	<1.0	<1.0	<1.0	**1.5**	<2.0	90
	11/25/08	<1.0	<1.0	<1.0	<5.0	<1.0	**2.59**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**2.93**	<2.0	<1.0
MW-12	10/22/07[(3)]	<1.0	**4.34**	<1.0	<5.0	**1.12**	1,220	**4.85**	**1,225**	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	2,080
	11/25/08	<1.0	<1.0	<1.0	<5.0	**2.27**	2,280	**11.6**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	2,520
MW-13	10/22/07	<1.0	**1.0**	<1.0	<5.0	<1.0	654	**4.79**	**659**	<1.0	**1.01**	<1.0	<1.0	16	<2.0	1,290
	11/25/08	<1.0	**3.12**	<1.0	<5.0	**1.35**	2,450	**14.7**	**2,465**	<1.0	**1.7**	<1.0	<1.0	15	<2.0	812
MW-14	11/25/08	<1.0	<1.0	<1.0	<5.0	**2.4**	230	**4.04**	**234**	<1.0	<1.0	<1.0	<1.0	640	<2.0	11.2

Table 1 (continued)

Comprehensive Summary of the Results of the Annual Groundwater Sampling Events
Performed Between 2004 and 2008
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

(Results reported in micrograms per liter, ug/l)

Monitoring Well Number	Sample Date[1]	Benzene	Carbon Disulfide	Chlorobenzene	Chloroethane	1,1 Dichloroethene	1,2 Dichloroethene (Cis)	1,2 Dichloroethene (Trans)	1,2 Dichloroethene (Cis and Trans)	Ethylbenzene	Tetrachloroethene	Toluene	1,1,1-Trichloro ethane	Trichloroethene	Total Xylenes	Vinyl Chloride
MW-15	11/25/08	<1.0	<1.0	<1.0	<5.0	**5.36**	**1,200**	**31.1**	**1231**	<1.0	<1.0	<1.0	<1.0	**22.2**	<2.0	**840**
MW-16	11/25/08	<1.0	<1.0	<1.0	<5.0	**2.61**	**667**	**10.8**	**678**	<1.0	<1.0	<1.0	<1.0	**54.7**	<2.0	**95.8**
MW-17	11/25/08	<1.0	<1.0	<1.0	<5.0	**1.13**	**125**	**3.82**	**129**	<1.0	<1.0	<1.0	<1.0	**364**	<2.0	**1.24**
USEPA MCLs		5.0	NE	100	NE	7.0	70	100	NE	700	5.0	1,000	200	5.0	10,000	2.0
IDEM RISC Default Closure																
Industrial		52	10,000	2,000	990	5,100	1,000	2,000	NE	10,000	55	8,200	29,000	7.2	20,000	4.0
Residential		5.0	1,300	100	62	7.0	70	100	NE	700	5.0	1,000	200	5.0	10,000	2.0

Notes:

[1] 1989 through 2004 concentrations obtained from 2004 Keramida report.

[2] Chloroform was detected at 1.87 ug/L in the primary sample and 2.16 ug/L in the duplicate sample.

[3] Acetone was detected at 48.9 ug/L.

NL - concentration not listed in 2004 report NE - None established NA - Not analyzed

USEPA MCLs - United States Environmental Protection Agency (USEPA) Maximum Contaminant Levels (MCLs)

IDEM RISC - Indiana Department of Environmental Management (IDEM) risk integrated system of closure (RISC)

For a complete list of analyzed compounds and results please refer to the laboratory reports

Concentration exceeds IDEM RISC industrial default closure level

Concentration exceeds IDEM RISC residential default closure level and U.S. EPA maximum contaminant level

PB:MMM
CB: FJS

Table 2

Comprehensive Summary of the Volatile Organic Compound Analyses Performed on the Potable Water Samples Collected between 2004 and 2009 TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

(Results reported in micrograms per liter, ug/l)

Map ID#	House Number	Sample Date^1	Chloroethane	cis 1,2 Dichloroethene	trans 1,2 Dichloroethene	Tri-chloroethene	Vinyl Chloride	Comments
Houses located along North Old US 31								
2	4403	08/24/04	<0.50	<0.50	<0.50	<0.50	<0.50	
		07/14/05	<0.50	<0.50	<0.50	<0.50	<0.50	
		06/22/06	<0.50	<0.50	<0.50	<0.50	<0.50	
		10/22/07	<0.50	<0.50	<0.50	<0.50	<0.50	
		10/21/08	<0.50	<0.50	<0.50	<0.50	<0.50	
		11/18/08*	ND	ND	ND	ND	ND	Collected By IDEM
3	4377	10/21/08	<0.50	<0.50	<0.50	<0.50	**0.54**	
		11/03/08	<0.50	<0.50	<0.50	<0.50	**0.50**	
		11/18/08*	ND	ND	ND	ND	**1.1**	Collected by IDEM
		11/18/08*	ND	ND	ND	ND	**1.1**	Collected by IDEM
		11/20/08	<0.50	<0.50	<0.50	<0.50	**0.84**	Pre-Treatment
4	4375	11/03/08	<0.50	<0.50	<0.50	<0.50	**5.92**	Outside Spigot
		11/06/08	<0.50	<0.50	<0.50	<0.50	**5.00**	Kitchen Faucet
		11/18/08*	ND	ND	ND	ND	**8.4**	Collected by IDEM
		09/03/09	<1.0	<1.0	<1.0	<1.0	**9.0**	well pump removed
		09/03/09	<1.0	<1.0	<1.0	<1.0	**8.6**	duplicate sample
5	4163	08/24/04	<0.50	<0.50	<0.50	<0.50	<0.50	
		07/14/05	<0.50	<0.50	<0.50	<0.50	<0.50	
		06/22/06	<0.50	<0.50	<0.50	<0.50	<0.50	
		10/22/07	<0.50	<0.50	<0.50	<0.50	<0.50	
		10/21/08	<0.50	<0.50	<0.50	<0.50	<0.50	
		11/18/08*	ND	ND	ND	ND	ND	Collected By IDEM
6	4217/4081	08/24/04	<0.50	<0.50	<0.50	<0.50	<0.50	
		07/14/05	<0.50	<0.50	<0.50	<0.50	<0.50	
		06/22/06	<0.50	<0.50	<0.50	<0.50	<0.50	
		10/22/07	<0.50	<0.50	<0.50	<0.50	<0.50	
		11/03/08	<0.50	<0.50	<0.50	<0.50	<0.50	
		11/18/08*	ND	ND	ND	ND	ND	Collected By IDEM
18	4016	11/18/08*	ND	ND	ND	ND	ND	Collected By IDEM
		06/24/09	<0.50	<0.50	<0.50	<0.50	<0.50	
19	4008	11/18/08*	ND	ND	ND	ND	ND	Collected By IDEM
		11/18/08*	ND	ND	ND	ND	ND	Collected By IDEM
20	3998	11/18/08*	ND	ND	ND	ND	ND	Collected By IDEM
21	3980	12/10/08	<0.50	<0.50	<0.50	<0.50	<0.50	
22	3868	11/18/08*	ND	ND	ND	ND	**7.3**	Collected By IDEM
		12/10/08	<0.50	<0.50	<0.50	<0.50	**6.8**	
		03/19/09	<0.50	<0.50	<0.50	<0.50	**6.0**	
		06/02/09	<0.50	<0.50	<0.50	<0.50	**5.2**	
		09/10/09	<0.50	<0.50	<0.50	<0.50	**8.6**	
23	3842	11/18/08*	ND	ND	ND	ND	**1.2**	Collected By IDEM
		12/10/08	<0.50	<0.50	<0.50	<0.50	<0.50	
		12/10/08	<0.50	<0.50	<0.50	<0.50	**1.4**	duplicate sample
		03/19/09	<0.50	<0.50	<0.50	<0.50	**0.89**	
		06/02/09	<0.50	<0.50	<0.50	<0.50	**0.96**	
		09/10/09	<0.50	<0.50	<0.50	<0.50	**1.3**	
24	3796	12/10/08	<0.50	<0.50	<0.50	<0.50	**11.0**	
		06/02/09	<0.50	<0.50	<0.50	<0.50	**6.6**	
		09/10/09	<0.50	<0.50	<0.50	<0.50	**8.8**	
		09/10/09	<0.50	<0.50	<0.50	<0.50	**9.7**	duplicate sample
30	3791	11/18/08*	ND	ND	ND	ND	**10.0**	Collected By IDEM
		12/10/08	<0.50	<0.50	<0.50	<0.50	**9.4**	
		03/19/09	<0.50	<0.50	<0.50	<0.50	**8.5**	
		06/02/09	<0.50	<0.50	<0.50	<0.50	**8.1**	
		06/02/09	<0.50	<0.50	<0.50	<0.50	**8.3**	duplicate sample
		09/10/09	<0.50	<0.50	<0.50	<0.50	**11**	
		09/10/09	<0.50	<0.50	<0.50	<0.50	**11**	duplicate sample
31	3719/3701	11/18/08*	ND	ND	ND	ND	ND	Collected By IDEM
32	3618	12/10/08	<0.50	<0.50	<0.50	<0.50	<0.50	
33	3586	12/10/08	<0.50	<0.50	<0.50	<0.50	<0.50	
34	3597	11/18/08*	ND	**1.2**	ND	ND	ND	Collected By IDEM
		12/10/08	<0.50	**4.7**	<0.50	<0.50	<0.50	
		12/10/08	<0.50	**4.1**	<0.50	<0.50	<0.50	ms/msd sample
		03/19/09	<0.50	**3.7**	<0.50	<0.50	<0.50	
		06/02/09	<0.50	**3.5**	<0.50	<0.50	<0.50	
		09/10/09	<0.50	**2.9**	<0.50	<0.50	<0.50	
37	3394	12/11/08	<0.50	<0.50	<0.50	<0.50	<0.50	
64	4909	02/03/09	<0.50	<0.50	<0.50	<0.50	<0.50	
65	4910	02/03/09	<0.50	<0.50	<0.50	<0.50	<0.50	
66	4690	01/16/09	<0.50	<0.50	<0.50	<0.50	<0.50	
69	4833	04/29/09	<0.50	<0.50	<0.50	<0.50	<0.50	

Table 2 (continued)

Comprehensive Summary of the Volatile Organic Compound Analyses Performed on the Potable Water Samples Collected between 2004 and 2009
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

(Results reported in micrograms per liter, ug/l)

Map ID#	House Number	Sample Date[1]	Chloro-ethane	cis 1,2 Dichloro-ethene	trans 1,2 Dichloro-ethene	Trichloro-ethene	Vinyl Chloride	Comments
Houses located along East 450N								
54	116	04/29/09	<0.50	<0.50	<0.50	<0.50	<0.50	
55	120/128	02/03/09	<0.50	<0.50	<0.50	<0.50	<0.50	
79	1019	11/06/08	<0.50	<0.50	<0.50	<0.50	<0.50	
		11/18/08*	ND	ND	ND	ND	ND	Collected By IDEM
		06/02/09	<0.50	<0.50	<0.50	<0.50	<0.50	
73	1049	10/06/09	<0.50	<0.50	<0.50	<0.50	<0.50	
74	1125	10/06/09	<0.50	<0.50	<0.50	<0.50	<0.50	
75	1195	10/06/09	<0.50	<0.50	<0.50	<0.50	<0.50	
84	1995	02/11/09	<0.50	<0.50	<0.50	<0.50	<0.50	
89	1999	10/06/09	<0.50	<0.50	<0.50	<0.50	<0.50	House sample
		10/06/09	<0.50	<0.50	<0.50	<0.50	<0.50	Mobile home sample
90	2241	10/06/09	<0.50	<0.50	<0.50	<0.50	<0.50	
		10/06/09	<0.50	<0.50	<0.50	<0.50	<0.50	duplicate sample
Houses located along East 425N								
8	750	11/18/08*	ND	ND	ND	ND	ND	Collected By IDEM
9	682	11/18/08*	ND	ND	ND	ND	ND	Collected By IDEM
10	528	11/18/08*	ND	ND	ND	ND	ND	Collected By IDEM
11	501	11/18/08*	ND	ND	ND	ND	ND	Collected By IDEM
12	519	11/18/08*	ND	ND	ND	ND	ND	Collected By IDEM
13	537	11/18/08*	ND	ND	ND	ND	ND	Collected By IDEM
14	557	11/18/08*	ND	ND	ND	ND	ND	Collected By IDEM
15	581	11/18/08*	ND	ND	ND	ND	ND	Collected By IDEM
		04/12/09	--	--	--	--	--	Metals Non Detect[3]
16	719	11/18/08*	ND	ND	ND	ND	ND	Collected By IDEM
		05/26/09	<0.50	<0.50	<0.50	<0.50	<0.50	
17	781	11/18/08*	ND	ND	ND	ND	ND	Collected By IDEM
Houses located along East 375N								
25	1082	12/10/08	<0.50	<0.50	<0.50	<0.50	**1.6**	
		06/02/09	<0.50	<0.50	<0.50	<0.50	**0.97**	
		09/10/09	<0.50	<0.50	<0.50	<0.50	**1.2**	
27	966	12/11/08	<0.50	<0.50	<0.50	<0.50	<0.50	
28	948	12/10/08	<0.50	<0.50	<0.50	<0.50	<0.50	
29	908	12/11/08	<0.50	<0.50	<0.50	<0.50	<0.50	
38	343	12/11/08	<0.50	<0.50	<0.50	<0.50	<0.50	
		05/27/09	<0.50	<0.50	<0.50	<0.50	<0.50	
49	60	02/11/09	<0.50	<0.50	<0.50	<0.50	<0.50	
Houses located along East 350N								
35	1302	12/11/08	<0.50	<0.50	<0.50	<0.50	<0.50	
		05/26/09	<0.50	<0.50	<0.50	<0.50	<0.50	
86	1387	12/11/08	<0.50	<0.50	<0.50	<0.50	<0.50	
Houses located along East 250N								
91	5010	10/06/09	<0.50	<0.50	<0.50	<0.50	<0.50	

[1] 2004 concentrations obtained from 2004 Keramida report. Samples collected after 2004 were collected by MACTEC.

[2] House treatment system installed prior 11/20/08 sample collection

[3] Sample was only analyzed for metals (lead, chromium, copper, cadmium)

For a complete list of analyzed compounds please refer to the laboratory reports.

ND - IDEM did not specify detection limit

* - IDEM sample. Collected on either 11/18/08 or 11/19/08. Laboratory reports are not available.

PB: MMM
CB: PJS

Table 3

Comprehensive Summary of the Results fo the Soil Gas Collected in 2008
TORX Facility, 4366 North Old US Highway 31, 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 MTR-VMW3-V4.5-5.0 122308	12/19/08 12/23/08	**13** **14**	**5** **3**	**3** **2**	**1** **2**	**1** **1**	**1** <1	**3** **4**	<1 <1	**3** **2**	<1 <1	<1 <1	**3** **1**	**2** **1**	**3** **1**	<1 <1	<1 <1	<1 <1	<1 <1	<1 **1**	<1 **1**	<1 <1	**31** **24**	**13** **9**
VMW-3 (14.5-15)	MTR-VMW3-V14.5-15.0 121908 MTR-VMW3-V14.5-15.0 122308	12/19/08 12/23/08	**33** **27**	**4** **3**	**5** **3**	<1 **1**	**2** **3**	<1 <1	**3** **4**	<1 <1	**4** **4**	<1 <1	<1 <1	**2** <1	**1** <1	**1** <1	**1** <1	<1 <1	<1 <1	<1 **1**	**1** **1**	<1 **2**	**1** <1	**37** **32**	**19** **20**
VMW-3 (23.5-24)	MTR-VMW3-V23.5-24.0 121908 MTR-VMW3-V23.5-24.0 122308	12/19/08 12/23/08	<1 **6**	<1 **2**	<1 <1	<1 <1	**1** **5**	<1 <1	**3** **4**	<1 <1	<1 <1	<1 <1	<1 <1	<1 <1	<1 <1	<1 <1	<1 **1**	<1 <1	<1 <1	**3** **4**	**1** **2**	<1 <1	<1 <1	**8** **6**	<1 **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 Surfac "NAL" indicates there is no IDEM Soil Gas Screening Level for the compounc

[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
CB: PJS

Table 4

Comprehensive Summary of Volatile Organic Compound Analyses
Performed on the Groundwater Samples Collected from the Overburden Monitoring Wells During 2009
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

(Results reported in micrograms per liter, ug/l)

Monitoring Well Number	Field Sample ID	Sample Date	Acetone	Benzene	Chlorobenzene	Chloroethane	Chloroform	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethene (total)	Cis-1,2-Dichloroethene	Ethyl benzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylene, m/p
MW-1	MTR-MW1-G051209	05/12/09	20 U	**1.3**	**3.3**	**3.4**	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW1-G082609	08/26/09	20 U	**1.4**	**3.1**	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-2	MTR-MW2-G051209	05/12/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW2-G082709	08/27/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-3	MTR-MW3-G051209	05/12/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	**16**	**16**	**0.28 J**	2 U	1 U	1 U	1 U	**49**	2 U
	MTR-MW3-G090109	09/01/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	**0.54 J**	**0.54 J**	1 U	2 U	1 U	1 U	1 U	**480**	2 U
MW-4	MTR-MW4-G050809	05/08/09	20 UJ	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW4-G082809$^{(1)}$	08/28/09	**1.6 J**	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-5	MTR-MW5-G050809	05/08/09	20 UJ	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW5-G083109	08/31/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-6B	MTR-MW6B-G051409	05/14/09	20 U	1 U	1 U	1 U	1 U	1 U	**0.73 J**	**73**	**67**	1 U	2 U	1 U	**5.5**	1 U	**17**	2 U
	MTR-MW6B-G051409R	05/14/09	20 U	1 U	1 U	1 U	1 U	1 U	**0.71 J**	**69**	**64**	1 U	2 U	1 U	**5.1**	1 U	**16**	2 U
	MTR-MW6B-G090309	09/03/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	**19**	**19**	1 U	2 U	1 U	1 U	1 U	**4.2**	2 U
MW-6C	MTR-MW6C-G051409	05/14/09	20 U	1 U	1 U	1 UJ	1 U	1 U	**11**	**12000**	**12000**	1 U	**0.84 J**	1 U	**68**	**2.7**	**1300**	2 U
	MTR-MW6C-G090309	09/03/09	20 U	1 U	1 U	1 UJ	1 U	1 U	**25**	**17000**	**17000**	1 U	2 U	1 U	**92**	**12**	**3000**	2 U
MW-7	MTR-MW7-G051109	05/11/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW7-G082609	08/26/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-8	MTR-MW8-G051209	05/12/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	**1.5 J**	**1.5**	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW8-G09109	09/01/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	**1.7 J**	**1.7**	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-9A	MTR-MW9A-G051409	05/14/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW9A-G090109	09/01/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-9B	MTR-MW9B-G051409	05/14/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW9B-G051409R	05/14/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW9B-G090109	09/01/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-9C	MTR-MW9C-G051409	05/14/09	20 U	1 U	1 U	1 U	**4.4**	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	**2.6**	1 U	2 U
	MTR-MW9C-G090109	09/01/09	20 U	1 U	1 U	1 U	**4.2**	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	**2.1**	1 U	2 U
MW-10A	MTR-MW10A-G050709	05/07/09	20 UJ	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW10A-G082709	08/27/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-10B	MTR-MW10B-G050709	05/07/09	20 UJ	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW10B-G082709	08/27/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-10C	MTR-MW10C-G050709	05/07/09	20 UJ	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW10C-G082709	08/27/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-11	MTR-MW11-G051309	05/13/09	20 U	0.23 J	1 U	1 U	1 U	1 U	1 U	**1.6 J**	**1.6**	**0.2 J**	2 U	**0.68 J**	1 U	**2**	1 U	**0.33 J**
	MTR-MW11-G083109	08/31/09	20 U	1 J	1 U	1 U	1 U	1 U	1 U	**1.5 J**	**1.5**	1 U	2 U	1 U	1 U	**2.9**	1 U	2 U
MW-12	MTR-MW12-G051309	05/13/09	20 U	1 U	1 U	1 U	1 U	1 U	**2.2**	**2500**	**2500**	1 U	2 U	**0.34 J**	**27**	1 U	**1300**	2 U
	MTR-MW12-G083109	08/31/09	20 U	1 U	1 U	1 U	1 U	1 U	**3.5**	**4100**	**4100**	1 U	2 U	1 U	**43**	1 U	**1400**	2 U

Table 4 (continued)

Comprehensive Summary of Volatile Organic Compound Analyses
Performed on the Groundwater Samples Collected from the Overburden Monitoring Wells During 2009
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

(Results reported in micrograms per liter, ug/l)

Monitoring Well Number	Field Sample ID	Sample Date	Acetone	Benzene	Chlorobenzene	Chloroethane	Chloroform	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethene (total)	Cis-1,2-Dichloroethene	Ethyl benzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylene, m/p
MW-13	MTR-MW13-G051309	05/13/09	20 U	1 U	1 U	1 U	1 U	1 U	1.6	1700	1700	1 U	1.1 J	1 U	15	14	580	2 U
	MTR-MW13-G083109	08/31/09	20 U	1 U	1 U	1 U	1 U	1 U	1.4	2300	2300	1 U	1.1 J	1 U	14	14	830	2 U
MW-14	MTR-MW14-G051209	05/12/09	20 U	1 U	1 U	1 U	1 U	1 U	4	210	210	1 U	2 U	1 U	6.2	640	18	2 U
	MTR-MW14-G090209	09/02/09	20 U	1 U	1 U	1 U	1 U	1 U	3.7	170	170	1 U	2 U	1 U	4.8	680	23	2 U
MW-15	MTR-MW15-G051209	05/12/09	20 U	1 U	1 U	1 U	1 U	1 U	7.5	1400	1300	1 U	2 U	1 U	29	25	510	2 U
	MTR-MW15-G090309	09/03/09	20 U	1 U	1 U	1 U	1 U	1 U	7.6	1400	1400	1 U	2 U	1 U	42	29	440	2 U
	MTR-MW15-G090309R	09/03/09	20 U	1 U	1 U	1 U	1 U	1 U	8	1600	1600	1 U	2 U	1 U	45	29	520	2 U
MW-16	MTR-MW16-G051209	05/12/09	20 U	1 U	1 U	1 U	1 U	1 U	1.9	310	300	1 U	2 U	1 U	9.8	49	210	2 U
	MTR-MW16-G090209	09/02/09	20 U	1 U	1 U	1 U	1 U	1 U	1.1	190	190	1 U	2 U	1 U	6.8	45	160	2 U
MW-17	MTR-MW17-G051209	05/12/09	20 U	1 U	1 U	1 U	1 U	1 U	2.4	160	160	1 U	2 U	1 U	5.2	300	2.8	2 U
	MTR-MW17-G090209	09/02/09	20 U	1 U	1 U	1 U	1 U	1 U	2.1	140	140	1 U	2 U	1 U	4.7	330	1.6	2 U
MW-18(38.6)	MTR-MW18(38.6)-G050709	05/07/09	20 UJ	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW18(38.6)-G082709	08/27/09	20 U	1 U	0.87 J	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-18(63)	MTR-MW18(63)-G050709	05/07/09	20 UJ	1 U	1 U	1 U	1 U	1.2	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW18(63)-G082709	08/27/09	20 U	1 U	1 U	1 U	1 U	1.2	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-18(164)	MTR-MW18(164)-G050709	05/07/09	20 UJ	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW18(164)-G082609	08/26/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-19(33)	MTR-MW19 (33) - G050509	05/05/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW19 (33) - G090109	09/01/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW19 (33) - G090109R	09/01/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-19(53)	MTR-MW19 (53) - G050509	05/05/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	11	11	1 U	2 U	1 U	1 U	1 U	14	2 U
	MTR-MW19 (53) - G050509R	05/05/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	11	11	1 U	2 U	1 U	1 U	1 U	15	2 U
	MTR-MW19 (53) - G090109	09/01/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	19	19	1 U	2 U	1 U	1 U	1 U	21	2 U
MW-19(118)	MTR-MW19 (118) - G050509	05/05/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW19 (118) - G090109	09/01/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-20(35)	MTR-MW20(35)-G051409	05/14/09	20 U	1 U	1 U	4.2	1 U	1 U	2.5	2200	2200	1 U	2 U	1 U	29	14	1500	2 U
	MTR-MW20(35)-G090309	09/03/09	20 U	1 U	1 U	1 U	1 U	1 U	5.4	3500	3500	1 U	1.4 J	0.19 J	24	13	2100	2 U
MW-20(51)	MTR-MW20(51)-G051409	05/14/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	72	72	1 U	2 U	1 U	0.4 J	0.76 J	220	2 U
	MTR-MW20(51)-G090309	09/03/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	89	88	1 U	2 U	1 U	0.69 J	1 U	80	2 U
	MTR-MW20(51)-G090309R	09/03/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	91	91	1 U	2 U	1 U	1 U	1 U	71	2 U
MW-20(124)	MTR-MW20(124)-G051409	05/14/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW20(124)-G051409R	05/14/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW20(124)-G090309	09/03/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-20(155)	MTR-MW20(155)-G051409	05/14/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW20(155)-G090309	09/03/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U

Table 4 (continued)

Comprehensive Summary of Volatile Organic Compound Analyses
Performed on the Groundwater Samples Collected from the Overburden Monitoring Wells During 2009
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

(Results reported in micrograms per liter, ug/l)

Monitoring Well Number	Field Sample ID	Sample Date	Acetone	Benzene	Chlorobenzene	Chloroethane	Chloroform	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethene (total)	Cis-1,2-Dichloroethene	Ethyl benzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylene, m/p
MW-21(40.2)	MTR-MW21(40.2)-G051409	05/14/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	**1.5**	1 U	2 U
	MTR-MW21(40.2)-G051409R	05/14/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	**1.5**	1 U	2 U
	MTR-MW21(40.2)-G083109	08/31/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	**1.4**	1 U	2 U
	MTR-MW21(40.2)-G083109R	08/31/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	**1.4**	1 U	2 U
MW-21(128)	MTR-MW21(128)-G051409	05/14/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW21(128)-G083109	08/31/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-21(155.3)	MTR-MW21(155.3)-G051409	05/14/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW21(155.3)-G083109	08/31/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-22(37)	MTR-MW22(37)-G050709	05/07/09	20 UJ	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW22(37)-G082809	08/28/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-22(67.7)	MTR-MW22(67.7)-G050709	05/07/09	20 UJ	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW22(67.7)-G082809	08/28/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-22(130.7)	MTR-MW22(130.7)-G050709 (2)	05/07/09	20 UJ	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW22(130.7)-G082809	08/28/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-23(39.9)	MTR-MW23(39.9)-G051109	05/11/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW23(39.9)-G082809	08/28/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-23(105.6)	MTR-MW23(105.6)-G051109	05/11/09	20 U	1 U	1 U	**8**	1 U	**1.4**	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW23(105.6)-G082809	08/28/09	20 U	1 U	1 U	**10**	1 U	**1.2**	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW23(105.6)-G082809R	08/28/09	20 U	1 U	1 U	**9.1**	1 U	**1.2**	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-23(122.7)	MTR-MW23(122.7)-G051109	05/11/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW23(122.7)-G082809	08/28/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-24(24.9)	MTR-MW24(24.9)-G051409	05/14/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW24(24.9)-G090109	09/01/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-24(55.4)	MTR-MW24(55.4)-G051409	05/14/09	20 U	1 U	1 U	1 U	1 U	1 U	**0.78 J**	**63**	**56**	1 U	2 U	1 U	**7.1**	**150**	**1.5**	2 U
	MTR-MW24(55.4)-G051409R	05/14/09	20 U	1 U	1 U	1 U	1 U	1 U	**0.75 J**	**62**	**55**	1 U	2 U	1 U	**7**	**150**	**1.5**	2 U
	MTR-MW24(55.4)-G090209	09/02/09	20 U	1 U	1 U	1 U	1 U	1 U	**0.71 J**	**74**	**68**	1 U	2 U	1 U	**6.2**	**150**	1 U	2 U
	MTR-MW24(55.4)-G090209R	09/02/09	20 U	1 U	1 U	1 U	1 U	1 U	**0.75 J**	**76**	**69**	1 U	2 U	1 U	**6.4**	**150**	1 U	2 U
MW-24(122.6)	MTR-MW24(122.6)-G051409	05/14/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW24(122.6)-G090109	09/01/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-24(159.4)	MTR-MW24(159.4)-G051409	05/14/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW24(159.4)-G090209	09/02/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-25(16.4)	MTR-MW25(16.4)-G051409	05/14/09	20 U	1 U	1 U	1 U	1 U	1 U	**4.9**	**1500**	**1500**	1 U	2 U	1 U	**9.9**	**7.8**	**980**	2 U
	MTR-MW25(16.4)-G051409R	05/14/09	20 U	1 U	1 U	1 U	1 U	1 U	**4.8**	**1400**	**1400**	1 U	2 U	1 U	**9.6**	**6.4**	**980**	2 U
	MTR-MW25(16.4)-G090209	09/02/09	20 U	1 U	1 U	1 U	1 U	1 U	**4.1**	**1500**	**1500**	1 U	2 U	1 U	**9.9**	1 U	**1200**	2 U
	MTR-MW25(16.4)-G090209R	09/02/09	20 U	1 U	1 U	1 U	1 U	1 U	**4.3**	**1500**	**1500**	1 U	2 U	1 U	**9**	1 U	**1300**	2 U
MW-25(32.6)	MTR-MW25(32.6)-G051409	05/14/09	20 U	1 U	1 U	1 U	1 U	1 U	**2.8**	**440**	**440**	1 U	2 U	1 U	**3.4**	**150**	**400**	2 U
	MTR-MW25(32.6)-G090209	09/02/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	**280**	**280**	1 U	2 U	1 U	**1.5**	**81**	**290**	2 U

Table 4 (continued)

Comprehensive Summary of Volatile Organic Compound Analyses
Performed on the Groundwater Samples Collected from the Overburden Monitoring Wells During 2009
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

(Results reported in micrograms per liter, ug/l)

Monitoring Well Number	Field Sample ID	Sample Date	Acetone	Benzene	Chlorobenzene	Chloroethane	Chloroform	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethene (total)	Cis-1,2-Dichloroethene	Ethyl benzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylene, m/p
MW-25(45.2)	MTR-MW25(45.2)-G051409	05/14/09	20 U	1 U	1 U	1 U	1 U	1 U	1.5	430	410	1 U	2 U	1 U	33	11	170	2 U
	MTR-MW25(45.2)-G090209	09/02/09	20 U	1 U	1 U	1 U	1 U	1 U	1.5	450	430	1 U	2 U	1 U	29	9.2	300	2 U
MW-25(82)	MTR-MW25(82)-G051409	05/14/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	0.47 J	0.47 J	1 U	2 U	1 U	1 U	1 U	4.8	2 U
	MTR-MW25(82)-G090209	09/02/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	3.2	2 U
MW-25(145)	MTR-MW25(145)-G051409	05/14/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW25(145)-G090209	09/02/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-26(17.5)	MTR-MW26(17.5)-G051209	05/12/09	20 U	1 U	1 U	1 U	1 U	1 U	1.7	1000	1000	1 U	2 U	1 U	15	12	250	2 U
	MTR-MW26(17.5)-G090209	09/02/09	20 U	1 U	1 U	1 U	1 U	1 U	2.6	960	960	1 U	2 U	1 U	15	13	270	2 U
MW-26(28.8)	MTR-MW26(28.8)-G051209	05/12/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	88	84	1 U	2 U	1 U	3.6	26	19	2 U
	MTR-MW26(28.8)-G090209	09/02/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	38	36	1 U	2 U	1 U	1.6	25	23	2 U
MW-26(58.2)	MTR0MW26(58.2)-G051209	05/12/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2.6 J	2.6 J	1 U	2 U	1 U	1 U	1.5	0.7 J	2 U
	MTR-MW26(58.2)-G051209R	05/12/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	4 J	4 J	1 U	2 U	1 U	1 U	1.6	0.8 J	2 U
	MTR-MW26(58.2)-G090209	09/02/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 J	2	1 U	2 U	1 U	1 U	2.1	1 U	2 U
MW-26(114.8)	MTR-MW26(114.8)-G051209	05/12/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW26(114.8)-G090209	09/02/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1.7 J	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-26(143.6)	MTR-MW26(143.6)-G051209	05/12/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW26(143.6)-G090209	09/02/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-27(18)	MTR-MW27(18)-G051209	05/12/09	20 U	1 U	1 U	1 U	1 U	1 U	3.2	840	840	1 U	2 U	1 U	6.6	13	360	2 U
	MTR-MW27(18)-G090209	09/02/09	20 U	1 U	1 U	1 U	1 U	1 U	3.7	1100	1100	1 U	2 U	1 U	7.9	19	510	2 U
	MTR-MW27(18)-G090209R	09/02/09	20 U	1 U	1 U	1 U	1 U	1 U	3.6	1200	1200	1 U	2 U	1 U	7.6	20	610	2 U
MW-27(53.05)	MTR-MW27(53.05)-G051209	05/12/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	0.64 J	0.64 J	1 U	2 U	1 U	1 U	52	1 U	2 U
	MTR-MW27(53.05)-G051209R	05/12/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	0.59 J	0.59 J	1 U	2 U	1 U	1 U	49	1 U	2 U
	MTR-MW27(53.05)-G090209	09/02/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	55	1 U	2 U
MW-27(75.4)	MTR-MW27(75.4)-G051209	05/12/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	31	30	1 U	2 U	1 U	1.2	37	1.6	2 U
	MTR-MW27(75.4)-G090209	09/02/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	35	33	1 U	2 U	1 U	1.5	37	1.1	2 U
MW-27(104.2)	MTR-MW27(104.2)-G051209	05/12/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	4.4	2 U
	MTR-MW27(104.2)-G090209	09/02/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	8.6	2 U
MW-27(135)	MTR-MW27(135)-G051209	05/12/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW27(135)-G090209	09/02/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-28(24.3)	MTR-MW28 (24.3) - G050509	05/05/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW28 (24.3) - G082709	08/27/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-28(53.2)	MTR-MW28 (53.2) - G050509	05/05/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW28 (53.2) - G050509R	05/05/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW28 (53.2) - G082709	08/27/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-28(117.7)	MTR-MW28 (117.7) - G050509	05/05/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW28 (117.7) - G082709	08/27/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U

Table 4 (continued)

Comprehensive Summary of Volatile Organic Compound Analyses
Performed on the Groundwater Samples Collected from the Overburden Monitoring Wells During 2009
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

(Results reported in micrograms per liter, ug/l)

Monitoring Well Number	Field Sample ID	Sample Date	Acetone	Benzene	Chlorobenzene	Chloroethane	Chloroform	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethene (total)	Cis-1,2-Dichloroethene	Ethyl benzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylene, m/p
MW-28(138.1)	MTR-MW28 (138.1) - G050509	05/05/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW28 (138.1) - G082709	08/27/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-29(82.5)	MTR-MW29 (82.5) - G050609	05/06/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW29 (82.5) - G082709	08/27/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-29(103.3)	MTR-MW29 (103.3) - G050609	05/06/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW29 (103.3) - G082709	08/27/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-29(132.8)	MTR-MW29 (132.8) - G050609	05/06/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW29 (132.8) - G082709	08/27/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-30(41.1)	MTR-MW30(41.1)-G050709	05/07/09	20 UJ	1 U	1 U	1 U	1 U	1 U	1	**130**	**130**	1 U	2 U	1 U	**2.7**	**77**	**2.2**	2 U
	MTR-MW30(41.1)-G090109	09/01/09	20 U	1 U	1 U	1 U	1 U	1 U	**1.2**	**150**	**150**	1 U	2 U	1 U	**3.2**	**82**	**3.5**	2 U
MW-30(120.2)	MTR-MW30(120.2)-G050709	05/07/09	20 UJ	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW30(120.2)-G090109	09/01/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-30(148)	MTR-MW30(148)-G050709	05/07/09	20 UJ	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW30(148)-G090109	09/01/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-31(30.9)	MTR-MW31 (30.9) - G050509	05/05/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW31 (30.9) - G090109	09/01/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	**0.89 J**	**0.89 J**	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW31 (30.9) - G090109R	09/01/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	**0.87 J**	**0.87 J**	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-31(55.5)	MTR-MW31 (55.5) - G050509	05/05/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW31 (55.5) - G090109	09/01/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-31(98.5)	MTR-MW31 (98.5) - G050509	05/05/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW31 (98.5) - G090109	09/01/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-31(139.2)	MTR-MW31 (139.2) - G050509	05/05/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW31 (139.2) - G050509R	05/05/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW31 (139.2) - G090109	09/01/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-32(24.1)	MTR-MW32 (24.1) - G050609	05/06/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	**4.2**	**3.8**	1 U	2 U	1 U	**0.43 J**	1 U	1 U	2 U
	MTR-MW32 (24.1) - G090309	09/03/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	**3.4**	**3.4**	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-32(89)	MTR-MW32 (89) - G050609$^{(3)}$	05/06/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	**12**	2 U
	MTR-MW32 (89) - G090309	09/03/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	**15**	2 U
MW-32(110)	MTR-MW32 (110) - G050609	05/06/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW32 (110) - G090309	09/03/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-33(23.1)	MTR-MW33 (23.1) - G050509	05/05/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW33 (23.1) - G082609	08/26/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-33(70.9)	MTR-MW33 (70.9) - G050509	05/05/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW33 (70.9) - G082609	08/26/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-33(129.1)	MTR-MW33 (129.1) - G050509	05/05/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW33 (129.1) - G082609	08/26/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U

Table 4 (continued)

Comprehensive Summary of Volatile Organic Compound Analyses
Performed on the Groundwater Samples Collected from the Overburden Monitoring Wells During 2009
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

(Results reported in micrograms per liter, ug/l)

Monitoring Well Number	Field Sample ID	Sample Date	Acetone	Benzene	Chlorobenzene	Chloroethane	Chloroform	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethene (total)	Cis-1,2-Dichloroethene	Ethyl benzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylene, m/p
MW-33(208.9)	MTR-MW33 (208.9) - G050509	05/05/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW33 (208.9) - G082609	08/26/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-34(37)	MTR-MW34(37)-G050609	05/06/09	20 UJ	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW34(37)-G090309	09/03/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-34(85)	MTR-MW34(85)-G050609	05/06/09	20 UJ	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	**12**	1 U	2 U
	MTR-MW34(85)-G090309	09/03/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	**1.4 J**	1 U	1 U	2 U	1 U	1 U	**14**	1 U	2 U
	MTR-MW34(85)-G090309R	09/03/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	**14**	1 U	2 U
MW-34(110)	MTR-MW34(110)-G050609	05/06/09	20 UJ	1 U	1 U	1 U	1 U	1 U	1 U	**3.1**	**3.1**	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW34(110)-G090309	09/03/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	**3.3**	**3.3**	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-34(135)	MTR-MW34(135)-G050609	05/06/09	20 UJ	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW34(135)-G090309	09/03/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-35(45)	MTR-MW35 (45) - G050509	05/05/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW35 (45) - G082609	08/26/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-35(90)	MTR-MW35 (90) - G050509	05/05/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW35 (90) - G082609	08/26/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-35(148)	MTR-MW35 (148) - G050509	05/05/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW35 (148) - G082609	08/26/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-36(35.2)	MTR-MW36(35.2)-G050609	05/06/09	20 UJ	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW36(35.2)-G082509	08/25/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-36(92.4)	MTR-MW36(92.4)-G050609	05/06/09	20 UJ	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW36(92.4)-G082509	08/25/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-36(124.5)	MTR-MW36(124.5)-G050609	05/06/09	20 UJ	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW36(124.5)-G082509	08/25/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-37(23.3)	MTR-MW37 (23.3) - G050409	05/04/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW37 (23.3) - G082509	08/25/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-37(70)	MTR-MW37 (70) - G050409	05/04/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW37 (70) - G082509	08/25/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-37(98)	MTR-MW37 (98) - G050409	05/04/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW37 (98) - G082509	08/25/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-38(20.8)	MTR-MW38 (20.8) - G050409	05/04/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW38 (20.8) - G082509	08/25/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-38(29.1)	MTR-MW38 (29.1) - G050409	05/04/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW38 (29.1) - G082509	08/25/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW38 (29.1) - G082509R	08/25/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-38(69.9)	MTR-MW38 (69.9) - G050409	05/04/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW38 (69.9) - G082509	08/25/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U

Table 4 (continued)

Comprehensive Summary of Volatile Organic Compound Analyses
Performed on the Groundwater Samples Collected from the Overburden Monitoring Wells During 2009
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

(Results reported in micrograms per liter, ug/l)

Monitoring Well Number	Field Sample ID	Sample Date	Acetone	Benzene	Chlorobenzene	Chloroethane	Chloroform	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethene (total)	Cis-1,2-Dichloroethene	Ethyl benzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylene, m/p
MW-38(102.5)	MTR-MW38 (102.5) - G050409	05/04/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW38 (102.5) - G082509	08/25/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-39(13)	MTR-MW39 (13) - G050409	05/04/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW39 (13) - G082509	08/25/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-39(29.3)	MTR-MW39 (29.3) - G050409	05/04/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW39 (29.3) - G082509	08/25/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-39(76.8)	MTR-MW39 (76.8) - G050409	05/04/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW39 (76.8) - G082509	08/25/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-46(95.5)	MTR-MW46(95.5)-G050709	05/07/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW46(95.5)-G082609	08/26/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-47(109.7)	MTR-MW47(109.7)-G050709	05/07/09	20 UJ	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW47(109.7)-G082609	08/26/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-47(137.8)	MTR-MW47(137.8)-G050709	05/07/09	20 UJ	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW47(137.8)-G082609	08/26/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW47(137.8)-G082609R	08/26/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	USEPA MCLs		NE	5.0	100	NE	80	NE	7.0	NE	70	700	5.0	1000	100	5.0	2.0	10000
	IDEM RISC Default Closure																	
	Industrial		92000	52	2000	990	1000	10000	5100	NE	1000	10000	55	8200	2000	31	4.0	20000
	Residential		6900	see MCL	see MCL	62	see MCL	990	see MCL	NE	see MCL	see MCL	see MCL	see MCL	see MCL	see MCL	see MCL	see MCL

Notes:
NA - Not analyzed
NE - None established
R - replicate sample
U - not detected, value is the detection limit
J - value is estimated

USEPA MCLs - United States Environmental Protection Agency (USEPA) Maximum Contaminant Levels (MCLs) (May 2009)
IDEM RISC - Indiana Department of Environmental Management (IDEM) risk integrated system of closure (RISC) (05/01/09)
Xylene mixed (total) used as a surrogate for Xylene, m/p.
For a complete list of analyzed compounds and results please refer to the laboratory reports
Concentration exceeds IDEM RISC industrial default closure level
Concentration exceeds IDEM RISC residential default closure level and U.S. EPA maximum contaminant level

[1] 2-Butanone was detected at a concentration of 14 ug/l in the sample collected from MW-4 on 08/28/09

[2] MTR-MW22(130.7)-G050709 was mistakenly labeled as MTR-MW22(138.7)-G050709 on the Chain of Custody (COC)

[3] MTR-MW32(89)-G050609 was mistakenly labeled as MTR-MW32(82)-G050609 on the Chain of Custody (COC)

PB: MMM
CB: RLB

Table 5

Comprehensive Summary of Target Inorganic Compound Analyses
Performed on the Groundwater Samples Collected from the Overburden Monitoring Wells During 2009
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

(Results reported in milligrams per liter, mg/l)

Monitoring Well Number	Field Sample ID	Sample Date	Cadmium, Dissolved	Chromium, Dissolved	Copper, Dissolved	Lead, Dissolved	Cadmium, Total	Chromium, Total	Copper, Total	Lead, Total
MW-18(38.6)	MTR-MW18(38.6)-G050709	05/07/09	0.002 U	**0.0013 J**	**0.00055 J**	0.005 U	0.002 U	**0.0054**	**0.00091 J**	0.005 U
	MTR-MW18(38.6)-G082709	08/27/09	0.002 U	**0.00055 J**	**0.0028 J**	0.005 U	0.002 U	**0.0025 J**	**0.0041 J**	**0.0006 J**
MW-18(63)	MTR-MW18(63)-G050709	05/07/09	0.002 U	**0.0011 J**	0.005 U	0.005 U	0.002 U	**0.0037 J**	**0.00037 J**	0.005 U
	MTR-MW18(63)-G082709	08/27/09	0.002 U	**0.00018 J**	**0.00069 J**	0.005 U	0.002 U	**0.00059 J**	**0.00072 J**	0.005 U
MW-18(164)	MTR-MW18(164)-G050709	05/07/09	0.002 U	0.005 U	0.005 U	0.005 U	0.002 U	0.005 U	0.005 U	0.005 U
	MTR-MW18(164)-G082609	08/26/09	0.002 U	**0.00016 J**	**0.00072 J**	0.005 U	0.002 U	**0.00048 J**	**0.00078 J**	**0.00012 J**
MW-19(33)	MTR-MW19 (33) - G050509	05/05/09	0.002 U	0.005 U	0.005 U	0.005 U	0.002 U	**0.008**	**0.0031 J**	**0.0015 J**
	MTR-MW19 (33) - G090109	09/01/09	0.002 U	**0.00021 J**	**0.00047 J**	0.005 U	0.002 U	**0.0013 J**	**0.00057 J**	0.005 U
	MTR-MW19 (33) - G090109R	09/01/09	0.002 U	**0.00021 J**	0.005 U	0.005 U	0.002 U	**0.00037 J**	**0.00036 J**	0.005 U
MW-19(53)	MTR-MW19 (53) - G050509	05/05/09	0.002 U	0.005 U	0.005 U	0.005 U	0.002 U	0.005 U	0.005 U	0.005 U
	MTR-MW19 (53) - G050509R	05/05/09	0.002 U	0.005 U	0.005 U	0.005 U	0.002 U	0.005 U	0.005 U	0.005 U
	MTR-MW19 (53) - G090109	09/01/09	0.002 U	**0.00024 J**	**0.0016 J**	0.005 U	0.002 U	**0.0013 J**	**0.001 J**	**0.00025 J**
MW-19(118)	MTR-MW19 (118) - G050509	05/05/09	0.002 U	0.005 U	0.005 U	0.005 U	0.002 U	0.005 U	0.005 U	0.005 U
	MTR-MW19 (118) - G090109	09/01/09	0.002 U	0.005 U	**0.0006 J**	0.005 U	0.002 U	**0.00022 J**	**0.00057 J**	0.005 U
MW-20(35)	MTR-MW20(35)-G051409	05/14/09	0.002 U	0.005 U	0.005 U	0.005 U	0.002 U	0.005 U	0.005 U	0.005 U
	MTR-MW20(35)-G090309	09/03/09	0.002 U	**0.00072 J**	0.005 U	**0.000096 J**	0.002 U	**0.0045 J**	**0.00083 J**	**0.00029 J**
MW-20(51)	MTR-MW20(51)-G051409	05/14/09	0.002 U	0.005 U	0.005 U	0.005 U	0.002 U	0.005 U	0.005 U	0.005 U
	MTR-MW20(51)-G090309	09/03/09	0.002 U	**0.00058 J**	0.005 U	0.005 U	0.002 U	**0.0012 J**	**0.00059 J**	**0.00046 J**
	MTR-MW20(51)-G090309R	09/03/09	0.002 U	**0.0005 J**	0.005 U	0.005 U	0.002 U	**0.001 J**	**0.00073 J**	**0.00028 J**
MW-20(124)	MTR-MW20(124)-G051409	05/14/09	0.002 U	0.005 U	0.005 U	0.005 U	0.002 U	0.005 U	0.005 U	0.005 U
	MTR-MW20(124)-G051409R	05/14/09	0.002 U	0.005 U	0.005 U	0.005 U	0.002 U	0.005 U	0.005 U	0.005 U
	MTR-MW20(124)-G090309	09/03/09	0.002 U	**0.0008 J**	0.005 U	0.005 U	0.002 U	**0.0012 J**	**0.00041 J**	0.005 U
MW-20(155)	MTR-MW20(155)-G051409	05/14/09	0.002 U	0.005 U	0.005 U	0.005 U	0.002 U	0.005 U	0.005 U	0.005 U
	MTR-MW20(155)-G090309	09/03/09	0.002 U	**0.00052 J**	0.005 U	0.005 U	0.002 U	**0.00062 J**	0.005 U	0.005 U
MW-21(40.2)	MTR-MW21(40.2)-G051409	05/14/09	0.002 U	0.005 U	0.005 U	0.005 U	0.002 U	0.005 U	0.005 U	0.005 U
	MTR-MW21(40.2)-G051409R	05/14/09	0.002 U	0.005 U	0.005 U	0.005 U	0.002 U	0.005 U	0.005 U	0.005 U
	MTR-MW21(40.2)-G083109	08/31/09	0.002 U	**0.00037 J**	**0.00077 J**	0.005 U	0.002 U	**0.00078 J**	**0.00063 J**	**0.00011 J**
	MTR-MW21(40.2)-G083109R	08/31/09	0.002 U	**0.00036 J**	**0.00076 J**	0.005 U	0.002 U	**0.00087 J**	**0.00064 J**	**0.000087 J**

Table 5 (continued)

Comprehensive Summary of Target Inorganic Compound Analyses
Performed on the Groundwater Samples Collected from the Overburden Monitoring Wells During 2009
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

(Results reported in milligrams per liter, mg/l)

Monitoring Well Number	Field Sample ID	Sample Date	Cadmium, Dissolved	Chromium, Dissolved	Copper, Dissolved	Lead, Dissolved	Cadmium, Total	Chromium, Total	Copper, Total	Lead, Total
MW-21(128)	MTR-MW21(128)-G051409	05/14/09	0.002 U	0.005 U	0.005 U	0.005 U	0.002 U	0.005 U	0.005 U	0.005 U
	MTR-MW21(128)-G083109	08/31/09	0.002 U	0.005 U	**0.00038** J	0.005 U	0.002 U	**0.00024** J	0.005 U	0.005 U
MW-21(155.3)	MTR-MW21(155.3)-G051409	05/14/09	0.002 U	0.005 U	0.005 U	0.005 U	0.002 U	0.005 U	0.005 U	0.005 U
	MTR-MW21(155.3)-G083109	08/31/09	0.002 U	**0.00013** J	**0.00081** J	0.005 U	0.002 U	**0.00048** J	**0.00028** J	0.005 U
MW-22(37)	MTR-MW22(37)-G050709	05/07/09	0.002 U	0.005 U	**0.00049** J	0.005 U	0.002 U	0.005 U	**0.00088** J	0.005 U
	MTR-MW22(37)-G082809	08/28/09	0.002 U	0.005 U	**0.00075** J	0.005 U	0.002 U	**0.00026** J	0.005 U	0.005 U
MW-22(67.7)	MTR-MW22(67.6)-G050709	05/07/09	0.002 U	0.005 U	0.005 U	0.005 U	0.002 U	0.005 U	**0.00031** J	0.005 U
	MTR-MW22(67.6)-G082809	08/28/09	0.002 U	**0.00017** J	**0.0014** J	0.005 U	0.002 U	**0.00041** J	0.005 U	**0.0001** J
MW-22(130.7)	MTR-MW22(130.7)-G050709$^{(1)}$	05/07/09	0.002 U	0.005 U	**0.0019** J	0.005 U	0.002 U	0.005 U	**0.0011** J	0.005 U
	MTR-MW22(130.7)-G082809	08/28/09	0.002 U	**0.00018** J	**0.0014** J	0.005 U	0.002 U	**0.00035** J	0.005 U	0.005 U
	USEPA MCLs		0.005	0.1	1.3	0.015	0.005	0.1	1.3	0.015
	IDEM RISC Default Closure									
	Industrial		0.051	0.31	4.1	0.042	0.051	0.31	4.1	0.042
	Residential		see MCL	see MCL	see MCL	see MCL	see MCL	see MCL	see MCL	see MCL

Notes:

NA - Not analyzed	U - not detected, value is the detection limit
R - Replicate sample	J - value is estimated

USEPA MCLs - United States Environmental Protection Agency (USEPA) Maximum Contaminant Levels (MCLs) (May 2009)

IDEM RISC - Indiana Department of Environmental Management (IDEM) risk integrated system of closure (RISC) (05/01/09)

For a complete list of analyzed compounds and results please refer to the laboratory reports

Concentration exceeds IDEM RISC industrial default closure level

▨ Concentration exceeds IDEM RISC residential default closure level and U.S. EPA maximum contaminant level

(1) MTR-MW22(130.7)-G050709 was mistakenly labeled as MTR-MW22(138.7)-G050709 on the Chain of Custody (COC)

PB: MMM
CB: RLB

Table 6

Comprehensive Summary of Volatile Organic Compound Analyses
Performed on the Groundwater Samples Collected from the Bedrock Monitoring Wells During 2009
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

(Results reported in micrograms per liter, ug/l)

Monitoring Well Number	Field Sample ID	Sample Date	Acetone	Benzene	Chlorobenzene	Chloroethane	Chloroform	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethene (total)	Cis-1,2-Dichloroethene	Ethyl benzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylene, m/p
MW-40(198.8)	MTR-MW40(198.8)-G051109	05/11/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW40(198.8)-G083109	08/31/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-41(190)	MTR-MW41(190)-G051509	05/15/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW41(190)-G083109	08/31/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-42(175.3)	MTR-MW42(175.3)-G050709	05/07/09	**49 J**	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW42(175.3)-G082709(1)	08/27/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	**0.46 J**	1 U	1 U	1 U	2 U
MW-43(190)	MTR-MW43(190)-G051509	05/15/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW43(190)-G083109	08/31/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-44(185.9)	MTR-MW44(185.9)-G051109	05/11/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW44(185.9)-G083109	08/31/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
MW-45(185)	MTR-MW45(185)-G051409	05/14/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
	MTR-MW45(185)-G083109	08/31/09	20 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U
USEPA MCLs			NE	5.0	100	NE	80	NE	7.0	NE	70	700	5.0	1000	100	5.0	2.0	10000
IDEM RISC Default Closure																		
Industrial			92000	52	2000	990	1000	10000	5100	NE	1000	10000	55	8200	2000	31	4.0	20000
Residential			6900	see MCL	see MCL	62	see MCL	990	see MCL	see MCL	see MCL	see MCL	see MCL	see MCL	see MCL	see MCL	see MCL	see MCL

Notes:
NA - Not analyzed
NE - None established
U - not detected, value is the detection limit
J - value is estimated

USEPA MCLs - United States Environmental Protection Agency (USEPA) Maximum Contaminant Levels (MCLs) (May 2009)
IDEM RISC - Indiana Department of Environmental Management (IDEM) risk integrated system of closure (RISC) (05/01/09)
Xylene mixed (total) used as a surrogate for Xylene, m/p.
For a complete list of analyzed compounds and results please refer to the laboratory reports
Concentration exceeds IDEM RISC industrial default closure level
Concentration exceeds IDEM RISC residential default closure level and U.S. EPA maximum contaminant level

(1) Carbon disulfide was detected at a concentration of 3.1 ug/l in the sample collected from MW-42(175.3) on 08/27/09

PB: MMM
CB: RLB RLB

Table 7

Comprehensive Summary of Volatile Organic Compound Analyses
Performed on the Treatment System Samples Collected During 2009
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

(Results reported in micrograms per liter, ug/l)

Map ID	Street Address	Sample Date	Chloro-ethane	cis 1,2 Dichloro-ethene	trans 1,2 Dichloro-ethene	Trichloro-ethene	Vinyl Chloride	Comments
22	3868 N Old US Hwy 31	03/19/09	<0.50	<0.50	<0.50	<0.50	6.0	Pre Treatment
		03/19/09	<0.50	<0.50	<0.50	<0.50	<0.50	Post Treatment
		06/02/09	<0.50	<0.50	<0.50	<0.50	5.2	Pre Treatment
		06/02/09	<0.50	<0.50	<0.50	<0.50	<0.50	Post Treatment
		09/10/09	<0.50	<0.50	<0.50	<0.50	8.6	Pre Treatment
		9/10/09(1)	<0.50	<0.50	<0.50	<0.50	<0.50	Post Treatment
		09/10/09	<0.50	<0.50	<0.50	<0.50	<0.50	Final Treatment
23	3842 N Old US Hwy 31	03/19/09	<0.50	<0.50	<0.50	<0.50	**0.89**	Pre Treatment
		03/19/09	<0.50	<0.50	<0.50	<0.50	**0.87**	Pre Treatment - R
		03/19/09	<0.50	<0.50	<0.50	<0.50	<0.50	Post Treatment
		06/02/09	<0.50	<0.50	<0.50	<0.50	**0.96**	Pre Treatment
		06/02/09	<0.50	<0.50	<0.50	<0.50	<0.50	Post Treatment
		09/10/09	<0.50	<0.50	<0.50	<0.50	**1.3**	Pre Treatment
		09/10/09	<0.50	<0.50	<0.50	<0.50	<0.50	Post Treatment
24	3796 N Old US Hwy 31	06/02/09	<0.50	<0.50	<0.50	<0.50	6.6	Pre Treatment
		06/02/09	<0.50	<0.50	<0.50	<0.50	<0.50	Post Treatment
		09/10/09	<0.50	<0.50	<0.50	<0.50	8.8	Pre Treatment
		09/10/09	<0.50	<0.50	<0.50	<0.50	9.7	Pre Treatment - R
		09/10/09	<0.50	<0.50	<0.50	<0.50	<0.50	Post Treatment
25	1082 E 375 N	06/02/09	<0.50	<0.50	<0.50	<0.50	**0.97**	Pre Treatment
		06/02/09	<0.50	<0.50	<0.50	<0.50	<0.50	Post Treatment
		09/10/09	<0.50	<0.50	<0.50	<0.50	**1.2**	Pre Treatment
		09/10/09	<0.50	<0.50	<0.50	<0.50	<0.50	Post Treatment
30	3791 N Old US Hwy 31	03/19/09	<0.50	<0.50	<0.50	<0.50	8.5	Pre Treatment
		03/19/09	<0.50	<0.50	<0.50	<0.50	<0.50	Post Treatment
		06/02/09	<0.50	<0.50	<0.50	<0.50	8.1	Pre Treatment
		06/02/09	<0.50	<0.50	<0.50	<0.50	8.3	Pre Treatment - R
		06/02/09	<0.50	<0.50	<0.50	<0.50	<0.50	Post Treatment
		07/23/09	<0.50	<0.50	<0.50	<0.50	9.8	Pre Treatment
		07/23/09	<0.50	<0.50	<0.50	<0.50	9.8	Pre Treatment - R
		7/23/09 (2)	<0.50	<0.50	<0.50	<0.50	<0.50	Post Treatment
		07/23/09	<0.50	<0.50	<0.50	<0.50	<0.50	Final Treatment
		08/31/09	<0.50	<0.50	<0.50	<0.50	12	Pre Treatment
		08/31/09	<0.50	<0.50	<0.50	<0.50	12	Pre Treatment - R
		08/31/09	<0.50	<0.50	<0.50	<0.50	<0.50	Post Treatment
		09/10/09	<0.50	<0.50	<0.50	<0.50	11	Pre Treatment
		09/10/09	<0.50	<0.50	<0.50	<0.50	11	Pre Treatment - R
		9/10/09(3)	<0.50	<0.50	<0.50	<0.50	<0.50	Post Treatment
		09/10/09	<0.50	<0.50	<0.50	<0.50	<0.50	Final Treatment

Table 7 (continued)
Comprehensive Summary of Volatile Organic Compound Analyses Performed on the Treatment System Samples Collected During 2009
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

(Results reported in micrograms per liter, ug/l)

Map ID	Street Address	Sample Date	Chloro-ethane	cis 1,2 Dichloro-ethene	trans 1,2 Dichloro-ethene	Trichloro-ethene	Vinyl Chloride	Comments
34	3597 N Old US Hwy 31	03/19/09	<0.50	**3.7**	<0.50	<0.50	<0.50	Pre Treatment
		03/19/09	<0.50	<0.50	<0.50	<0.50	<0.50	Post Treatment
		06/02/09	<0.50	**3.5**	<0.50	<0.50	<0.50	Pre Treatment
		06/02/09	<0.50	<0.50	<0.50	<0.50	<0.50	Post Treatment
		09/10/09	<0.50	**2.9**	<0.50	<0.50	<0.50	Pre Treatment
		09/10/09	<0.50	<0.50	<0.50	<0.50	<0.50	Post Treatment

USEPA MCLs	NE	70	100	5.0	2.0
IDEM RISC Default Closure					
Industrial	990	1000	2000	31	4.0
Residential	62	see MCL	see MCL	see MCL	see MCL

Notes
Pre-Treatment sample collected before the first carbon tank/canister (untreated water)
Post-Treatment sample collected between the first and second carbon tanks/canisters (treated water)
Final-Treatment sample collected after the second carbon tanks/canisters (treated water)
R = Replicate sample was collected in addition to the primary sample
USEPA MCLs - United States Environmental Protection Agency (USEPA) Maximum Contaminant Levels (MCLs) (May 2009)
IDEM RISC - Indiana Department of Environmental Management (IDEM) risk integrated system of closure (RISC) (05/01/09)
For a complete list of analyzed compounds and results please refer to the laboratory reports
Concentration exceeds IDEM RISC residential default closure level and U.S. EPA maximum contaminant level
(1) Methylene chloride detected in sample at concentration of 1.8 ug/l.
(2) Methylene chloride detected in sample at concentration of 2.6 ug/l.
(3) Methylene chloride detected in sample at concentration of 2.8 ug/l.

PB: MMM
CB: PJS

Table 8
Proposed Drilling Location, Method, Depth, and Justification
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Boring ID	Drill Method			Maximum Total Depth (1)	Justification
	Direct Push	Hollow Stem	Rotosonic™		
Plume Delineation					
B48			x	bedrock	Vinyl chloride concentration exceeds industrial RISC standards
B49			x	bedrock	Horizontal VOC delineation
B50			x	bedrock	Horizontal VOC delineation
B51			x	bedrock	Horizontal VOC delineation
Potential Source(s) Investigation					
B52			x	bedrock	Between pond and former parts washer/degreaser.
B53(2)		x		no VOCs	East of former north septic system
B54(2)		x		no VOCs	South of former north septic system
B55(2)		x		no VOCs	Former dry well
B56(2)		x		no VOCs	Former hotspot between pond & building
B57(2)		x		no VOCs	Former pond footprint.
B58(2)		x		no VOCs	Former pond footprint
B59(2)		x		no VOCs	Former hotspot between pond & building
B60(2)		x		no VOCs	Former hotspot between pond & building
B61(2)		x		no VOCs	Former hotspot between pond & building
B62(2)		x		no VOCs	East of former south septic system
B63(3)		x		no VOCs	Evaluate concentrations in soil for remedial feasibility study
B64	x			saturation	Evaluate source of VOCs in MW-19
B65	x			saturation	Offset location between B63 and B65 if these borings are positive for VOCs
B66	x			saturation	Near former parts washer/degreaser
B67	x			saturation	Near former parts washer/degreaser
B68	x			saturation	Near former parts washer/degreaser
B69	x			saturation	Near former parts washer/degreaser
B70	x			saturation	Near former parts washer/degreaser
B71	x			saturation	Near former parts washer/degreaser
B72	x			saturation	Near former parts washer/degreaser
B73	x			saturation	Near former parts washer/degreaser
B74	x			saturation	Former dry well
B75	x			saturation	Former dry well

(1) - No VOCs - assume maximum depth of 60 feet below grade. Bedrock - assume maximum depth of 170 feet below grade. Saturation - assume maximum depth of 25 feet below grade.

(2) - Includes one 2 1/4-inch ID HSA soil boring and one 4 1/4-inch HSA boring.

(3) - Includes one 2 1/4-inch ID HSA soil boring

PB: MMM
CB: PJS

Table 9
Off-Site Laboratory Method 8260 Target Compounds and Detection Limits for Low Concentrations in Soil
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Method	Analyte	CAS	MDL	PQL	Unit
VOC_5035/8260_SLL	1,1,1-Trichloroethane	71-55-6	0.16	5	µg/kg
VOC_5035/8260_SLL	1,1,2,2-Tetrachloroethane	79-34-5	0.24	5	µg/kg
VOC_5035/8260_SLL	1,1,2-Trichloroethane	79-00-5	0.25	5	µg/kg
VOC_5035/8260_SLL	1,1-Dichloroethane	75-34-3	0.22	5	µg/kg
VOC_5035/8260_SLL	1,1-Dichloroethene	75-35-4	0.21	5	µg/kg
VOC_5035/8260_SLL	1,2-Dichloroethane	107-06-2	0.26	5	µg/kg
VOC_5035/8260_SLL	1,2-Dichloroethene, Total	540-59-0	0.41	5	µg/kg
VOC_5035/8260_SLL	1,2-Dichloropropane	78-87-5	0.19	5	µg/kg
VOC_5035/8260_SLL	1,3-Dichloropropene, Total	542-75-6	0.72	10	µg/kg
VOC_5035/8260_SLL	2-Butanone	78-93-3	0.41	10	µg/kg
VOC_5035/8260_SLL	2-Hexanone	591-78-6	0.44	5	µg/kg
VOC_5035/8260_SLL	4-Methyl-2-pentanone	108-10-1	0.73	5	µg/kg
VOC_5035/8260_SLL	Acetone	67-64-1	1.61	10	µg/kg
VOC_5035/8260_SLL	Benzene	71-43-2	0.24	5	µg/kg
VOC_5035/8260_SLL	Bromodichloromethane	75-27-4	0.19	5	µg/kg
VOC_5035/8260_SLL	Bromoform	75-25-2	0.2	5	µg/kg
VOC_5035/8260_SLL	Bromomethane	74-83-9	1.5	10	µg/kg
VOC_5035/8260_SLL	Carbon disulfide	75-15-0	0.45	5	µg/kg
VOC_5035/8260_SLL	Carbon tetrachloride	56-23-5	0.45	5	µg/kg
VOC_5035/8260_SLL	Chlorobenzene	108-90-7	0.39	5	µg/kg
VOC_5035/8260_SLL	Chloroethane	75-00-3	1.31	5	µg/kg
VOC_5035/8260_SLL	Chloroform	67-66-3	0.2	5	µg/kg
VOC_5035/8260_SLL	Chloromethane	74-87-3	0.89	10	µg/kg
VOC_5035/8260_SLL	cis-1,2-Dichloroethene	156-59-2	0.16	5	µg/kg
VOC_5035/8260_SLL	cis-1,3-Dichloropropene	10061-01-	0.21	5	µg/kg
VOC_5035/8260_SLL	Dibromochloromethane	124-48-1	0.2	5	µg/kg
VOC_5035/8260_SLL	Ethylbenzene	100-41-4	0.39	5	µg/kg
VOC_5035/8260_SLL	m,p-Xylene	M/P-XYLEN	0.75	2.5	µg/kg
VOC_5035/8260_SLL	Methylene chloride	75-09-2	0.55	5	µg/kg
VOC_5035/8260_SLL	o-Xylene	95-47-6	0.38	2.5	µg/kg
VOC_5035/8260_SLL	Styrene	100-42-5	0.35	5	µg/kg
VOC_5035/8260_SLL	Tetrachloroethene	127-18-4	0.35	5	µg/kg
VOC_5035/8260_SLL	Toluene	108-88-3	0.29	5	µg/kg
VOC_5035/8260_SLL	trans-1,2-Dichloroethene	156-60-5	0.25	5	µg/kg
VOC_5035/8260_SLL	trans-1,3-Dichloropropene	10061-02-	0.5	10	µg/kg
VOC_5035/8260_SLL	Trichloroethene	79-01-6	0.5	5	µg/kg
VOC_5035/8260_SLL	Vinyl chloride	75-01-4	0.25	5	µg/kg
VOC_5035/8260_SLL	Xylenes, Total	1330-20-7	1.14	5	µg/kg

MDL = method detection Limit
PQL = practical quantitation Limit

PB: MMM
CB: PJS

Table 10
Off-Site Laboratory Method 8260 Target Compounds and Detection Limits for High Concentrations in Soil
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Method	Analyte	CAS	MDL	PQL	Units
VOC_5035/8260_S	1,1,1-Trichloroethane	71-55-6	11	100	µg/kg
VOC_5035/8260_S	1,1,2,2-Tetrachloroethane	79-34-5	18	200	µg/kg
VOC_5035/8260_S	1,1,2-Trichloroethane	79-00-5	12	200	µg/kg
VOC_5035/8260_S	1,1-Dichloroethane	75-34-3	19	100	µg/kg
VOC_5035/8260_S	1,1-Dichloroethene	75-35-4	14	100	µg/kg
VOC_5035/8260_S	1,2-Dichloroethane	107-06-2	12	100	µg/kg
VOC_5035/8260_S	1,2-Dichloroethene, Total	540-59-0	31	250	µg/kg
VOC_5035/8260_S	1,2-Dichloropropane	78-87-5	15	350	µg/kg
VOC_5035/8260_S	1,3-Dichloropropene, Total	542-75-6	29	200	µg/kg
VOC_5035/8260_S	2-Butanone	78-93-3	16	750	µg/kg
VOC_5035/8260_S	2-Hexanone	591-78-6	41	500	µg/kg
VOC_5035/8260_S	4-Methyl-2-pentanone	108-10-1	16	500	µg/kg
VOC_5035/8260_S	Acetone	67-64-1	181	450	µg/kg
VOC_5035/8260_S	Benzene	71-43-2	17	100	µg/kg
VOC_5035/8260_S	Bromodichloromethane	75-27-4	14	150	µg/kg
VOC_5035/8260_S	Bromoform	75-25-2	19	100	µg/kg
VOC_5035/8260_S	Bromomethane	74-83-9	128	150	µg/kg
VOC_5035/8260_S	Carbon disulfide	75-15-0	11	150	µg/kg
VOC_5035/8260_S	Carbon tetrachloride	56-23-5	51	100	µg/kg
VOC_5035/8260_S	Chlorobenzene	108-90-7	12	150	µg/kg
VOC_5035/8260_S	Chloroethane	75-00-3	161	300	µg/kg
VOC_5035/8260_S	Chloroform	67-66-3	12	100	µg/kg
VOC_5035/8260_S	Chloromethane	74-87-3	51	300	µg/kg
VOC_5035/8260_S	cis-1,2-Dichloroethene	156-59-2	17	200	µg/kg
VOC_5035/8260_S	cis-1,3-Dichloropropene	10061-01-5	13	100	µg/kg
VOC_5035/8260_S	Dibromochloromethane	124-48-1	12	200	µg/kg
VOC_5035/8260_S	Ethylbenzene	100-41-4	11	200	µg/kg
VOC_5035/8260_S	m,p-Xylene	M/P-XYLEN	15	200	µg/kg
VOC_5035/8260_S	Methylene chloride	75-09-2	21	200	µg/kg
VOC_5035/8260_S	o-Xylene	95-47-6	12	100	µg/kg
VOC_5035/8260_S	Styrene	100-42-5	19	150	µg/kg
VOC_5035/8260_S	Tetrachloroethene	127-18-4	19	100	µg/kg
VOC_5035/8260_S	Toluene	108-88-3	11	150	µg/kg
VOC_5035/8260_S	trans-1,2-Dichloroethene	156-60-5	13	100	µg/kg
VOC_5035/8260_S	trans-1,3-Dichloropropene	10061-02-6	15	150	µg/kg
VOC_5035/8260_S	Trichloroethene	79-01-6	13	100	µg/kg
VOC_5035/8260_S	Vinyl chloride	75-01-4	14	200	µg/kg
VOC_5035/8260_S	Xylenes, Total	1330-20-7	27	300	µg/kg

MDL = method detection Limit

PQL = practical quantitation Limit

PB: MMM

CB: PJS Paul J.

MACTEC Electronic Signature

Table 11
Off-Site Laboratory Method 6020 Target Compounds and Detection Limits for Concentrations in Soil
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Method	Analyte	CAS	MDL	PQL	Unit
ICP_6020_S	Cadmium	7440-43-9	0.003	0.10	mg/kg
ICP_6020_S	Chromium	7440-47-3	0.005	0.25	mg/kg
ICP_6020_S	Copper	7440-50-8	0.013	0.25	mg/kg
ICP_6020_S	Lead	7439-92-1	0.004	0.25	mg/kg

MDL = method detection Limit
PQL = practical quantitation Limit

PB: MMM
CB: PJ
MACTEC Electronic Signature

Table 12
Off-Site Laboratory Method 8260 Target Compounds and Detection Limits for Concentrations in Groundwater
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Method	Analyte	CAS	MDL	PQL	Unit
VOC_8260_W	1,1,1-Trichloroethane	71-55-6	0.21	1	µg/L
VOC_8260_W	1,1,2,2-Tetrachloroethane	79-34-5	0.19	1	µg/L
VOC_8260_W	1,1,2-Trichloroethane	79-00-5	0.15	1	µg/L
VOC_8260_W	1,1-Dichloroethane	75-34-3	0.18	1	µg/L
VOC_8260_W	1,1-Dichloroethene	75-35-4	0.19	1	µg/L
VOC_8260_W	1,2-Dichloroethane	107-06-2	0.15	1	µg/L
VOC_8260_W	1,2-Dichloroethene, Total	540-59-0	0.35	2	µg/L
VOC_8260_W	1,2-Dichloropropane	78-87-5	0.14	2	µg/L
VOC_8260_W	1,3-Dichloropropene, Total	542-75-6	0.31	2	µg/L
VOC_8260_W	2-Butanone	78-93-3	0.35	5	µg/L
VOC_8260_W	2-Hexanone	591-78-6	0.23	5	µg/L
VOC_8260_W	4-Methyl-2-pentanone	108-10-1	0.33	5	µg/L
VOC_8260_W	Acetone	67-64-1	0.36	20	µg/L
VOC_8260_W	Benzene	71-43-2	0.17	1	µg/L
VOC_8260_W	Bromodichloromethane	75-27-4	0.14	1	µg/L
VOC_8260_W	Bromoform	75-25-2	0.12	1	µg/L
VOC_8260_W	Bromomethane	74-83-9	0.3	1	µg/L
VOC_8260_W	Carbon disulfide	75-15-0	0.1	2.5	µg/L
VOC_8260_W	Carbon tetrachloride	56-23-5	0.16	1	µg/L
VOC_8260_W	Chlorobenzene	108-90-7	0.14	1	µg/L
VOC_8260_W	Chloroethane	75-00-3	0.29	1	µg/L
VOC_8260_W	Chloroform	67-66-3	0.19	1	µg/L
VOC_8260_W	Chloromethane	74-87-3	0.33	1	µg/L
VOC_8260_W	cis-1,2-Dichloroethene	156-59-2	0.17	1	µg/L
VOC_8260_W	cis-1,3-Dichloropropene	10061-01-	0.16	1	µg/L
VOC_8260_W	Dibromochloromethane	124-48-1	0.1	1	µg/L
VOC_8260_W	Ethylbenzene	100-41-4	0.15	1	µg/L
VOC_8260_W	m,p-Xylene	M/P-XYLEN	0.31	2	µg/L
VOC_8260_W	Methylene chloride	75-09-2	0.31	5	µg/L
VOC_8260_W	o-Xylene	95-47-6	0.16	1	µg/L
VOC_8260_W	Styrene	100-42-5	0.14	1	µg/L
VOC_8260_W	Tetrachloroethene	127-18-4	0.13	2	µg/L
VOC_8260_W	Toluene	108-88-3	0.14	1	µg/L
VOC_8260_W	trans-1,2-Dichloroethene	156-60-5	0.17	1	µg/L
VOC_8260_W	trans-1,3-Dichloropropene	10061-02-	0.14	1	µg/L
VOC_8260_W	Trichloroethene	79-01-6	0.19	1	µg/L
VOC_8260_W	Vinyl chloride	75-01-4	0.27	1	µg/L
VOC_8260_W	Xylenes, Total	1330-20-7	0.48	2	µg/L

MDL = method detection Limit
PQL = practical quantitation Limit

PB: MMM
CB: P. Paul J.
MACTEC Electronic Signature

Table 13
Off-Site Laboratory Method 6020 Target Compounds and Detection Limits for Concentrations in Groundwater
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Method	Analyte	CAS	MDL	PQL	Unit
ICP_6020_W	Cadmium	7440-43-9	0.06	2	µg/L
ICP_6020_W	Chromium	7440-47-3	0.10	5	µg/L
ICP_6020_W	Copper	7440-50-8	0.25	5	µg/L
ICP_6020_W	Lead	7439-92-1	0.08	5	µg/L

MDL = method detection Limit

PQL = practical quantitation Limit

PB: MMM

CB: PJ

MACTEC Electronic Signature

Table 14
Off-Site Laboratory Method TO-15 Target Compounds and Detection Limits for Concentrations in Air
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Method	Analyte	based on 1ppb EQL ug/m3	ppbv	based on 0.4ppb EQL ug/m3	ppbv	MDL ppbv
TO-15	1,1,1-Trichloroethane	5.5	1	2.2	0.4	0.16
TO-15	1,1,2,2-Tetrachloroethane	6.9	1	2.7	0.4	0.15
TO-15	1,1,2-Trichloroethane	5.5	1	2.2	0.4	0.22
TO-15	1,1-Dichloroethane	4.0	1	1.6	0.4	0.19
TO-15	1,1-Dichloroethene	4.0	1	1.6	0.4	0.17
TO-15	1,2,4-Trichlorobenzene	7.4	1	3.0	0.4	0.09
TO-15	1,2,4-Trimethylbenzene	4.9	1	2.0	0.4	0.11
TO-15	1,2-Dibromoethane	7.7	1	3.1	0.4	0.21
TO-15	1,2-Dichlorobenzene	6.0	1	2.4	0.4	0.11
TO-15	1,2-Dichloroethane	4.0	1	1.6	0.4	0.17
TO-15	1,2-Dichloropropane	4.6	1	1.8	0.4	0.21
TO-15	1,3,5-Trimethylbenzene	4.9	1	2.0	0.4	0.15
TO-15	1,3-Butadiene	2.2	1	0.9	0.4	0.28
TO-15	1,3-Dichlorobenzene	6.0	1	2.4	0.4	0.15
TO-15	1,4 Dioxane	7.2	1	1.4	0.4	0.61
TO-15	1,4-Dichlorobenzene	6.0	1	2.4	0.4	0.14
TO-15	2-Butanone	5.9	1	1.2	0.4	0.2
TO-15	2-Hexanone	4.1	1	1.6	0.4	0.23
TO-15	2-Propanol	2.5	1	1.0	0.4	0.16
TO-15	4-Ethyl Toluene	4.9	1	2.0	0.4	0.14
TO-15	4-Methyl-2-Pentanone	4.1	1	1.6	0.4	0.26
TO-15	Acetone	2.4	1	1.0	0.4	0.23
TO-15	Benzene	3.2	1	1.3	0.4	0.16
TO-15	Benzyl Chloride	5.2	1	2.1	0.4	0.12
TO-15	Bromodichloromethane	6.7	1	2.7	0.4	0.21
TO-15	Bromoform	10.3	1	4.1	0.4	0.11
TO-15	Bromomethane	3.9	1	1.6	0.4	0.21
TO-15	Carbon Disulfide	3.1	1	1.2	0.4	0.16
TO-15	Carbon Tetrachloride	6.3	1	2.5	0.4	0.2
TO-15	Chlorobenzene	4.6	1	1.8	0.4	0.18
TO-15	Chloroethane	2.6	1	1.1	0.4	0.18
TO-15	Chloroform	4.9	1	2.0	0.4	0.16
TO-15	Chloromethane	2.1	1	0.8	0.4	0.24
TO-15	cis-1,2-Dichloroethene	4.0	1	1.6	0.4	0.17
TO-15	cis-1,3-Dichloropropene	4.5	1	1.8	0.4	0.16
TO-15	Cyclohexane	3.4	1	1.4	0.4	0.11
TO-15	Dibromochloromethane	8.5	1	3.4	0.4	0.19
TO-15	Dichlorodifluoromethane	4.9	1	2.0	0.4	0.24
TO-15	Ethyl Acetate	7.2	1	1.4	0.4	0.3
TO-15	Ethylbenzene	4.3	1	1.7	0.4	0.14

Table 14 (continued)
Off-Site Laboratory Method TO-15 Target Compounds and Detection Limits for Concentrations in Air
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

		based on 1ppb		based on 0.4ppb		MDL
Method	**Analyte**	**EQL ug/m3**	**ppbv**	**EQL ug/m3**	**ppbv**	**ppbv**
TO-15	Freon 113	7.7	1	3.1	0.4	0.16
TO-15	Freon 114	7.0	1	2.8	0.4	0.25
TO-15	Heptane	4.1	1	1.6	0.4	0.15
TO-15	Hexachlorobutadiene	10.7	1	4.3	0.4	0.13
TO-15	Hexane	3.5	1	1.4	0.4	0.12
TO-15	m,p-Xylene	4.3	1	1.7	0.4	0.35
TO-15	Methylene Chloride	3.5	1	1.4	0.4	0.15
TO-15	MTBE	3.6	1	1.4	0.4	0.17
TO-15	o-Xylene	4.3	1	1.7	0.4	0.16
TO-15	Propene	1.7	1	0.7	0.4	0.18
TO-15	Styrene	4.3	1	1.7	0.4	0.15
TO-15	Tetrachloroethene	6.8	1	2.7	0.4	0.3
TO-15	Tetrahydrofuran	2.9	1	1.2	0.4	0.22
TO-15	Toluene	3.8	1	1.5	0.4	0.19
TO-15	trans-1,2-Dichloroethene	4.0	1	1.6	0.4	0.21
TO-15	trans-1,3-Dichloropropene	4.5	1	1.8	0.4	0.14
TO-15	Trichloroethene	5.4	1	2.1	0.4	0.28
TO-15	Trichlorofluoromethane	5.6	1	2.2	0.4	0.24
TO-15	Vinyl Acetate	3.5	1	1.4	0.4	0.14
TO-15	Vinyl Chloride	2.6	1	1.0	0.4	0.28

MDL = method detection Limit
PQL = practical quantitation Limit

PB: MMM
CB: PJ

Table 15
Summary of QC Limits for Surrogate, Field Duplicate, and Spikes
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

PARAMETER	QC TEST	ANALYTE	WATER (%)	WATER RPD	SOIL (%)	SOIL RPD
Volatiles	**Surrogate**	All Surrogates(1)	85 - 115		80 - 120	
	LCS	All Target Compounds	70 - 130		60 - 140	
	MS/MSD	All Target Compounds	70 - 130	20	60 - 140	30
	Field Duplicates	All Target Compounds		25		40
Metals	**LCS**	All Target Analytes	80 - 120		80 - 120	
	MS/MSD	All Target Analytes	80 - 120	20	75 - 125	20
	Field Duplicates(2)	All Target Analytes		25		40
	Lab Duplicates(3)	All Target Analytes		20		35

Notes:

LCS - Laboratory Control Sample

MS/MSD - Matrix Spike/ Matrix Spike Duplicate

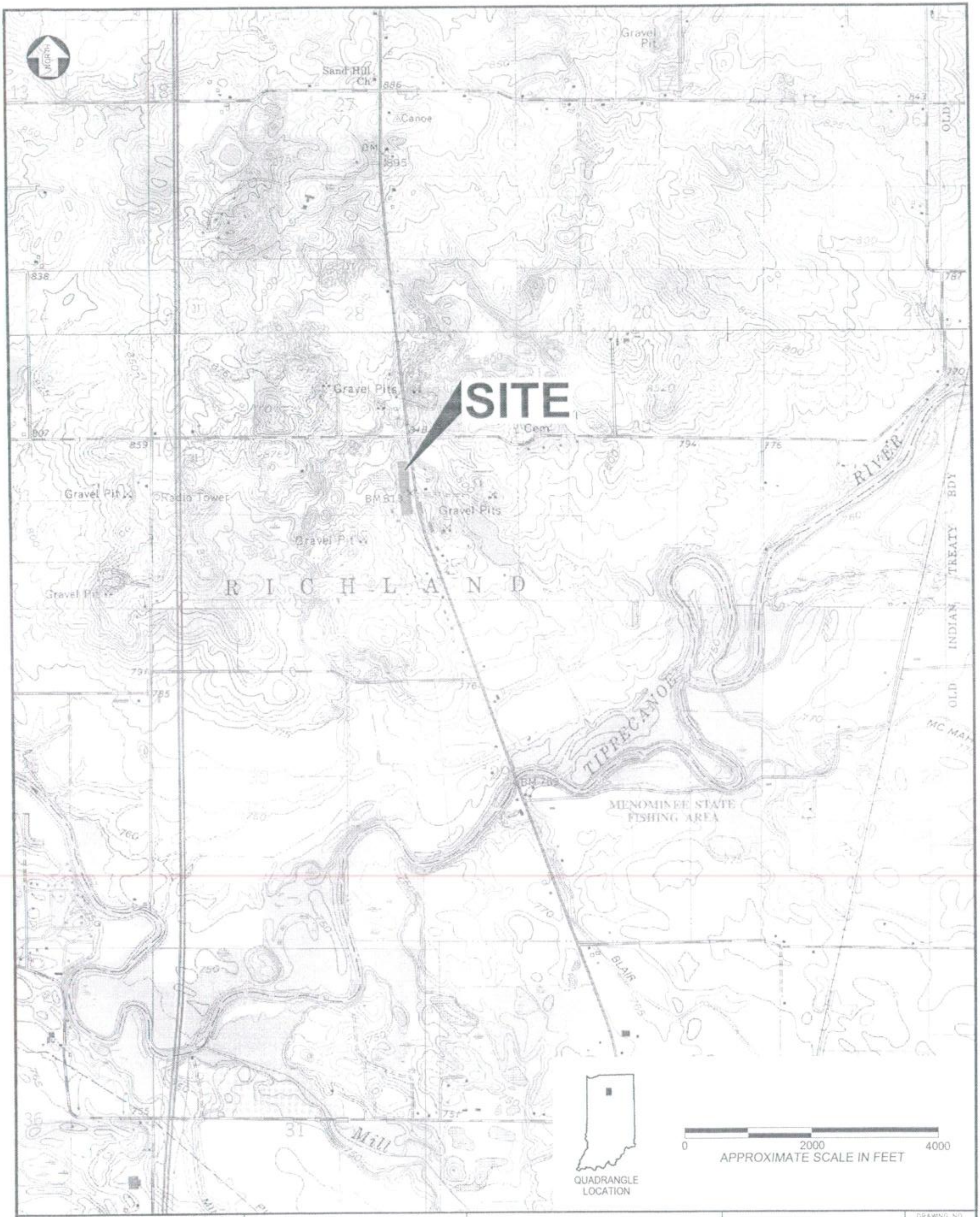
(1) Project-specific limits for surrogate recovery review/validation are established based on subcontract laboratory and Indiana Department of Environmental Management (IDEM) recommended control limits. The project limits are used for evaluation of recovery for all surrogates during data validation.

(2) Both results are > 5X the sample quantitation limit (SQL). For aqueous results < 5X the SQL use ± SQL value. For solid media (soil and sediment) use ± 2X SQL value.

(3) Both results are > 5X the SQL. For aqueous results < 5X the SQL use ± 1.5X SQL value. For solid media (soil and sediment) use ± 2.5X SQL value.

PB: MMM
CB: PJ

FIGURES



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DATE
12/02/2009

SOURCE USGS topographic quadrangles of Argos, IN, 1994 and Rochester, IN, 1992.

PROJECT NO.
3359 09 2469

SCALE
SEE ABOVE

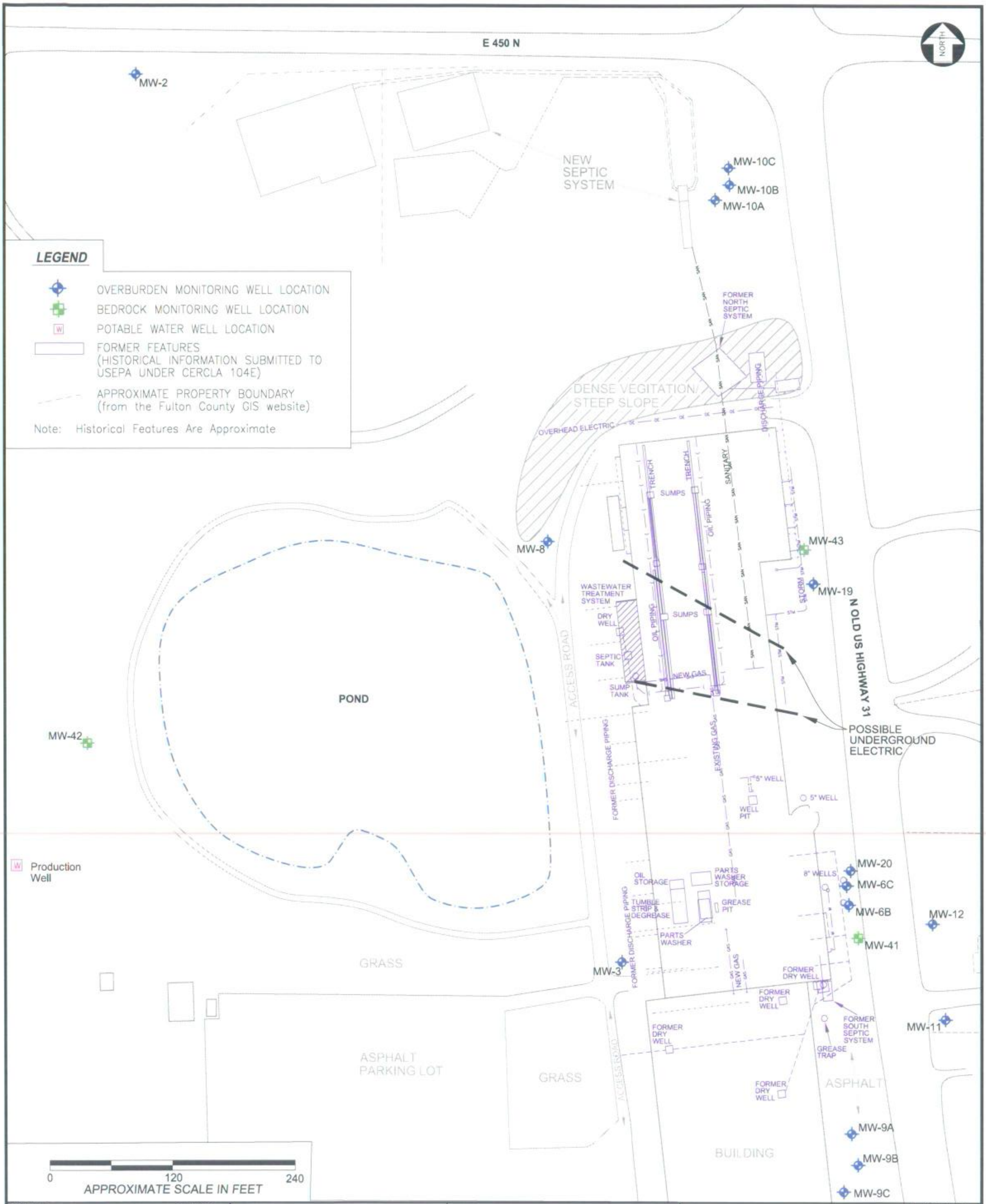
TORX FACILITY
4366 NORTH OLD US HIGHWAY 31
ROCHESTER, INDIANA

MACTEC
521 Byers Road Suite 204
Miamisburg, Ohio 45342
(937) 859-3600 FAX (937) 859-7951

SITE LOCATION MAP

DRAWING NO.
1

SHEET 1 of 1



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DATE
12/30/2009

SOURCE Wells surveyed by Territorial Engineering, 2009; Fulton County, IN GIS, 2005; historical maps from Textron

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TORX FACILITY
4366 NORTH OLD US HIGHWAY 31
ROCHESTER, INDIANA

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Miamisburg, Ohio 45342
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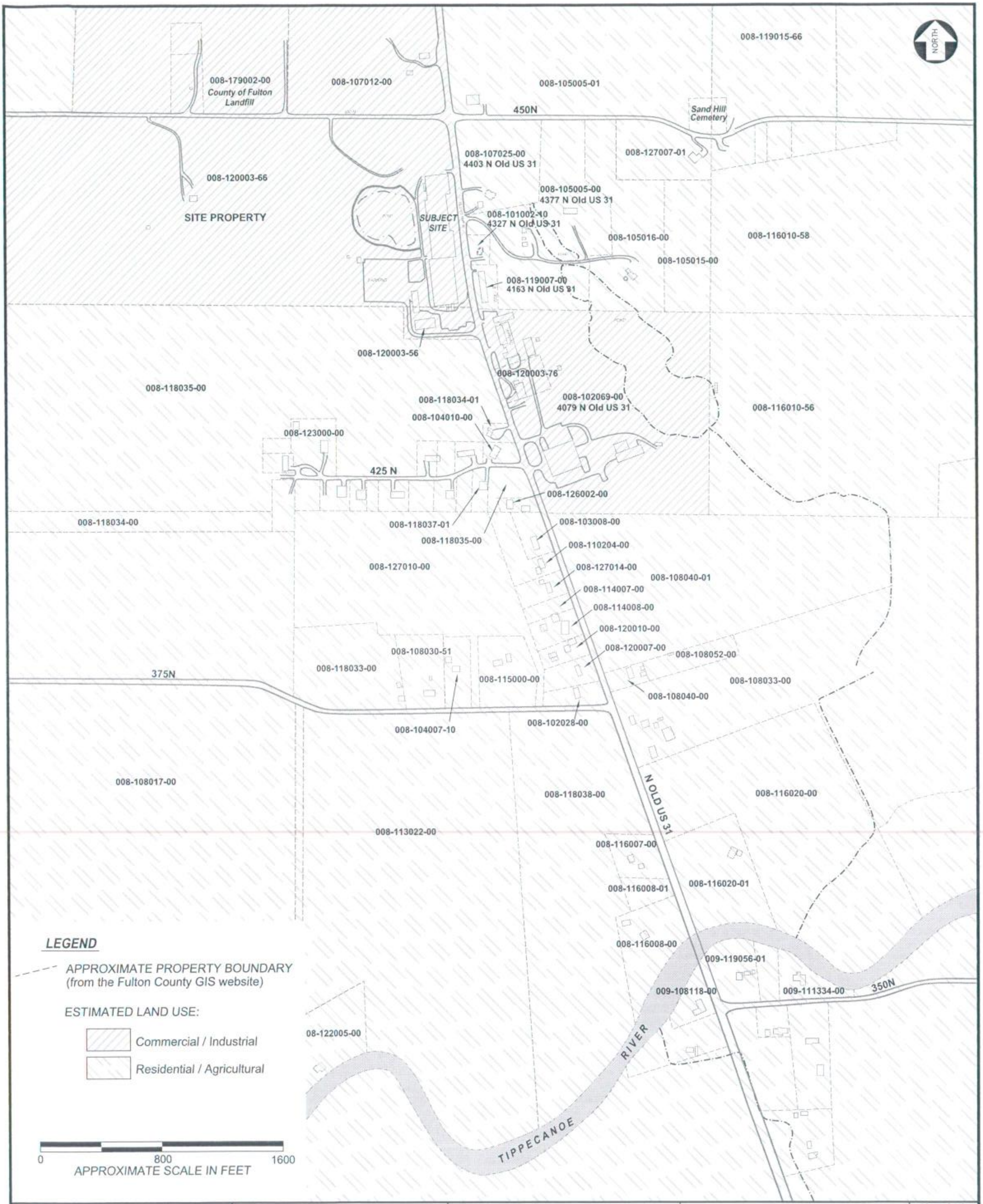
SITE FEATURES MAP

DRAWING NO.
2

SHEET 1 of 1



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SOURCE Fulton County, IN GIS, 2005; Wilcox survey, 2008.		
PROJECT NO. 3359 09 2469		SCALE SEE ABOVE

TORX FACILITY
4366 NORTH OLD US HIGHWAY 31
ROCHESTER, INDIANA

MACTEC
521 Byers Road Suite 204
Miamisburg, Ohio 45342
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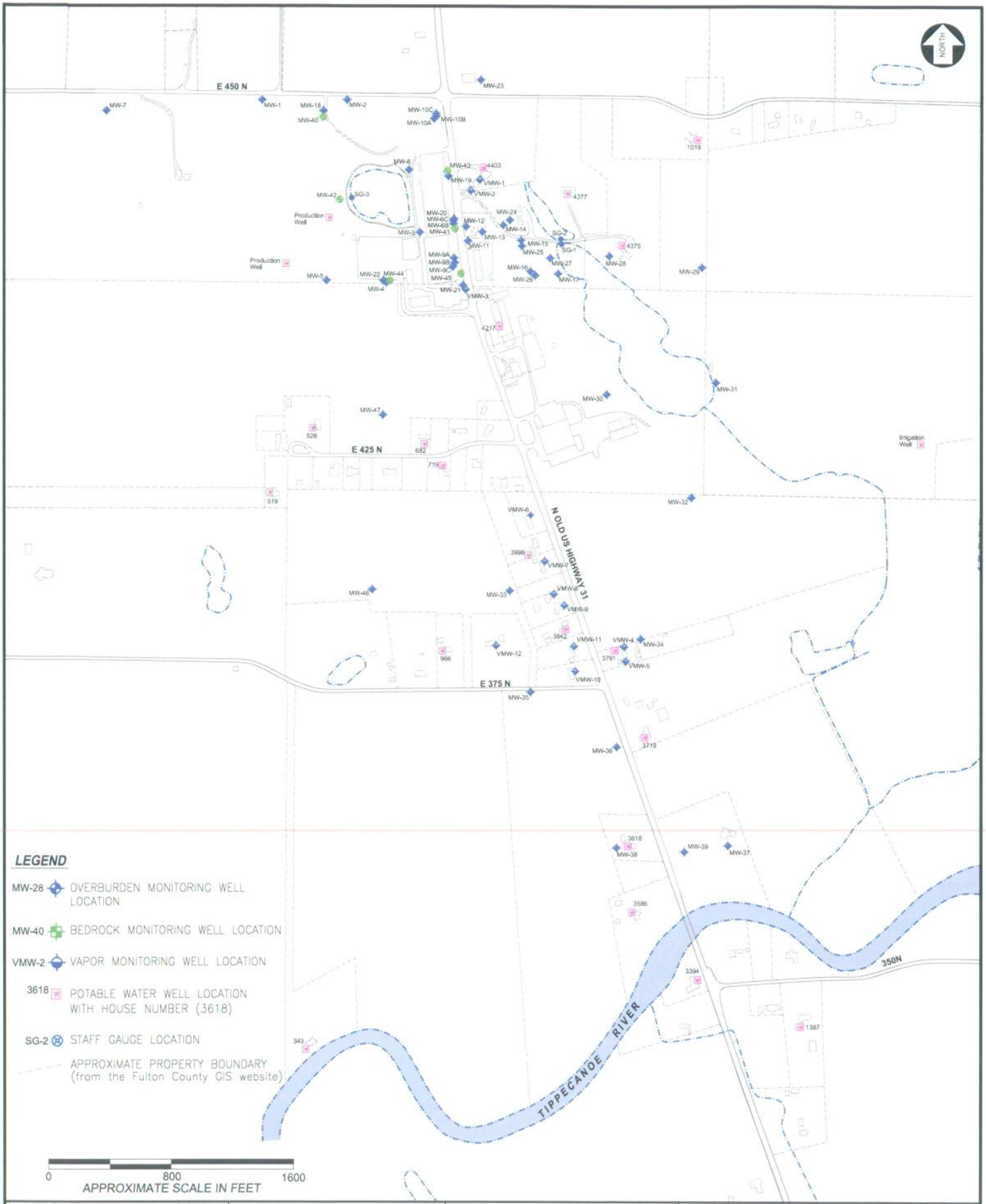
SITE LAYOUT

DRAWING NO.
3

SHEET 1 of 1



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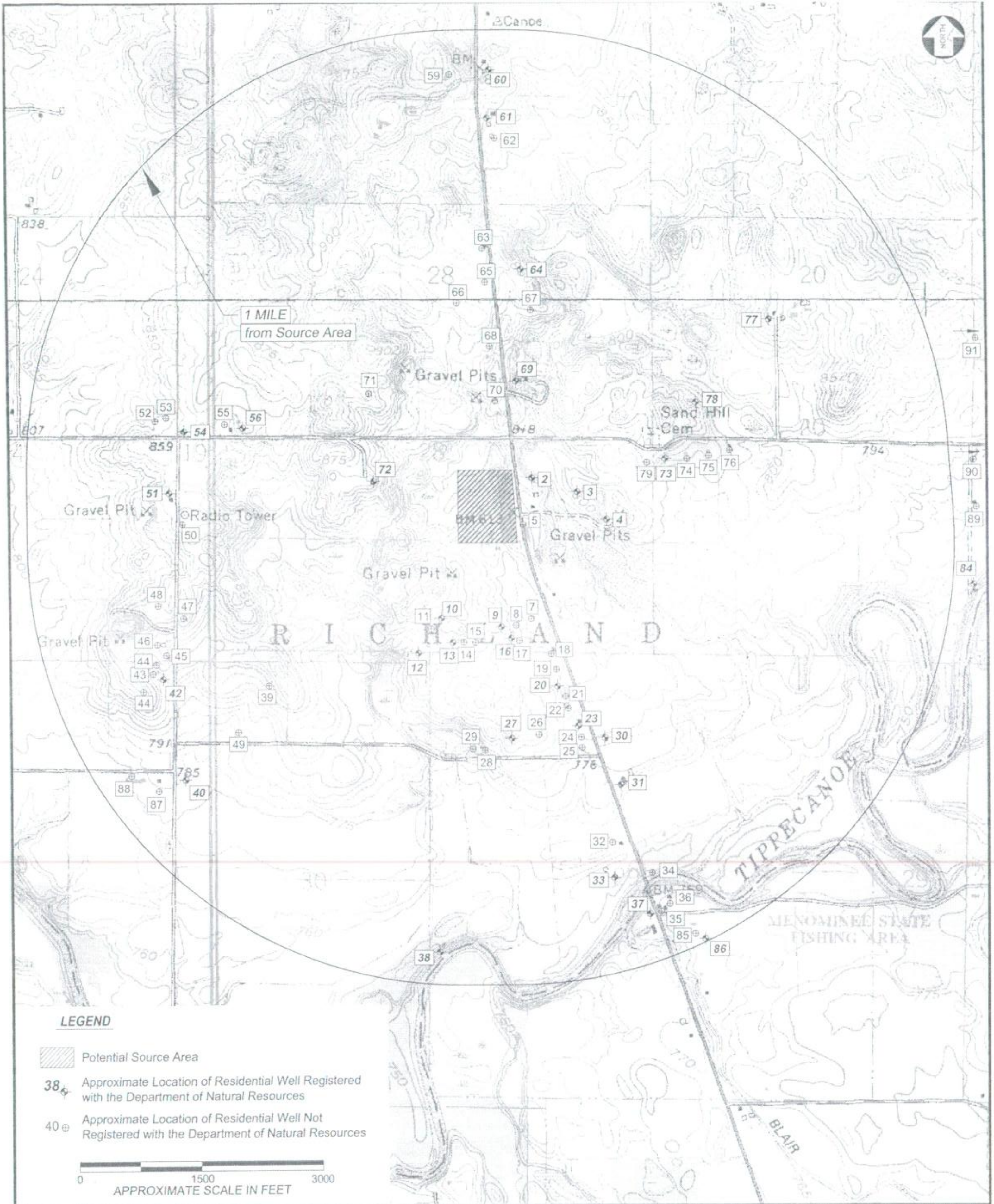
APPROVED BY	DATE 12/22/2009				
SOURCE Wells surveyed by Territorial Engineering, 2009; Fulton County, IN GIS, 2005.					
PROJECT NO. 3359 09 2469	SCALE SEE ABOVE				SHEET 1 of 1



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DATE
12/22/2009

SOURCE USGS Topographic maps of Rochester, Argos, Pershing, and Rutland, Indiana

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3359 09 2469

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TORX FACILITY
4366 NORTH OLD US HIGHWAY 31
ROCHESTER, INDIANA

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APPROXIMATE LOCATIONS OF RESIDENTIAL WELLS

DRAWING NO.
5

SHEET 1 of 1

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APPROVED BY Quig Hot
DATE 12/22/2009
SOURCE MACTEC Notes 06/28/05; Fulton County, IN GIS, 2005; Wilcox survey, 2008.
PROJECT NO. 3359 09 2469
SCALE SEE ABOVE

TORX FACILITY
4366 NORTH OLD US HIGHWAY 31
ROCHESTER, INDIANA

MACTEC
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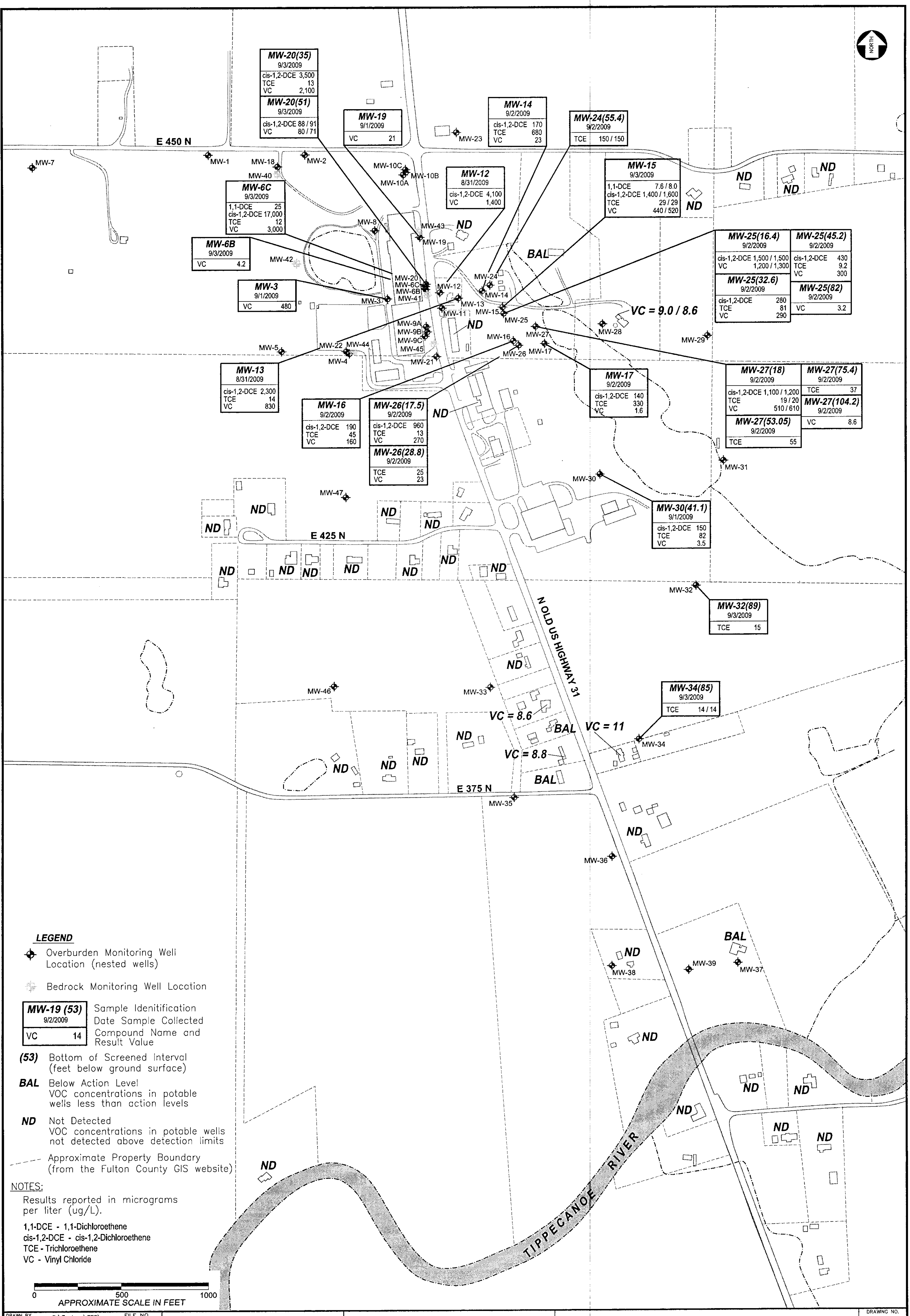
APPROXIMATE
EASTERN POND
SAMPLING LOCATIONS

DRAWING NO. 6

SHEET 1 of 1



LEGEND

✦	Overburden Monitoring Well Location (nested wells)
✧	Bedrock Monitoring Well Location
MW-19 (53) 9/2/2009 VC 14	Sample Idenitification Date Sample Collected Compound Name and Result Value
(53)	Bottom of Screened Interval (feet below ground surface)
BAL	Below Action Level VOC concentrations in potable wells less than action levels
ND	Not Detected VOC concentrations in potable wells not detected above detection limits
- - -	Approximate Property Boundary (from the Fulton County GIS website)

NOTES:

Results reported in micrograms per liter (ug/L).

1,1-DCE - 1,1-Dichloroethene
cis-1,2-DCE - cis-1,2-Dichloroethene
TCE - Trichloroethene
VC - Vinyl Chloride

DRAWN BY	RLB
FILE NO.	P:\Textron\TFS\ Drawings\TFS All VOCs 11-09.dwg
APPROVED BY	
DATE	12/30/2009
SOURCE	Wells surveyed by Territorial Engineering, 2009; Fulton County, IN GIS, 2005.
PROJECT NO.	3359 09 2469
SCALE	SEE ABOVE

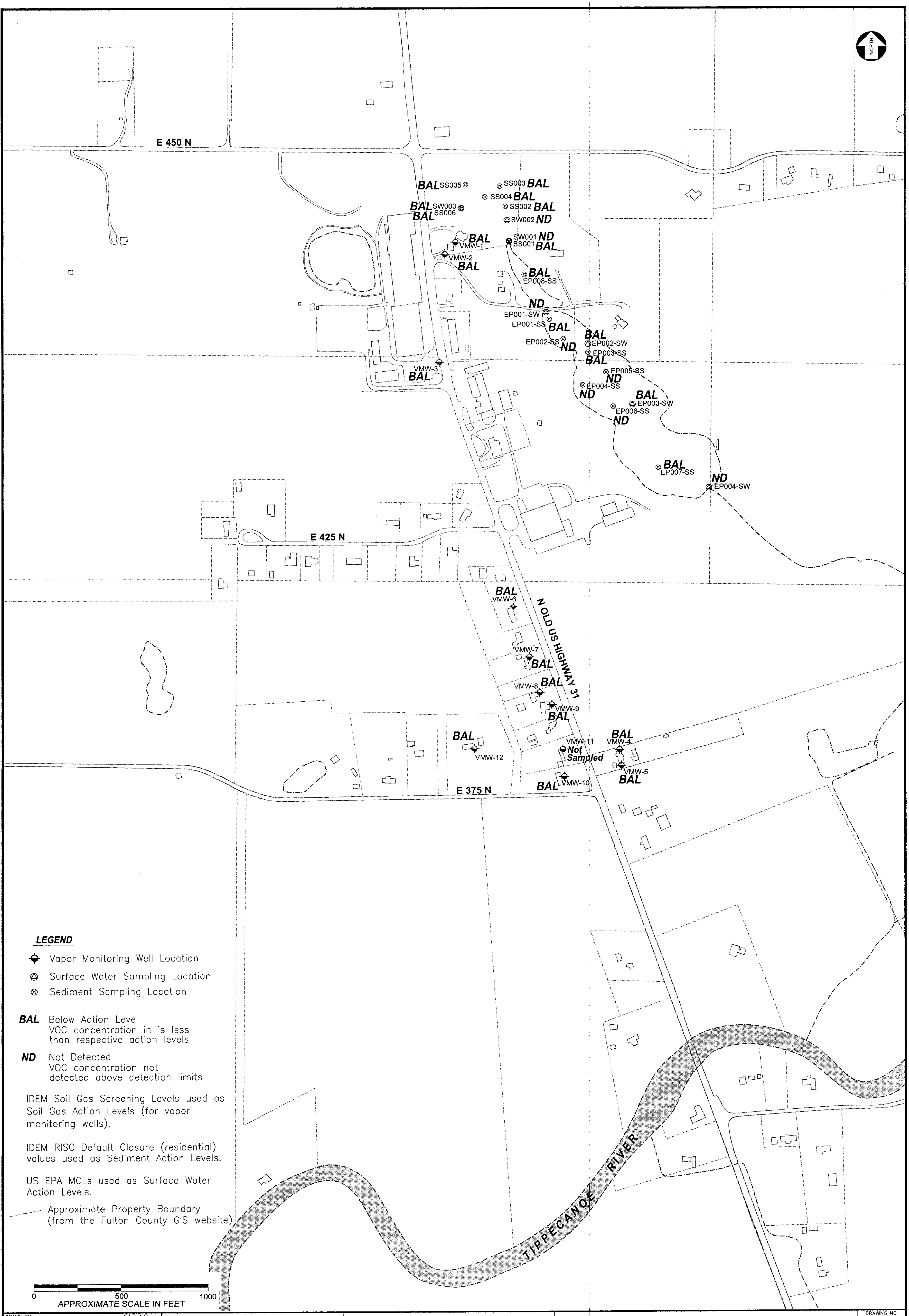
TORX FACILITY
4366 NORTH OLD US HIGHWAY 31
ROCHESTER, INDIANA

MACTEC
521 Byers Road Suite 204
Miamisburg, Ohio 45342
(937) 859-3600 FAX (937) 859-7951

VOC CONCENTRATIONS THAT EXCEED MCLs IN DRINKING WATER AND GROUNDWATER

DRAWING NO. 7

SHEET 1 of 1



LEGEND

- Vapor Monitoring Well Location
- Surface Water Sampling Location
- ⊗ Sediment Sampling Location

BAL Below Action Level
VOC concentration in is less than respective action levels

ND Not Detected
VOC concentration not detected above detection limits

IDEM Soil Gas Screening Levels used as Soil Gas Action Levels (for vapor monitoring wells).

IDEM RISC Default Closure (residential) values used as Sediment Action Levels.

US EPA MCLs used as Surface Water Action Levels.

--- Approximate Property Boundary (from the Fulton County GIS website)

DRAWN BY	FILE NO.
RLB	P:\Textron\TFS\ Drawings\TFS All VOCs 11-09.dwg
APPROVED BY	DATE
	12/22/2009
SOURCE Wells surveyed by Territorial Engineering, 2009; Fulton County, IN GIS, 2005.	
PROJECT NO.	SCALE
3359 09 2469	SEE ABOVE

TORX FACILITY
4366 NORTH OLD US HIGHWAY 31
ROCHESTER, INDIANA

MACTEC
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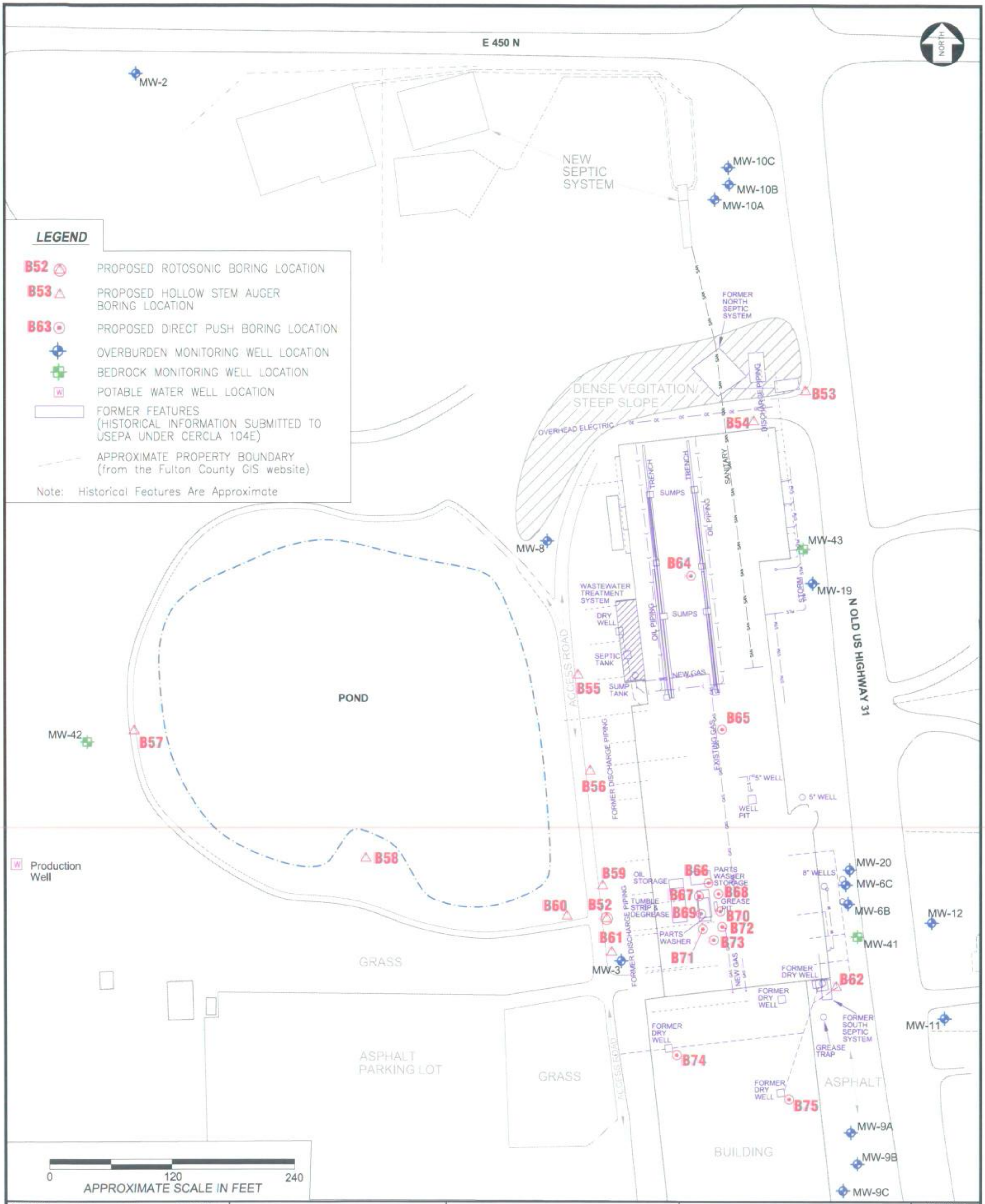
Miamisburg, Ohio 45342
(937) 859-3600 FAX (937) 859-7951

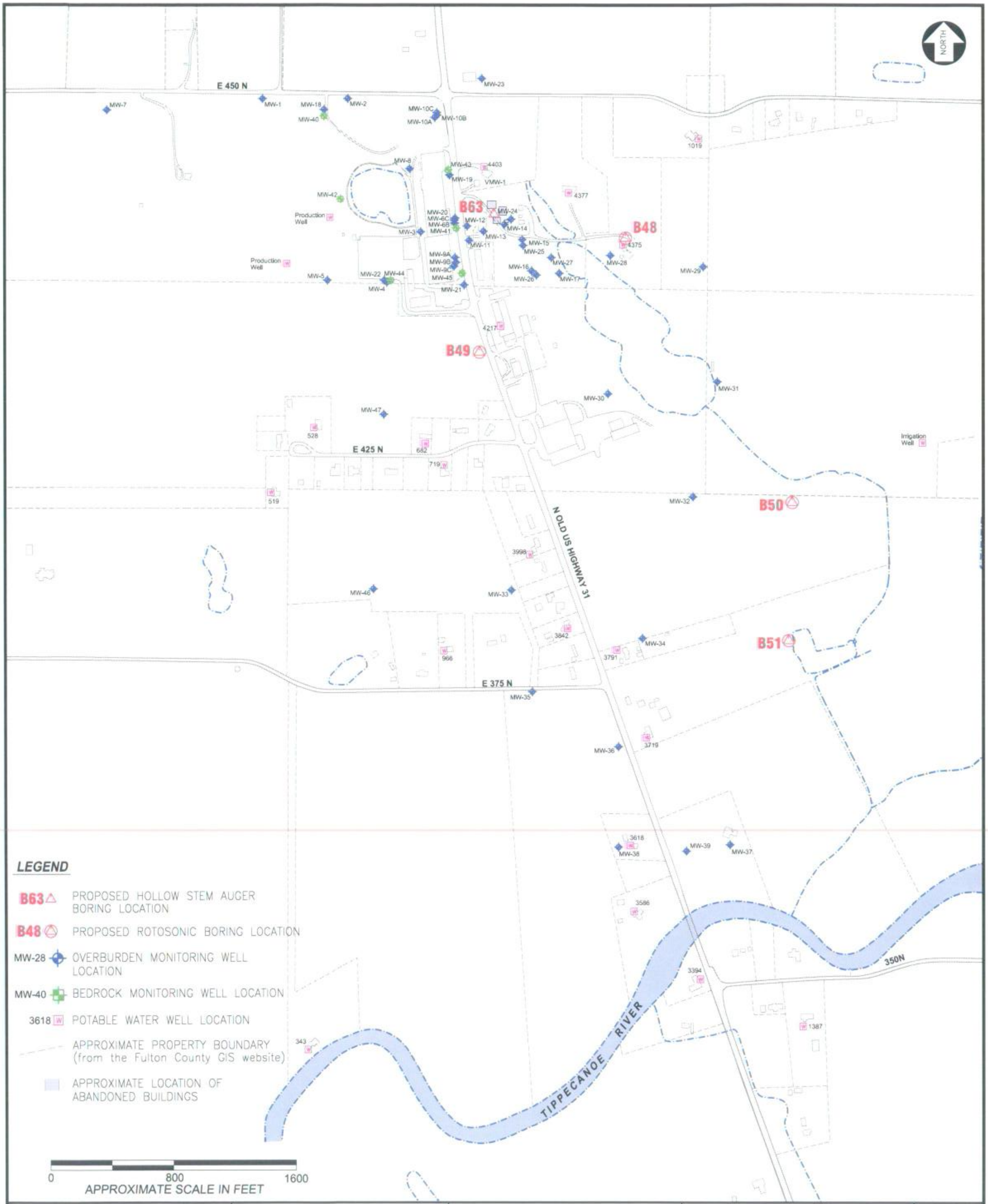
MOST RECENT VOC DETECTIONS IN THE SEDIMENT, SURFACE WATER, AND SOIL GAS SAMPLES SINCE 2008

DRAWING NO.
8

SHEET 1 of 1



DRAWN BY RLB FILE NO. P:\Textron\TFS\Drawings\Potential Sources.dwg	TORX FACILITY 4366 NORTH OLD US HIGHWAY 31 ROCHESTER, INDIANA	MACTEC 521 Byers Road Suite 204 Miamisburg, Ohio 45342 (937) 859-3600 FAX (937) 859-7951	PROPOSED LOCATION OF ON-SITE SOIL BORINGS	DRAWING NO. 9
APPROVED BY DATE 12/30/2009				SHEET 1 of 1
SOURCE Wells surveyed by Territorial Engineering, 2009; Fulton County, IN GIS, 2005; historical maps from Textron				
PROJECT NO. 3359 09 2469 SCALE SEE ABOVE				



DRAWN BY RLB

FILE NO. P:\Textron\TFS\Drawings\TFS Surveyed Wells.dwg

APPROVED BY

DATE 12/30/2009

SOURCE Wells surveyed by Territorial Engineering, 2009; Fulton County, IN GIS, 2005.

PROJECT NO. 3359 09 2469

SCALE SEE ABOVE

TORX FACILITY
4366 NORTH OLD US HIGHWAY 31
ROCHESTER, INDIANA

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521 Byers Road Suite 204
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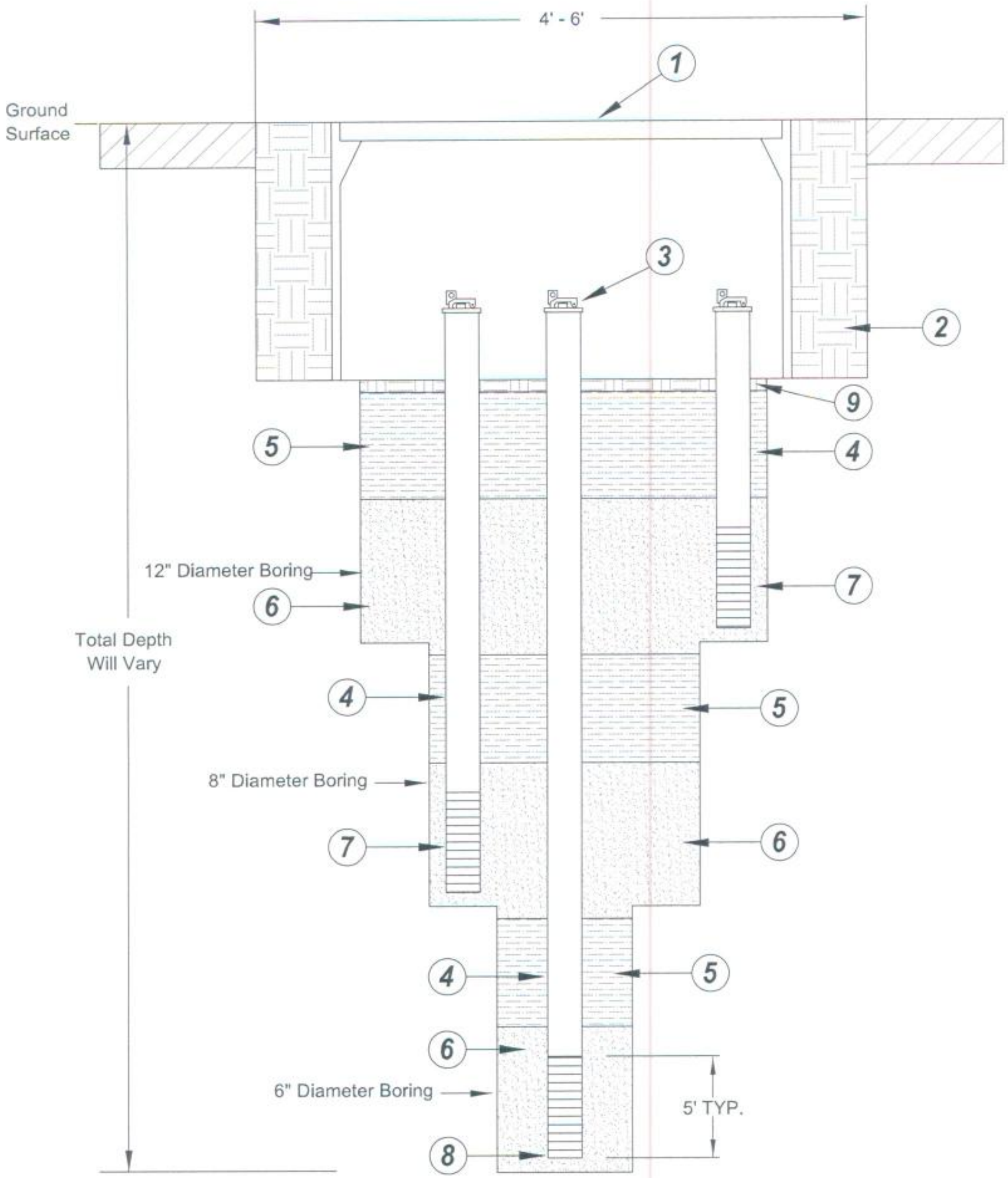
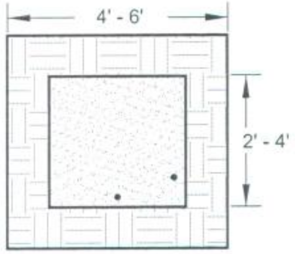
PROPOSED LOCATION OF OFF-SITE SOIL BORINGS

DRAWING NO. **10**

SHEET 1 of 1





Monitoring Well
Monument Detail

Notes

1. 2' - 4' Diameter Traffic Bearing Manway Vault
2. Concrete Pad
3. Locking Water Tight Cap
4. 2" Schedule 80 (or Schedule 40) PVC Threaded Riser Pipe
5. Bentonite Seal
6. Sandpack
7. 2" Schedule 80 (or Schedule 40) Slotted Screen
8. 2" Schedule 80 (or Schedule 40) PVC Threaded End Cap
9. Layer of Concrete

Not Drawn To Scale

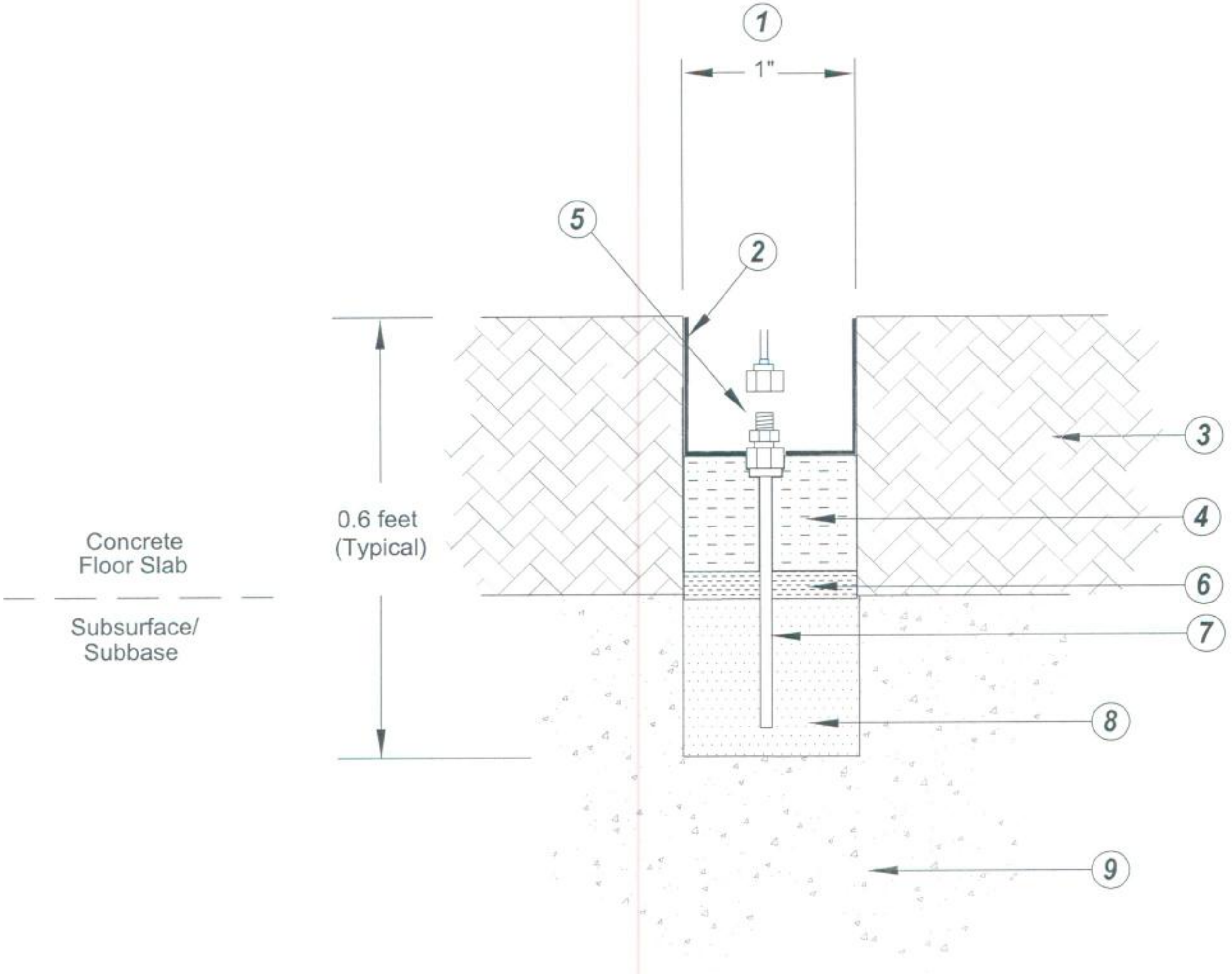
DRAWN BY: RLB
FILE NO.: P:\Textron\TFS\Drawings\Typ Flushmount Well.dwg
REVIEWED BY:
DATE: 12/22/2009
SOURCE: MACTEC Field Notes
PROJECT NO.: 3359 09 2469
APPROXIMATE SCALE: Not to Scale

TORX FACILITY
4366 NORTH OLD US HIGHWAY 31
ROCHESTER, IN

MACTEC
521 Byers Road, Suite 204, Miamisburg, Ohio
(937) 859-3600 FAX (937) 859-7951

TYPICAL FLUSHMOUNT NESTED WELL CONSTRUCTION DIAGRAM

DRAWING NO. 11



Notes

① 1" Diameter Boring
② Sodium Silicate Seal
③ Concrete Floor Slab
0.3 to 0.5 ft thick
④ Flow Rock
Anchoring Cement
⑤ Sub-Slab Vapor
Monitoring Point
⑥ Bentonite Seal
⑦ 0.25" Stainless
Steel Tubing
⑧ Sandpack
⑨ Subsurface/Subbase

Not Drawn To Scale

DRAWN BY
RLB
P:\Textron\TFS\
Drawings\Typ Flushmount Well.dwg
FILE NO.
REVIEWED BY:
DATE
12/22/2009
SOURCE
MACTEC Field Notes
PROJECT NO.
3359 09 2469
APPROXIMATE SCALE
Not to Scale

TORX FACILITY
4366 NORTH OLD US HIGHWAY 31
ROCHESTER, IN

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521 Byers Road, Suite 204, Miamisburg, Ohio
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TYPICAL SUB-SLAB
VAPOR PROBE
CONSTRUCTION DIAGRAM

DRAWING NO.
12

APPENDIX A

REQUEST FOR PROPOSAL FOR DRILLING SERVICES

MACTEC
engineering and constructing a better tomorrow

December 1, 2009

RE: Request for Drilling Services for the Further Site Investigation - Phase 2 at the Textron TORX Facility, 4366 Old US Highway 31, Rochester, Indiana
MACTEC Project Number: 3359-09-2469

Dear ____:

MACTEC Engineering and Consulting, Inc. (MACTEC) is soliciting bids for various drilling services as part of a Further Site Investigation - Phase 2 (FSI-Ph 2) at the referenced Textron facility (Site). MACTEC has prepared an electronic bid sheet with estimated quantities that must be completed and submitted with your bid documents.

There will be a mandatory pre-bid meeting and site visit on December 15, 2009 at 10:00 AM. All prospective bidders must attend the pre-bid meeting and site visit. Failure to attend the mandatory pre-bid meeting may be grounds for rejection of a drilling contractor bid. Prospective bidders will not be compensated by MACTEC and/or Textron for any expenses associated with attending the mandatory pre-bid meeting.

MACTEC will receive bid questions electronically until 12:00 pm on December 18, 2009. Questions and responses will be disseminated to all bidders by 12:00 pm on December 22, 2009. Please submit questions electronically to Rusty Dornbusch of MACTEC at redornbusch@mactec.com.

The drilling requirements for the FSI-Ph2 are as follows:

Rotosonic Drilling Requirements

1. Drill five (5) borings to bedrock using rotosonic drilling techniques. Bedrock is estimated to be 170 feet below ground surface.
2. Complete the five (5) rotosonic borings as groundwater monitoring wells constructed of 2-inch I.D. schedule 40 PVC wells with 5-feet of 0.010-inch slot screen.
3. There is a potential that up to 4 wells may need to be installed in a nested format at each of the rotosonic boring locations.

Screened Hollow Stem Auger Drilling Requirements

1. Drill ten (10) borings to an estimated depth of 60 feet below ground surface using 4¼-inch I.D. hollow stem auger (HSA).
    i. The lead auger must be laser or machine slotted.
    ii. A screen which is welded to a conventional auger will not be acceptable.
    iii. HSA must have new rubber o-ring seal separating each 5-foot auger section.
2. Collect soil samples in 2-foot intervals continuously from each boring using a split barrel sampler.
3. Complete the ten (10) HSA borings as groundwater monitoring wells constructed of 2-inch I.D. schedule 40 PVC wells with 5-feet of 0.010-inch slot screen.

Direct Push Drilling Requirements

1. Drill eleven (11) borings to an estimated depth of 30 feet below ground surface using direct push technology.
2. Direct push drilling will be conducted using dual tube sample tooling.

3. Direct push soil sampling will be performed in discrete 4-foot sampling intervals.
4. Core a 12-inch diameter hole in the concrete floor using a concrete coring machine at each proposed direct push location inside of the plant.
5. Hand auger and/or hand dig to a depth of 5-feet below ground surface will be performed at all proposed drilling locations.
6. Complete the two (2) of the eleven (11) direct push borings as groundwater monitoring wells constructed using a 2.5 inch O.D pre-packed well assembly with 1.5-inch I.D. schedule 40 PVC riser pipe and a 5-foot 0.010-inch factory-slotted screen.
7. Collect groundwater samples using a discrete groundwater sampler using a small diameter bladder pump.
8. Direct push boring not completed as groundwater monitoring wells will be grouted from the bottom up following completion of sampling activities.
9. Direct push groundwater sample tooling will permit bottom up grouting as the tooling is removed from the borehole.
10. The direct push wells will be completed with an 8-inch bolt down flush mount protective cover.

General Drilling Requirements

1. All drilling activities will be supervised by an Indiana licensed driller.
2. Boring logs and/or monitoring well completion diagrams will be submitted to Indiana Department of Natural Resources, as required.
4. Groundwater samples will be collected at 10 foot intervals beginning 10 feet below first water.
    i. Assume 15 intervals per rotosonic location.
    ii. Assume 4 intervals per SHSA location.
    iii. Assume 1 interval per direct push location.
3. Collect groundwater samples from rotosonic and SHSA borings will use a discrete groundwater sampler with an inflatable packer assembly above the pump.
4. The groundwater samples collected from the rotosonic and SHSA borings will be collected using a variable speed, stainless steel submersible sampling pump (i.e. Grundfos or Keck SP).
5. Clean disposable tubing will be required for each groundwater sampling interval.
6. Non-nested groundwater monitoring wells completed at a depth greater than 100-feet will use centralizers at the following intervals:
7. Bottom of the screen;
8. 5-feet above the screen; and,
9. Every 20 feet to a depth of 80-feet bgs.
10. A minimum of a 2-foot bentonite pellets/chips seal above the sand pack will be installed.
11. Non-nested wells will have a neat cement slurry placed using a tremie pipe in the annular space above the top of the bentonite seal to approximately 3-feet below ground surface.
12. In nested wells (rotosonic borings), bentonite pellets/chips will be placed between the sand pack intervals.
13. The nested monitoring wells will be completed with a 14-inch heavy duty road box (or appropriately sized) set in a concrete pad.
14. The concrete pad poured for the heavy duty road box will have a 2-foot collar around the box and be a minimum of 6-inches thick.

15. For monitoring wells completed above ground, the protective covers will be appropriately sized for the number of wells and have 4-inch I.D. bollard posts for protection. The pro-covers and bollard posts will be painted safety yellow prior to being installed at the well head.
16. The concrete pad poured around the above grade completion will be a minimum 4-foot by 4-foot and 6-inches thick.
17. The concrete must have a slight fall from the protective cover to the edge of the concrete to shed water away from the well.
18. Drilling equipment will be decontaminated between boring locations.
19. Non-dedicated groundwater sampling equipment will be decontaminated between sampling intervals.
20. Decontamination pad must be large enough to contain drilling equipment and fluids.
21. All decontamination water/fluids must be collected for proper disposal.
22. All IDW will be stored in the appropriate container(s) at the IDW staging area. General site trash or "Municipal" waste is not to be placed in the IDW containers.
23. The drilling locations and access roads will be restored to pre-drilling conditions.

Site Access and Health & Safety Requirements:

1. The drilling contractor will be responsible for vehicle access to the proposed drilling location.
2. The drilling contractor will be responsible for designing, building and maintaining access roads to the proposed drilling site(s) at the off-site locations.
3. The drilling contractor will be responsible to properly vent the engine exhaust to the exterior of the plant.
4. The drilling contractor will be responsible to maintain the barricades and signage for exhaust piping when working inside the plant.
5. The drilling contractor will be responsible for barricades, road signs, and flaggers if needed.
6. The drilling contractor will be responsible to notify the utility locating service and have all utilities in the area of the borings located.

The current property owner, Camcar requires that all field personnel working at the Site undergo a mandatory safety training prior to working at the Site. This training session will take approximately 40 minutes to complete and will be conducted on the first day of field/drilling activities by the Camcar Health and Safety Officer.

It is anticipated that all field work will be completed working a minimum of 10 hours a day (including a 0.5 hour for lunch) in 10 day shifts excluding mobilization and demobilization. The field work will begin on or around January 25, 2010 and needs to be completed by February 26, 2010.

In the event of drilling equipment failure, the selected drilling contractor will be responsible for clean up and disposal of hydraulic or any other fluids released from their drilling equipment and/or support trucks. In addition, the selected drilling contractor will be required to have a spill kit on their drill rig(s) and/or support truck(s).

Please complete the attached "Drilling Cost Estimate – December 2009" spreadsheet and return to MACTEC by 5:00 PM eastern standard time on December 29, 2009.

Please include the following information when returning the completed bid package:

- Certificate of Insurance;

- Copy of health and safety training as per OSHA requirements for proposed team members; and,
- Fee schedules and proposed costs.

The contract with the successful bidder will be governed by the “Terms and Conditions” outlined in the attached file “Drilling Subcontract 72108 SAMPLE.pdf”. Exceptions to any of the “Terms and Conditions” must be noted in your bid document. In addition, the insurance requirements that are required by MACTEC are outlined in the attached file “COI example drilling.pdf”. Please sign and return a copy of the signature page acknowledging your agreement to the scope of work presented in this bid specification document along with the completed forms.

The actual investigation footage may vary by drilling location. All locations may not be drilled, and/or additional locations may be drilled.

If you have any questions or comments please contact our office at (937)859-3600.

Sincerely,
MACTEC ENGINEERING AND CONSULTING, INC.

Russell Dornbusch	Paul Stork
Project Geologist	Office Manager

Attachments

______ Agrees to the scope of work presented in the bid specification *Request for Drilling Services for the Further Site Investigation - Phase 2 at the Former Textron TORX facility, 4366 Old US Highway 31, Rochester, Indiana, MACTEC Project Number: 3359-09-2469* dated December 1, 2009. Drilling services invoices will be based on the unit rates presented in the “Drilling Cost Estimate – December 2009” spreadsheet submitted by the referenced drilling company.

By:____

Print Name:____

Title:____

Date:____

APPENDIX B

PROPOSED SCHEDULE

Proposed Work Plan Investigation Schedule
for the Phase 2 Further Site Investigation
TORX Facility
4366 North Old US Highway 31
Rochester, Indiana

	January		February				March				April					May				June	
Task Name	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15	Week 16	Week 17	Week 18	Week 19	Week 20	Week 21
HASP Preparation	🟩																				
Mobilization/ Demobilization	🟦	🟦				🟦															
Direct Push, SHSA, and Sonic Drilling (includes well installation, vertical profiling, and soil sampling)		🟥	🟥	🟥	🟥	🟥															
Vapor Intrusion Investigation				🟩	🟩																
Groundwater Monitoring Well Development					🟦	🟦	🟦														
Groundwater Monitoring and Laboratory Analyses								🟦	🟦	🟦	🟦										
Soil Boring and Monitoring well Survey										🟩											
Data Evaluation and Field Result Analysis		🟥	🟥	🟥	🟥	🟥	🟥	🟥	🟥	🟥	🟥	🟥	🟥	🟥	🟥						
Report Preparation														🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩

MACTEC
engineering and constructing a better tomorrow

FILE COPY

Letter of Transmittal

To: Ms. Teresa Holz
USEAP Region 5
77 West Jackson Blvd
Mail Code: SE-5J
Chicago, IL 60604-3507

Date: January 5, 2010

Re: Textron Rochester, In

We Are Sending You: X Attached
_ Under Separate Cover via

Copies	Description
1	Phase 2 Further Site Investigation Work Plan – January 4, 2010
1	Responses to IDEM comments on the Further Site Investigation Report – January 4, 2010

These Are Transmitted as Checked Below:

_ For Approval
X For Your Information
_ As Requested
_ For Review and Comment
_ Review and Correct
_ Prints Returned after Loan to Us
_ Returned for Corrections
_ Review and File

Remarks:

Megan M. Marhelski

Megan M. Marhelski

Paul J. Stork

Copy to

Signed

If enclosures are not as noted, please notify us at once.

MACTEC Engineering and Consulting, Inc.
521 Byers Road, Suite 204 • Miamisburg, OH 45342 • Phone: 937.859.3600 • Fax: 937.859.7951
www.mactec.com