REMEDIAL INVESTIGATION REPORT

PHASE I BUSINESS PARK
LACKAWANNA, NEW YORK

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Prepared for:

Tecumseh Redevelopment, Inc.

REMEDIAL INVESTIGATION REPORT

Phase I Business Park

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1.0 INTRODUCTION

1.1 Background and History

Tecumseh Redevelopment, Inc. (Tecumseh) owns approximately 1,100-acres of land located on the west side of New York State Route 5 (Hamburg Turnpike) in the City of Lackawanna, NY (see Figures 1 and 2). The majority of Tecumseh's property is located in the City of Lackawanna (the City), with portions of the property extending into the Town of Hamburg. Tecumseh's property is bordered by NY State Route 5 on the east, Lake Erie to the west and northwest, and other industrial properties to the south and the northeast.

The property was formerly used for the production of steel, coke, and related products by Bethlehem Steel Corporation (BSC). Steel production on the property was discontinued in 1983 and the coke ovens ceased activity in 2000. Tecumseh acquired its Lackawanna property from BSC's bankruptcy estate in 2003.

A Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) of all Solid Waste Management Units (SWMUs) located on the 1,100-acre property was initiated by BSC under an Administrative Order issued by the United States Environmental Protection Agency (USEPA) in 1990. Tecumseh completed the RFI in January 2005. USEPA subsequently determined that the site investigation requirements of the 1990 Administrative Order were satisfied, and Tecumseh's obligations under the 1990 Administrative Order were terminated. Tecumseh is currently negotiating an Order on Consent and Corrective Measures Study (CMS) Work Plan with the New York State Department of Environmental Conservation (NYSDEC).

Tecumseh has developed conceptual redevelopment plans for the entire 1,100-acre site. A portion of those plans incorporates a Business Park area along NYS Route 5. Phase I of the Business Park, herein referred to as the Phase I Business Park or the Site, encompassing approximately 102 acres, will be completed first. It is anticipated that Business Park Phases II and III, encompassing approximately 173 and 128 acres, respectively, will follow.

1.1.1 Phase I Business Park

In 2000, USEPA released the Phase I Business Park property from the 1990 Order, as the twelve SWMUs located within the Phase I Business Park boundaries had received a "No Further Action" determination during the RFI (Ref 1).

In March 2001, BSC performed a Phase I Environmental Site Assessment (ESA) on the Phase I Business Park property (formerly deemed "Parcel B") as part of a due diligence review in conjunction with the then-proposed redevelopment and sale of the property (Ref. 2). A copy of the report was subsequently submitted to the NYSDEC. The Phase I ESA determined that portions of the Phase I Business Park may have been impacted by historical steel manufacturing operations (BSC, 2001). Additional detail concerning the Phase I ESA findings is presented in Section 2.0.

In June of 2005 Tecumseh submitted an application to the NYSDEC requesting acceptance of the Phase I Business Park into the NY State Brownfield Cleanup Program (BCP). The application was accompanied by a Remedial Investigation (RI) Work Plan (Ref. 3) that identified site characterization requirements to be completed pursuant to the BCP and NYSDEC DER-10 guidance. The Site was accepted into the BCP with the execution of the Brownfield Cleanup Agreement in November of 2005. RI field activities were initiated in January 2006 and substantially completed in February 2006.

1.2 Purpose and Scope

This RI Report has been prepared on behalf of Tecumseh to present RI findings and describe environmental conditions within the Site.

This Report contains the following sections.

- Section 2.0 presents a description of the Site and summarizes prior assessments.
- Section 3.0 presents a discussion of the RI sampling and methodology.
- Section 4.0 presents the nature and extent of impact in Site media.
- Section 5.0 describes chemical constituent migration pathways.
- Section 6.0 provides a human health exposure assessment and fish and wildlife resources impact assessment.
- Section 7.0 presents RI summary and conclusions
- Section 8.0 presents cited references.

2.0 SITE DESCRIPTION AND PRIOR ASSESSMENTS

The Phase I Business Park is located west of New York State Route 5 (Hamburg Turnpike), east of the Gateway Metroport Ship Canal, and east and south of land currently owned by Gateway Trade Center (see Figures 1 and 2). The flat lying, approximately 102-acre Site is comprised mostly of vacant land, but includes some active railroad spurs and other structures (See §2.2). A chain-link fence that borders the entire property along Route 5 and a remote-control access gate at the Ridge Road guardhouse restrict access to the property.

The Site was formerly used to house a portion of BSC's integrated steel making operations. Most facility operations ceased in 1983, with a majority of the structures at the facility demolished in subsequent years. Specific processes and steel making facilities located on the Phase I Business Park parcel included:

- Open Hearth furnaces
- Blooming Mill
- Billet Preparation Mills
- Roughing Mills
- Rail Mills
- Foundry
- Water Treatment Plant

2.1 Site Topography, Physiography, and Drainage

The Site is generally flat with no discernable drainage pattern. The United States Geological Survey Buffalo, SW, New York Quadrangle, 7.5-minute topographic map was reviewed to assess physiographic conditions pertaining to the Site. The map, presented as Figure 1, indicates that the Site and surrounding areas slope gently to the west toward the Gateway Metroport Ship Canal and Lake Erie. Topographic contour maps prepared by BSC indicate the Site is situated approximately 585 feet above mean sea level.

2.2 Site Structures and Vegetation

The Site contains structural remnants and other features associated with historic integrated steel-making facilities at the Site. These include:

- Numerous slabs and concrete piers from former buildings and foundations. Many of the slabs are constructed of macadam.

- Immediately west of the Site boundary is a man-made drainage channel designated as the North Return Water Trench that begins near the former Pumping Station No. 1 and flows north to the Union Ship Canal (see Figure 2). Historically, the trench collected treated wastewater and non-contact cooling water from SPDES permitted outfalls from BSC operations. Currently, there are no active outfalls into the North Return Water Trench from the Site.

- Further south and immediately west of the Site boundary is another man-made drainage channel designated as the South Return Water Trench that begins near the former Blowing Engine House No. 1 and flows south to Smokes Creek (see Figure 2). Historically and currently, the trench collects and discharges groundwater and stormwater to Smokes Creek under an active SPDES permit (no. NY-0269310). There are no active outfalls into the South Return Water Trench from the Site except for treated groundwater discharge from an on-site groundwater remediation system (i.e., South Linde system), which discharges near the confluence of the South Return Water Trench and Smokes Creek.

- The former plant Fire Department Headquarters building located at the northeast corner of the Site near Gate 1 at Fuhrman Boulevard.

- An active rail spur traverses the eastern boundary of the Site adjacent to Route 5 and Fuhrman Boulevard.

The land surface is generally flat, and heavily vegetated with shrubs, grasses, and trees. The approximate locations of the current and former structures/buildings are shown on Figure 2.

2.3 Site Geology and Hydrogeology

The United States Department of Agriculture Soil Survey of Erie County, New York indicates that the Site is covered by surface soil classified as Urban Land; soil consisting of paved, foreign, or disturbed soils. Drilling logs from monitoring wells constructed on or near the Site indicate that the upper two feet (east side) to eight feet (west side) is typically composed of steel and iron-making slag and/or other fill material. The fill is underlain by

lacustrine clays and silts that are, in turn, underlain by shale or limestone bedrock. Bedrock is about 60 feet below grade near the eastern perimeter of the Site.

Historically, due to the proximity of Lake Erie and municipal supplied water, groundwater in the area has not been developed for industrial, agricultural, or public supply purposes. There is a deed restriction that prohibits the use of groundwater on the property. Consequently, no groundwater supply wells are present on the 1,100-acre Tecumseh property. Measurements taken in several monitoring wells on or near the Site indicate that the water table is 5 to 6 feet below grade within the soil/fill unit. Upgradient monitoring wells MW-8A and MW-8B are located in the northeast corner of the Site. Well MW-8A was installed to 15.15 feet below ground surface (fbgs) and screened within the soil/fill unit from 5.15 to 15.15 fbgs; well MW-8B was installed to 71.30 fbgs and screened within the sand/bedrock unit from 56.30 to 71.30 fbgs (Ref. 4). Boring logs for wells MW-8A and MW-8B are presented in Appendix A. Groundwater elevation contour maps completed during investigation of the 1,100-acre former BSC property indicate that shallow groundwater flows radially west/southwest across the Site towards the Gateway Metroport Ship Canal and Lake Erie as well as northwest toward the Buffalo Outer Harbor (Ref. 4).

2.4 Utilities

The following utilities are present on or near the Site:

- Electric Utility: Overhead electric power lines on wooden utility poles, owned by Niagara Mohawk Power Corporation (NMPC), run north and south adjacent to the Site. The electric utilities are located just east of the North Return Water Trench and former Power House No. 1 (see Figure 2), but are not located within the Site boundary. The former Power House No. 1 is not part of the Site.

- Railroad Tracks: Several active railroad tracks, owned and operated by South Buffalo Railway, are located on the east side of the Site parallel to New York State Route 5 (Hamburg Turnpike). These tracks are used to service tenants within the 1,100-acre Tecumseh property, Gateway Trade Center facilities, and for storage of railroad cars for customers.

- Water: Erie County currently supplies potable water to the site. Lake Erie is not accessible from the Site without crossing properties owned by Tecumseh or Gateway Trade Center.

- Sanitary Sewers: Active and abandoned sewer lines are located at the approximate locations indicated on Figure 2.

2.5 Wetlands and Floodplains

No state/federal wetlands or floodplains exist on the Site.

2.6 Previous Site Assessments

2.6.1 RCRA Facility Assessment

Twelve SWMUs, designated as P-43 through P-53 and P-64, were identified on the 102-acre Site during the RCRA Facility Assessment (RFA) that preceded the RFI (Ref. 5). BSC performed assessments for all twelve 12 of these SWMUs. Based on the assessment findings, USEPA Region II issued "No Further Assessment" designations for 11 of the 12 SWMUs in December of 1990. A "No Further Assessment" designation was issued for the twelfth SWMU in September 1991. Accordingly, all 12 SWMUs located within the proposed Phase I Business Park Area were excluded from the RFI Order by the USEPA in January 2001 (Ref. 1).

2.6.2 Site Reconnaissance and Limited Test Pit Investigation

From July 11 through 13, 2000, field reconnaissance activities were conducted by URS Consultants, Inc. to observe the conditions on the Site and the immediately adjacent properties. The field reconnaissance consisted of parallel east to west transects, approximately 50 to 75 feet apart. Structures observed in the field, such as pits, sumps, former foundation floors, and storm drains, were not surveyed; therefore, locations identified on Figure 2 and presented in Appendix B of the RI Work Plan are approximate. The description of site features based upon field observations made during the field reconnaissance was summarized in a July 14, 2000 memorandum presented in Appendix B of the RI Work Plan.

Several areas of stressed vegetation, sometimes combined with a viscous oil substance pooled on the ground surface, were observed and noted. Additionally, two large oil-stained areas were reportedly observed on the Rail Finishing concrete foundation on the south end of the Site and the Machine Shop concrete foundation located near the north end of the Site (see Figure 2).

On July 13, 2000, shallow test trenches were excavated at the locations of observed surface staining. These excavations indicated that the oily surface stains were confined to the upper two feet or less of soil/fill. No samples were collected for laboratory analysis; however, four discrete field aliquots of the oily material were collected and screened with a benzene field test kit. Field screening did not detect benzene in any of the four samples screened.

2.6.3 Phase I Environmental Site Assessment

A Phase I Environmental Site Assessment (ESA) was completed for the 102-acre Site by BSC in 2001. The Site was, at that time, designated by BSC as "Parcel B." The Phase I ESA is included as Attachment 5 of the BCP application. The results of the assessment indicated potential environmental conditions based on historic site uses, adjacent site uses, and field observations. These included:

- The potential impact of surface soil/fill by base-neutral semi-volatile organic compounds (SVOCs) associated with the operation of steel mills, foundry, petroleum bulk storage and other historic steel manufacturing operations.

- The potential impact of surface and subsurface soil/fill by metals associated with steel manufacturing operations.

- The potential impact of surface and subsurface soil/fill by PCBs from transformers and rail yards in discrete areas of the parcel.

- Potential soil/fill and groundwater impacts from volatile organic compounds associated with gasoline storage in discrete onsite areas, and historic off-site gasoline releases upgradient of the property.

The results of the assessments described above formed the basis of the site characterization program described in the RI Work Plan.

3.0 REMEDIAL INVESTIGATION APPROACH & RATIONALE

This RI focuses on providing defensible data to identify areas of the Site potentially requiring remediation, define chemical constituent migration pathways, qualitatively assess human health and ecological risks, and allow performance of a remedial alternatives evaluation. This section of the RI report presents a discussion of the rationale for the data collection program of the RI, including the methods employed to collect samples and make field measurements and observations, and the methods used to chemically analyze the environmental samples.

3.1 General

The RI included the following field activities to delineate and characterize on-site soil/fill as well as assess groundwater quality at the Site:

- Visual, olfactory, and PID characterization of surface and subsurface soil/fill via test pit excavation and boring advancement.
- Collection of surface and subsurface soil/fill samples.
- Advancement of on-site borings completed as groundwater monitoring wells.
- Collection and analysis of groundwater samples from existing and newly installed monitoring wells at the site.

RI field activities were conducted by TurnKey Environmental Restoration, LLC (TurnKey) in accordance with the Site Health and Safety Plan (HASP) for Brownfield Cleanup Program Remedial Investigation Activities, Phase I Business Park, Lackawanna, New York (Appendix C of Ref. 3). Environmental sample collection was performed in accordance with TurnKey's Field Operating Procedures (FOPs). USEPA and NYSDEC-approved sample collection and handling techniques were used. Samples for chemical analysis were analyzed in accordance with USEPA SW-846 methodology to meet the definitive-level data requirements. Analytical results were evaluated by a third-party data validation expert in accordance with provisions described in the RI Work Plan. The majority of field activities were conducted under NYSDEC oversight. Each sampling location was surveyed by TurnKey's surveyor and plotted on the site base map shown on Figure 2.

3.2 Constituents of Potential Concern

Constituents of potential concern (COPCs) were identified in the RI Work Plan based on site operational history and Phase I ESA findings (see Table 1). The primary COPCs included base-neutral Target Compound List (TCL) semi-volatile organic compounds (SVOCs) associated with petroleum bulk storage and fossil fuels, and select inorganics (arsenic, cadmium, chromium, lead, mercury and cyanide) typically associated with steel manufacturing. Other COPCs analyzed on a location-by-location basis included polychlorinated biphenyls (PCBs), which were analyzed in select locations housing former transformers and rail yards, and petroleum-based volatile organic compounds (VOCs), analyzed in areas of former gasoline storage. Petroleum-based VOCs are also associated with several off-site properties along New York State Route 5 identified as formerly containing gasoline service stations, and were therefore included in all groundwater samples. In addition, pesticides, herbicides and dioxins were added to the list of COPCs at two surface soil sample locations per NYSDEC's request. It should be noted that TurnKey's review of historical documentation yielded no recorded use of pesticides, herbicides or dioxin at the Site.

In addition to the COPCs, an expanded list of parameters was developed as part of the RI Work Plan (See Table 2). The "expanded" list was employed during the RI at a minimum frequency of 1 per 20 samples per matrix to check for the presence of both COPCs and other constituents less likely to be encountered. Also, photoionization detector (PID) headspace screening for volatile organic compounds was employed at all test pit locations, with expanded list VOCs added to samples exhibiting elevated PID readings.

3.3 Soil/Fill

As shown in Figure 2, the Site was broken into ten Areas of Assessment (AOAs), identified as AOA-1 through AOA-10. The AOAs were developed in the RI Work Plan to focus the soil/fill investigation according to area-specific concerns and facilitate data presentation. Surface and subsurface soil/fill sample information included in this section is discussed as it pertains to each of the ten AOAs.

In general, surface and subsurface soil/fill samples were collected from 82 test pits and 37 surface sample locations (119 total locations) to evaluate the nature of potential impacts within the ten AOAs. A total of 49 surface soil and 35 subsurface soil samples were collected from those sample locations during this RI. The following sections describe the

soil/fill sampling rationale and methodology. Test pit and surface soil/fill locations discussed in this section are shown in Figure 2. Field logs for all test pits excavated at the Site are included in Appendix B. The investigation methods and laboratory analyses performed are summarized in Table 3.

3.3.1 Sampling Rationale

3.3.1.1 Areas of Assessment 1, 4, 5, and 6

AOAs 1, 4, 5, and 6 comprise the former main operational mill area of the Site. Forty-nine test pits, 15 surface soil/fill sample locations, and 3 monitoring well borings were excavated/completed within these AOAs. From those locations, 23 surface soil/fill and 18 subsurface soil/fill samples were collected. The COPCs analyzed included SVOCs and metals, and PCBs in discrete locations.

3.3.1.2 Areas of Assessment 2 and 3

AOAs 2 and 3 consist primarily of support buildings located south of the main mill complex as well as several fuel oil tank locations. Five test pits and 6 surface soil/fill sample locations were excavated/installed within these AOAs. From those locations, 6 surface soil/fill and 2 subsurface soil/fill samples were collected. The COPCs analyzed included SVOCs from former tank locations, SVOCs and PCBs from the former rail yard, metals in areas of former building operations, and PCBs, pesticides and 2,3,7,8-TCDD at one location.

3.3.1.3 Areas of Assessment 7 and 8

AOAs 7 and 8 contain the former Open Hearth, Stripper, Foundry, and Machine Shop buildings. Portions of the Billet Prep No. 2 building are also within this AOA group. Fourteen test pits, 8 surface soil/fill sample locations, and 2 monitoring well borings were excavated/installed within these AOAs. From those locations, 10 surface soil/fill and 5 subsurface soil/fill samples were collected. The COPCs analyzed included SVOCs and metals from former tank locations and building operations as well as PCBs from former transformer locations.

3.3.1.4 Areas of Assessment 9 and 10

AOAs 9 and 10 contain the former rail yard, several support buildings (rigger shop, repair shop) and the fire department headquarters. Fourteen test pit, 8 surface soil/fill

locations, and 1 monitoring well location(s) were excavated/installed within these AOAs. From those locations, 10 surface soil/fill and 10 subsurface soil/fill samples were collected. The COPCs analyzed included SVOCs and metals from former tank locations and building operations, PCBs from former transformer locations and rail yards, VOCs from former gasoline storage and use areas, and PCBs, pesticides and 2,3,7,8-TCDD at one location near Furhman Boulevard.

3.3.2 Surface Soil/Fill Sampling Methodology

Discrete surface soil/fill samples were collected by first scraping away vegetation with an excavator bucket. A dedicated stainless steel spoon was then used to collect a representative aliquot of soil/fill from 0 to 6 inches below ground surface (bgs). Surface soil/fill samples from test pit locations were also collected using a dedicated stainless steel spoon; however, the sample interval included the upper horizon of the test pit sidewall to a maximum depth of 2 fbgs. Composite surface soil/fill samples were transferred to a new stainless steel bowl for compositing and homogenization. Grab and composite samples were transferred to laboratory supplied, pre-cleaned sample containers for analysis of the parameters listed in Table 3 using USEPA SW-846 methodology.

Representative samples were described in the field by qualified TurnKey personnel using the Unified Soil Classification System (USCS), scanned for total volatile organic vapors with a calibrated MiniRae 2000 PID equipped with a 10.6 eV lamp, and characterized for impacts via visual and/or olfactory observations.

3.3.3 Subsurface Soil/Fill Sampling Methodology

All test pit soil/fill subsurface samples were initially retrieved by the excavator bucket. Representative subsurface soil/fill samples from each sample composite group and grab location, as identified in Table 3, were collected from the center of the excavator bucket using a dedicated stainless steel spoon. Composite samples were transferred to a new stainless steel bowl for compositing and homogenization. Grab and composite samples were transferred to laboratory-supplied, pre-cleaned sample containers for analysis of the parameters listed in Table 3 using USEPA SW-846 methodology.

In accordance with Table 3 of the RI Work Plan, a second representative aliquot was collected from 76 test pit locations and transferred to a sealable plastic bag for discrete

headspace determination (HSD). HSD measurements recorded during the investigation are presented in analytical summary Tables 4 through 13. Per the Work Plan, PID scan and/or HSD values greater than 20 parts per million (ppm) required the collection of an additional sample for TCL VOC analysis using USEPA SW-846 methodology. During the investigation, only 5 of the 76 test pits requiring field assessment were analyzed for VOCs; three were selected based on PID scan or HSD exceedances and two by visual and/or olfactory (V/O) evidence of impact. The location and rationale, provided parenthetically, for the five test pit locations included: TP-1-9 (V/O), TP-5-3 (V/O), TP-7-2 (V/O and HSD), TP-10-1 (V/O and HSD), and TP-10-6 (V/O and PID scan). Each VOC subsurface soil/fill sample collected was transferred directly into a laboratory supplied, pre-cleaned sample container for analysis of TCL VOCs.

3.3.4 Methods of Chemical Analysis

Surface and subsurface soil/fill samples were couriered under chain-of-custody command to Severn Trent Laboratories, Inc. (STL), located at 10 Hazelwood Drive, Amherst, New York 14228 for chemical analysis as identified in Tables 1, 2, and 3. STL is an independent, NY State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP)-certified facility approved to perform the analyses prescribed for this RI. STL also has NYSDOH Contract Laboratory Program (CLP) certification while maintaining ASP accreditation. STL employed analytical testing methods described in USEPA Test Methods for Evaluating Solid Wastes contained in SW-846, revised 1991.

3.4 Groundwater

A groundwater monitoring program was conducted at the Site to assess groundwater quality and potential groundwater contaminant migration pathways. The following sections describe the sampling rationale and methodology. Monitoring well locations discussed in this section are shown in Figure 2 and are summarized in Table 14. Monitoring well logs for all wells at the Site are included in Appendix A.

3.4.1 Existing Monitoring Well Evaluation

One shallow groundwater monitoring well, identified as MW-08A was installed on the subject property during prior investigation of the former BSC Site (see Figure 2). On

February 23, 2006, TurnKey located and redeveloped MW-08A to determine the usability of the well for the RI. Based on the condition of the protective casing, access to the well, clarity and yield of development water, and well recovery rate, MW-08A was determined to be in satisfactory condition for use as a groundwater quality monitoring location in the RI.

3.4.2 Monitoring Well Installation Rationale

Following completion of soil/fill portion of the investigation, seven new piezometers and seven new monitoring wells were installed to better determine shallow groundwater flow direction and upgradient/downgradient groundwater quality on the Phase I Business Park Area. Figure 2 presents the groundwater monitoring points used during the RI, including: existing upgradient monitoring well MW-8A; newly installed temporary piezometers P-50S, P-51S, P-52S, P-54S, P-55S, P-56S, and P-57S; and newly installed monitoring wells MW-12A, MW-13A, MW-14A, MW-15A, MW-16A, MW-17A, and MW-18A.

3.4.3 Temporary Piezometer Installation Methodology

Temporary piezometers were installed in each of the seven test pits (see Figure 2) prior to backfilling activities. The following table identifies each piezometer and test pit location, where installed.

Test Pit ID	Temporary Piezometer ID
TP-1-1	P-50S
TP-1-12	P-51S
TP-7-6	P-52S
TP-7-5	P-53S (NOT INSTALLED)
TP-10-4	P-54S
TP-4-5	P-55S
TP-9-1	P-56S
TP-3-1	P-57S

As indicated above, piezometer P-53S was not installed as intended. This was due to insufficient shallow groundwater at the designated test pit location TP-7-5, as well as

surrounding test pit locations within that AOA (i.e., TP-7-2, TP-7-4, TP-7-7, and TP-7-8). In addition, the location of piezometer P-57S was changed in the field from test pit TP-3-2 to test pit TP-3-1 also due to the presence of insufficient shallow groundwater. With these exceptions, all temporary piezometers were installed in accordance with the RI Work Plan.

3.4.4 Monitoring Well Installation Methodology

In addition to existing upgradient monitoring well MW-8A, seven new monitoring wells, identified as MW-12A through MW-18A, were installed to further assess groundwater quality at the Site. The location of the new wells was based on field observations recorded during the soil/fill investigation, as well as the temporary piezometer groundwater elevation and flow direction evaluation. All monitoring wells were installed at the proposed locations without deviation, except well MW-18A. Upon discovery of a former gasoline underground storage tank (UST) immediately west of the former Fire Station (see Figure 2), monitoring well MW-18A was relocated closer to that area in order to better assess groundwater quality in the vicinity of the UST. The discovery of the UST is discussed further in Section 4.1 of this report.

3.4.5 Monitoring Well Development

Groundwater monitoring well development of the newly installed wells MW-12A, MW-13A, MW-14A, MW-15A, MW-16A, MW-17A, and MW-18A and existing monitoring well MW-8A was conducted using a dedicated disposable polyethylene bailer for surging and a peristaltic pump for purging in accordance with NYSDEC and TurnKey protocols, without deviation. Non-aqueous phase liquid (NAPL) was not identified in any on-site monitoring well during this investigation.

3.4.6 Groundwater Elevation Measurements

Groundwater elevations were measured in all existing and newly installed wells/piezometers on March 6, 2006 and June 1, 2006. Groundwater elevation data was used to prepare two isopotential maps presented as Figures 3 and 4. Groundwater elevations were measured using an electric water level meter to the nearest 0.01 feet in accordance with TurnKey's FOPs. Table 14 presents a summary of the groundwater elevations collected on those dates. Review of both isopotential maps indicates that groundwater from the southern

two thirds of the Site primarily flows west-southwest toward the Gateway Metroport Ship Canal, and groundwater from the northern third of the Site flows west-northwest toward the Outer Harbor and Union Ship Canal.

3.4.7 Monitoring Well Sampling

All groundwater monitoring wells were sampled using low flow sampling methodology per the RI Work Plan. Well sampling logs are presented in Appendix B.

3.4.8 Methods of Chemical Analysis

Groundwater samples were couriered under chain-of-custody command to STL for chemical analysis as identified in Tables 1, 2, and 3. STL employed analytical testing methods described in USEPA Test Methods for Evaluating Solid Wastes contained in SW-846, revised 1991.

3.5 Quality Assurance/Quality Control

Field investigation data were collected and processed using the procedures outlined in the RI Work Plan to ensure representative sample collection and to achieve the data quality objectives of the Remedial Investigation. The field activities were recorded in bound project field books supplemented with TurnKey field forms as necessary. Any deviation from the RI Work Plan procedures was recorded in the Variance Logs shown in Appendix C.

TurnKey collected blind duplicates and matrix spike/matrix spike duplicates (MS/MSD) at a frequency of one per 20 samples for each environmental media (i.e., soil/fill and groundwater). A trip blank, analyzed for the most comprehensive VOC list accompanied each cooler of aqueous media to be analyzed for VOCs. Table 15 summarizes the QA/QC sample locations.

3.6 Data Usability Summary

In accordance with the RI Work Plan, the laboratory analytical data from this investigation was independently assessed and, as required, submitted for independent review. Ms. Judy Harry of Data Validation Services located in North Creek, New York performed the data usability summary assessment for the soil/fill and groundwater samples, which

involved a review of the summary form information and sample raw data, and a limited review of associated QC raw data. Specifically, the following items were reviewed:

- Laboratory Narrative Discussion
- Custody Documentation
- Holding Times
- Surrogate and Internal Standard Recoveries
- Matrix Spike Recoveries/Duplicate Recoveries
- Field Duplicate Correlation
- Preparation/Calibration Blanks
- Control Spike/Laboratory Control Samples
- Instrumental IDLs
- Calibration/CRI/CRA Standards
- ICP Interference Check Standards
- ICP Serial Dilution Correlations
- Sample Results Verification

The Data Usability Summary Report (DUSR) was conducted using guidance from the USEPA Region 2 validation Standard Operating Procedures, the USEPA National Functional Guidelines for Data Review, as well as professional judgment. Appendix D includes the DUSR, which was prepared in accordance with Appendix 2B of NYSDEC's draft DER-10 guidance. Those items listed above that demonstrated deficiencies are discussed in detail in the DUSR. Analytical results that were edited or qualified per the DUSR are highlighted in red on Tables 4 through 13 and 16.

4.0 RI FINDINGS

This Section describes pertinent field observations and chemical analytical results in surface soil/fill, subsurface soil/fill, and groundwater.

4.1 Field Observations

The surface of the Phase I BPA was generally covered with vegetation ranging from scrub brush and grasses to medium sized trees (mostly poplars). Small areas lacking vegetation occurred where remnants of historical improvements (i.e., concrete or macadam pads) or sparse surface patches of slag, coal and coke fines existed at grade. Subsurface lithology generally consisted of a soil/fill unit comprised of non-cohesive coal and coke fines, slag, cinders, brick, concrete, metal, railroad ballast etc., which was ubiquitous at the site. The soil/fill unit thinned considerably toward the east where a reworked native sandy clay unit was observed immediately below the soil/fill unit. Groundwater was generally encountered within the soil/fill unit approximately 4.0 fbgs.

Previous site reconnaissance efforts undertaken by others identified surface staining at several locations within the Phase I BPA, all of which are shaded yellow on Figure 2. During this investigation, no surface staining or stressed vegetation was observed at those locations or any other location within the Phase I BPA. Field evidence of subsurface impacts, however, were identified at eleven test pit locations, nine of which were described as petroleum in nature with some staining and/or visible product while the remaining two were described as a former tar-bound macadam road or floor. One of the petroleum impacted test pits also contained an underground storage tank (UST). A description of these eleven test pit locations is presented below:

- Test pit TP-1-6: At approximately 2.0 – 5.0 fbgs, an oily tar-like material was encountered on the southeast wall of the test pit. Railroad ties were encountered in the upper 2 feet of soil/fill.

- Test Pit TP-1-13: Groundwater within this test pit, which was encountered at a depth of approximately 3.8 feet below grade, exhibited oily blebs and sheen.

- Test pits TP-5-3 and TP-5-7: At approximately 0.5 to 2.0 fbgs, a tar-bound macadam layer was encountered at each test pit. Based upon location of the test pit versus historical structure, the material at TP-5-3 may be a former road adjacent to a previous pitch tank, whereas the material at TP-5-7 appeared to be former building floor (i.e., within the Former Open Hearth No. 1 building). Both

areas appeared similar in composition (i.e., large gravel within a hardened tar matrix intermixed with fines). Historical drawings indicate tar-bound macadam was used ubiquitously at the site.

- Test pit TP-6-6: Groundwater within this test pit, which was encountered at a depth of approximately 5.5 feet below grade, exhibited oily blebs and sheen.

- TP-6-7: Oily product, which was encountered in the southeast corner of this test pit at a depth of 3.6 feet below grade, exhibited oily blebs and sheen.

- Test pit TP-7-2: Petroleum impacted soil/fill and visible product (i.e., thick oily/tar) were observed within concrete secondary containment around two historic above ground tar tanks at this location and determined to extend approximately 20-feet by 4-feet by 5.5-feet deep. A 6-inch steel discharge pipe was also observed emanating from the Former Power House No. 1 Building west of the test pit. This pipe will be investigated further during remedial activities at this location.

- Test pit TP-7-4: A small area of oily staining was noted on the bottom of this test pit at a depth of approximately 3.8 feet below grade.

- Test pit TP-9-3: Petroleum impacted soil/fill, visible sheening, and appurtenant piping was observed at this location and determined to extend approximately 55-feet by 60-feet by 10-feet deep. No USTs were observed during test pitting activities. This location historically contained above ground fuel oil tanks.

- Test pit TP-10-1: Petroleum impacted soil/fill and traces of visible product (i.e., thick oily/tar) were observed within a shallow bowl shaped area at this location and determined to extend approximately 16-feet by 5-feet by 4.5-feet deep. This location historically contained oil tanks.

- Test pit TP-10-6: One UST and suspected gasoline petroleum impacted soil/fill was identified along the west side of the Former Fire Station building (see Figure 2). Petroleum impacts encompass approximately a 30-foot by 40-foot by 10-foot deep area. Historical information indicated additional UST(s) may be located north of the building. Due to the unknown location of suspected underground utilities (i.e., high-pressure natural gas and sewer), further investigation along north side of the building was not performed. The north side of the building will be investigated further during planned UST and impacted soil/fill removal activities at this location.

4.2 Chemical Presence in Soil/Fill

Chemical data for soil/fill samples collected during the RI are discussed in the following sections and are summarized, by AOA, in Tables 4a through 13a and 4b through 13b.

For purpose of comparison, Tables 4a through 13a include "Unrestricted Use" Soil Cleanup Objectives (SCOs) as published in 6NYCRR Part 375-6 "Remedial Program Soil Cleanup Objectives." Unrestricted Use SCOs are deemed protective of human health and groundwater irrespective of end use of the property. Accordingly, the unrestricted use SCOs represent conservative soil/fill cleanup objectives that are often difficult to achieve on former industrial sites in urban areas.. Tables 4b through 13b present the data relative to "Restricted Use" Soil Cleanup Objectives (SCOs) Specifically, Tables 4b through 13b compare the data to commercial use SCOs per 6NYCRR Part 375-6. These values are deemed protective of human health, in the absence of other controls, for sites where end use will be limited to commercial or more restrictive (e.g., industrial) uses.

RI Sample locations where reported concentrations exceed respective SCOs are shaded on the data summary tables.

The following sections discuss the analytical findings according to Area of Assessment As indicated on Tables 4a through 13a, several exceedances of the unrestricted use SCOs were noted, particularly for carcinogenic polyaromatic hydrocarbons (i.e., benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene), metal COPCs, and to a lesser extent PCBs. Based on the widespread nature of the unrestricted use SCO exceedances, the discussions below are limited to soil/fill quality as indicated by the commercial use SCOs. To the extent commercial use SCOs are exceeded, unrestricted use SCOs would be exceeded as well. .

AOA 1 (see Table 4b): No exceedances of the commercial SCOs for VOCs or PCBs occurred at any of the sampled locations within AOA 1. With the exception of sample TP-1-(6,7,8,10), all locations exhibited exceedance of the commercial SCOs for one or more PAHs, although these were generally within an order of magnitude of the SCO. For

inorganics, arsenic exceeded the SCOs at five of the nine locations where samples were collected. Mercury and Cyanide exceeded the SCOs in TP-1-(1-5).

AOA 2 (see Table 5b): No samples were collected for VOC or PCB analysis within AOA 2. All of the samples within AOA 2 exhibited exceedance of one or more PAHs. None of the locations indicated exceedance of inorganic SCOs with the exception of mercury in TP-2 (1-3).

AOA 3 (see Table 6b): No samples were collected for VOC analysis within AOA 3. Samples for PCBs within AOA 3 were limited to one location, SS (19-21), which exhibited levels well below the SCOs. All three samples analyzed for SVOCs exceeded the commercial SCOs for PAHs. One sample, TP-3-(1-2), exceeded the SCO for arsenic. In addition, one sample from AOA 3 (MW-13A, 0.0-1.0) was analyzed for dioxins, herbicides and pesticides. Dioxins and herbicides were reported as non-detectable. One pesticide, 4,4'-DDT, was detected at a concentration well below the commercial SCO.

AOA 4 (see Table 7b): No samples were collected for VOC analysis within AOA 4. Samples for PCB analysis were collected from two locations (SS-04 and SS-05); the samples from SS-04 exceeded the commercial SCO for Aroclor 1248 and Aroclor 1254. Each of the three samples slightly exceeded the commercial SCO for one or more PAH compound. Mercury was detected above the commercial SCO in one sample (SS-26).

AOA 5 (see Table 8b): No exceedances of the commercial SCOs for VOCs or PCBs occurred at any of the sampled locations within AOA 5. With the exception of sample TP-5-11, all locations exhibited exceedance of the commercial SCOs for one or more PAHs. For inorganics, arsenic exceeded the SCOs at two of the nine locations where metals samples were collected, cadmium exceeded the commercial SCOs at four of the nine locations, lead exceeded the commercial SCO at two of the nine locations, and manganese exceeded the commercial SCOs at one location.

AOA 6 (see Table 9b): No samples were collected for VOC analysis within AOA 6. One sample (SS-07) slightly exceeded the commercial SCO for Aroclor 1260. All locations

exhibited exceedance of the commercial SCOs for one or more PAH compounds. For inorganics, arsenic exceeded the SCOs at five of the six locations where metals samples were collected, and lead and mercury exceeded the commercial SCOs at one location, each.

AOA 7 (see Table 10b): No exceedances of the commercial SCOs for VOCs or PCBs were recorded at any of the sampled locations within AOA 7. With the exception of sample TP-7 (1,3/8-4), all locations exhibited exceedance of the commercial SCOs for one or more PAH compounds. For inorganics, arsenic exceeded the SCOs at one of the five locations where metals samples were collected.

AOA 8 (see Table 11b): No samples were collected for VOC analysis within AOA 8. One sample (SS-18) exceeded the commercial SCO for Aroclor 1248. With the exception of sample TP-8 (1,3), all locations exhibited exceedance of the commercial SCOs for one or more PAH compounds, although these were within an order of magnitude of the SCO. For inorganics, arsenic, lead and mercury each exceeded the SCOs at two of the five locations where metals samples were collected.

AOA 9 (see Table 12b): No exceedances of the commercial SCOs for VOCs or PCBs were recorded at any of the sampled locations within AOA 9. Four of the six samples slightly exceeded commercial SCOs for one or more PAHs. For inorganics, arsenic exceeded the SCOs at three of the five locations where metals samples were collected.

AOA 10 (see Table 13b): No exceedances of the commercial SCOs for VOCs or PCBs were recorded at any of the sampled locations within AOA 10. Sample TP-10 (1-3) indicated exceedance of commercial SCOs for PAHs. With the exception of sample TP-10-1, which only slightly exceeded the SCO for benzo(a)pyrene, the remaining samples met SCOs or SVOCs. For inorganics, arsenic exceeded the SCOs at four of the six locations where metals samples were collected.

In addition to the above-described analyses, subsurface soil/fill samples TP-10-6 (0.0-1.0) and TP-10-6 (1.0-5.5), which are near the underground storage tank described in Section 4.1, were analyzed for TCLP VOCs, lead, flashpoint, corrosivity, reactivity, and leachable

pH. Analytical results are summarized below along with their respective hazardous waste characteristic limits per 40 CFR Part 261:

	Concentration (ug/L)		
Parameter	TP-10-6 (0.0-1.0)	TP-10-6 (1.0-5.5)	Limit
Leachable Lead	16.7	65.3	5,000
Flashpoint	>200 F	>200 F	>140 F
2 Butanone	ND	26	200,000
H_2S Released	ND	ND	ND
HCN Released	ND	ND	ND
Leachable pH	8.39	9.04	2-12

As indicated, the soil/fill did not exhibit hazardous waste characteristics.

4.3 Groundwater

Groundwater quality data was collected during the RI from the shallow overburden or fill unit at the Site. Monitoring well and piezometer construction details are summarized in Table 14. Groundwater QA/QC samples collected during the RI are summarized in Table 15. The analytical data is summarized in Table 16 and the findings are discussed below. The groundwater quality data was used to compare groundwater chemistry between upgradient and downgradient groundwater, evaluate Site-derived chemical constituents in groundwater (if any), and include parameters that assist in evaluating the fate and transport of chemical constituents in groundwater (if present).

4.3.1 VOCs

In general, only acetone (MW-12A), 1,2,4-trichlorobenzene (MW-12A), and n-butylbenzene (MW-15A) were detected above method detection limits, however at concentrations well below the NYSDEC Class "GA" Groundwater Quality Standards/Guidance Values (per 6NYCRR Part 703) (GWQS/GVs). All other VOCs were reported as non-detect.

4.3.2 SVOCs

All SVOCs analyzed were reported as non-detect for all eight wells monitored.

4.3.3 Metals

Total metals were reported as non-detect or at concentrations well below GWQS/GVs for all but one of the analyzed locations. Specifically, monitoring well MW-12A contained barium (8.7 mg/L), iron (248 mg/L), magnesium (2260 mg/L), manganese (74.3 mg/L), and sodium (44000 mg/L) exceeding their respective GWQSs.

Due to field turbidity measurements greater than TurnKey's field threshold value of 50 nephelometric units (NTUs), a filtered metals sample was collected and analyzed from well MW-15A for site-specific metals arsenic, cadmium, chromium, lead, mercury, and cyanide. All dissolved metals concentrations were reported as non-detect.

4.3.4 PCBs

All PCBs analyzed were reported as non-detect for all eight wells monitored.

5.0 FATE AND TRANSPORT OF COPCS

Soil/fill sample results exceed SCOs for certain COPCs. Accordingly, the soil/fill data were incorporated with the physical characterization of the Site to evaluate the fate and transport of COPCs in Site media. The mechanisms by which the COPCs present above SCOs can migrate to other areas or media are briefly outlined below.

5.1 Airborne Pathways

Potential migration pathways involving airborne transport of soil/fill COPCs include erosion and transport of soil particles and sorbed chemical constituents in fugitive dust emissions, and volatilization from subsurface soil vapor.

5.1.1 Fugitive Dust

Non-volatile chemicals present in soil/fill can be released to ambient air as a result of fugitive dust generation. Since the Site is heavily vegetated with shrubs, grasses, and trees, and because most of the fill consists of large grained slag, suspension due to wind erosion or physical disturbance of surface soil/fill particles is unlikely. Under the planned future commercial/industrial land use, the majority of the Site would be covered by asphalt and structures with only small areas covered by grass and/or ornamental landscaping. Fugitive dust may be generated during excavation activities during or following redevelopment. Therefore, this migration pathway is potentially relevant under the reasonably anticipated future land use scenario.

5.1.2 Volatilization

Volatile chemicals present in soil/fill may be released to ambient air or future building indoor air through volatilization from or through the soil/fill pore space. Volatile chemicals typically have a low organic-carbon partition coefficient (Koc), low molecular weight, and a high Henry's Law constant. VOCs were not detected in Site soil/fill at concentrations above restricted commercialSCOs. However, elevated PID readings were recorded in certain areas exhibiting visible petroleum impact. Therefore, the soil-to-air pathway may be relevant to locations near former petroleum storage tanks and petroleum-impacted soil/fill.

5.2 Waterborne Pathways

5.2.1 Surface Water Runoff

Under the current use scenario, the potential for soil particle transport with surface water runoff is low, as the Site is mostly flat lying and contains a significant amount of vegetative growth. Uncontrolled off-site transport is further limited because the Site is outside the 500-year floodplain. Under the reasonably anticipated future use scenario, the Site will be covered by asphalt and buildings, mitigating transport of subsurface (i.e., covered) soil/fill via storm water runoff. Although stormwater runoff during excavation activities is possible during the future use scenario, erosion controls are typical construction practice and are required under NYSDEC storm water regulations for disturbances at sites greater than 1 acre in size.

5.2.2 Leaching

Due to the relatively insoluble nature of the majority of the COPCs and absence of downgradient overburden groundwater impacts, chemical migration via leaching to groundwater is not likely. Although MW-12A indicated the presence of barium above Class GA groundwater quality standards, nearby soils at TP-5 (1-5) contained barium at an estimated concentration of only 73 mg/kg. This is well below the soil cleanup objective presented in 6NYCRR Part 375-6 for protection of groundwater due to leaching (820 mg/kg). Therefore, waterborne transport via the leaching pathway is not considered significant on this site.

5.3 Exposure Pathways

6.0 BASED ON THE ANALYSIS OF CHEMICAL FATE AND TRANSPORT PROVIDED ABOVE, THE PATHWAYS THROUGH WHICH SITE COPCS COULD POTENTIALLY MIGRATE TO OTHER AREAS OR MEDIA ARE FUGITIVE DUST EMISSIONS VIA PHYSICAL DISTURBANCE OF SOIL PARTICLES AND, TO A LESSER EXTENT, SOIL VAPOR-TO-AIR VOLATILIZATION. HOWEVER, GIVEN THE DISTANCE BETWEEN THE SITE AND OCCUPIED STRUCTURES

AND NYSDEC/NYSDOH REQUIREMENTS FOR DUST CONTROLS DURING EXCAVATION AT REMEDIAL PROGRAM CONSTRUCTION SITES, IT IS UNLIKELY THAT SITE-RELATED COPCS WOULD REACH OFFSITE RECEPTORS AT SIGNIFICANT EXPOSURE POINT CONCENTRATIONS.QUALITATIVE HUMAN HEALTH EXPOSURE AND WILDLIFE IMPACT ASSESSMENT

6.1 Human Health Exposure Assessment

A qualitative exposure assessment consists of characterizing the exposure setting (including the physical environment and potentially exposed human populations), identifying exposure pathways, and evaluating contaminant fate and transport.

An exposure pathway describes the means by which an individual may be exposed to contaminants originating from a site. An exposure pathway has five elements:

- A receptor population.
- A contaminant source
- A contaminant release and transport mechanism
- A point of exposure
- A route of exposure

The receptor population is the people who are or may be exposed to contaminants at a point of exposure. The source of contamination is defined as either the source of contaminant release to the environment (such as a waste disposal area or point of discharge), or the impacted environmental medium (soil, air, biota, water) at the point of exposure. Contaminant release and transport mechanisms carry contaminants from the source to points where people may be exposed. The point of exposure is a location where actual or potential human contact with a contaminated medium may occur. The route of exposure is the manner in which a contaminant actually enters or contacts the body (i.e., ingestion, inhalation, dermal absorption).

An exposure pathway is complete when all five elements of an exposure pathway are documented; a potential exposure pathway exists when any one or more of the five elements comprising an exposure pathway is not documented but could reasonably occur. An exposure pathway may be eliminated from further evaluation when any one of the five

elements comprising an exposure pathway does not exist in the present, and will not exist in the future.

6.1.1 Potential Receptors

The identification of potential human receptors is based on the characteristics of the Site, the surrounding land uses, and the probable future land uses. The Phase I Business Park Site is presently unoccupied, with the exception of active rail lines. Under current Site use conditions, human contact with Site soil/fill can be expected to occur primarily by two types of receptors: trespassers who may traverse the site (although presently mitigated by fencing and security gates); and construction workers that may access the Site to service utilities or perform rail maintenance. Trespassers may be comprised of adolescents, and adults, whereas construction workers would be limited to adults.

In terms of future use, the current Site owner (Tecumseh Redevelopment) has developed a Master Plan for commercial/industrial redevelopment of the Site consistent with surrounding property use and site zoning. Accordingly, the reasonably anticipated future use of the Site is for commercial/industrial purposes, with exposed receptors comprised of indoor workers, outdoor workers (e.g., groundskeepers or maintenance staff) and construction workers who may be employed at or perform work on the property. Site visitors/customers may also be considered receptors; however, their exposure would be similar to that of the indoor worker but at a lesser frequency and duration. Therefore consideration of the indoor worker is conservatively protective of the site visitor.

6.1.2 Contaminant Sources

The COPCs present in unremediated site media at elevated concentrations are discussed in Section 4.0. In general, these are limited to non-volatile COPCs in surface soil/fill and volatile and non-volatile COPCs in subsurface soil/fill. Groundwater contained elevated concentrations of a limited number of metals at only one location.

6.1.3 Contaminant Release and Transport Mechanisms

Contaminant release and transport mechanisms are specific to the type of receptor. For the current use scenario, these include direct contact with surface soil/fill by trespassers

and construction workers, and contact with fugitive dusts, vapors and subsurface soil/fill by construction workers. Contact with soil vapors migrating to outdoor air also poses a potential, albeit less likely, mechanism for trespassers and construction workers.

For the future (unremediated) use scenario, contaminant release and transport mechanisms are listed below by receptor:

- Future indoor worker: indoor air VOCs
- Future outdoor worker: fugitive dusts, outdoor air VOCs, direct contact with soil/fill
- Future construction worker: fugitive dusts, outdoor air VOCs, direct contact with soil/fill

For both the current and future use scenarios, groundwater is not considered to pose a relevant mechanism due to the absence of significant groundwater impacts, the availability of a local municipal potable water source, the depth to groundwater (greater than 4.5 feet; the standard depth of utilities and foundation footers), and the existence of a deed restriction that does not allow the use of Site groundwater.

6.1.4 Point of Exposure

Excluding specific areas of observed impact described in Section 4.0, no discernible operable units, areas of disposal or source areas were identified on the property. The point of exposure is therefore defined as the overall BCP Site.

6.1.5 Route of Exposure

Based on the types of receptors and points of exposure identified above, potential routes of exposure are listed below:

Current Use Scenario

- Trespasser – skin contact, incidental ingestion, inhalation
- Construction Worker - skin contact, incidental ingestion and inhalation

Future Use Scenario

- Indoor Worker – inhalation
- Construction and Outdoor Worker - skin contact, inhalation and incidental ingestion

6.1.6 Exposure Assessment Summary

Based on the above assessment, Table 17 summarizes the potential exposure receptors, sources, transport mechanisms, exposure points and routes of exposure. In most instances, these exposures can be readily mitigated during and following redevelopment through proper soil/fill management and placement of asphalt, building and landscape cover.

6.2 Fish and Wildlife Impact Assessment (FWIA)

The Site has been vacant since the former BSC steel plant ceased production in 1983. Emergent vegetative cover has re-colonized the vacant industrial site with scrub-like brush and trees. A mixture of cover types exists on the Site, ranging from asphalt roadways, rail and concrete foundation, to spots of dense scrub-brush vegetation with numerous cottonwood and poplar trees.

The historical use of the Site has eliminated the majority of native species. The Site is mainly populated by low-lying vegetation and small stature early successional trees (e.g., eastern cottonwood and poplar). The majority of fauna found on the Site are avian and small mammal species with the exception of the white-tailed deer. No federally listed or proposed threatened or endangered species are known to exist in the project area (USFWS 1999).

The Phase I Business Park Area is slated for redevelopment as a commercial/industrial area, consistent with surrounding property. Roadways, buildings, parking facilities and maintained ornamental landscaping will substantially limit availability of suitable cover type for reestablishment of biota. As such, based on the Fish and Wildlife Resource Impact Analysis Decision Key included as Appendix E (NYSDEC DER-10 guidelines, Appendix 3C), no fish and wildlife resources impact analysis is warranted.

7.0 SUMMARY AND CONCLUSIONS

The RI findings indicate conditions consistent with the historic use of the Site for steel-making and finishing operations. Soil/fill concentrations, where identified above commercial SCOs, varied according to the type and nature of the constituents. Specifically, elevated concentrations of petroleum VOCs were limited to discrete locations of the Site where visual or olfactory evidence of impact was observed (e.g., underground storage tank and oil-stained areas), or where past operational practices indicate an increased potential for releases of these substances (former transformer areas). Certain COPCs metals and base-neutral semi-volatiles (i.e., PAHs) were detected at several locations above SCOs, including composite sample locations. The detection of these substances in widespread areas is consistent with the observed presence of coal/coke fines and slag within the soil/fill matrix, and macadam cover.

The investigation findings indicate that, as would be expected based on the relatively low solubility of the soil/fill constituents prevalent in the soil/fill matrix, groundwater is not impacted by COPCs. Although MW-12A indicated somewhat elevated concentrations of barium, MW-12A is located near the upgradient side of the site, in an area where soils exhibited barium concentrations much less than the corresponding soil cleanup objective presented in 6NYCRR Part 375-6 for protection of groundwater due to leaching. In addition, barium was not detected above Class GA Groundwater Quality Standards at downgradient well locations. As such, the presence of barium in MW-12A is not indicative of an onsite source of contamination.

Based on the RI Findings, remediation of soil/fill is warranted. An Alternatives Analysis Report (AAR) will be prepared to identify and evaluate candidate remedial alternatives in accordance with 6NYCRR Part 375. Additional pre-design investigation may be necessary to quantify the volume and extent of soil/fill requiring cleanup.

8.0 REFERENCES

1. Correspondence from Dale J. Carpenter, USEPA Region 2, to Leo Carcher, Bethlehem Steel Corp. (January 23, 2001).

2. *Phase I Environmental Site Assessment for Parcel B*, prepared for Bethlehem Steel Corporation by URS Consultants, Inc., March 2001.

3. *Remedial Investigation Work Plan for Phase I Business Park Area*, prepared for Tecumseh Redevelopment, Inc. by TurnKey Environmental Restoration, LLC, May 2005 (revised August 2005).

4. *RCRA Facility Investigation (RFI) Report for the Former Bethlehem Steel Corporation Facility, Lackawanna, New York, Parts I through VII*, prepared for Bethlehem Steel Corporation by URS Consultants, Inc., October 2004.

5. *RCRA Facility Assessment (RFA) Report for the Bethlehem Steel Corporation Facility, Lackawanna, New York.* EPA-330/2-88-054. NEIC, Denver, CO. 1988.

TABLES

TABLE 1

CONSTITUENTS OF POTENTIAL CONCERN (COPCs)

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Lackawanna, New York

COMPOUND	CAS #
Volatile Organic Compounds	
(STARS Method 8021B)	
Benzene	*71-43-2*
n-Butylbenzene	*104-51-8*
sec-Butylbenzene	*135-98-8*
tert-Butylbenzene	*98-06-6*
p-Cymene	*99-87-6*
Ethylbenzene	*100-41-4*
Isopropylbenzene	*98-82-8*
Methyl tert butyl ether	*1634-04-4*
n-Propylbenzene	*103-65-1*
Toluene	*108-88-3*
1,2,4-Trimethylbenzene	*95-63-6*
1,3,5-Trimethylbenzene	*108-67-8*
m-Xylene	*95-47-6*
o-Xylene	*106-42-3*
p-Xylene	*108-38-3*
TCL Semi-Volatile Organic Compounds	
(Method 8270C - base/neutrals only)	
Acenaphthene	*83-32-9*
Acenaphthylene	*208-96-8*
Anthracene	*120-12-7*
Benzo(a)anthracene	*56-55-3*
Benzo(b)fluoranthene	*205-99-2*
Benzo(k)fluoranthene	*207-08-9*
Benzo(g,h,i)perylene	*191-24-2*
Benzo(a)pyrene	*50-32-8*
Benzyl alcohol	*100-51-6*
Bis(2-chloroethoxy) methane	*111-91-1*
Bis(2-chloroethyl) ether	*111-44-4*
2,2'-Oxybis (1-Chloropropane)	*108-60-1*
Bis(2-ethylhexyl) phthalate	*117-81-7*
4-Bromophenyl phenyl ether	*101-55-3*
Butyl benzyl phthalate	*85-68-7*
4-Chloroaniline	*106-47-8*
2-Chloronaphthalene	*91-58-7*
4-Chlorophenyl phenyl ether	*7005-72-3*
Chrysene	*218-01-9*
Dibenzo(a,h)anthracene	*53-70-3*
Dibenzofuran	*132-64-9*
Di-n-butyl phthalate	*84-74-2*
1,2-Dichlorobenzene	*95-50-1*
1,3-Dichlrobenzene	*541-73-1*
1,4-Dichlrobenzene	*106-46-7*
3,3'-Dichlorobenzidine	*91-94-1*
Diethyl phthalate	*84-66-2*
Dimethyl phthalate	*131-11-3*
2,4-Dinitrotoluene	*121-14-2*
2,6-Dinitrotoluene	*606-20-2*
Di-n-octyl phthalate	*117-84-0*
Fluoranthene	*206-44-0*
Fluorene	*86-73-7*
Hexachlorobenzene	*118-74-1*
Hexachlorobutadiene	*87-68-3*
Hexachlorocyclopentadiene	*77-47-4*
Hexachloroethane	*67-72-1*
Indeno(1,2,3-cd)pyrene	*193-39-5*
Isophorone	*78-59-1*
2-Methylnaphthalene	*91-57-6*
Naphthalene	*91-20-3*
2-Nitroaniline	*88-74-4*
3-Nitroaniline	*99-09-2*
4-Nitroaniline	*100-01-6*
Nitrobenzene	*95-95-3*
N-Nitrosodiphenylamine	*86-30-6*

COMPOUND	CAS #
TCL Semi-Volatile Organic Compounds (cont'd)	
(Method 8270C - base/neutrals only)	
N-Nitroso-Di-n-propylamine	*621-64-7*
Phenanthrene	*85-01-8*
Pyrene	*129-00-0*
1,2,4-Trichlorobenzene	*120-82-1*
Total Metals *(Site-Specific)*	
(Method6010B)	
Arsenic	*7440-38-2*
Cadmium	*7440-43-9*
Chromium	*7440-47-3*
Lead	*7439-92-1*
Mercury *(Method 7470A(water) and 7471A(s*	*7439-97-6*
Wet Chemistry	
Cyanide *(Method 9010B)*	*57-12-5*
PCBs	
Method 8082	
Aroclor 1016	*12674-11-2*
Aroclor 1221	*11104-28-2*
Aroclor 1232	*11141-16-5*
Aroclor 1242	*53469-21-9*
Aroclor 1248	*12672-29-6*
Aroclor 1254	*11097-69-1*
Aroclor 1260	*11096-82-5*
Herbicides (2 Locations)	
Method 8151A	
2,4-D	*94-75-7*
Dalapon	*75-99-0*
Dichloroprop	*120-36-5*
Dinoseb	*88-85-7*
Pentachlorophenol	*87-86-5*
Picloram	*1918-02-1*
2,4,5-T	*93-76-5*
2,4,5-TP	*93-72-1*
Dioxin (2 locations)	
Method 8280	
2,3,7,8-TCDD	*1746-01-6*
Pesticides (2 locations)	
Method 8081	
Aldrin	*309-00-2*
alpha-BHC	*319-84-6*
beta-BHC	*319-85-7*
gamma-BHC (Lindane)	*58-89-9*
delta-BHC	*319-86-9*
Chlordane	*57-74-9*
4,4'-DDD	*72-54-8*
4,4'-DDE	*72-55-9*
4,4'-DDT	*50-29-3*
Dieldrin	*60-57-1*
Endosulfan I	*959-98-8*
Endosulfan II	*33213-65-9*
Endosulfan Sulfate	*1031-07-8*
Endrin	*72-20-8*
Endrin ketone	*7421-93-4*
Endrin aldehyde	*53494-70-5*
Heptachlor	*76-44-8*
Heptachlor epoxide	*1024-57-3*
Methoxychlor	*72-43-5*
Toxaphene	*8001-35-2*

TABLE 2

EXPANDED PARAMETER LIST

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Lackawanna, New York

Collected 1 per 20 samples per matrix

COMPOUND	CAS #
TCL Volatile Organic Compounds	
(Method 8260B - full list)	
(plus STARS Method 8021 parameters)	
Acetone	67-64-1
Benzene	71-43-2
Bromoform	75-25-2
Bromodichloromethane	75-27-4
Bromomethane (Methyl bromide)	74-83-9
2-Butanone (MEK)	78-93-3
n-Butylbenzene	104-51-8
sec-Butylbenzene	135-98-8
tert-Butylbenzene	98-06-6
Carbon disulfide	75-15-0
Carbon tetrachloride	56-23-5
Chlorobenzene	108-90-7
Chloroethane	75-00-3
Chloroform	67-66-3
Chloromethane (Methyl chloride)	74-87-3
Cyclohexane	110-82-7
p-Cymene (p-isopropyltoluene)	99-87-6
1,2-Dibromo-3-chloropropane	96-12-8
1,2-Dibromoethane (EDB)	106-93-4
Dibromochloromethane	124-48-1
Dichlorodifluoromethane (Freon-12)	75-71-8
1,2-Dichlorobenzene	95-50-1
1,3-Dichlorobenzene	541-73-1
1,4-Dichlorobenzene	106-46-7
1,1-Dichloroethane	75-34-3
1,2-Dichloroethane (EDC)	107-06-2
1,1-Dichloroethylene (1,1-DCE)	75-35-4
trans-1,2-Dichloroethylene	156-60-5
cis-1,2-Dichloroethylene	156-59-2
cis-1,3-Dichloropropene	10061-01-5
trans-1,3-Dichloropropene	10061-02-6
1,2-Dichloropropane	78-87-5
Ethylbenzene	100-41-4
2-Hexanone	591-78-6
Isopropylbenzene (Cumene)	98-82-8
Methyl acetate	79-20-9
Methylene chloride	75-09-2
Methylcyclohexane	108-87-2
4-methyl-2-pentanone (MIBK)	108-10-1
Methyl tert butyl ether (MTBE)	1634-04-4
n-Propylbenzene	103-65-1
Styrene	100-42-5
1,1,1,2-Tetrachloroethane	630-20-6
Tetrachloroethylene (PCE)	127-18-4
Toluene	108-88-3
1,2,4-Trichlorobenzene	120-82-1
1,1,1-Trichloroethane	71-55-6
1,1,2-Trichloroethane	79-00-5
Trichloroethylene (TCE)	79-01-6
Trichlorofluoromethane (Freon-11)	75-69-4
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	76-13-1
1,2,4-Trimethylbenzene	95-63-6
1,3,5-Trimethylbenzene	108-67-8
Vinyl chloride	75-01-4
m-Xylene	95-47-6
o-Xylenes	106-42-3
p-Xylene	108-38-3
TCL Semi-Volatile Organic Compounds	
(Method 8270C - base-neutrals and acid extractables)	
Acenaphthene	83-32-9
Acenaphthylene	208-96-8
Anthracene	120-12-7
Benzo(a)anthracene	56-55-3
Benzo(a)pyrene	50-32-8

COMPOUND	CAS #
TCL Semi-Volatile Organic Compounds	
(Method 8270C - base-neutrals and acid extractables)	
Acenaphthene	83-32-9
Acenaphthylene	208-96-8
Anthracene	120-12-7
Benzo(a)anthracene	56-55-3
Benzo(a)pyrene	50-32-8
Benzo(b)fluoranthene	205-99-2
Benzo(g,h,i)perylene	191-24-2
Benzo(k)fluoranthene	207-08-9
Benzyl alcohol	100-51-6
bis(2-Chloroethoxy)methane	111-91-1
bis(2-Chloroethyl)ether	111-44-4
2,2'-oxybis(1-chloropropane); bis(2-chloroisopropyl)ether	108-60-1
bis(2-Ethylhexyl)phthalate	117-81-7
Butyl benzyl phthalate	85-68-7
4-Bromophenyl phenyl ether	101-55-3
4-Chloroaniline	106-47-8
4-Chloro-3-methylphenol	59-50-7
2-Chloronaphthalene	91-58-7
2-Chlorophenol	95-57-8
4-Chlorophenyl-phenylether	7005-72-3
Chrysene	218-01-9
Dibenzo(a,h)anthracene	53-70-3
Dibenzofuran	132-64-9
3,3'-Dichlorobenzidine	91-94-1
2,4-Dichlorophenol	120-83-2
1,2-Dichlorobenzene	95-50-1
1,3-Dichlorobenzene	541-73-1
1,4-Dichlorobenzene	106-46-7
Diethyl phthalate	84-66-2
2,4-Dimethylphenol	105-67-9
Dimethyl phthalate	131-11-3
Di-n-butyl phthalate	84-74-2
Di-n-octyl phthalate	117-84-0
4,6-Dinitro-2-methylphenol	534-52-1
2,4-Dinitrophenol	51-28-5
2,4-Dinitrotoluene	121-14-2
2,6-Dinitrotoluene	606-20-2
Fluoranthene	206-44-0
Fluorene	86-73-7
Hexachlorobenzene	118-74-1
Hexachlorobutadiene	87-68-3
Hexachlorocyclopentadiene	77-47-4
Hexachloroethane	67-72-1
Indeno(1,2,3-cd)pyrene	193-39-5
Isophorone	78-59-1
2-Methylnaphthalene	91-57-6
2-Methylphenol (o-Cresol)	95-48-7
4-Methylphenol (p-Cresol)	106-44-5
Naphthalene	91-20-3
2-Nitroaniline	88-74-4
3-Nitroaniline	99-09-2
4-Nitroaniline	100-01-6
Nitrobenzene	98-95-3
2-Nitrophenol	88-75-5
4-Nitrophenol	100-02-7
N-Nitrosodiphenylamine	86-30-6
N-Nitroso-di-n-propylamine	621-64-7
Pentachlorophenol	87-86-5
Phenanthrene	85-01-8
Phenol	108-95-2
Pyrene	129-00-0
1,2,4-Trichlorobenzene	120-82-1
2,4,5-Trichlorophenol	95-95-4
2,4,6-Trichlorophenol	88-06-2

COMPOUND	CAS #
TAL Metals	
(Site-Specific Metals)	
(Method 6010B)	
Antimony	7440-38-2
Arsenic	7440-38-2
Barium	7440-39-3
Cadmium	7440-43-9
Chromium	7440-47-3
Lead	7439-92-1
Mercury (Method 7470A(water) and 7471A(solid))	7439-97-6
Nickel	7440-02-0
Potassium	7440-09-7
Selenium	7782-49-2
Silver	7440-22-4
Thallium	7440-28-0
Wet Chemistry	
Cyanide *(Method 9010B)*	57-12-5
PCBs	
(Method 8082)	
Aroclor 1016	12674-11-2
Aroclor 1221	11104-28-2
Aroclor 1232	11141-16-5
Aroclor 1242	53469-21-9
Aroclor 1248	12672-29-6
Aroclor 1254	11097-69-1
Aroclor 1260	11096-82-5

TABLE 3

ANALYTICAL PROGRAM SUMMARY

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Lackawanna, New York

Area of Assessment	Subarea of Assessment	Investigation Sample I.D. (test pits) (depth, fbgs)	Sample Horizon	Number of Samples	Sample Type	Matrix	TCL +STARS VOCs [1]	STARS VOCs [2]	TCL SVOCs [3] (BNAs)	SVOCs (BN only) [4]	TAL Metals + CN [5]	SS Metals + CN [6]	Herbicides	Pesticides	2,3,7,8-TCDD	pH	TCL PCBs [7]	TCLP VOCs, TCLP Lead, I/C/R	Investigation Locations	Investigation Method	Rationale
AREAS OF ASSESSMENT 1, 4, 5, & 6																					
1	A	TP-1-(1-5) (0.0-2.0)	SS	1	C	soil/fill				1		1							TP-1-1 TP-1-2 TP-1-3 TP-1-4 TP-1-5	test pit	Areas of observed surface staining
		TP-1-(1-5) (2.0-5.0)	SUB	1	C					1		1									
	B	TP-1-(6-10) (0.0-2.0)	SS	1	C	soil/fill				1		1							**TP-1-6** **TP-1-7** **TP-1-8** TP-1-9 TP-1-10	test pit	- Fmr. area of observed surface staining in former 32" Rail Finishing Dept. - Area of observed surface staining, former 32" Rail Finishing Department - Area of observed surface staining, former 21" Finishing Mill - Former area of oil storage in former 21" Finishing Mill - Former area of oil storage in former 21" Finishing Mill
		TP-1-(67810) (2.0-5.0)	SUB	1	C					1		1									
		TP-1-9 (1.0-4.8)	SUB	1	G			1		1		1							TP-1-9		Former area of oil storage in former 21" Finishing Mill
	C	TP-1-(11-12) (0.0-2.0)	SS	1	C	soil/fill				1		1							TP-1-11 TP-1-12	test pit	- Area of surface staining west of 32" Rail Mill - Former area of surface staining west of 32" Rail Mill
		TP-1-(11-12) (2.0-4.5)	SUB	1	C					1		1									
	D	TP-1-(13-17) (0.0-2.0)	SS	1	C	soil/fill				1		1							**TP-1-13** TP-1-14 TP-1-15 TP-1-16 TP-1-17	test pit	- Area of observed surface staining, former 21" Rail Mill - Area of former oil tunnel and oil rooms in former 30" Roughing Mill - Area of oil rooms in former 30" Roughing Mill - Area of oil rooms in former 32" Rail Mill - Former 32" Rail Mill
		TP-1-(13-17) (2.0-5.0)	SUB	1	C					1		1									
	-	TP-1-18 (2.0-5.0)	SUB	1	G	soil/fill				1									TP-1-18	test pit	SWMU P-46 sump
		TP-1-19 (2.0-7.0)	SUB	1	G	soil/fill				1									TP-1-19	test pit	Observed pit location
		TP-1-20 (x.x-x.x)	SUB	0	--	--	*~ no sample collected ~*												TP-1-20	test pit	SWMU P-52/P-53 Settling Tanks
		TP-1-21 (x.x-x.x)	SUB	0	--	--	*~ no sample collected ~*												TP-1-21	test pit	SWMU P-47
		TP-1-22 (2.0-6.5)	SUB	1	G	soil/fill	1		1										TP-1-22	test pit	Sump in northwest corner of AOA 1
		SS-06	SS	1	G	soil/fill											1		SS-06	surface soil	Former transformer area, 21" Finishing Mill
		SS-22	SS	1	G	soil/fill											1		SS-22	surface soil	Area between oil storage and crop pit

TABLE 3

ANALYTICAL PROGRAM SUMMARY

Remedial Investigation Report
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Lackawanna, New York

Area of Assessment	Subarea of Assessment	Investigation Sample I.D. (test pits) (depth, fbgs)	Sample Horizon	Number of Samples	Sample Type	Matrix	TCL +STARS VOCs [1]	STARS VOCs [2]	TCL SVOCs [3] (BNAs)	SVOCs (BN only) [4]	TAL Metals + CN [5]	SS Metals + CN [6]	Herbicides	Pesticides	2,3,7,8-TCDD	pH	TCL PCBs [7]	TCLP VOCs, TCLP Lead, I/C/R	Investigation Locations	Investigation Method	Rationale
AREAS OF ASSESSMENT 1, 4, 5, & 6 (continued)																					
4	-	TP-4-(1-5) (0.0-1.0)	SS	1	C	soil/fill				1		1							TP-4-1 TP-4-2 TP-4-3 TP-4-4 TP-4-5	test pit	- Former Billet Prep No. 2 - Former 2,000 gallon quench oil tank - Former quench oil tanks area, Billet Prep No. 2 - Former "pickling tanks" area, former Billet Prep No. 1 - Former oil storage area, Billet Prep No. 1
		TP-4-(1-5) (1.0-3.0)	SUB	1	C					1		1									
		SS-04	SS	1	G	soil/fill											1		SS-04	surface soil	Former area of transformers, Billet Prep No. 2
		SS-05	SS	1	G	soil/fill											1		SS-05	surface soil	Former area of transformers, Billet Prep No. 2
		SS-25	SS	1	G	soil/fill				1		1							SS-25	surface soil	Lab and office area
		SS-26	SS	1	G	soil/fill						1				1			SS-26	surface soil	Adjacent to former acid tanks
5	A	TP-5-(1-5) (0.0-1.0)	SS	1	C	soil/fill				1	1								TP-5-1 TP-5-2 TP-5-3 TP-5-4 TP-5-5	test pit	- Former area of 2,500 gallon diesel tank - Former area of oil house - Former area of pitch tank - Area of surface staining, former Welfare Building - Former area of 2,500 gallon fuel oil tank
		TP-5-(1245) (1.0-4.5)	SUB	1	C					1		1									
		TP-5-3 (1.0-4.5)	SUB	1	G			1		1		1									
	B	TP-5-(6-10) (0.0-1.0)	SS	1	C	soil/fill				1		1							TP-5-6 TP-5-7 TP-5-8 TP-5-9 TP-5-10	test pit	- Former area of Open Hearth No. 1 near oil house - Former area of Open Hearth No. 1 (north end) - Former Oil House area near former Gas Producers and Galleries - Former Gas Producers and Galleries - Former Stripper Building
		TP-5-(6-10) (1.0-4.0)	SUB	1	C					1		1									
	C	TP-5-11 (0.0-1.0)	SS	1	G	soil/fill				1		1							TP-5-11	test pit	Former "Tar Spraying" area of Covered Mould Yard
		TP-5-11 (1.0-4.0)	SUB	1	G					1		1									
	-	TP-5-12 (1.0-3.5)	SUB	1	G	soil/fill						1							TP-5-12	test pit	Gas Producers and Galleries Bldg. And out-building
		SS-(1-2)	SS	1	C	soil/fill				1		1							SS-01 SS-02	surface soil	- Former area of railroad tracks - Former area of railroad tracks
		SS-03	SS	1	G	soil/fill											1		SS-03	surface soil	Former area of Substation No. 1
		SS-27	SS	1	G	soil/fill				1									SS-27	surface soil	Area between oil house and storage

TABLE 3

ANALYTICAL PROGRAM SUMMARY

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Lackawanna, New York

Area of Assessment	Subarea of Assessment	Investigation Sample I.D. (test pits) (depth, fbgs)	Sample Horizon	Number of Samples	Sample Type	Matrix	TCL +STARS VOCs [1]	STARS VOCs [2]	TCL SVOCs [3] (BNAs)	SVOCs (BN only) [4]	TAL Metals + CN [5]	SS Metals + CN [6]	Herbicides	Pesticides	2,3,7,8-TCDD	pH	TCL PCBs [7]	TCLP VOCs, TCLP Lead, I/C/R	Investigation Locations	Investigation Method	Rationale
AREAS OF ASSESSMENT 1, 4, 5, & 6 (continued)																					
6	-	TP-6-(1-5) (0.0-2.0)	SS	1	C	soil/fill				1		1							TP-6-1 TP-6-2 TP-6-3 TP-6-4 TP-6-5	test pit	- Former area of oil cellar, 40" Blooming Mill - Former area of 44" Blooming Mill Pits - Former 36" Roughing Mill and 44" Mill Pit Furnace area - Former sump location east of former 40" Mill Pit Furnace - Area of surface staining near former 36" Roughing Mill
		TP-6-(1-5) (2.0-6.0)	SUB	1	C					1		1									
		TP-6-6 (2.0-6.0)	SUB	1	G	soil/fill				1		1							TP-6-6	test pit	SWMU P-43 and nearby pit
		TP-6-7 (2.0-4.0)	SUB	1	G	soil/fill						1							TP-6-7	test pit	40" Blooming Mill Gas Mixer area (big one)
		TP-6-8 (x.x - x.x)	SUB	0	G	soil/fill	~ *no sample collected* ~												TP-6-8	test pit	SWMUs P-44 and P-49
		TP-6-9 (x.x - x.x)	SUB	0	G	soil/fill	~ *no sample collected* ~												TP-6-9	test pit	SWMU P-45
		TP-6-10 (2.0-6.0)	SUB	1	G	soil/fill											1		TP-6-10	test pit	36" Roughing Mill observed pit location
		SS-07	SS	1	G	soil/fill											1		SS-07	surface soil	Former area of substations
		SS-08	SS	1	G	soil/fill											1		SS-08	surface soil	Former area of three transformers
		SS-28	SS	1	G	soil/fill											1		SS-28	surface soil	40" Blooming Mill three transformer area
		SS-29	SS	1	G	soil/fill				1		1							SS-29	surface soil	SWMU P-50 area
		SS-30	SS	1	G	soil/fill						1							SS-30	surface soil	40" Mill Pit furnace gas mixer area (small one)
AREAS OF ASSESSMENT 2 & 3																					
2	-	TP-2-(1-3) (0.0-2.0)	SS	1	C	soil/fill				1		1							TP-2-1 TP-2-2 TP-2-3	test pit	- Former area of two 12,000 gallon fuel oil tanks - Former oil pump house and pit in Mill No. 15 - Former truck lube area of former Chipper Building
		TP-2-(1-3) (2.0-5.5)	SUB	1	C					1		1									
		SS-23	SS	1	G	soil/fill				1		1							SS-23	surface soil	Outside in between tool repair sheds
		SS-24	SS	1	G	soil/fill				1									SS-24	surface soil	Outside motor storage

TABLE 3

ANALYTICAL PROGRAM SUMMARY

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Lackawanna, New York

Area of Assessment	Subarea of Assessment	Investigation Sample I.D. (test pits) (depth, fbgs)	Sample Horizon	Number of Samples	Sample Type	Matrix	TCL +STARS VOCs [1]	STARS VOCs [2]	TCL SVOCs [3] (BNAs)	SVOCs (BN only) [4]	TAL Metals + CN [5]	SS Metals + CN [6]	Herbicides	Pesticides	2,3,7,8-TCDD	pH	TCL PCBs [7]	TCLP VOCs, TCLP Lead, I/C/R	Investigation Locations	Investigation Method	Rationale
AREAS OF ASSESSMENT 2 & 3 (continued)																					
3	-	TP-3-(1-2) (0.0-1.0)	SS	1	C	soil/fill				1		1							TP-3-1 TP-3-2	test pit	- Former area of 2,500 gallon diesel oil tank - Former area of 15,000 gallon pitch tank
		TP-3-(1-2) (1.0-3.0)	SUB	1	C					1	1										
		SS-(19-21)	SS	1	C	soil/fill				1		1					1		SS-19 SS-20 SS-21	surface soil	- Former area of railroad tracks - Former area of railroad tracks - Former area of railroad tracks
		MW-13A (0.0-1.0)	SS	1	G	soil/fill							1	1	1				MW-13A	surface soil	Open area
AREAS OF ASSESSMENT 7 & 8																					
7 & 8	A	TP-7-(1-3)/8-4 (0.0-2.0)	SS	1	C	soil/fill				1		1							TP-7-1 TP-7-2 TP-7-3 TP-8-4	test pit	- Former area of pitch tank - Fmr. area of two 5,000 gallon tar tanks and two 25,000 gallon fuel oil tanks - Former area of 2,500 gallon fuel oil tank - Former area of 400 gallon fuel oil tank
		TP-7-(1,3)/8-4 (2.0-5.5)	SUB	1	C					1		1									
		TP-7-2 (2.0-5.0)	SUB	1	G			1		1		1									
7	B	TP-7-(4-7) (0.0-1.0)	SS	1	C	soil/fill				1		1							TP-7-4 TP-7-5 TP-7-6 TP-7-7	test pit	- Former area of Foundry - Former area of Open Hearth No. 2 - Former area of Stripper Building - Former Open Hearth (Hot Mixers)
		TP-7-(4-7) (2.0-7.0)	SUB	1	C					1		1									
	-	TP-7-8 (x.x - x.x)	SUB	0	G	soil/fill	*~ no sample collected ~*												TP-7-8	test pit	Foundary Building observed shallow sump area
		SS-15	SS	1	G	soil/fill											1		SS-15	surface soil	Former area of transformer, Foundry
		SS-16	SS	1	G	soil/fill											1		SS-16	surface soil	Former area of transformer, Foundry
		SS-17	SS	1	G	soil/fill											1		SS-17	surface soil	Former area of transformer, Foundry
		SS-31	SS	1	G	soil/fill				1									SS-31	surface soil	Tool Room/Oil House building

TABLE 3

ANALYTICAL PROGRAM SUMMARY

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Lackawanna, New York

Area of Assessment	Subarea of Assessment	Investigation Sample I.D. (test pits) (depth, fbgs)	Sample Horizon	Number of Samples	Sample Type	Matrix	TCL +STARS VOCs [1]	STARS VOCs [2]	TCL SVOCs [3] (BNAs)	SVOCs (BN only) [4]	TAL Metals + CN [5]	SS Metals + CN [6]	Herbicides	Pesticides	2,3,7,8-TCDD	pH	TCL PCBs [7]	TCLP VOCs, TCLP Lead, I/C/R	Investigation Locations	Investigation Method	Rationale
8	B	TP-8-(1-3) (0.0-1.0)	SS	1	C	soil/fill				1		1							TP-8-1 TP-8-2 TP-8-3	test pit	- Former downgradient area of Machine Shop - Former downgradient area of Forge Shop - Former area of oil house in Billet Prep No. 2
		TP-8-(1-3) (1.0-7.0)	SUB	1	C					1		1									
	D	TP-8-5 (x.x - x.x)	SUB	0	G	soil/fill	~ no sample collected ~												TP-8-5	test pit	Machine Shop observed area of shallow machine pits
		TP-8-6 (1.0-3.0)	SUB	1	G	soil/fill						1							TP-8-6	test pit	Babbit Shop
		SS-18	SS	1	G	soil/fill											1		SS-18	surface soil	Former area of three transformers, Billet Prep No. 2
		SS-(32-33)	SS	1	C	soil/fill				1		1							SS-32 SS-33	surface soil	- Machine Shop observed area of surface staining - Machine Shop observed area of surface staining
		SS-34	SS	1	G	soil/fill				1		1							SS-34	surface soil	Office (1944 Millrights Shop) area
AREAS OF ASSESSMENT 9 & 10																					
9	D	TP-9-(125) (0.0-1.0)	SS	1	C	soil/fill				1		1							TP-9-1 TP-9-2 TP-9-5	test pit	- Former area of 2,000 gallon oil tank - Former area of Gasoline Engine House - Former area of oil house adjacent to former Thaw Shed
		TP-9-(125) (1.0-7.0)	SUB	1	C				1			1									
		TP-9-1 (1.0-3.5)	SUB	1	G		1														
		TP-9-2 (1.0-7.0)	SUB	1	G			1													
		TP-9-5 (1.0-4.5)	SUB	1	G			1													
		TP-9-3 (0.0-1.0)	SS	1	G	soil/fill				1		1							TP-9-3	test pit	Former area of 10,000 gallon, 2,500 gallon, and 3,000 gallon fuel oil tanks
		TP-9-3 (1.0-4.5)	SUB	1	G			1		1		1									
		TP-9-4 (0.0 - x.x)	SS	0	G	soil/fill	~ refusal at grade - no sample collected ~												TP-9-4	test pit	Former area of 300 gallon fuel oil tank
		TP-9-4 (x.x - x.x)	SUB	0	G																
		SS-09	SS	1	G	soil/fill											1		SS-09	surface soil	Former area of transformer
		SS-(10-13)	SS	1	C	soil/fill				1		1					1		SS-10 SS-11 SS-12 SS-13	surface soil	Former area of Rail Yard
		SS-35	SS	1	G	soil/fill							1	1	1				SS-35	surface soil	Area between access road and Furhmann Blvd., near Freight House
		SS-36	SS	1	G	soil/fill				1									SS-36	surface soil	Tool Shed area

TABLE 3

ANALYTICAL PROGRAM SUMMARY

Remedial Investigation Report
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Lackawanna, New York

Area of Assessment	Subarea of Assessment	Investigation Sample I.D. (test pits) (depth, fbgs)	Sample Horizon	Number of Samples	Sample Type	Matrix	TCL +STARS VOCs [1]	STARS VOCs [2]	TCL SVOCs [3] (BNAs)	SVOCs (BN only) [4]	TAL Metals + CN [5]	SS Metals + CN [6]	Herbicides	Pesticides	2,3,7,8-TCDD	pH	TCL PCBs [7]	TCLP VOCs, TCLP Lead, I/C/R	Investigation Locations	Investigation Method	Rationale
10	A	TP-10-(1-3) (0.0-1.0)	SS	1	C	soil/fill				1		1							TP-10-1 TP-10-2 TP-10-3	test pit	- Former area of 15,000 gallon oil tank - Former area of oil storage building - Former area of oil house building along north end
		TP-10-(2,3) (1.0-4.0)	SUB	1	C					1		1									
		TP-10-1 (1.0-4.5)	SUB	1	G			1		1		1									
10	B	TP-10-(4-5) (0.0-1.0)	SS	1	C	soil/fill				1		1							TP-10-4 TP-10-5	test pit	- Former area of Plate Shop - Former area of Roll Shop
		TP-10-(4-5) (1.0-2.5)	SUB	1	C					1		1									
10	-	TP-10-6 (0.0-1.0)	SS	1	G	soil/fill		1										1	TP-10-6	test pit	Former area of 5,000 gallon, 12,000 gallon, 8,022 gallon underground gasoline storage tanks, former Fire Department Headquarters
		TP-10-6 (1.0-5.5)	SUB	1	G			1										1			
		TP-10-7 (1.0-2.5)	SUB	1	G	soil/fill				1									TP-10-7	test pit	Area between Welding Shop and Tool Shop
		TP-10-8 (x.x - x.x)	SUB	0	G	soil/fill	~ *no sample collected* ~												TP-10-8	test pit	Tool Shop building
		TP-10-9 (x.x - x.x)	SUB	0	G	soil/fill	~ *no sample collected* ~												TP-10-9	test pit	Unnamed building north of Plate Shop
		SS-14	SS	1	G	soil/fill											1		SS-14	surface soil	Former area of three transformers, Structural Repair Shop
GROUNDWATER																					
1	-	NA	SGW	NA	NA	water [9]	~ *no sample collected* ~												P-50S	piezometer	Determine groundwater flow direction, installed within test pit TP-1-1 upon backfill
1							~ *no sample collected* ~												P-51S	piezometer	Determine groundwater flow direction, installed within test pit TP-1-12 upon backfill
7							~ *no sample collected* ~												P-52S	piezometer	Determine groundwater flow direction, installed within test pit TP-7-6 upon backfill
7							~ *not installed* ~												P-53S	piezometer	Determine groundwater flow direction, proposed to be installed within test pit TP-7-5 upon backfill
10							~ *no sample collected* ~												P-54S	piezometer	Determine groundwater flow direction, installed within test pit TP-10-4 upon backfill
4							~ *no sample collected* ~												P-55S	piezometer	Determine groundwater flow direction, installed within test pit TP-4-5 upon backfill
9							~ *no sample collected* ~												P-56S	piezometer	Determine groundwater flow direction, installed within test pit TP-9-1 upon backfill
3							~ *no sample collected* ~												P-57S	piezometer	Determine groundwater flow direction, installed within test pit TP-3-1 upon backfill

TABLE 3

ANALYTICAL PROGRAM SUMMARY

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Lackawanna, New York

Area of Assessment	Subarea of Assessment	Investigation Sample I.D. (test pits) (depth, fbgs)	Sample Horizon	Number of Samples	Sample Type	Matrix	TCL +STARS VOCs [1]	STARS VOCs [2]	TCL SVOCs [3] (BNAs)	SVOCs (BN only) [4]	TAL Metals + CN [5]	SS Metals + CN [6]	Herbicides	Pesticides	2,3,7,8-TCDD	pH	TCL PCBs [7]	TCLP VOCs, TCLP Lead, I/C/R	Investigation Locations	Investigation Method	Rationale
9	-	MW-8A	SGW	8	G	water [9]		1		1		1					1		MW-8A [8]	monitoring well	Existing monitoring well; Determine shallow groundwater flow direction & quality
5		MW-12A					1		1		1						1		MW-12A	monitoring well	Determine shallow groundwater flow direction and quality
3		MW-13A						1		1		1					1		MW-13A	monitoring well	Determine shallow groundwater flow direction and quality
8		MW-14A						1		1		1					1		MW-14A	monitoring well	Determine shallow groundwater flow direction and quality
7		MW-15A						1		1		1					1		MW-15A	monitoring well	Determine shallow groundwater flow direction and quality
6		MW-16A						1		1		1					1		MW-16A	monitoring well	Determine shallow groundwater flow direction and quality
1		MW-17A						1		1		1					1		MW-17A	monitoring well	Determine shallow groundwater flow direction and quality
10		MW-18A						1		1		1					1		MW-18A	monitoring well	Determine shallow groundwater flow direction and quality

TOTALS:

soil/fill (49 SS and 35 SUB)	84	--	--	2	9	2	55	2	52	2	2	2	1	17	2	
groundwater	8	--	--	1	7	1	7	1	7	0	0	0	0	8	0	

Notes:

1. One per 20 samples will be analyzed for the full TCL list of VOCs via Method 8260B, plus the STARS List VOCs via Method 8021 as determined by the QA Officer.
2. VOCs include: STARS List VOCs via Method 8021. Additional samples may be collected depending on headspace determination results.
3. One per 20 samples will be analyzed for the full TCL list of SVOCs via Method 8270C, including base-neutrals and acid extractables as determined by the QA Officer..
4. SVOCs include: TCL SVOCs via Method 8270C, base-neutrals only.
5. One per 20 samples will be analyzed for the TAL Metals plus cyanide.
6. Site-Specific (SS) Metals include: arsenic (6010B), cadmium (6010B), chromium (6010B), cyanide (9010B), lead (6010B), and mercury (7470A for water and 7471A for soil). Analytical methods are shown parenthetically.
7. PCBs include the full TCL list of PCBs via Method 8082.
8. Existing monitoring well locations were installed during previous investigations conducted at the site by others.
9. All water samples will be measured for field parameters including, at a minimum, pH, temperature, turbidity and specific conductance.
10. " - " indicates no specific subarea of assessment has been designated; general area of assessment

Abbreviations/Acronyms:

C = composite sample	NA = not applicable	SGW = shallow groundwater	SVOCs = semi-volatile organic compounds	TCL = Target Compound List
G = grab sample	P = piezometer	SS = surface soil/fill	TAL = target analyte list	TP = test pit
MW = monitoring well	PCBs = Polychlorinated Biphenyls	SUB = subsurfce soil/fill	TBD = to be determined	VOCs = volatile organic compounds

Color Code:

TP-1-1	= Historically identified surface staining was not evident at this location during the investigation, therefore a stained surface soil (SSS) sample was not collected.
	= PID scan (< 20 ppm), PID headspace (< 20 ppm), and visual/olfactory observations did not indicate environmental impact; therefore no VOC sample was collected from the subsurface at this location.
1	= Sample delivery group (SDG) A06-0652 (soil/fill)
1	= SDG A06-0714 (soil/fill)
1	= SDG A06-0821 (soil/fill)
1	= SDG A06-0418 (soil/fill)
1	= SDG A06-0824 (soil/fill)
1	= SDG A06-0923 (soil/fill)
1	= SDG A06-0936 (soil/fill)
1	= SDGs A06-0953, A06-1077 (soil/fill)
1	= SDGs A06-2431, A06-2432 (groundwater)

TABLE 4A

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 1

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type							Unrestricted SCO (mg/kg)
	TP-1-(1-5)	TP-1-(1-5)	TP-1-(6-10)	TP-1-(67810)	TP-1-9	TP-1-(11-12)	TP-1-(11-12)	
	0.0 - 2.0	2.0 - 5.0	0.0 - 2.0	2.0 - 5.0	1.0 - 4.8	0.0 - 2.0	2.0 - 4.5	
	composite	composite	composite	composite	grab	composite	composite	
Headspace Determination (ppm) - 10.6 eV Lamp [subsurface samples only]								
Total VOCs	--	5.0 (max)	--	2.8 (max)	1.4	--	0.8 (max)	--
PID Field Scans (ppm) - 10.6 eV Lamp								
Total VOCs	0.0 (max)	1.4 (max)	2.4 (max)	5.7 (max)	0.2	2.1 (max)	4.3 (max)	--
STARS Volatile Organic Compounds (VOCs - Method 8021) - mg/kg								
Benzene	--	--	--	--	0.0013	--	--	**0.06**
Naphthalene	--	--	--	--	0.076 J	--	--	**12**
Methylene Chloride	--	--	--	--	--	--	--	**0.05**
TOTAL VOCs (mg/kg)	0	0	0	0	0.0773	0	0	--
Base-Neutral Semi-Volatile Organic Compounds (SVOCs - Method 8270) - mg/kg								
Acenaphthene	0.98 J	0.31 J	0.28 J	ND	0.22 J	0.26 J	0.11 J	**20**
Acenaphthylene	2.2	1.5 J	1.4 J	0.17 J	0.44 J	2.9	1.9	**100**
Anthracene	2.9	1.7 J	1.2 J	0.096 J	0.41 J	2.2	1.9	**100**
Benzo(a)anthracene	**7.8**	**5.5**	**2.9**	0.45 J	**1.2 J**	**8.3**	**5.6**	**1**
Benzo(b)fluoranthene	**16 J**	**8.4 J**	**4.5 J**	0.73 J	**1.9 J**	**11 J**	**7.7 J**	**1**
Benzo(k)fluoranthene	**5 J**	**2.3 J**	**1.8 J**	0.25 J	0.61 J	**3 J**	**2.4 J**	**0.8**
Benzo(g,h,i)perylene	6.5	2.7	2.5	0.28 J	0.42 J	3.9	2.7	**100**
Benzo(a)pyrene	**8**	**5.5**	**3.1**	0.47 J	**1.2 J**	**7.7**	**4.9**	**1**
Chrysene	**8.8**	**6.1**	**3.2**	0.44 J	**1 J**	**7.5**	**5.2**	**1**
Dibenzo(a,h)anthracene	**1.9**	**0.8 J**	**0.55 J**	ND	0.2 J	**1.1 J**	**0.79 J**	**0.33**
Dibenzofuran	0.68 J	0.72 J	0.35 J	ND	0.24 J	0.6 J	0.69 J	**7**
Fluoranthene	19	12	5.9	0.66 J	2.0	17	11	**100**
Fluorene	1.1 J	0.84 J	0.53 J	ND	ND	1 J	1 J	**30**
Indeno(1,2,3-cd)pyrene	**6.3**	**2.5**	**1.8**	0.28 J	0.49 J	**3.5**	**2.4**	**0.5**
2-Methylnaphthalene	0.34 J	0.43 J	0.18 J	ND	0.23 J	0.31 J	0.32 J	--
Phenanthrene	12	7.7	4.1	0.3 J	1.4 J	8.2	7.3	**100**
Pyrene	13	7.7	3.9	0.47 J	1.4 J	11	7.3	**100**
TOTAL SVOCs (mg/kg)	112.5	66.7	38.19	4.596	13.36	89.47	63.21	--
Polychlorinated Biphenyls (PCBs) - mg/kg								
Aroclor 1248	--	--	--	--	--	--	--	**0.1**
Aroclor 1254	--	--	--	--	--	--	--	**0.1**
Aroclor 1260	--	--	--	--	--	--	--	**0.1**
Inorganic Compounds - mg/kg								
Arsenic, Total	**121**	**34.6**	**13.1**	10.2	12.1	**25.4**	**21.8**	**13**
Cadmium, Total	ND	ND	ND	ND	ND	ND	ND	**2.5**
Chromium, Total	**123 J**	**40.3 J**	**70.1 J**	**79.9 J**	13.2 J	**152 J**	**128 J**	**30**
Lead, Total	**257 J**	**126 J**	**210 J**	**108 J**	59.2 J	**240 J**	**176 J**	**63**
Mercury, Total	**12**	**0.206**	0.075	0.051	0.041	0.131	0.082	**0.18**
Cyanide, Total	**123**	14.2	ND	9.2	ND	1.6	ND	**27**

Notes:
1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. Soil/fill sample TP-1-22 (2.0 - 6.5) was analyzed for TCL VOCs plus STARS, all other samples were analyzed for STARS VOCs, only.
3. Soil/fill sample TP-1-22 (2.0 - 6.5) was analyzed for TCL SVOCs (BNAs), all other samples were analyzed for BN SVOCs, only.
4. J = Estimated value; result is less than the sample quantitation limit but greater than zero.
5. ND = parameter not detected above laboratory detection limit.
6. SCO = Soil Cleanup Objective (Protection of Public Health - Commercial), per NYSDEC 6NYCRR Part 375-6.8(b), Final December 2006.
7. " -- " = not analyzed for this parameter or no individual SCO
8. " * " = Field scan was not obtained due to inclement weather conditions.
9. " RED TEXT " = Data was qualified per the third party Data Usability Summary Report (DUSR).

Color Code:

compound	= TCL VOC
compound	= Polycyclic Aromatic Hydrocarbon (PAH)
BOLD	= Value exceeds Unrestricted SCO.

TABLE 4A (continued)

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 1

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type							Unrestricted SCO (mg/kg)
	TP-1-(13-17) 0.0 - 2.0 composite	TP-1-(13-17) 2.0 - 5.0 composite	TP-1-18 2.0 - 5.0 grab	TP-1-19 2.0 - 7.0 grab	TP-1-22 [2,3] 2.0 - 6.5 grab	SS-06 0.0 - 1.0 grab	SS-22 0.0 - 1.0 grab	
Headspace Determination (ppm) - 10.6 eV Lamp [subsurface samples only]								
Total VOCs	--	2.3 (max)	0.0	0.0	0.0	--	--	**--**
PID Field Scans (ppm) - 10.6 eV Lamp								
Total VOCs	0.0 (max)	0.0 (max)	*	*	0.0	--	--	**--**
STARS Volatile Organic Compounds (VOCs - Method 8021) - mg/kg								
Benzene	--	--	--	--	ND	--	--	**0.06**
Naphthalene	--	--	--	--	ND	--	--	**12**
Methylene Chloride	--	--	--	--	0.012	--	--	**0.05**
TOTAL VOCs (mg/kg)	0	0	0	0	0.012	0	0	--
Base-Neutral Semi-Volatile Organic Compounds (SVOCs - Method 8270) - mg/kg								
Acenaphthene	0.2 J	ND	ND	0.89 J	ND	--	--	**20**
Acenaphthylene	0.55 J	1.1 J	0.41 J	5.2	1.6 J	--	--	**100**
Anthracene	0.8 J	0.66 J	0.44 J	5.3	0.89 J	--	--	**100**
Benzo(a)anthracene	**2.4**	**2.2**	**1.6 J**	**16**	**5.9 J**	--	--	**1**
Benzo(b)fluoranthene	**3.3 J**	**3.2 J**	**2.1 J**	**21 J**	**7.1 J**	--	--	**1**
Benzo(k)fluoranthene	**1.3 J**	**1.1 J**	0.65 J	**7 J**	**2.4 J**	--	--	**0.8**
Benzo(g,h,i)perylene	1.4 J	1.4 J	0.85 J	6	3.9 J	--	--	**100**
Benzo(a)pyrene	**2.5**	**2.3**	**1.6 J**	**14**	**5.3 J**	--	--	**1**
Chrysene	**2.3**	**2.2**	**1.4 J**	**15**	**5.7 J**	--	--	**1**
Dibenzo(a,h)anthracene	**0.39 J**	**0.38 J**	0.25 J	**2.1**	**1.3 J**	--	--	**0.33**
Dibenzofuran	0.21 J	ND	0.1 J	1.2 J	ND	--	--	**7**
Fluoranthene	4.8	3.8	2.3	36 J	9.4	--	--	**100**
Fluorene	0.27 J	0.2 J	ND	1.7 J	ND	--	--	**30**
Indeno(1,2,3-cd)pyrene	**1.2 J**	**1.1 J**	**0.76 J**	**6.1**	**3.7 J**	--	--	**0.5**
2-Methylnaphthalene	0.21 J	ND	ND	0.3 J	ND	--	--	**--**
Phenanthrene	2.9	1.5 J	1.4 J	24	2.7 J	--	--	**100**
Pyrene	3.5	2.7	1.8 J	23	9.8	--	--	**100**
TOTAL SVOCs (mg/kg)	28.23	23.84	15.66	184.8	59.69	0	0	--
Polychlorinated Biphenyls (PCBs) - mg/kg								
Aroclor 1248	**--**	**--**	**--**	**--**	**--**	ND	0.067	**0.1**
Aroclor 1254	**--**	**--**	**--**	**--**	**--**	**0.47**	ND	**0.1**
Aroclor 1260	**--**	**--**	**--**	**--**	**--**	ND	**0.19**	**0.1**
Inorganic Compounds - mg/kg								
Arsenic, Total	**21.2**	**15.7**	--	--	--	--	--	**13**
Cadmium, Total	1.7 J	ND	--	--	--	--	--	**2.5**
Chromium, Total	**104 J**	**46.8 J**	--	--	--	--	--	**30**
Lead, Total	**437 J**	**231 J**	--	--	--	--	--	**63**
Mercury, Total	0.146	0.112	--	--	--	--	--	**0.18**
Cyanide, Total	1.3	1.2	--	--	--	--	--	**27**

Notes:
1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. Soil/fill sample TP-1-22 (2.0 - 6.5) was analyzed for TCL VOCs plus STARS, all other samples were analyzed for STARS VOCs, only.
3. Soil/fill sample TP-1-22 (2.0 - 6.5) was analyzed for TCL SVOCs (BNAs), all other samples were analyzed for BN SVOCs, only.
4. J = Estimated value; result is less than the sample quantitation limit but greater than zero.
5. ND = parameter not detected above laboratory detection limit.
6. SCO = Soil Cleanup Objective (Protection of Public Health - Commercial), per NYSDEC 6NYCRR Part 375-6.8(b), Final December 2006.
7. " -- " = not analyzed for this parameter or no individual SCO
8. " * " = Field scan was not obtained due to inclement weather conditions.
9. " RED TEXT " = Data was qualified per the third party Data Usability Summary Report (DUSR).

Color Code:

compound	= TCL VOC
compound	= Polycyclic Aromatic Hydrocarbon (PAH)
BOLD	= Value exceeds Unrestricted SCO.

TABLE 4B

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 1

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type							Restricted-Commercial SCO (mg/kg)
	TP-1-(1-5) 0.0 - 2.0 composite	TP-1-(1-5) 2.0 - 5.0 composite	TP-1-(6-10) 0.0 - 2.0 composite	TP-1-(67810) 2.0 - 5.0 composite	TP-1-9 1.0 - 4.8 grab	TP-1-(11-12) 0.0 - 2.0 composite	TP-1-(11-12) 2.0 - 4.5 composite	
Headspace Determination (ppm) - 10.6 eV Lamp [subsurface samples only]								
Total VOCs	--	5.0 (max)	--	2.8 (max)	1.4	--	0.8 (max)	--
PID Field Scans (ppm) - 10.6 eV Lamp								
Total VOCs	0.0 (max)	1.4 (max)	2.4 (max)	5.7 (max)	0.2	2.1 (max)	4.3 (max)	--
STARS Volatile Organic Compounds (VOCs - Method 8021) - mg/kg								
Benzene	--	--	--	--	0.0013	--	--	44
Naphthalene	--	--	--	--	0.076 J	--	--	500
Methylene Chloride	--	--	--	--	--	--	--	500
TOTAL VOCs (mg/kg)	0	0	0	0	0.0773	0	0	--
Base-Neutral Semi-Volatile Organic Compounds (SVOCs - Method 8270) - mg/kg								
Acenaphthene	0.98 J	0.31 J	0.28 J	ND	0.22 J	0.26 J	0.11 J	500
Acenaphthylene	2.2	1.5 J	1.4 J	0.17 J	0.44 J	2.9	1.9	500
Anthracene	2.9	1.7 J	1.2 J	0.096 J	0.41 J	2.2	1.9	500
Benzo(a)anthracene	7.8	5.5	2.9	0.45 J	1.2 J	8.3	5.6	5.6
Benzo(b)fluoranthene	16 J	8.4 J	4.5 J	0.73 J	1.9 J	11 J	7.7 J	5.6
Benzo(k)fluoranthene	5 J	2.3 J	1.8 J	0.25 J	0.61 J	3 J	2.4 J	56
Benzo(g,h,i)perylene	6.5	2.7	2.5	0.28 J	0.42 J	3.9	2.7	500
Benzo(a)pyrene	8	5.5	3.1	0.47 J	1.2 J	7.7	4.9	1
Chrysene	8.8	6.1	3.2	0.44 J	1 J	7.5	5.2	56
Dibenzo(a,h)anthracene	1.9	0.8 J	0.55 J	ND	0.2 J	1.1 J	0.79 J	0.56
Dibenzofuran	0.68 J	0.72 J	0.35 J	ND	0.24 J	0.6 J	0.69 J	350
Fluoranthene	19	12	5.9	0.66 J	2.0	17	11	500
Fluorene	1.1 J	0.84 J	0.53 J	ND	ND	1 J	1 J	500
Indeno(1,2,3-cd)pyrene	6.3	2.5	1.8	0.28 J	0.49 J	3.5	2.4	5.6
2-Methylnaphthalene	0.34 J	0.43 J	0.18 J	ND	0.23 J	0.31 J	0.32 J	--
Phenanthrene	12	7.7	4.1	0.3 J	1.4 J	8.2	7.3	500
Pyrene	13	7.7	3.9	0.47 J	1.4 J	11	7.3	500
TOTAL SVOCs (mg/kg)	112.5	66.7	38.19	4.596	13.36	89.47	63.21	--
Polychlorinated Biphenyls (PCBs) - mg/kg								
Aroclor 1248	--	--	--	--	--	--	--	1
Aroclor 1254	--	--	--	--	--	--	--	1
Aroclor 1260	--	--	--	--	--	--	--	1
Inorganic Compounds - mg/kg								
Arsenic, Total	121	34.6	13.1	10.2	12.1	25.4	21.8	16
Cadmium, Total	ND	ND	ND	ND	ND	ND	ND	9.3
Chromium, Total	123 J	40.3 J	70.1 J	79.9 J	13.2 J	152 J	128 J	1,500
Lead, Total	257 J	126 J	210 J	108 J	59.2 J	240 J	176 J	1,000
Mercury, Total	12	0.206	0.075	0.051	0.041	0.131	0.082	2.8
Cyanide, Total	123	14.2	ND	9.2	ND	1.6	ND	27

Notes:
1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. Soil/fill sample TP-1-22 (2.0 - 6.5) was analyzed for TCL VOCs plus STARS, all other samples were analyzed for STARS VOCs, only.
3. Soil/fill sample TP-1-22 (2.0 - 6.5) was analyzed for TCL SVOCs (BNAs), all other samples were analyzed for BN SVOCs, only.
4. J = Estimated value; result is less than the sample quantitation limit but greater than zero.
5. ND = parameter not detected above laboratory detection limit.
6. SCO = Soil Cleanup Objective (Protection of Public Health - Commercial), per NYSDEC 6NYCRR Part 375-6.8(b), Final December 2006.
7. " -- " = not analyzed for this parameter or no individual SSAL
8. " " = Field scan was not obtained due to inclement weather conditions.
9. "RED TEXT " = Data was qualified per the third party Data Usability Summary Report (DUSR).

Color Code:

compound	= TCL VOC
compound	= Polycyclic Aromatic Hydrocarbon (PAH)
BOLD	= Value exceeds Restricted-Commercial SCO.

TABLE 4B (continued)

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 1

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type							Restricted-Commercial SCO (mg/kg)
	TP-1-(13-17) 0.0 - 2.0 composite	TP-1-(13-17) 2.0 - 5.0 composite	TP-1-18 2.0 - 5.0 grab	TP-1-19 2.0 - 7.0 grab	TP-1-22 [2,3] 2.0 - 6.5 grab	SS-06 0.0 - 1.0 grab	SS-22 0.0 - 1.0 grab	
Headspace Determination (ppm) - 10.6 eV Lamp [subsurface samples only]								
Total VOCs	--	2.3 (max)	0.0	0.0	0.0	--	--	--
PID Field Scans (ppm) - 10.6 eV Lamp								
Total VOCs	0.0 (max)	0.0 (max)	*	*	0.0	--	--	--
STARS Volatile Organic Compounds (VOCs - Method 8021) - mg/kg								
Benzene	--	--	--	--	ND	--	--	44
Naphthalene	--	--	--	--	ND	--	--	500
Methylene Chloride	--	--	--	--	0.012	--	--	500
TOTAL VOCs (mg/kg)	0	0	0	0	0.012	0	0	--
Base-Neutral Semi-Volatile Organic Compounds (SVOCs - Method 8270) - mg/kg								
Acenaphthene	0.2 J	ND	ND	0.89 J	ND	--	--	500
Acenaphthylene	0.55 J	1.1 J	0.41 J	5.2	1.6 J	--	--	500
Anthracene	0.8 J	0.66 J	0.44 J	5.3	0.89 J	--	--	500
Benzo(a)anthracene	2.4	2.2	1.6 J	**16**	**5.9 J**	--	--	5.6
Benzo(b)fluoranthene	3.3 J	3.2 J	2.1 J	**21 J**	**7.1 J**	--	--	5.6
Benzo(k)fluoranthene	1.3 J	1.1 J	0.65 J	7 J	2.4 J	--	--	56
Benzo(g,h,i)perylene	1.4 J	1.4 J	0.85 J	6	3.9 J	--	--	500
Benzo(a)pyrene	**2.5**	**2.3**	**1.6 J**	**14**	**5.3 J**	--	--	1
Chrysene	2.3	2.2	1.4 J	15	5.7 J	--	--	56
Dibenzo(a,h)anthracene	0.39 J	0.38 J	0.25 J	**2.1**	**1.3 J**	--	--	0.56
Dibenzofuran	0.21 J	ND	0.1 J	1.2 J	ND	--	--	350
Fluoranthene	4.8	3.8	2.3	36 J	9.4	--	--	500
Fluorene	0.27 J	0.2 J	ND	1.7 J	ND	--	--	500
Indeno(1,2,3-cd)pyrene	1.2 J	1.1 J	0.76 J	**6.1**	3.7 J	--	--	5.6
2-Methylnaphthalene	0.21 J	ND	ND	0.3 J	ND	--	--	--
Phenanthrene	2.9	1.5 J	1.4 J	24	2.7 J	--	--	500
Pyrene	3.5	2.7	1.8 J	23	9.8	--	--	500
TOTAL SVOCs (mg/kg)	28.23	23.84	15.66	184.8	59.69	0	0	--
Polychlorinated Biphenyls (PCBs) - mg/kg								
Aroclor 1248	--	--	--	--	--	ND	0.067	1
Aroclor 1254	--	--	--	--	--	0.47	ND	1
Aroclor 1260	--	--	--	--	--	ND	0.19	1
Inorganic Compounds - mg/kg								
Arsenic, Total	**21.2**	15.7	--	--	--	--	--	16
Cadmium, Total	1.7 J	ND	--	--	--	--	--	9.3
Chromium, Total	104 J	46.8 J	--	--	--	--	--	1,500
Lead, Total	437 J	231 J	--	--	--	--	--	1,000
Mercury, Total	0.146	0.112	--	--	--	--	--	2.8
Cyanide, Total	1.3	1.2	--	--	--	--	--	27

Notes:
1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. Soil/fill sample TP-1-22 (2.0 - 6.5) was analyzed for TCL VOCs plus STARS, all other samples were analyzed for STARS VOCs, only.
3. Soil/fill sample TP-1-22 (2.0 - 6.5) was analyzed for TCL SVOCs (BNAs), all other samples were analyzed for BN SVOCs, only.
4. J = Estimated value; result is less than the sample quantitation limit but greater than zero.
5. ND = parameter not detected above laboratory detection limit.
6. SCO = Soil Cleanup Objective (Protection of Public Health - Commercial), per NYSDEC 6NYCRR Part 375-6.8(b), Final December 2006.
7. " -- " = not analyzed for this parameter or no individual SSAL
8. " * " = Field scan was not obtained due to inclement weather conditions.
9. " RED TEXT " = Data was qualified per the third party Data Usability Summary Report (DUSR).

Color Code:

compound	= TCL VOC
compound	= Polycyclic Aromatic Hydrocarbon (PAH)
BOLD	= Value exceeds Restricted-Commercial SCO.

TURNKEY ENVIRONMENTAL RESTORATION, LLC

TABLE 5A

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 2

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type				Unrestricted SCO (mg/kg)
	TP-2-(1-3)	TP-2-(1-3)	SS-23	SS-24	
	0.0 - 2.0	2.0 - 5.5	0.0 - 1.0	0.0 - 1.0	
	composite	composite	grab	grab	
Headspace Determination (ppm) - 10.6 eV Lamp [subsurface samples only]					
Total VOCs	--	0.0 (max)	--	--	**--**
PID Field Scans (ppm) - 10.6 eV Lamp					
Total VOCs	*	*	--	--	**--**
Base-Neutral Semi-Volatile Organic Compounds (SVOCs - Method 8270) - mg/kg					
Acenaphthene	0.44 J	0.67 J	ND	1.1 J	**20**
Acenaphthylene	0.59 J	20	ND	0.89 J	**100**
Anthracene	1 J	17 J	0.4 J	3.9 J	**100**
Benzo(a)anthracene	**6.7 J**	**50**	**1.6 J**	**14**	**1**
Benzo(b)fluoranthene	**11 J**	**86 J**	**2.6 J**	**15 J**	**1**
Benzo(k)fluoranthene	**3.7 J**	**25 J**	0.53 J	**6 J**	**0.8**
Benzo(g,h,i)perylene	3.3 J	34	1.3 J	7 J	**100**
Benzo(a)pyrene	**6.8 J**	**62**	**1.5 J**	**12**	**1**
Chrysene	**8**	**52**	**1.5 J**	**11**	**1**
Dibenzo(a,h)anthracene	**1 J**	**8.6**	ND	**2.3 J**	**0.33**
Dibenzofuran	ND	3.8 J	ND	1 J	**7**
Fluoranthene	14	95 J	3.5 J	28	**100**
Fluorene	0.38 J	4.2 J	ND	1.5 J	**30**
Indeno(1,2,3-cd)pyrene	**3 J**	**30**	**1.1 J**	**6.9 J**	**0.5**
2-Methylnaphthalene	ND	1.6 J	ND	ND	**--**
Naphthalene	ND	4.2 J	ND	ND	**12**
Phenanthrene	6.5 J	52 J	1.4 J	16	**100**
Pyrene	11	94	3.3 J	20	**100**
TOTAL SVOCs (mg/kg)	77.41	640.1	18.73	146.6	--
Inorganic Compounds - mg/kg					
Arsenic, Total	10	7.4	7.8	--	**13**
Cadmium, Total	**2.8**	1.4	**2.9**	--	**2.5**
Chromium, Total	**136 J**	15.9 J	**95.6**	--	**30**
Lead, Total	**267 J**	**103 J**	**198**	--	**63**
Mercury, Total	**2.9 J**	**1.8 J**	**1.9**	--	**0.18**
Cyanide, Total	11.5	ND	14.7 J	--	**27**

Notes:
1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds reported
2. J = Estimated value; result is less than the sample quantitation limit but greater than zero.
3. ND = parameter not detected above laboratory detection limit.
4. SCO = Soil Cleanup Objective (Protection of Public Health - Commercial), per NYSDEC 6NYCRR Part 375-6.8(b), Final Decem
5. " -- " = not analyzed for this parameter or no individual SCO
6. " * " = Field scan was not obtained due to inclement weather conditions.
7. " RED TEXT " = Data was qualified per the third party Data Usability Summary Report (DUSR).

Color Code:

compound	= Polycyclic Aromatic Hydrocarbon (PAH)
BOLD	= Value exceeds Restricted-Commercial SCO.

TABLE 5B

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 2

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type				Restricted-Commercial SCO (mg/kg)
	TP-2-(1-3)	TP-2-(1-3)	SS-23	SS-24	
	0.0 - 2.0	2.0 - 5.5	0.0 - 1.0	0.0 - 1.0	
	composite	composite	grab	grab	
Headspace Determination (ppm) - 10.6 eV Lamp [subsurface samples only]					
Total VOCs	--	0.0 (max)	--	--	**--**
PID Field Scans (ppm) - 10.6 eV Lamp					
Total VOCs	*	*	--	--	**--**
Base-Neutral Semi-Volatile Organic Compounds (SVOCs - Method 8270) - mg/kg					
Acenaphthene	0.44 J	0.67 J	ND	1.1 J	**500**
Acenaphthylene	0.59 J	20	ND	0.89 J	**500**
Anthracene	1 J	17 J	0.4 J	3.9 J	**500**
Benzo(a)anthracene	**6.7 J**	**50**	1.6 J	**14**	**5.6**
Benzo(b)fluoranthene	**11 J**	**86 J**	2.6 J	**15 J**	**5.6**
Benzo(k)fluoranthene	3.7 J	25 J	0.53 J	6 J	**56**
Benzo(g,h,i)perylene	3.3 J	34	1.3 J	7 J	**500**
Benzo(a)pyrene	**6.8 J**	**62**	**1.5 J**	**12**	**1**
Chrysene	8	52	1.5 J	11	**56**
Dibenzo(a,h)anthracene	**1 J**	**8.6**	ND	**2.3 J**	**0.56**
Dibenzofuran	ND	3.8 J	ND	1 J	**350**
Fluoranthene	14	95 J	3.5 J	28	**500**
Fluorene	0.38 J	4.2 J	ND	1.5 J	**500**
Indeno(1,2,3-cd)pyrene	3 J	**30**	1.1 J	**6.9 J**	**5.6**
2-Methylnaphthalene	ND	1.6 J	ND	ND	**--**
Naphthalene	ND	4.2 J	ND	ND	**500**
Phenanthrene	6.5 J	52 J	1.4 J	16	**500**
Pyrene	11	94	3.3 J	20	**500**
TOTAL SVOCs (mg/kg)	77.41	640.07	18.73	146.59	--
Inorganic Compounds - mg/kg					
Arsenic, Total	10	7.4	7.8	--	**16**
Cadmium, Total	2.8	1.4	2.9	--	**9.3**
Chromium, Total	136 J	15.9 J	95.6	--	**1,500**
Lead, Total	267 J	103 J	198	--	**1,000**
Mercury, Total	**2.9 J**	1.8 J	1.9	--	**2.8**
Cyanide, Total	11.5	ND	14.7 J	--	**27**

Notes:
1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds reported
2. J = Estimated value; result is less than the sample quantitation limit but greater than zero.
3. ND = parameter not detected above laboratory detection limit.
4. SCO = Soil Cleanup Objective (Protection of Public Health - Commercial), per NYSDEC 6NYCRR Part 375-6.8(b), Final Decemt
5. " -- " = not analyzed for this parameter or no individual SCO
6. " * " = Field scan was not obtained due to inclement weather conditions.
7. " RED TEXT " = Data was qualified per the third party Data Usability Summary Report (DUSR).

Color Code:

compound	= Polycyclic Aromatic Hydrocarbon (PAH)
BOLD	= Value exceeds Restricted-Commercial SCO.

TABLE 6A

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 3

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type				Unrestricted SCO (mg/kg)
	TP-3-(1-2)	TP-3-(1-2)	SS-(19-21)	MW-13A	
	0.0 - 1.0	1.0 - 3.0	0.0 - 1.0	0.0 - 1.0	
	composite	composite	composite	grab	
Headspace Determination (ppm) - 10.6 eV Lamp [subsurface samples only]					
Total VOCs	--	0.0 (max)	--	--	**--**
PID Field Scans (ppm) - 10.6 eV Lamp					
Total VOCs	0.0 (max)	0.0 (max)	--	--	**--**
Base-Neutral Semi-Volatile Organic Compounds (SVOCs - Method 8270) - mg/kg					
Acenaphthene	ND	0.68 J	2.5 J	--	**20**
Acenaphthylene	3.9 J	4.8 J	3.1 J	--	**100**
Anthracene	1.9 J	4.8 J	9.3	--	**100**
Benzo(a)anthracene	**10**	**23**	**24**	--	**1**
Benzo(b)fluoranthene	**15 J**	**32 J**	**26 J**	--	**1**
Benzo(k)fluoranthene	**5.2 J**	**8.5 J**	**7.5 J**	--	**0.8**
Benzo(g,h,i)perylene	9.2	14	12	--	**100**
Benzo(a)pyrene	**12**	**24**	**21**	--	**1**
Chrysene	**10**	**22**	**20**	--	**1**
Dibenzo(a,h)anthracene	**2.5 J**	**4.4 J**	**3.7 J**	--	**0.33**
Dibenzofuran	ND	0.65 J	3.6 J	--	**7**
Fluoranthene	18	48	50	--	**100**
Fluorene	ND	1.5 J	4.6 J	--	**30**
Indeno(1,2,3-cd)pyrene	**8.3**	**14**	**11**	--	**0.5**
2-Methylnaphthalene	ND	0.4 J	2.6 J	--	**--**
Naphthalene	ND	0.38 J	6.1 J	--	**12**
Phenanthrene	4 J	19	33	--	**100**
Pyrene	14 J	37	38	--	**100**
TOTAL SVOCs (mg/kg)	114	259	278	--	--
Polychlorinated Biphenyls (PCBs) - mg/kg					
Aroclor 1254	--	--	**0.29**	--	**0.1**
Aroclor 1260	--	--	**0.22 J**	--	**0.1**
Inorganic Compounds [2] - mg/kg					
Aluminum, Total	--	13800	--	--	**--**
Arsenic, Total	11.6 J	**36.7 J**	11.8	--	**13**
Barium, Total	--	166 J	--	--	**350**
Beryllium, Total	--	2.1	--	--	**7.2**
Cadmium, Total	1.3	**4.1**	1.2	--	**2.5**
Calcium, Total	--	87000 J	--	--	**--**
Chromium, Total	**175 J**	**59.1 J**	**35.8**	--	**30**
Cobalt, Total	--	6.8	--	--	**--**
Copper, Total	--	**119 J**	--	--	**50**
Iron, Total	--	45300 J	--	--	**--**
Lead, Total	**141 J**	**280 J**	**151**	--	**63**
Magnesium, Total	--	19400	--	--	**--**
Manganese, Total	--	**3710**	--	--	**1,600**

TABLE 6A

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 3

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type				Unrestricted SCO (mg/kg)
	TP-3-(1-2)	TP-3-(1-2)	SS-(19-21)	MW-13A	
	0.0 - 1.0	1.0 - 3.0	0.0 - 1.0	0.0 - 1.0	
	composite	composite	composite	grab	
Inorganic Compounds [2] - mg/kg					
Mercury, Total	0.161	0.08	**0.217**	--	**0.18**
Nickel, Total	--	18.6	--	--	**30**
Potassium, Total	--	1090	--	--	**--**
Sodium, Total	--	633	--	--	**--**
Vanadium, Total	--	33.2	--	--	**--**
Zinc, Total	--	**452**	--	--	**109**
Cyanide, Total	ND	ND	ND	--	**27**
Dioxins - mg/kg					
2,3,7,8-TCDD	--	--	--	ND	**--**
Herbicides - mg/kg					
2,4-D	--	--	--	ND	**--**
Pentachlorophenol	--	--	--	ND	**--**
Pesticides - mg/kg					
4,4'-DDT	--	--	--	**0.094**	**0.0033**

Notes:

1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. Sample TP-3-(1-2) (1.0 - 3.0) analyzed for TAL Metals, all other samples analyzed for arsenic, cadmium, chromium, cyanide, lead, & mercury, only.
3. J = Estimated value; result is less than the sample quantitation limit but greater than zero.
4. ND = parameter not detected above laboratory detection limit.
5. SCO = Soil Cleanup Objective (Protection of Public Health - Commercial), per NYSDEC 6NYCRR Part 375-6.8(b), Final December 2006.
6. " -- " = not analyzed for this parameter or no individual SCO
7. " RED TEXT " = Data was qualified per the third party Data Usability Summary Report (DUSR).

Color Code:

compound	= Polycyclic Aromatic Hydrocarbon (PAH)
compound	= TAL Metal
BOLD	= Value exceeds Unrestricted SCO

TABLE 6B

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 3

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type				Restricted-Commercial SCO (mg/kg)
	TP-3-(1-2)	TP-3-(1-2)	SS-(19-21)	MW-13A	
	0.0 - 1.0	1.0 - 3.0	0.0 - 1.0	0.0 - 1.0	
	composite	composite	composite	grab	
Headspace Determination (ppm) - 10.6 eV Lamp [subsurface samples only]					
Total VOCs	--	0.0 (max)	--	--	**--**
PID Field Scans (ppm) - 10.6 eV Lamp					
Total VOCs	0.0 (max)	0.0 (max)	--	--	**--**
Base-Neutral Semi-Volatile Organic Compounds (SVOCs - Method 8270) - mg/kg					
Acenaphthene	ND	0.68 J	2.5 J	--	**500**
Acenaphthylene	3.9 J	4.8 J	3.1 J	--	**500**
Anthracene	1.9 J	4.8 J	9.3	--	**500**
Benzo(a)anthracene	**10**	**23**	**24**	--	**5.6**
Benzo(b)fluoranthene	**15 J**	**32 J**	**26 J**	--	**5.6**
Benzo(k)fluoranthene	5.2 J	8.5 J	7.5 J	--	**56**
Benzo(g,h,i)perylene	9.2	14	12	--	**500**
Benzo(a)pyrene	**12**	**24**	**21**	--	**1**
Chrysene	10	22	20	--	**56**
Dibenzo(a,h)anthracene	**2.5 J**	**4.4 J**	**3.7 J**	--	**0.56**
Dibenzofuran	ND	0.65 J	3.6 J	--	**350**
Fluoranthene	18	48	50	--	**500**
Fluorene	ND	1.5 J	4.6 J	--	**500**
Indeno(1,2,3-cd)pyrene	**8.3**	**14**	**11**	--	**5.6**
2-Methylnaphthalene	ND	0.4 J	2.6 J	--	**--**
Naphthalene	ND	0.38 J	6.1 J	--	**500**
Phenanthrene	4 J	19	33	--	**500**
Pyrene	14 J	37	38	--	**500**
TOTAL SVOCs (mg/kg)	114	259	278	--	--
Polychlorinated Biphenyls (PCBs) - mg/kg					
Aroclor 1254	--	--	0.29	--	**1**
Aroclor 1260	--	--	0.22 J	--	**1**
Inorganic Compounds [2] - mg/kg					
Aluminum, Total	--	13800	--	--	**--**
Arsenic, Total	11.6 J	**36.7 J**	11.8	--	**16**
Barium, Total	--	166 J	--	--	**400**
Beryllium, Total	--	2.1	--	--	**590**
Cadmium, Total	1.3	4.1	1.2	--	**9.3**
Calcium, Total	--	87000 J	--	--	**--**
Chromium, Total	175 J	59.1 J	35.8	--	**1,500**
Cobalt, Total	--	6.8	--	--	**--**
Copper, Total	--	119 J	--	--	**270**
Iron, Total	--	45300 J	--	--	**--**
Lead, Total	141 J	280 J	151	--	**1,000**
Magnesium, Total	--	19400	--	--	**--**

TABLE 6B

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 3

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type				Restricted-Commercial SCO (mg/kg)
	TP-3-(1-2)	TP-3-(1-2)	SS-(19-21)	MW-13A	
	0.0 - 1.0	1.0 - 3.0	0.0 - 1.0	0.0 - 1.0	
	composite	composite	composite	grab	
Manganese, Total	--	3710	--	--	**10,000**
Inorganic Compounds [2] - mg/kg					
Mercury, Total	0.161	0.08	0.217	--	**2.8**
Nickel, Total	--	18.6	--	--	**310**
Potassium, Total	--	1090	--	--	**--**
Sodium, Total	--	633	--	--	**--**
Vanadium, Total	--	33.2	--	--	**--**
Zinc, Total	--	452	--	--	**10,000**
Cyanide, Total	ND	ND	ND	--	**27**
Dioxins - mg/kg					
2,3,7,8-TCDD	--	--	--	ND	**--**
Herbicides - mg/kg					
2,4-D	--	--	--	ND	**--**
Pentachlorophenol	--	--	--	ND	**--**
Pesticides - mg/kg					
4,4'-DDT	--	--	--	0.094	**47**

Notes:
1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. Sample TP-3-(1-2) (1.0 - 3.0) analyzed for TAL Metals, all other samples analyzed for arsenic, cadmium, chromium, cyanide, lead, & mercury, only.
3. J = Estimated value; result is less than the sample quantitation limit but greater than zero.
4. ND = parameter not detected above laboratory detection limit.
5. SCO = Soil Cleanup Objective (Protection of Public Health - Commercial), per NYSDEC 6NYCRR Part 375-6.8(b), Final December 2006.
6. " -- " = not analyzed for this parameter or no individual SCO
7. " RED TEXT " = Data was qualified per the third party Data Usability Summary Report (DUSR).

Color Code:

compound	= Polycyclic Aromatic Hydrocarbon (PAH)
compound	= TAL Metal
BOLD	= Value exceeds Restricted-Commerical SCO

TABLE 7A

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 4

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type						Unrestricted SCO (mg/kg)
	TP-4 (1-5)	TP-4 (1-5)	SS-04	SS-05	SS-25	SS-26	
	0.0 - 1.0	1.0 - 3.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	
	composite	composite	grab	grab	grab	grab	
Headspace Determination (ppm) - 10.6 eV Lamp [subsurface samples only]							
Total VOCs	--	0.0 (max)	--	--	--	--	**--**
PID Field Scans (ppm) - 10.6 eV Lamp							
Total VOCs	*	*	--	--	--	--	**--**
Base-Neutral Semi-Volatile Organic Compounds (SVOCs - Method 8270) - mg/kg							
Acenaphthene	ND	ND	--	--	0.16 J	--	**20**
Acenaphthylene	ND	0.68 J	--	--	0.27 J	--	**100**
Anthracene	1.2 J	0.61 J	--	--	0.78	--	**100**
Benzo(a)anthracene	**4.4 J**	**1.9**	--	--	**1.6**	--	**1**
Benzo(b)fluoranthene	**5.5 J**	**3.1 J**	--	--	**2.2 J**	--	**1**
Benzo(k)fluoranthene	**1.8 J**	**0.99 J**	--	--	0.61 J	--	**0.8**
Benzo(g,h,i)perylene	2.4 J	1.6 J	--	--	0.81	--	**100**
Benzo(a)pyrene	**4.2 J**	**2.2**	--	--	**1.6**	--	**1**
Chrysene	**4.4 J**	**2**	--	--	**1.6**	--	**1**
Dibenzo(a,h)anthracene	**0.72 J**	**0.5 J**	--	--	0.23 J	--	**0.33**
Dibenzofuran	ND	0.13 J	--	--	0.24 J	--	**7**
Fluoranthene	9	3.3	--	--	4	--	**100**
Fluorene	ND	0.2 J	--	--	0.42	--	**30**
Indeno(1,2,3-cd)pyrene	**2.1 J**	**1.4 J**	--	--	**0.78**	--	**0.5**
2-Methylnaphthalene	ND	ND	--	--	0.068 J	--	**--**
Naphthalene	ND	0.11 J	--	--	0.065 J	--	**12**
Phenanthrene	3.3 J	2	--	--	3.2	--	**100**
Pyrene	8.1 J	2.8	--	--	2.8	--	**100**
TOTAL SVOCs (mg/kg)	47.1	23.5	--	--	21.4	--	--
Polychlorinated Biphenyls (PCBs) - mg/kg							
Aroclor 1248	--	--	**1.2**	**0.54**	--	--	**0.1**
Aroclor 1254	--	--	**3.0**	ND	--	--	**0.1**
Aroclor 1260	--	--	ND	**0.38**	--	--	**0.1**
Inorganic Compounds - mg/kg							
Arsenic, Total	9.3 J	7	--	--	7.6	12.6	**13**
Cadmium, Total	**3.2 J**	2.1	--	--	1.4	**5.8**	**2.5**
Chromium, Total	**114 J**	**82.3 J**	--	--	**67.8**	**245**	**30**
Lead, Total	**642 J**	**800 J**	--	--	**166**	**355**	**63**
Mercury, Total	**1.5 J**	**0.559 J**	--	--	0.148	**3.8**	**0.18**
Cyanide, Total	ND	ND	--	--	3.5 J	8.2 J	**27**
Wet Chemistry - units shown parenthentically							
pH (S.U.)	--	--	--	--	--	8.40	**--**

Notes:
1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds reported as non-detect.
2. J = Estimated value; result is less than the sample quantitation limit but greater than zero.
3. ND = parameter not detected above laboratory detection limit.
4. SCO = Soil Cleanup Objective (Protection of Public Health - Commercial), per NYSDEC 6NYCRR Part 375-6.8(b), Final December 2006.
5. " -- " = not analyzed for this parameter or no individual SCO
6. " * " = Field scan was not obtained due to inclement weather conditions.
7. " RED TEXT " = Data was qualified per the third party Data Usability Summary Report (DUSR).

Color Code:

compound	= Polycyclic Aromatic Hydrocarbon (PAH)
BOLD	= Value exceeds Unrestricted SCO

TABLE 7B

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 4

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type						Restricted-Commerical SCO (mg/kg)
	TP-4 (1-5)	TP-4 (1-5)	SS-04	SS-05	SS-25	SS-26	
	0.0 - 1.0	1.0 - 3.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	
	composite	composite	grab	grab	grab	grab	
Headspace Determination (ppm) - 10.6 eV Lamp [subsurface samples only]							
Total VOCs	--	0.0 (max)	--	--	--	--	--
PID Field Scans (ppm) - 10.6 eV Lamp							
Total VOCs	*	*	--	--	--	--	--
Base-Neutral Semi-Volatile Organic Compounds (SVOCs - Method 8270) - mg/kg							
Acenaphthene	ND	ND	--	--	0.16 J	--	**500**
Acenaphthylene	ND	0.68 J	--	--	0.27 J	--	**500**
Anthracene	1.2 J	0.61 J	--	--	0.78	--	**500**
Benzo(a)anthracene	4.4 J	1.9	--	--	1.6	--	**5.6**
Benzo(b)fluoranthene	5.5 J	3.1 J	--	--	2.2 J	--	**5.6**
Benzo(k)fluoranthene	1.8 J	0.99 J	--	--	0.61 J	--	**56**
Benzo(g,h,i)perylene	2.4 J	1.6 J	--	--	0.81	--	**500**
Benzo(a)pyrene	**4.2 J**	**2.2**	--	--	**1.6**	--	**1**
Chrysene	4.4 J	2	--	--	1.6	--	**56**
Dibenzo(a,h)anthracene	**0.72 J**	0.5 J	--	--	0.23 J	--	**0.56**
Dibenzofuran	ND	0.13 J	--	--	0.24 J	--	**350**
Fluoranthene	9	3.3	--	--	4	--	**500**
Fluorene	ND	0.2 J	--	--	0.42	--	**500**
Indeno(1,2,3-cd)pyrene	2.1 J	1.4 J	--	--	0.78	--	**5.6**
2-Methylnaphthalene	ND	ND	--	--	0.068 J	--	--
Naphthalene	ND	0.11 J	--	--	0.065 J	--	**500**
Phenanthrene	3.3 J	2	--	--	3.2	--	**500**
Pyrene	8.1 J	2.8	--	--	2.8	--	**500**
TOTAL SVOCs (mg/kg)	47.12	23.52	0	0	21.43	0	--
Polychlorinated Biphenyls (PCBs) - mg/kg							
Aroclor 1248	--	--	**1.2**	0.54	--	--	**1**
Aroclor 1254	--	--	**3.0**	ND	--	--	**1**
Aroclor 1260	--	--	ND	0.38	--	--	**1**
Inorganic Compounds - mg/kg							
Arsenic, Total	9.3 J	7	--	--	7.6	12.6	**16**
Cadmium, Total	3.2 J	2.1	--	--	1.4	5.8	**9.3**
Chromium, Total	114 J	82.3 J	--	--	67.8	245	**1,500**
Lead, Total	642 J	800 J	--	--	166	355	**1,000**
Mercury, Total	1.5 J	0.559 J	--	--	0.148	**3.8**	**2.8**
Cyanide, Total	ND	ND	--	--	3.5 J	8.2 J	**27**
Wet Chemistry - units shown parenthentically							
pH (S.U.)	--	--	--	--	--	8.40	--

Notes:
1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds reported as non-detect.
2. J = Estimated value; result is less than the sample quantitation limit but greater than zero.
3. ND = parameter not detected above laboratory detection limit.
4. SCO = Soil Cleanup Objective (Protection of Public Health - Commercial), per NYSDEC 6NYCRR Part 375-6.8(b), Final December 2006.
5. " -- " = not analyzed for this parameter or no individual SCO
6. " * " = Field scan was not obtained due to inclement weather conditions.
7. " RED TEXT " = Data was qualified per the third party Data Usability Summary Report (DUSR).

Color Code:

compound	= Polycyclic Aromatic Hydrocarbon (PAH)
BOLD	= Value exceeds Restricted-Commercial SCO

TABLE 8A

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 5

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type						Unrestricted SCO (mg/kg)
	TP-5-(1-5)	TP-5-(1245)	TP-5-3	TP-5-(6-10)	TP-5-(6-10)	TP-5-11	
	0.0 - 1.0	1.0 - 4.5	1.0 - 4.5	0.0 - 1.0	1.0 - 4.0	0.0 - 1.0	
	composite	composite	grab	composite	composite	grab	
Headspace Determination (ppm) - 10.6 eV Lamp [subsurface samples only]							
Total VOCs	--	0.0 (max)	0.0	--	0.0 (max)	--	--
PID Field Scans (ppm) - 10.6 eV Lamp							
Total VOCs	0.0 (max)	0.0 (max)	0.0	0.0 (max)	0.0 (max)	0.0	--
STARS Volatile Organic Compounds (VOCs - Method 8021) - mg/kg							
Naphthalene	--	--	1.6	--	--	--	**12**
TOTAL VOCs (mg/kg)	--	--	1.6	--	--	--	--
Base-Neutral Semi-Volatile Organic Compounds (SVOCs - Method 8270) - mg/kg							
Acenaphthene	4.4 J	2.1 J	2.2 J	0.54 J	0.19 J	0.039 J	**20**
Acenaphthylene	5.6 J	10	6.2 J	0.65 J	0.18 J	0.15 J	**100**
Anthracene	24	20	15	1.9 J	0.52 J	0.17 J	**100**
Benzo(a)anthracene	**36**	**41**	**31**	**4.6 J**	**1.3 J**	0.68	**1**
Benzo(b)fluoranthene	**40 J**	**48 J**	**36 J**	**6.2 J**	**2.3 J**	**1.2 J**	**1**
Benzo(k)fluoranthene	**13 J**	**18 J**	**9.8 J**	**2.1 J**	**0.83 J**	0.31 J	**0.8**
Benzo(g,h,i)perylene	17	22	17	2.7 J	1 J	0.44	**100**
Benzo(a)pyrene	**32**	**40**	**29**	**4.4 J**	**1.5**	0.75	**1**
Chrysene	**33**	**37**	**27**	**4.1 J**	**1.3 J**	0.71	**1**
Dibenzo(a,h)anthracene	**4.8 J**	**5.8 J**	**4.4 J**	**0.86 J**	0.31 J	0.12 J	**0.33**
Dibenzofuran	**7.7**	6.6 J	4.3 J	ND	0.21 J	0.079 J	**7**
Fluoranthene	**100**	**130 D**	94	10	2.5	1.1	**100**
Fluorene	13	12	9	0.66 J	0.29 J	0.047 J	**30**
Indeno(1,2,3-cd)pyrene	**16**	**20**	**16**	**2.4 J**	**0.92 J**	0.4	**0.5**
2-Methylnaphthalene	2.8 J	1.4 J	0.99 J	ND	0.16 J	0.087 J	--
Naphthalene	**18**	2.9 J	2.5 J	ND	0.41 J	0.078 J	**12**
Phenanthrene	82	92	66	5.5 J	1.9	0.6	**100**
Pyrene	72	84	68	7.3 J	1.9	0.86	**100**
TOTAL SVOCs (mg/kg)	521.3	592.8	438.4	53.9	17.7	7.8	--
Polychlorinated Biphenyls (PCBs) - mg/kg							
TOTAL PCBs (mg/kg)	--	--	--	--	--	--	--
Inorganic Compounds [2] - mg/kg							
Aluminum, Total	6630	--	--	--	--	--	--
Arsenic, Total	12.8 J	2.8 J	**103 J**	**23.5**	12.8	7.5	**13**
Barium, Total	73 J	--	--	--	--	--	**350**
Beryllium, Total	0.99	--	--	--	--	--	**7.2**
Cadmium, Total	**8.2**	ND	**94.9**	**16 J**	**9.3 J**	0.52 J	**2.5**
Calcium, Total	84300 J	--	--	--	--	--	--
Chromium, Total	**299 J**	3.3 J	**161 J**	**138 J**	**75.1 J**	**47.7 J**	**30**
Cobalt, Total	6.9	--	--	--	--	--	--
Copper, Total	**126 J**	--	--	--	--	--	**50**
Iron, Total	78700 J	--	--	--	--	--	--
Lead, Total	**535 J**	6.4 J	**10200 J**	**814 J**	**427 J**	50.8 J	**63**
Magnesium, Total	18600	--	--	--	--	--	--
Manganese, Total	**14500**	--	--	--	--	--	**1,600**
Mercury, Total	**1.9**	**0.591**	**0.375**	**2.0**	**5.9**	0.068	**0.18**
Nickel, Total	27.4	--	--	--	--	--	**30**
Potassium, Total	639 J	--	--	--	--	--	--
Selenium, Total	**4.7**	--	--	--	--	--	**3.9**
Sodium, Total	225 J	--	--	--	--	--	--
Vanadium, Total	211	--	--	--	--	--	--
Zinc, Total	**905**	--	--	--	--	--	**109**
Cyanide, Total	ND	ND	ND	ND	ND	ND	**27**

Notes:
1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. Sample TP-5-(1-5) (0.0 - 1.0) was analyzed for TAL Metals, all other samples were analyzed for arsenic, cadmium, chromium, cyanide, lead, and mercury, only.
3. D = Analyzed at the secondary dilution factor.
4. J = Estimated value; result is less than the sample quantitation limit but greater than zero.
5. ND = parameter not detected above laboratory detection limit.
6. SCO = Soil Cleanup Objective (Protection of Public Health - Commercial), per NYSDEC 6NYCRR Part 375-6.8(b), Final December 2006.
7. " -- " = not analyzed for this parameter or no individual SCO
8. " RED TEXT " = Data was qualified per the third party Data Usability Summary Report (DUSR).

Color Code:

compound	= Polycyclic Aromatic Hydrocarbon (PAH)
compound	= TAL Metal
BOLD	= Value exceeds Unrestricted SCO

TABLE 8A (continued)

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 5

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type					Unrestricted SCO (mg/kg)
	TP-5-11	TP-5-12	SS-(1-2)	SS-03	SS-27	
	1.0 - 4.0	1.0 - 3.5	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	
	grab	grab	composite	grab	grab	
Headspace Determination (ppm) - 10.6 eV Lamp [subsurface samples only]						
Total VOCs	0.0	0.0	--	--	--	--
PID Field Scans (ppm) - 10.6 eV Lamp						
Total VOCs	0.0	0.0	--	--	--	--
STARS Volatile Organic Compounds (VOCs - Method 8021) - mg/kg						
Naphthalene	--	--	--	--	--	12
TOTAL VOCs (mg/kg)	--	--	--	--	--	--
Base-Neutral Semi-Volatile Organic Compounds (SVOCs - Method 8270) - mg/kg						
Acenaphthene	0.16 J	--	ND	--	0.58 J	20
Acenaphthylene	0.31 J	--	ND	--	ND	100
Anthracene	0.54 J	--	0.35 J	--	1.4 J	100
Benzo(a)anthracene	1.9	--	1.6 J	--	11	1
Benzo(b)fluoranthene	2.4 J	--	2.4 J	--	23 J	1
Benzo(k)fluoranthene	0.87 J	--	0.78 J	--	25 J	0.8
Benzo(g,h,i)perylene	1.1	--	0.93 J	--	8.9	100
Benzo(a)pyrene	1.9	--	1.7 J	--	12	1
Chrysene	1.8	--	1.7 J	--	12	1
Dibenzo(a,h)anthracene	0.32 J	--	0.27 J	--	2.6 J	0.33
Dibenzofuran	0.19 J	--	ND	--	ND	7
Fluoranthene	3.3	--	3 J	--	24	100
Fluorene	0.22 J	--	ND	--	0.55 J	30
Indeno(1,2,3-cd)pyrene	0.98	--	0.93 J	--	7.9	0.5
2-Methylnaphthalene	0.17 J	--	ND	--	ND	--
Naphthalene	0.29 J	--	ND	--	ND	12
Phenanthrene	1.6	--	1 J	--	11	100
Pyrene	2.8	--	2.6 J	--	19	100
TOTAL SVOCs (mg/kg)	20.9	0	17.3	0	158.9	--
Polychlorinated Biphenyls (PCBs) - mg/kg						
TOTAL PCBs (mg/kg)	--	--	--	ND	--	--
Inorganic Compounds [2] - mg/kg						
Aluminum, Total	--	--	--	--	--	--
Arsenic, Total	7.7	43.7	13.2	--	--	13
Barium, Total	--	--	--	--	--	350
Beryllium, Total	--	--	--	--	--	7.2
Cadmium, Total	3 J	45.3 J	11.2	--	--	2.5
Calcium, Total	--	--	--	--	--	--
Chromium, Total	141 J	98.7 J	39.5	--	--	30
Cobalt, Total	--	--	--	--	--	--
Copper, Total	--	--	--	--	--	50
Iron, Total	--	--	--	--	--	--
Lead, Total	157 J	1340 J	574	--	--	63
Magnesium, Total	--	--	--	--	--	--
Manganese, Total	--	--	--	--	--	1,600
Mercury, Total	0.045	0.349	2.5	--	--	0.18
Nickel, Total	--	--	--	--	--	30
Potassium, Total	--	--	--	--	--	--
Selenium, Total	--	--	--	--	--	3.9
Sodium, Total	--	--	--	--	--	--
Vanadium, Total	--	--	--	--	--	--
Zinc, Total	--	--	--	--	--	109
Cyanide, Total	ND	ND	ND	--	--	27

Notes:
1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detec
2. Sample TP-5-(1-5) (0.0 - 1.0) was analyzed for TAL Metals, all other samples were analyzed for arsenic, cadmium, chromium, cyanide, lead, and n
3. D = Analyzed at the secondary dilution factor.
4. J = Estimated value; result is less than the sample quantitation limit but greater than zero.
5. ND = parameter not detected above laboratory detection limit.
6. SCO = Soil Cleanup Objective (Protection of Public Health - Commercial), per NYSDEC 6NYCRR Part 375-6.8(b), Final December 2006.
7. " -- " = not analyzed for this parameter or no individual SCO
8. " RED TEXT " = Data was qualified per the third party Data Usability Summary Report (DUSR).

Color Code:

compound	= Polycyclic Aromatic Hydrocarbon (PAH)
compound	= TAL Metal
BOLD	= Value exceeds Unrestricted SCO

TABLE 8B

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 5

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type						Restricted-Commercial SCO (mg/kg)
	TP-5-(1-5) 0.0 - 1.0 composite	TP-5-(1245) 1.0 - 4.5 composite	TP-5-3 1.0 - 4.5 grab	TP-5-(6-10) 0.0 - 1.0 composite	TP-5-(6-10) 1.0 - 4.0 composite	TP-5-11 0.0 - 1.0 grab	
Headspace Determination (ppm) - 10.6 eV Lamp [subsurface samples only]							
Total VOCs	--	0.0 (max)	0.0	--	0.0 (max)	--	**--**
PID Field Scans (ppm) - 10.6 eV Lamp							
Total VOCs	0.0 (max)	0.0 (max)	0.0	0.0 (max)	0.0 (max)	0.0	**--**
STARS Volatile Organic Compounds (VOCs - Method 8021) - mg/kg							
Naphthalene	--	--	1.6	--	--	--	**500**
TOTAL VOCs (mg/kg)	--	--	1.6	--	--	--	--
Base-Neutral Semi-Volatile Organic Compounds (SVOCs - Method 8270) - mg/kg							
Acenaphthene	4.4 J	2.1 J	2.2 J	0.54 J	0.19 J	0.039 J	**500**
Acenaphthylene	5.6 J	10	6.2 J	0.65 J	0.18 J	0.15 J	**500**
Anthracene	24	20	15	1.9 J	0.52 J	0.17 J	**500**
Benzo(a)anthracene	**36**	**41**	**31**	4.6 J	1.3 J	0.68	**5.6**
Benzo(b)fluoranthene	**40 J**	**48 J**	**36 J**	**6.2 J**	2.3 J	1.2 J	**5.6**
Benzo(k)fluoranthene	13 J	18 J	9.8 J	2.1 J	0.83 J	0.31 J	**56**
Benzo(g,h,i)perylene	17	22	17	2.7 J	1 J	0.44	**500**
Benzo(a)pyrene	**32**	**40**	**29**	**4.4 J**	**1.5**	0.75	**1**
Chrysene	33	37	27	4.1 J	1.3 J	0.71	**56**
Dibenzo(a,h)anthracene	**4.8 J**	**5.8 J**	**4.4 J**	**0.86 J**	0.31 J	0.12 J	**0.56**
Dibenzofuran	7.7	6.6 J	4.3 J	ND	0.21 J	0.079 J	**350**
Fluoranthene	100	130 D	94	10	2.5	1.1	**500**
Fluorene	13	12	9	0.66 J	0.29 J	0.047 J	**500**
Indeno(1,2,3-cd)pyrene	**16**	**20**	**16**	2.4 J	0.92 J	0.4	**5.6**
2-Methylnaphthalene	2.8 J	1.4 J	0.99 J	ND	0.16 J	0.087 J	**--**
Naphthalene	18	2.9 J	2.5 J	ND	0.41 J	0.078 J	**500**
Phenanthrene	82	92	66	5.5 J	1.9	0.6	**500**
Pyrene	72	84	68	7.3 J	1.9	0.86	**500**
TOTAL SVOCs (mg/kg)	521.3	592.8	438.4	53.9	17.7	7.8	--
Polychlorinated Biphenyls (PCBs) - mg/kg							
TOTAL PCBs (mg/kg)	--	--	--	--	--	--	--
Inorganic Compounds [2] - mg/kg							
Aluminum, Total	6630	--	--	--	--	--	**--**
Arsenic, Total	12.8 J	2.8 J	**103 J**	**23.5**	12.8	7.5	**16**
Barium, Total	73 J	--	--	--	--	--	**400**
Beryllium, Total	0.99	--	--	--	--	--	**590**
Cadmium, Total	8.2	ND	**94.9**	**16 J**	9.3 J	0.52 J	**9.3**
Calcium, Total	84300 J	--	--	--	--	--	**--**
Chromium, Total	299 J	3.3 J	161 J	138 J	75.1 J	47.7 J	**1,500**
Cobalt, Total	6.9	--	--	--	--	--	**--**
Copper, Total	126 J	--	--	--	--	--	**270**
Iron, Total	78700 J	--	--	--	--	--	**--**
Lead, Total	535 J	6.4 J	**10200 J**	814 J	427 J	50.8 J	**1,000**
Magnesium, Total	18600	--	--	--	--	--	**--**
Manganese, Total	**14500**	--	--	--	--	--	**10,000**
Mercury, Total	1.9	0.591	0.375	2.0	5.9	0.068	**2.8**
Nickel, Total	27.4	--	--	--	--	--	**310**
Potassium, Total	639 J	--	--	--	--	--	**--**
Selenium, Total	4.7	--	--	--	--	--	**1,500**
Sodium, Total	225 J	--	--	--	--	--	**--**
Vanadium, Total	211	--	--	--	--	--	**--**
Zinc, Total	905	--	--	--	--	--	**10,000**
Cyanide, Total	ND	ND	ND	ND	ND	ND	**27**

Notes:
1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. Sample TP-5-(1-5) (0.0 - 1.0) was analyzed for TAL Metals, all other samples were analyzed for arsenic, cadmium, chromium, cyanide, lead, and mercury, only.
3. D = Analyzed at the secondary dilution factor.
4. J = Estimated value; result is less than the sample quantitation limit but greater than zero.
5. ND = parameter not detected above laboratory detection limit.
6. SCO = Soil Cleanup Objective (Protection of Public Health - Commercial), per NYSDEC 6NYCRR Part 375-6.8(b), Final December 2006.
7. " -- " = not analyzed for this parameter or no individual SCO
8. " RED TEXT " = Data was qualified per the third party Data Usability Summary Report (DUSR).

Color Code:

compound	= Polycyclic Aromatic Hydrocarbon (PAH)
compound	= TAL Metal
BOLD	= Value exceeds Restricted-Commercial SCO

TABLE 8B (continued)

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 5

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type					Restricted-Commercial SCO (mg/kg)
	TP-5-11	TP-5-12	SS-(1-2)	SS-03	SS-27	
	1.0 - 4.0	1.0 - 3.5	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	
	grab	grab	composite	grab	grab	
Headspace Determination (ppm) - 10.6 eV Lamp [subsurface samples only]						
Total VOCs	0.0	0.0	--	--	--	**--**
PID Field Scans (ppm) - 10.6 eV Lamp						
Total VOCs	0.0	0.0	--	--	--	**--**
STARS Volatile Organic Compounds (VOCs - Method 8021) - mg/kg						
Naphthalene	--	--	--	--	--	**500**
TOTAL VOCs (mg/kg)	--	--	--	--	--	--
Base-Neutral Semi-Volatile Organic Compounds (SVOCs - Method 8270) - mg/kg						
Acenaphthene	0.16 J	--	ND	--	0.58 J	**500**
Acenaphthylene	0.31 J	--	ND	--	ND	**500**
Anthracene	0.54 J	--	0.35 J	--	1.4 J	**500**
Benzo(a)anthracene	1.9	--	1.6 J	--	**11**	**5.6**
Benzo(b)fluoranthene	2.4 J	--	2.4 J	--	**23 J**	**5.6**
Benzo(k)fluoranthene	0.87 J	--	0.78 J	--	25 J	**56**
Benzo(g,h,i)perylene	1.1	--	0.93 J	--	8.9	**500**
Benzo(a)pyrene	**1.9**	--	**1.7 J**	--	**12**	**1**
Chrysene	1.8	--	1.7 J	--	12	**56**
Dibenzo(a,h)anthracene	0.32 J	--	0.27 J	--	**2.6 J**	**0.56**
Dibenzofuran	0.19 J	--	ND	--	ND	**350**
Fluoranthene	3.3	--	3 J	--	24	**500**
Fluorene	0.22 J	--	ND	--	0.55 J	**500**
Indeno(1,2,3-cd)pyrene	0.98	--	0.93 J	--	**7.9**	**5.6**
2-Methylnaphthalene	0.17 J	--	ND	--	ND	**--**
Naphthalene	0.29 J	--	ND	--	ND	**500**
Phenanthrene	1.6	--	1 J	--	11	**500**
Pyrene	2.8	--	2.6 J	--	19	**500**
TOTAL SVOCs (mg/kg)	20.85	0	17.26	0	158.9	--
Polychlorinated Biphenyls (PCBs) - mg/kg						
TOTAL PCBs (mg/kg)	--	--	--	ND	--	1
Inorganic Compounds [2] - mg/kg						
Aluminum, Total	--	--	--	--	--	**--**
Arsenic, Total	7.7	**43.7**	13.2	--	--	**16**
Barium, Total	--	--	--	--	--	**400**
Beryllium, Total	--	--	--	--	--	**590**
Cadmium, Total	3 J	**45.3 J**	**11.2**	--	--	**9.3**
Calcium, Total	--	--	--	--	--	**--**
Chromium, Total	141 J	98.7 J	39.5	--	--	**1,500**
Cobalt, Total	--	--	--	--	--	**--**
Copper, Total	--	--	--	--	--	**270**
Iron, Total	--	--	--	--	--	**--**
Lead, Total	157 J	**1340 J**	574	--	--	**1,000**
Magnesium, Total	--	--	--	--	--	**--**
Manganese, Total	--	--	--	--	--	**15,000**
Mercury, Total	0.045	0.349	2.5	--	--	**2.8**
Nickel, Total	--	--	--	--	--	**310**
Potassium, Total	--	--	--	--	--	**--**
Selenium, Total	--	--	--	--	--	**1,500**
Sodium, Total	--	--	--	--	--	**--**
Vanadium, Total	--	--	--	--	--	**--**
Zinc, Total	--	--	--	--	--	**89,000**
Cyanide, Total	ND	ND	ND	--	--	**27**

Notes:
1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. Sample TP-5-(1-5) (0.0 - 1.0) was analyzed for TAL Metals, all other samples were analyzed for As, Cd, Cr, CN, Pb, & Hg, only.
3. D = Analyzed at the secondary dilution factor.
4. J = Estimated value; result is less than the sample quantitation limit but greater than zero.
5. ND = parameter not detected above laboratory detection limit.
6. SCO = Soil Cleanup Objective (Protection of Public Health - Commercial), per NYSDEC 6NYCRR Part 375-6.8(b), Final December 2006.
7. " -- " = not analyzed for this parameter or no individual SCO
8. " RED TEXT " = Data was qualified per the third party Data Usability Summary Report (DUSR).

Color Code:

compound	= Polycyclic Aromatic Hydrocarbon (PAH)
compound	= TAL Metal
BOLD	= Value exceeds Restricted-Commercial SCO

TABLE 9A

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 6

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type										Unrestricted SCO (mg/kg)
	TP-6-(1-5)	TP-6-(1-5)	TP-6-6	TP-6-7	TP-6-10	SS-07	SS-08	SS-28	SS-29	SS-30	
	0.0 - 2.0	2.0 - 6.0	2.0 - 6.0	2.0 - 4.0	2.0 - 6.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	
	composite	composite	grab	grab	grab	grab	grab	grab	grab	grab	
Headspace Determination (ppm) - 10.6 eV Lamp [subsurface samples only]											
Total VOCs	--	0.0 (max)	0.0	0.0	0.0	--	--	--	--	--	**--**
PID Field Scans (ppm) - 10.6 eV Lamp											
Total VOCs	1.0 (max)	1.1 (max)	0.0	0.0	0.0	--	--	--	--	--	**--**
Base-Neutral Semi-Volatile Organic Compounds (SVOCs - Method 8270) - mg/kg											
Acenaphthene	5.4 J	6.8 J	0.84 J	--	--	--	--	--	0.31 J	--	**20**
Acenaphthylene	ND	ND	2 J	--	--	--	--	--	0.23 J	--	**100**
Anthracene	14 J	14 J	3.8 J	--	--	--	--	--	0.94 J	--	**100**
Benzo(a)anthracene	**30 J**	**28 J**	**17**	--	--	--	--	--	**2.4 J**	--	**1**
Benzo(b)fluoranthene	**36 J**	**27 J**	**16 J**	--	--	--	--	--	**3.2 J**	--	**1**
Benzo(k)fluoranthene	**41 J**	**6.8 J**	**6 J**	--	--	--	--	--	**1.1 J**	--	**0.8**
Benzo(g,h,i)perylene	15 J	14 J	9	--	--	--	--	--	1.7 J	--	**100**
Benzo(a)pyrene	**22 J**	**22 J**	**14**	--	--	--	--	--	**2.5 J**	--	**1**
Chrysene	**28 J**	**25 J**	**17**	--	--	--	--	--	**2.5 J**	--	**1**
Dibenzo(a,h)anthracene	**4.5 J**	**4.1 J**	**2.7 J**	--	--	--	--	--	**0.4 J**	--	**0.33**
Dibenzofuran	3.1 J	3.6 J	0.5 J	--	--	--	--	--	0.32 J	--	**7**
Fluoranthene	71	65	40	--	--	--	--	--	5.6	--	**100**
Fluorene	5.8 J	6.4 J	0.95 J	--	--	--	--	--	0.45 J	--	**30**
Indeno(1,2,3-cd)pyrene	**13 J**	**12 J**	**8.2**	--	--	--	--	--	**1.4 J**	--	**0.5**
Naphthalene	ND	2.2 J	0.4 J	--	--	--	--	--	0.57 J	--	**12**
Phenanthrene	52	51	15	--	--	--	--	--	4.1	--	**100**
Pyrene	55	51	35	--	--	--	--	--	4.6	--	**100**
TOTAL SVOCs (mg/kg)	395.8	338.9	188.4	0	0	0	0	0	32.32	0	--
Polychlorinated Biphenyls (PCBs) - mg/kg											
Aroclor 1254	--	--	--	--	**0.58**	ND	**0.88**	ND	--	--	**0.1**
Aroclor 1260	--	--	--	--	ND	**1.6**	ND	**0.35**	--	--	**0.1**
Inorganic Compounds - mg/kg											
Arsenic, Total	**14.7 J**	**22.6 J**	**152 J**	**39.2 J**	--	--	--	--	**17.7**	**18.5**	**13**
Cadmium, Total	**5.3 J**	**5.1 J**	**7.9 J**	**3 J**	--	--	--	--	**8**	**6.7**	**2.5**
Chromium, Total	**123**	**99.1**	**242**	**52.8**	--	--	--	--	**171**	**97.5**	**30**
Lead, Total	**454**	**474**	**774**	**1660**	--	--	--	--	**440**	**549**	**63**
Mercury, Total	**1.2**	**1.1**	**0.429**	**0.362**	--	--	--	--	**0.389**	**3**	**0.18**
Cyanide, Total	ND	ND	ND	2.0	--	--	--	--	ND	ND	**27**

Notes:
1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. J = Estimated value; result is less than the sample quantitation limit but greater than zero.
3. ND = parameter not detected above laboratory detection limit.
4. SCO = Soil Cleanup Objective (Protection of Public Health - Commercial), per NYSDEC 6NYCRR Part 375-6.8(b), Final December 2006.
5. " -- " = not analyzed for this parameter or no individual SCO
6. " RED TEXT " = Data was qualified per the third party Data Usability Summary Report (DUSR).

Color Code:

compound	= Polycyclic Aromatic Hydrocarbon (PAH)
BOLD	= Value exceeds Unrestricted SCO

TABLE 9B

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 6

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type										Restricted-Commercial SCO (mg/kg)
	TP-6-(1-5)	TP-6-(1-5)	TP-6-6	TP-6-7	TP-6-10	SS-07	SS-08	SS-28	SS-29	SS-30	
	0.0 - 2.0	2.0 - 6.0	2.0 - 6.0	2.0 - 4.0	2.0 - 6.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	
	composite	composite	grab	grab	grab	grab	grab	grab	grab	grab	
Headspace Determination (ppm) - 10.6 eV Lamp [subsurface samples only]											
Total VOCs	--	0.0 (max)	0.0	0.0	0.0	--	--	--	--	--	**--**
PID Field Scans (ppm) - 10.6 eV Lamp											
Total VOCs	1.0 (max)	1.1 (max)	0.0	0.0	0.0	--	--	--	--	--	**--**
Base-Neutral Semi-Volatile Organic Compounds (SVOCs - Method 8270) - mg/kg											
Acenaphthene	5.4 J	6.8 J	0.84 J	--	--	--	--	--	0.31 J	--	**500**
Acenaphthylene	ND	ND	2 J	--	--	--	--	--	0.23 J	--	**500**
Anthracene	14 J	14 J	3.8 J	--	--	--	--	--	0.94 J	--	**500**
Benzo(a)anthracene	**30 J**	**28 J**	**17**	--	--	--	--	--	2.4 J	--	**5.6**
Benzo(b)fluoranthene	**36 J**	**27 J**	**16 J**	--	--	--	--	--	3.2 J	--	**5.6**
Benzo(k)fluoranthene	41 J	6.8 J	6 J	--	--	--	--	--	1.1 J	--	**56**
Benzo(g,h,i)perylene	15 J	14 J	9	--	--	--	--	--	1.7 J	--	**500**
Benzo(a)pyrene	**22 J**	**22 J**	**14**	--	--	--	--	--	**2.5 J**	--	**1**
Chrysene	28 J	25 J	17	--	--	--	--	--	2.5 J	--	**56**
Dibenzo(a,h)anthracene	**4.5 J**	**4.1 J**	**2.7 J**	--	--	--	--	--	0.4 J	--	**0.56**
Dibenzofuran	3.1 J	3.6 J	0.5 J	--	--	--	--	--	0.32 J	--	**350**
Fluoranthene	71	65	40	--	--	--	--	--	5.6	--	**500**
Fluorene	5.8 J	6.4 J	0.95 J	--	--	--	--	--	0.45 J	--	**500**
Indeno(1,2,3-cd)pyrene	**13 J**	**12 J**	**8.2**	--	--	--	--	--	1.4 J	--	**5.6**
Naphthalene	ND	2.2 J	0.4 J	--	--	--	--	--	0.57 J	--	**500**
Phenanthrene	52	51	15	--	--	--	--	--	4.1	--	**500**
Pyrene	55	51	35	--	--	--	--	--	4.6	--	**500**
TOTAL SVOCs (mg/kg)	395.8	338.9	188.4	0	0	0	0	0	32.32	0	--
Polychlorinated Biphenyls (PCBs) - mg/kg											
Aroclor 1254	--	--	--	--	0.58	ND	0.88	ND	--	--	**1**
Aroclor 1260	--	--	--	--	ND	**1.6**	ND	0.35	--	--	**1**
Inorganic Compounds - mg/kg											
Arsenic, Total	14.7 J	**22.6 J**	**152 J**	**39.2 J**	--	--	--	--	**17.7**	**18.5**	**16**
Cadmium, Total	5.3 J	5.1 J	7.9 J	3 J	--	--	--	--	8	6.7	**9.3**
Chromium, Total	123	99.1	242	52.8	--	--	--	--	171	97.5	**1,500**
Lead, Total	454	474	774	**1660**	--	--	--	--	440	549	**1,000**
Mercury, Total	1.2	1.1	0.429	0.362	--	--	--	--	0.389	**3**	**2.8**
Cyanide, Total	ND	ND	ND	2.0	--	--	--	--	ND	ND	**27**

Notes:
1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. J = Estimated value; result is less than the sample quantitation limit but greater than zero.
3. ND = parameter not detected above laboratory detection limit.
4. SCO = Soil Cleanup Objective (Protection of Public Health - Commercial), per NYSDEC 6NYCRR Part 375-6.8(b), Final December 2006.
5. " -- " = not analyzed for this parameter or no individual SCO
6. " RED TEXT " = Data was qualified per the third party Data Usability Summary Report (DUSR).

Color Code:

compound	= Polycyclic Aromatic Hydrocarbon (PAH)
BOLD	= Value exceeds Restricted-Commercial SCO

TABLE 10A

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 7

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type									Unrestricted SCO (mg/kg)
	TP-7-(1-3)/8-4	TP-7-(1,3)/8-4	TP-7-2	TP-7-(4-7)	TP-7-(4-7)	SS-15	SS-16	SS-17	SS-31	
	0.0 - 2.0	1.5 - 5.5	2.0 - 5.0	0.0 - 1.0	2.0 - 7.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	
	composite	composite	grab	composite	composite	grab	grab	grab	grab	
Headspace Determination (ppm) - 10.6 eV Lamp [subsurface samples only]										
Total VOCs	--	0.0 (max)	3123	--	0.0 (max)	--	--	--	--	**--**
PID Field Scans (ppm) - 10.6 eV Lamp										
Total VOCs	0.0 (max)	0.0 (max)	12.8	0.0 (max)	0.0 (max)	--	--	--	--	**--**
STARS Volatile Organic Compounds (VOCs - Method 8021) - mg/kg										
n-Butylbenzene	--	--	7.6	--	--	--	--	--	--	**12**
Ethylbenzene	--	--	**1.8**	--	--	--	--	--	--	**1**
Isopropylbenzene	--	--	0.48	--	--	--	--	--	--	**--**
p-Cymene	--	--	1.4	--	--	--	--	--	--	**--**
n-Propylbenzene	--	--	1.6	--	--	--	--	--	--	**3.9**
1,2,4-Trimethylbenzene	--	--	**26**	--	--	--	--	--	--	**3.6**
m-Xylene	--	--	**3.1**	--	--	--	--	--	--	**0.26**
Xylenes, Total	--	--	**3.1**	--	--	--	--	--	--	**0.26**
Naphthalene	--	--	**120**	--	--	--	--	--	--	**12**
TOTAL VOCs (mg/kg)	0	0	162	0	0	0	0	0	0	--
Base-Neutral Semi-Volatile Organic Compounds (SVOCs - Method 8270) - mg/kg										
Acenaphthylene	1.6 J	0.25 J	3.8 J	0.68 J	0.9 J	--	--	--	0.2 J	**100**
Anthracene	1 J	ND	2.7 J	0.48 J	1.4 J	--	--	--	0.072 J	**100**
Benzo(a)anthracene	**6 J**	**1 J**	**9.3**	**2.2 J**	**4.3 J**	--	--	--	0.33 J	**1**
Benzo(b)fluoranthene	**8.7 J**	**1.1 J**	**12 J**	**2.8 J**	**5.1 J**	--	--	--	0.78 J	**1**
Benzo(k)fluoranthene	**2.2 J**	0.46 J	**3 J**	**1 J**	**1.6 J**	--	--	--	0.23 J	**0.8**
Benzo(g,h,i)perylene	5.8 J	0.65 J	6.8 J	1.1 J	2.7 J	--	--	--	0.62	**100**
Benzo(a)pyrene	**6.4 J**	0.87 J	**9.7**	**2 J**	**3.6 J**	--	--	--	0.51	**1**
Chrysene	**6.2 J**	0.96 J	**10**	**2.1 J**	**4.3 J**	--	--	--	0.37 J	**1**
Dibenzo(a,h)anthracene	**1.5 J**	0.2 J	**1.7 J**	**0.35 J**	**0.81 J**	--	--	--	0.18 J	**0.33**
Dibenzofuran	ND	ND	1 J	ND	ND	--	--	--	0.04 J	**7**
Fluoranthene	9.3	1.5 J	16	3.2 J	8.1	--	--	--	0.35 J	**100**
Fluorene	ND	ND	2.9 J	ND	0.59 J	--	--	--	ND	**30**
Indeno(1,2,3-cd)pyrene	**4.7 J**	**0.59 J**	**5.4 J**	**0.98 J**	**2.2 J**	--	--	--	**0.53**	**0.5**
2-Methylnaphthalene	ND	ND	15	ND	ND	--	--	--	0.099 J	**--**
Naphthalene	0.83 J	ND	7.5 J	ND	0.44 J	--	--	--	0.063 J	**12**
Phenanthrene	4.2 J	0.45 J	13	1.7 J	5.2 J	--	--	--	0.15 J	**100**
Pyrene	8.5	1.4 J	17	2.8 J	7.1 J	--	--	--	0.35 J	**100**
TOTAL SVOCs (mg/kg)	66.93	9.43	136.8	21.39	48.34	0	0	0	4.874	--
Polychlorinated Biphenyls (PCBs) - mg/kg										
Aroclor 1260	--	--	--	--	--	ND	0.017 J	**0.14**	--	**0.1**

TABLE 10A

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 7

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type									Unrestricted SCO (mg/kg)
	TP-7-(1-3)/8-4	TP-7-(1,3)/8-4	TP-7-2	TP-7-(4-7)	TP-7-(4-7)	SS-15	SS-16	SS-17	SS-31	
	0.0 - 2.0	1.5 - 5.5	2.0 - 5.0	0.0 - 1.0	2.0 - 7.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	
	composite	composite	grab	composite	composite	grab	grab	grab	grab	
Inorganic Compounds - mg/kg										
Arsenic, Total	**116 J**	**15.8 J**	4.2 J	10 J	10.1 J	--	--	--	--	**13**
Cadmium, Total	**7.6 J**	1.4 J	0.75 J	**4.4 J**	**2.7 J**	--	--	--	--	**2.5**
Chromium, Total	**315**	**124**	**52.1**	**118**	**34.4**	--	--	--	--	**30**
Lead, Total	**728**	61.5	**171**	**628**	**318**	--	--	--	--	**63**
Mercury, Total	**2.1**	0.141	0.086	**0.637**	**0.757**	--	--	--	--	**0.18**
Cyanide, Total	ND	ND	ND	ND	ND	--	--	--	--	**27**

Notes:
1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. B = Analyte was detected in the associated blank as well as in the sample.
3. J = Estimated value; result is less than the sample quantitation limit but greater than zero.
4. ND = parameter not detected above laboratory detection limit.
5. SCO = Soil Cleanup Objective (Protection of Public Health - Commercial), per NYSDEC 6NYCRR Part 375-6.8(b), Final December 2006.
6. " -- " = not analyzed for this parameter or no individual SCO
7. " RED TEXT " = Data was qualified per the third party Data Usability Summary Report (DUSR).

Color Code:

compound	= Polycyclic Aromatic Hydrocarbon (PAH)
BOLD	= Value exceeds Unrestricted SCO

TABLE 10B

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 7

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type									Restricted-Commercial SCO (mg/kg)
	TP-7-(1-3)/8-4	TP-7-(1,3)/8-4	TP-7-2	TP-7-(4-7)	TP-7-(4-7)	SS-15	SS-16	SS-17	SS-31	
	0.0 - 2.0	1.5 - 5.5	2.0 - 5.0	0.0 - 1.0	2.0 - 7.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	
	composite	composite	grab	composite	composite	grab	grab	grab	grab	
Headspace Determination (ppm) - 10.6 eV Lamp [subsurface samples only]										
Total VOCs	--	0.0 (max)	3123	--	0.0 (max)	--	--	--	--	**--**
PID Field Scans (ppm) - 10.6 eV Lamp										
Total VOCs	0.0 (max)	0.0 (max)	12.8	0.0 (max)	0.0 (max)	--	--	--	--	**--**
STARS Volatile Organic Compounds (VOCs - Method 8021) - mg/kg										
n-Butylbenzene	--	--	7.6	--	--	--	--	--	--	**500**
Ethylbenzene	--	--	1.8	--	--	--	--	--	--	**390**
Isopropylbenzene	--	--	0.48	--	--	--	--	--	--	**--**
p-Cymene	--	--	1.4	--	--	--	--	--	--	**--**
n-Propylbenzene	--	--	1.6	--	--	--	--	--	--	**500**
1,2,4-Trimethylbenzene	--	--	26	--	--	--	--	--	--	**190**
m-Xylene	--	--	3.1	--	--	--	--	--	--	**500**
Xylenes, Total	--	--	3.1	--	--	--	--	--	--	**500**
Naphthalene	--	--	120	--	--	--	--	--	--	**500**
TOTAL VOCs (mg/kg)	0	0	162.0	0	0	0	0	0	0	--
Base-Neutral Semi-Volatile Organic Compounds (SVOCs - Method 8270) - mg/kg										
Acenaphthylene	1.6 J	0.25 J	3.8 J	0.68 J	0.9 J	--	--	--	0.2 J	**500**
Anthracene	1 J	ND	2.7 J	0.48 J	1.4 J	--	--	--	0.072 J	**500**
Benzo(a)anthracene	**6 J**	1 J	**9.3**	2.2 J	4.3 J	--	--	--	0.33 J	**5.6**
Benzo(b)fluoranthene	**8.7 J**	1.1 J	**12 J**	2.8 J	5.1 J	--	--	--	0.78 J	**5.6**
Benzo(k)fluoranthene	2.2 J	0.46 J	3 J	1 J	1.6 J	--	--	--	0.23 J	**56**
Benzo(g,h,i)perylene	5.8 J	0.65 J	6.8 J	1.1 J	2.7 J	--	--	--	0.62	**500**
Benzo(a)pyrene	**6.4 J**	0.87 J	**9.7**	**2 J**	**3.6 J**	--	--	--	0.51	**1**
Chrysene	6.2 J	0.96 J	10	2.1 J	4.3 J	--	--	--	0.37 J	**56**
Dibenzo(a,h)anthracene	**1.5 J**	0.2 J	**1.7 J**	0.35 J	**0.81 J**	--	--	--	0.18 J	**0.56**
Dibenzofuran	ND	ND	1 J	ND	ND	--	--	--	0.04 J	**350**
Fluoranthene	9.3	1.5 J	16	3.2 J	8.1	--	--	--	0.35 J	**500**
Fluorene	ND	ND	2.9 J	ND	0.59 J	--	--	--	ND	**500**
Indeno(1,2,3-cd)pyrene	4.7 J	0.59 J	5.4 J	0.98 J	2.2 J	--	--	--	0.53	**5.6**
2-Methylnaphthalene	ND	ND	15	ND	ND	--	--	--	0.099 J	**--**
Naphthalene	0.83 J	ND	7.5 J	ND	0.44 J	--	--	--	0.063 J	**500**
Phenanthrene	4.2 J	0.45 J	13	1.7 J	5.2 J	--	--	--	0.15 J	**500**
Pyrene	8.5	1.4 J	17	2.8 J	7.1 J	--	--	--	0.35 J	**500**
TOTAL SVOCs (mg/kg)	66.93	9.43	136.8	21.39	48.34	0	0	0	4.874	--
Polychlorinated Biphenyls (PCBs) - mg/kg										
Aroclor 1260	--	--	--	--	--	ND	0.017 J	0.14	--	**1**

TABLE 10B

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 7

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type									Restricted-Commercial SCO (mg/kg)
	TP-7-(1-3)/8-4	TP-7-(1,3)/8-4	TP-7-2	TP-7-(4-7)	TP-7-(4-7)	SS-15	SS-16	SS-17	SS-31	
	0.0 - 2.0	1.5 - 5.5	2.0 - 5.0	0.0 - 1.0	2.0 - 7.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	
	composite	composite	grab	composite	composite	grab	grab	grab	grab	
Inorganic Compounds - mg/kg										
Arsenic, Total	**116 J**	15.8 J	4.2 J	10 J	10.1 J	--	--	--	--	**16**
Cadmium, Total	7.6 J	1.4 J	0.75 J	4.4 J	2.7 J	--	--	--	--	**9.3**
Chromium, Total	315	124	52.1	118	34.4	--	--	--	--	**1,500**
Lead, Total	728	61.5	171	628	318	--	--	--	--	**1,000**
Mercury, Total	2.1	0.141	0.086	0.637	0.757	--	--	--	--	**2.8**
Cyanide, Total	ND	ND	ND	ND	ND	--	--	--	--	**27**

Notes:
1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. B = Analyte was detected in the associated blank as well as in the sample.
3. J = Estimated value; result is less than the sample quantitation limit but greater than zero.
4. ND = parameter not detected above laboratory detection limit.
5. SCO = Soil Cleanup Objective (Protection of Public Health - Commercial), per NYSDEC 6NYCRR Part 375-6.8(b), Final December 2006.
6. " -- " = not analyzed for this parameter or no individual SCO
7. " RED TEXT " = Data was qualified per the third party Data Usability Summary Report (DUSR).

Color Code:

compound	= Polycyclic Aromatic Hydrocarbon (PAH)
BOLD	= Value exceeds Restricted-Commercial SCO

TABLE 11A

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 8

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type						Unrestricted SCO (mg/kg)
	TP-8-(1-3)	TP-8-(1-3)	TP-8-6	SS-18	SS-(32-33)	SS-34	
	0.0 - 1.0	1.0 - 7.0	1.0 - 3.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	
	composite	composite	grab	grab	composite	grab	
Headspace Determination (ppm) - 10.6 eV Lamp [subsurface samples only]							
Total VOCs	--	0.0 (max)	0.0	--	--	--	**--**
PID Field Scans (ppm) - 10.6 eV Lamp							
Total VOCs	0.0 (max)	0.0 (max)	0.0	--	--	--	**--**
Base-Neutral Semi-Volatile Organic Compounds (SVOCs - Method 8270) - mg/kg							
Acenaphthene	0.62 J	ND	--	--	0.41 J	0.67 J	**20**
Acenaphthylene	0.36 J	ND	--	--	0.22 J	ND	**100**
Anthracene	1.4 J	ND	--	--	0.83 J	1.6 J	**100**
Benzo(a)anthracene	**3.7 J**	0.81 J	--	--	**2.4**	**6.7 J**	**1**
Benzo(b)fluoranthene	**4.2 J**	**1.4 J**	--	--	**3.2 J**	**9.2 J**	**1**
Benzo(k)fluoranthene	**1.6 J**	**1.6 J**	--	--	**1.1 J**	**3.2 J**	**0.8**
Benzo(g,h,i)perylene	2.3 J	0.7 J	--	--	1.3 J	4.3 J	**100**
Benzo(a)pyrene	**3.1 J**	0.85 J	--	--	**2.3**	**7.2 J**	**1**
Chrysene	**3.8 J**	0.82 J	--	--	**2.5**	**6.6 J**	**1**
Dibenzo(a,h)anthracene	**0.62 J**	ND	--	--	**0.4 J**	**1.2 J**	**0.33**
Dibenzofuran	0.31 J	ND	--	--	0.27 J	ND	**7**
Di-n-butyl phthalate	ND	ND	--	--	0.18 J	ND	**--**
Fluoranthene	8.6	1.2 J	--	--	4.9	13	**100**
Fluorene	0.49 J	ND	--	--	0.35 J	0.48 J	**30**
Indeno(1,2,3-cd)pyrene	**1.9 J**	**0.55 J**	--	--	**1.2 J**	**4.1 J**	**0.5**
2-Methylnaphthalene	ND	ND	--	--	0.2 J	ND	**--**
Naphthalene	0.27 J	ND	--	--	0.24 J	ND	**12**
Phenanthrene	5.4	0.54 J	--	--	3.5	6.2 J	**100**
Pyrene	7.5	1.1 J	--	--	4	10	**100**
TOTAL SVOCs (mg/kg)	46.2	9.57	0	0	29.5	74.5	--
Polychlorinated Biphenyls (PCBs) - mg/kg							
Aroclor 1248	--	--	--	**3.4**	--	--	**0.1**
Inorganic Compounds - mg/kg							
Arsenic, Total	11.5 J	6.3 J	**17.3**	--	4.6 J	**17.8**	**13**
Cadmium, Total	**2.6 J**	0.71 J	**6.3**	--	**2.9 J**	**4.8**	**2.5**
Chromium, Total	**84**	**101**	**180 J**	--	**71.5 J**	**95.3**	**30**
Lead, Total	286	57.9	**2180 J**	--	**1250 J**	**510**	**63**
Mercury, Total	**0.293**	0.033	**0.473 J**	--	**5.7 J**	**4.2**	**0.18**
Cyanide, Total	2.2	ND	ND	--	7.7 J	10.5 J	**27**

Notes:
1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. B = Analyte was detected in the associated blank as well as in the sample.
3. J = Estimated value; result is less than the sample quantitation limit but greater than zero.
4. ND = parameter not detected above laboratory detection limit.
5. SCO = Soil Cleanup Objective (Protection of Public Health - Commercial), per NYSDEC 6NYCRR Part 375-6.8(b), Final December 2006.
6. " -- " = not analyzed for this parameter or no individual SCO
7. " RED TEXT " = Data was qualified per the third party Data Usability Summary Report (DUSR).

Color Code:

compound	= Polycyclic Aromatic Hydrocarbon (PAH)
BOLD	= Value exceeds unrestricted SCO

TABLE 11B

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 8

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type						Restricted-Commercial SCO (mg/kg)
	TP-8-(1-3)	TP-8-(1-3)	TP-8-6	SS-18	SS-(32-33)	SS-34	
	0.0 - 1.0	1.0 - 7.0	1.0 - 3.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	
	composite	composite	grab	grab	composite	grab	
Headspace Determination (ppm) - 10.6 eV Lamp [subsurface samples only]							
Total VOCs	--	0.0 (max)	0.0	--	--	--	**--**
PID Field Scans (ppm) - 10.6 eV Lamp							
Total VOCs	0.0 (max)	0.0 (max)	0.0	--	--	--	**--**
Base-Neutral Semi-Volatile Organic Compounds (SVOCs - Method 8270) - mg/kg							
Acenaphthene	0.62 J	ND	--	--	0.41 J	0.67 J	**500**
Acenaphthylene	0.36 J	ND	--	--	0.22 J	ND	**500**
Anthracene	1.4 J	ND	--	--	0.83 J	1.6 J	**500**
Benzo(a)anthracene	3.7 J	0.81 J	--	--	2.4	**6.7 J**	**5.6**
Benzo(b)fluoranthene	4.2 J	1.4 J	--	--	3.2 J	**9.2 J**	**5.6**
Benzo(k)fluoranthene	1.6 J	1.6 J	--	--	1.1 J	3.2 J	**56**
Benzo(g,h,i)perylene	2.3 J	0.7 J	--	--	1.3 J	4.3 J	**500**
Benzo(a)pyrene	**3.1 J**	0.85 J	--	--	**2.3**	**7.2 J**	**1**
Chrysene	3.8 J	0.82 J	--	--	2.5	6.6 J	**56**
Dibenzo(a,h)anthracene	**0.62 J**	ND	--	--	0.4 J	**1.2 J**	**0.56**
Dibenzofuran	0.31 J	ND	--	--	0.27 J	ND	**350**
Di-n-butyl phthalate	ND	ND	--	--	0.18 J	ND	**--**
Fluoranthene	8.6	1.2 J	--	--	4.9	13	**500**
Fluorene	0.49 J	ND	--	--	0.35 J	0.48 J	**500**
Indeno(1,2,3-cd)pyrene	1.9 J	0.55 J	--	--	1.2 J	4.1 J	**5.6**
2-Methylnaphthalene	ND	ND	--	--	0.2 J	ND	**--**
Naphthalene	0.27 J	ND	--	--	0.24 J	ND	**500**
Phenanthrene	5.4	0.54 J	--	--	3.5	6.2 J	**500**
Pyrene	7.5	1.1 J	--	--	4	10	**500**
TOTAL SVOCs (mg/kg)	46.2	9.57	0	0	29.5	74.5	--
Polychlorinated Biphenyls (PCBs) - mg/kg							
Aroclor 1248	--	--	--	**3.4**	--	--	**1**
Inorganic Compounds - mg/kg							
Arsenic, Total	11.5 J	6.3 J	**17.3**	--	4.6 J	**17.8**	**16**
Cadmium, Total	2.6 J	0.71 J	6.3	--	2.9 J	4.8	**9.3**
Chromium, Total	84	101	180 J	--	71.5 J	95.3	**1,500**
Lead, Total	286	57.9	**2180 J**	--	**1250 J**	510	**1,000**
Mercury, Total	0.293	0.033	0.473 J	--	**5.7 J**	**4.2**	**2.8**
Cyanide, Total	2.2	ND	ND	--	7.7 J	10.5 J	**27**

Notes:
1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. B = Analyte was detected in the associated blank as well as in the sample.
3. J = Estimated value; result is less than the sample quantitation limit but greater than zero.
4. ND = parameter not detected above laboratory detection limit.
5. SCO = Soil Cleanup Objective (Protection of Public Health - Commercial), per NYSDEC 6NYCRR Part 375-6.8(b), Final December 2006.
6. " -- " = not analyzed for this parameter or no individual SCO
7. " RED TEXT " = Data was qualified per the third party Data Usability Summary Report (DUSR).

Color Code:

compound	= Polycyclic Aromatic Hydrocarbon (PAH)
BOLD	= Value exceeds Restricted-Commercial SCO

TABLE 12A

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 9

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type											Unrestricted SCO (mg/kg)
	TP-9-1	TP-9-2	TP-9-3	TP-9-3	TP-9-5	TP-9-(125)	TP-9-(125)	SS-09	SS-(10-13)	SS-35	SS-36	
	1.0 - 3.5	1.0 - 7.0	0.0 - 1.0	1.0 - 4.5	1.0 - 4.5	0.0 - 1.0	1.0 - 7.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	
	grab	grab	grab	grab	grab	composite	composite	grab	composite	grab	grab	
Headspace Determination (ppm) - 10.6 eV Lamp [subsurface samples only]												
Total VOCs	0.0	0.0	0.0	328	0.0	--	0.0 (max)	--	--	--	--	**--**
PID Field Scans (ppm) - 10.6 eV Lamp												
Total VOCs	0.0	0.0	0.0	25.8	0.0	0.0 (max)	0.0 (max)	--	--	--	--	**--**
STARS Volatile Organic Compounds (VOCs - Method 8021) [2] - mg/kg												
n-Butylbenzene	ND	ND	--	8.2	ND	--	--	--	--	--	--	**12**
sec-Butylbenzene	ND	ND	--	6.0	ND	--	--	--	--	--	--	**11**
tert-Butylbenzene	ND	ND	--	2.0	ND	--	--	--	--	--	--	**5.9**
Isopropylbenzene	ND	ND	--	0.75	ND	--	--	--	--	--	--	**--**
p-Cymene	ND	ND	--	2.3	ND	--	--	--	--	--	--	**--**
n-Propylbenzene	ND	ND	--	3.4	ND	--	--	--	--	--	--	**3.9**
Toluene	ND	ND	--	0.16	ND	--	--	--	--	--	--	**0.7**
1,2,4-Trimethylbenzene	ND	ND	--	**7.9**	ND	--	--	--	--	--	--	**3.6**
1,3,5-Trimethylbenzene	ND	ND	--	1.6	ND	--	--	--	--	--	--	**8.4**
o-Xylene	ND	ND	--	**2.1**	ND	--	--	--	--	--	--	**0.26**
m-Xylene	ND	ND	--	0.23	ND	--	--	--	--	--	--	**0.26**
Xylenes, Total	ND	ND	--	**2.3**	ND	--	--	--	--	--	--	**0.26**
Naphthalene	ND	ND	--	**16**	ND	--	--	--	--	--	--	**12**
Methylene Chloride	0.007	--	--	--	--	--	--	--	--	--	--	**0.05**
TOTAL VOCs (mg/kg)	0.007	0	0	50.6	0	0	0	0	0	0	0	--
Base-Neutral Semi-Volatile Organic Compounds (SVOCs - Method 8270) [3] - mg/kg												
Acenaphthene	--	--	0.096 J	5.1	--	ND	ND	--	0.18 J	--	ND	**20**
Acenaphthylene	--	--	0.4 J	ND	--	0.62 J	ND	--	0.69 J	--	0.38 J	**100**
Anthracene	--	--	0.57 J	3.2	--	0.62 J	ND	--	0.62 J	--	0.24 J	**100**
Benzo(a)anthracene	--	--	**1.3**	0.21 J	--	**1.6 J**	0.5 J	--	**2.9**	--	**1.1 J**	**1**
Benzo(b)fluoranthene	--	--	**2 J**	ND	--	**3.2 J**	0.75 J	--	**6.1 J**	--	**2.4 J**	**1**
Benzo(k)fluoranthene	--	--	0.64 J	ND	--	**1 J**	0.2 J	--	**1.7 J**	--	**0.87 J**	**0.8**
Benzo(g,h,i)perylene	--	--	1.2	ND	--	1.6 J	0.38 J	--	4.4	--	1.3 J	**100**
Benzo(a)pyrene	--	--	**1.2**	ND	--	**2 J**	0.46 J	--	**4.2**	--	**1.7 J**	**1**
Chrysene	--	--	**1.3**	0.4 J	--	**1.8 J**	0.51 J	--	**3**	--	**1.2 J**	**1**
Dibenzo(a,h)anthracene	--	--	0.28 J	ND	--	**0.48 J**	ND	--	**1.1 J**	--	0.29 J	**0.33**
Dibenzofuran	--	--	0.17 J	1.3 J	--	0.27 J	ND	--	0.13 J	--	ND	**7**
Fluoranthene	--	--	2.4	0.55 J	--	2.6 J	0.87 J	--	3.8	--	1.6 J	**100**
Fluorene	--	--	0.16 J	9	--	0.2 J	ND	--	0.1 J	--	ND	**30**
Indeno(1,2,3-cd)pyrene	--	--	**0.89**	ND	--	**1.4 J**	0.37 J	--	**3.6**	--	**1 J**	**0.5**
2-Methylnaphthalene	--	--	0.5 J	35	--	0.29 J	ND	--	0.17 J	--	ND	**--**
Naphthalene	--	--	0.32 J	ND	--	0.42 J	ND	--	0.25 J	--	ND	**12**
Phenanthrene	--	--	1.9	23	--	1.4 J	0.75 J	--	1.5	--	0.49 J	**100**
Pyrene	--	--	2	2.4	--	2.4 J	0.79 J	--	3.5	--	1.5 J	**100**
TOTAL SVOCs (mg/kg)	0	0	17.33	80.16	0	21.9	5.58	0	37.94	0	14.07	--
Polychlorinated Biphenyls (PCBs) - mg/kg												
Aroclor 1248	--	--	--	--	--	--	--	0.088	ND	--	--	**0.1**
Aroclor 1260	--	--	--	--	--	--	--	**0.78**	0.033	--	--	**0.1**

TABLE 12A

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 9

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type											Unrestricted SCO (mg/kg)
	TP-9-1	TP-9-2	TP-9-3	TP-9-3	TP-9-5	TP-9-(125)	TP-9-(125)	SS-09	SS-(10-13)	SS-35	SS-36	
	1.0 - 3.5	1.0 - 7.0	0.0 - 1.0	1.0 - 4.5	1.0 - 4.5	0.0 - 1.0	1.0 - 7.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	
	grab	grab	grab	grab	grab	composite	composite	grab	composite	grab	grab	
Inorganic Compounds - mg/kg												
Arsenic, Total	--	--	**26.8**	4.8	--	**19.5 J**	5.4 J	--	**79.8 J**	--	--	**13**
Cadmium, Total	--	--	**5.5 J**	ND	--	**2.8**	0.41	--	**3.5 J**	--	--	**2.5**
Chromium, Total	--	--	**249 J**	6.3 J	--	**174 J**	23.7 J	--	**90.6 J**	--	--	**30**
Lead, Total	--	--	**620 J**	**73.7 J**	--	**207 J**	**126 J**	--	**389 J**	--	--	**63**
Mercury, Total	--	--	0.144	0.031	--	0.155 J	0.037 J	--	**0.421 J**	--	--	**0.18**
Cyanide, Total	--	--	ND	ND	--	1.8 J	1.9 J	--	3 J	--	--	**27**
Dioxins - mg/kg												
2,3,7,8-TCDD	--	--	--	--	--	--	--	--	--	ND	--	**--**
Herbicides - mg/kg												
2,4-D	--	--	--	--	--	--	--	--	--	0.083 J	--	**--**
Pentachlorophenol	--	--	--	--	--	--	--	--	--	0.12	--	**--**
Pesticides - mg/kg												
4,4'-DDT	--	--	--	--	--	--	--	--	--	**0.023**	--	**0.0033**

Notes:
1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. Soil/fill sample TP-9-1 (1.0 - 3.5) was analyzed for TCL VOCs plus STARS, all other samples were analyzed for STARS VOCs, only.
3. Soil/fill sample TP-9-(125) (1.0 - 7.0) was analyzed for TCL SVOCs (BNAs), all other samples were analyzed for BN SVOCs, only.
4. J = Estimated value; result is less than the sample quantitation limit but greater than zero.
5. ND = parameter not detected above laboratory detection limit.
6. SCO = Soil Cleanup Objective (Protection of Public Health - Commercial), per NYSDEC 6NYCRR Part 375-6.8(b), Final December 2006.
7. " -- " = not analyzed for this parameter or no individual SCO
8. " RED TEXT " = Data was qualified per the third party Data Usability Summary Report (DUSR).

Color Code:

compound	= TCL VOC
compound	= Polycyclic Aromatic Hydrocarbon (PAH)
BOLD	= Value exceeds Unrestricted SCO

TABLE 12B

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 9

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type											Restricted-Commercial SCO (mg/kg)
	TP-9-1	TP-9-2	TP-9-3	TP-9-3	TP-9-5	TP-9-(125)	TP-9-(125)	SS-09	SS-(10-13)	SS-35	SS-36	
	1.0 - 3.5	1.0 - 7.0	0.0 - 1.0	1.0 - 4.5	1.0 - 4.5	0.0 - 1.0	1.0 - 7.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	
	grab	grab	grab	grab	grab	composite	composite	grab	composite	grab	grab	
Headspace Determination (ppm) - 10.6 eV Lamp [subsurface samples only]												
Total VOCs	0.0	0.0	0.0	328	0.0	--	0.0 (max)	--	--	--	--	--
PID Field Scans (ppm) - 10.6 eV Lamp												
Total VOCs	0.0	0.0	0.0	25.8	0.0	0.0 (max)	0.0 (max)	--	--	--	--	--
STARS Volatile Organic Compounds (VOCs - Method 8021) [2] - mg/kg												
n-Butylbenzene	ND	ND	--	8.2	ND	--	--	--	--	--	--	500
sec-Butylbenzene	ND	ND	--	6.0	ND	--	--	--	--	--	--	500
tert-Butylbenzene	ND	ND	--	2.0	ND	--	--	--	--	--	--	500
Isopropylbenzene	ND	ND	--	0.75	ND	--	--	--	--	--	--	--
p-Cymene	ND	ND	--	2.3	ND	--	--	--	--	--	--	--
n-Propylbenzene	ND	ND	--	3.4	ND	--	--	--	--	--	--	500
Toluene	ND	ND	--	0.16	ND	--	--	--	--	--	--	500
1,2,4-Trimethylbenzene	ND	ND	--	7.9	ND	--	--	--	--	--	--	190
1,3,5-Trimethylbenzene	ND	ND	--	1.6	ND	--	--	--	--	--	--	190
o-Xylene	ND	ND	--	2.1	ND	--	--	--	--	--	--	500
m-Xylene	ND	ND	--	0.23	ND	--	--	--	--	--	--	500
Xylenes, Total	ND	ND	--	2.3	ND	--	--	--	--	--	--	500
Naphthalene	ND	ND	--	16	ND	--	--	--	--	--	--	500
Methylene Chloride	0.007	--	--	--	--	--	--	--	--	--	--	500
TOTAL VOCs (mg/kg)	0.007	0	0	50.6	0	0	0	0	0	0	0	--
Base-Neutral Semi-Volatile Organic Compounds (SVOCs - Method 8270) [3] - mg/kg												
Acenaphthene	--	--	0.096 J	5.1	--	ND	ND	--	0.18 J	--	ND	500
Acenaphthylene	--	--	0.4 J	ND	--	0.62 J	ND	--	0.69 J	--	0.38 J	500
Anthracene	--	--	0.57 J	3.2	--	0.62 J	ND	--	0.62 J	--	0.24 J	500
Benzo(a)anthracene	--	--	1.3	0.21 J	--	1.6 J	0.5 J	--	2.9	--	1.1 J	5.6
Benzo(b)fluoranthene	--	--	2 J	ND	--	3.2 J	0.75 J	--	**6.1 J**	--	2.4 J	5.6
Benzo(k)fluoranthene	--	--	0.64 J	ND	--	1 J	0.2 J	--	1.7 J	--	0.87 J	56
Benzo(g,h,i)perylene	--	--	1.2	ND	--	1.6 J	0.38 J	--	4.4	--	1.3 J	500
Benzo(a)pyrene	--	--	**1.2**	ND	--	**2 J**	0.46 J	--	**4.2**	--	**1.7 J**	1
Chrysene	--	--	1.3	0.4 J	--	1.8 J	0.51 J	--	3	--	1.2 J	56
Dibenzo(a,h)anthracene	--	--	0.28 J	ND	--	0.48 J	ND	--	**1.1 J**	--	0.29 J	0.56
Dibenzofuran	--	--	0.17 J	1.3 J	--	0.27 J	ND	--	0.13 J	--	ND	350
Fluoranthene	--	--	2.4	0.55 J	--	2.6 J	0.87 J	--	3.8	--	1.6 J	500
Fluorene	--	--	0.16 J	9	--	0.2 J	ND	--	0.1 J	--	ND	500
Indeno(1,2,3-cd)pyrene	--	--	0.89	ND	--	1.4 J	0.37 J	--	3.6	--	1 J	5.6
2-Methylnaphthalene	--	--	0.5 J	35	--	0.29 J	ND	--	0.17 J	--	ND	--
Naphthalene	--	--	0.32 J	ND	--	0.42 J	ND	--	0.25 J	--	ND	500
Phenanthrene	--	--	1.9	23	--	1.4 J	0.75 J	--	1.5	--	0.49 J	500
Pyrene	--	--	2	2.4	--	2.4 J	0.79 J	--	3.5	--	1.5 J	500
TOTAL SVOCs (mg/kg)	0	0	17.33	80.16	0	21.9	5.58	0	37.94	0	14.07	--

TABLE 12B

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 9

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type											Restricted-Commercial SCO (mg/kg)
	TP-9-1	TP-9-2	TP-9-3	TP-9-3	TP-9-5	TP-9-(125)	TP-9-(125)	SS-09	SS-(10-13)	SS-35	SS-36	
	1.0 - 3.5	1.0 - 7.0	0.0 - 1.0	1.0 - 4.5	1.0 - 4.5	0.0 - 1.0	1.0 - 7.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	
	grab	grab	grab	grab	grab	composite	composite	grab	composite	grab	grab	
Polychlorinated Biphenyls (PCBs) - mg/kg												
Aroclor 1248	--	--	--	--	--	--	--	0.088	ND	--	--	**1**
Aroclor 1260	--	--	--	--	--	--	--	0.78	0.033	--	--	**1**
Inorganic Compounds - mg/kg												
Arsenic, Total	--	--	**26.8**	4.8	--	**19.5 J**	5.4 J	--	**79.8 J**	--	--	**16**
Cadmium, Total	--	--	5.5 J	ND	--	2.8	0.41	--	3.5 J	--	--	**9.3**
Chromium, Total	--	--	249 J	6.3 J	--	174 J	23.7 J	--	90.6 J	--	--	**1,500**
Lead, Total	--	--	620 J	73.7 J	--	207 J	126 J	--	389 J	--	--	**1,000**
Mercury, Total	--	--	0.144	0.031	--	0.155 J	0.037 J	--	0.421 J	--	--	**2.8**
Cyanide, Total	--	--	ND	ND	--	1.8 J	1.9 J	--	3 J	--	--	**27**
Dioxins - mg/kg												
2,3,7,8-TCDD	--	--	--	--	--	--	--	--	--	ND	--	**--**
Herbicides - mg/kg												
2,4-D	--	--	--	--	--	--	--	--	--	0.083 J	--	**--**
Pentachlorophenol	--	--	--	--	--	--	--	--	--	0.12	--	**--**
Pesticides - mg/kg												
4,4'-DDT	--	--	--	--	--	--	--	--	--	0.023	--	**47**

Notes:
1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. Soil/fill sample TP-9-1 (1.0 - 3.5) was analyzed for TCL VOCs plus STARS, all other samples were analyzed for STARS VOCs, only.
3. Soil/fill sample TP-9-(125) (1.0 - 7.0) was analyzed for TCL SVOCs (BNAs), all other samples were analyzed for BN SVOCs, only.
4. J = Estimated value; result is less than the sample quantitation limit but greater than zero.
5. ND = parameter not detected above laboratory detection limit.
6. SCO = Soil Cleanup Objective (Protection of Public Health - Commercial), per NYSDEC 6NYCRR Part 375-6.8(b), Final December 2006.
7. " -- " = not analyzed for this parameter or no individual SCO
8. " RED TEXT " = Data was qualified per the third party Data Usability Summary Report (DUSR).

Color Code:

compound	= TCL VOC
compound	= Polycyclic Aromatic Hydrocarbon (PAH)
BOLD	= Value exceeds Restricted-Commercial SCO

TABLE 13A

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 10

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type									Unrestricted SCO (mg/kg)
	TP-10-1	TP-10-(1-3)	TP-10-(2-3)	TP-10-(4-5)	TP-10-(4-5)	TP-10-6	TP-10-6	TP-10-7	SS-14	
	1.0 - 4.5	0.0 - 1.0	1.0 - 4.0	0.0 - 1.0	1.0 - 2.5	0.0 - 1.0	1.0 - 5.5	1.0 - 2.5	0.0 - 1.0	
	grab	composite	composite	composite	composite	grab	grab	grab	grab	
Headspace Determination (ppm) - 10.6 eV Lamp [subsurface samples only]										
Total VOCs	216	--	0.0 (max)	--	0.0 (max)	0.5	410	0.0	--	**--**
PID Field Scans (ppm) - 10.6 eV Lamp										
Total VOCs	10.2	0.0 (max)	0.0 (max)	0.0 (max)	0.0 (max)	25.3	3002	0.0	--	**--**
STARS Volatile Organic Compounds (VOCs - Method 8021) - mg/kg										
n-Butylbenzene	ND	--	--	--	--	ND	**19**	--	--	**12**
sec-Butylbenzene	5.5	--	--	--	--	ND	**22**	--	--	**11**
tert-Butylbenzene	ND	--	--	--	--	ND	**16**	--	--	**5.9**
Isopropylbenzene	0.29	--	--	--	--	ND	ND	--	--	**--**
p-Cymene	2.1	--	--	--	--	ND	16	--	--	**--**
n-Propylbenzene	ND	--	--	--	--	ND	**30**	--	--	**3.9**
Toluene	ND	--	--	--	--	ND	**25**	--	--	**0.7**
1,2,4-Trimethylbenzene	ND	--	--	--	--	ND	**77**	--	--	**3.6**
1,3,5-Trimethylbenzene	2.2	--	--	--	--	ND	**13**	--	--	**8.4**
o-Xylene	ND	--	--	--	--	ND	**21**	--	--	**0.26**
m-Xylene	ND	--	--	--	--	ND	**14**	--	--	**0.26**
Xylenes, Total	ND	--	--	--	--	ND	**34**	--	--	**0.26**
Naphthalene	4.7	--	--	--	--	ND	9.1	--	--	**12**
Methyl tert butyl ether	ND	--	--	--	--	ND	**0.93**	--	--	**0.93**
TOTAL VOCs (mg/kg)	14.79	0	0	0	0	0	263.0	0	0	--
Base-Neutral Semi-Volatile Organic Compounds (SVOCs - Method 8270) - mg/kg										
Acenaphthene	2.9 J	1.7 J	0.056 J	ND	ND	--	--	ND	--	**20**
Acenaphthylene	0.63 J	ND	ND	0.2 J	ND	--	--	ND	--	**100**
Anthracene	0.61 J	3.3 J	0.12 J	0.14 J	ND	--	--	ND	--	**100**
Benzo(a)anthracene	**1.4 J**	**7.7**	0.3 J	0.72 J	0.077 J	--	--	0.042 J	--	**1**
Benzo(b)fluoranthene	**1.5 J**	**9.7 J**	0.33 J	**1.1 J**	0.19 J	--	--	0.05 J	--	**1**
Benzo(k)fluoranthene	0.69 J	**2.3 J**	0.12 J	0.39 J	0.19 J	--	--	ND	--	**0.8**
Benzo(g,h,i)perylene	0.89 J	3.6 J	0.12 J	0.59 J	0.099 J	--	--	0.034 J	--	**100**
Benzo(a)pyrene	**1.1 J**	**6.4 J**	0.25 J	0.81	0.092 J	--	--	0.04 J	--	**1**
Chrysene	**1 J**	**7 J**	0.26 J	0.72 J	0.08 J	--	--	0.034 J	--	**1**
Dibenzo(a,h)anthracene	ND	**1.2 J**	0.043 J	0.16 J	0.025 J	--	--	ND	--	**0.33**
Dibenzofuran	ND	0.71 J	ND	0.047 J	ND	--	--	ND	--	**7**
Fluoranthene	4.5 J	15	0.62	1.1	0.14 J	--	--	0.056 J	--	**100**
Fluorene	1.2 J	1.4 J	0.042 J	ND	ND	--	--	ND	--	**30**
Indeno(1,2,3-cd)pyrene	**0.76 J**	**3 J**	0.11 J	**0.5 J**	0.083 J	--	--	0.029 J	--	**0.5**
2-Methylnaphthalene	0.48 J	ND	ND	0.073 J	ND	--	--	ND	--	**--**
Naphthalene	ND	0.41 J	ND	0.068 J	ND	--	--	ND	--	**12**
Phenanthrene	0.48 J	11	0.39	0.51 J	0.051 J	--	--	0.028 J	--	**100**
Pyrene	3.3 J	12	0.45	0.92	0.12 J	--	--	0.057 J	--	**100**
TOTAL SVOCs (mg/kg)	21.44	86.42	3.211	8.048	1.147	0	0	0.37	0	--
Polychlorinated Biphenyls (PCBs) - mg/kg										
TOTAL PCBs (mg/kg)	--	--	--	--	--	--	--	--	ND	**0.1**

TABLE 13A

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 10

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type									Unrestricted SCO (mg/kg)
	TP-10-1	TP-10-(1-3)	TP-10-(2-3)	TP-10-(4-5)	TP-10-(4-5)	TP-10-6	TP-10-6	TP-10-7	SS-14	
	1.0 - 4.5	0.0 - 1.0	1.0 - 4.0	0.0 - 1.0	1.0 - 2.5	0.0 - 1.0	1.0 - 5.5	1.0 - 2.5	0.0 - 1.0	
	grab	composite	composite	composite	composite	grab	grab	grab	grab	
Inorganic Compounds - mg/kg										
Arsenic, Total	**18 J**	**29.5 J**	2.4 J	**18.4 J**	2.7 J	--	--	--	--	**13**
Cadmium, Total	1.2	**3.3**	0.38	**2.7**	ND	--	--	--	--	**2.5**
Chromium, Total	28.8 J	**167 J**	9.8 J	29 J	7.5 J	--	--	--	--	**30**
Lead, Total	**421 J**	**234 J**	26.2 J	**260 J**	**91.1 J**	--	--	--	--	**63**
Mercury, Total	0.113 J	0.092 J	ND	**0.356 J**	0.043 J	--	--	--	--	**0.18**
Cyanide, Total	ND	10.3 J	ND	ND	ND	--	--	--	--	**27**
TCLP - (units shown parenthetically)										
2-Butanone (mg/L)	--	--	--	--	--	ND	0.026 J	--	--	**--**
Lead, Total (mg/L)	--	--	--	--	--	0.0167	0.0653	--	--	**--**
Flashpoint (°F)	--	--	--	--	--	> 200	> 200	--	--	**--**
H_2S Released from Waste (mg/kg)	--	--	--	--	--	ND	ND	--	--	**--**
HCN Released from Waste (mg/kg)	--	--	--	--	--	ND	ND	--	--	**--**
Leachable pH (S.U.)	--	--	--	--	--	8.39	9.04	--	--	**--**

Notes:
1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. J = Estimated value; result is less than the sample quantitation limit but greater than zero.
3. ND = parameter not detected above laboratory detection limit.
4. SCO = Soil Cleanup Objective (Protection of Public Health - Commercial), per NYSDEC 6NYCRR Part 375-6.8(b), Final December 2006.
5. " -- " = not analyzed for this parameter or no individual SCO
6. " RED TEXT " = Data was qualified per the third party Data Usability Summary Report (DUSR).

Color Code:

compound	= Polycyclic Aromatic Hydrocarbon (PAH)
BOLD	= Value exceeds Unrestricted SCO

TABLE 13B

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 10

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type									Restricted-Commercial SCO (mg/kg)
	TP-10-1	TP-10-(1-3)	TP-10-(2-3)	TP-10-(4-5)	TP-10-(4-5)	TP-10-6	TP-10-6	TP-10-7	SS-14	
	1.0 - 4.5	0.0 - 1.0	1.0 - 4.0	0.0 - 1.0	1.0 - 2.5	0.0 - 1.0	1.0 - 5.5	1.0 - 2.5	0.0 - 1.0	
	grab	composite	composite	composite	composite	grab	grab	grab	grab	
Headspace Determination (ppm) - 10.6 eV Lamp [subsurface samples only]										
Total VOCs	216	--	0.0 (max)	--	0.0 (max)	0.5	410	0.0	--	**--**
PID Field Scans (ppm) - 10.6 eV Lamp										
Total VOCs	10.2	0.0 (max)	0.0 (max)	0.0 (max)	0.0 (max)	25.3	3002	0.0	--	**--**
STARS Volatile Organic Compounds (VOCs - Method 8021) - mg/kg										
n-Butylbenzene	ND	--	--	--	--	ND	19	--	--	**500**
sec-Butylbenzene	5.5	--	--	--	--	ND	22	--	--	**500**
tert-Butylbenzene	ND	--	--	--	--	ND	16	--	--	**500**
Isopropylbenzene	0.29	--	--	--	--	ND	ND	--	--	**--**
p-Cymene	2.1	--	--	--	--	ND	16	--	--	**--**
n-Propylbenzene	ND	--	--	--	--	ND	30	--	--	**500**
Toluene	ND	--	--	--	--	ND	25	--	--	**500**
1,2,4-Trimethylbenzene	ND	--	--	--	--	ND	77	--	--	**190**
1,3,5-Trimethylbenzene	2.2	--	--	--	--	ND	13	--	--	**190**
o-Xylene	ND	--	--	--	--	ND	21	--	--	**500**
m-Xylene	ND	--	--	--	--	ND	14	--	--	**500**
Xylenes, Total	ND	--	--	--	--	ND	34	--	--	**500**
Naphthalene	4.7	--	--	--	--	ND	9.1	--	--	**500**
Methyl tert butyl ether	ND	--	--	--	--	ND	0.93	--	--	**500**
TOTAL VOCs (mg/kg)	14.79	0	0	0	0	0	263.0	0	0	--
Base-Neutral Semi-Volatile Organic Compounds (SVOCs - Method 8270) - mg/kg										
Acenaphthene	2.9 J	1.7 J	0.056 J	ND	ND	--	--	ND	--	**500**
Acenaphthylene	0.63 J	ND	ND	0.2 J	ND	--	--	ND	--	**500**
Anthracene	0.61 J	3.3 J	0.12 J	0.14 J	ND	--	--	ND	--	**500**
Benzo(a)anthracene	1.4 J	**7.7**	0.3 J	0.72 J	0.077 J	--	--	0.042 J	--	**5.6**
Benzo(b)fluoranthene	1.5 J	**9.7 J**	0.33 J	1.1 J	0.19 J	--	--	0.05 J	--	**5.6**
Benzo(k)fluoranthene	0.69 J	2.3 J	0.12 J	0.39 J	0.19 J	--	--	ND	--	**56**
Benzo(g,h,i)perylene	0.89 J	3.6 J	0.12 J	0.59 J	0.099 J	--	--	0.034 J	--	**500**
Benzo(a)pyrene	**1.1 J**	**6.4 J**	0.25 J	0.81	0.092 J	--	--	0.04 J	--	**1**
Chrysene	1 J	7 J	0.26 J	0.72 J	0.08 J	--	--	0.034 J	--	**56**
Dibenzo(a,h)anthracene	ND	**1.2 J**	0.043 J	0.16 J	0.025 J	--	--	ND	--	**0.56**
Dibenzofuran	ND	0.71 J	ND	0.047 J	ND	--	--	ND	--	**350**
Fluoranthene	4.5 J	15	0.62	1.1	0.14 J	--	--	0.056 J	--	**500**
Fluorene	1.2 J	1.4 J	0.042 J	ND	ND	--	--	ND	--	**500**
Indeno(1,2,3-cd)pyrene	0.76 J	3 J	0.11 J	0.5 J	0.083 J	--	--	0.029 J	--	**5.6**
2-Methylnaphthalene	0.48 J	ND	ND	0.073 J	ND	--	--	ND	--	**--**
Naphthalene	ND	0.41 J	ND	0.068 J	ND	--	--	ND	--	**500**
Phenanthrene	0.48 J	11	0.39	0.51 J	0.051 J	--	--	0.028 J	--	**500**
Pyrene	3.3 J	12	0.45	0.92	0.12 J	--	--	0.057 J	--	**500**
TOTAL SVOCs (mg/kg)	21.44	86.42	3.211	8.048	1.147	0	0	0.37	0	--
Polychlorinated Biphenyls (PCBs) - mg/kg										
TOTAL PCBs (mg/kg)	--	--	--	--	--	--	--	--	ND	**1**

TABLE 13B

SOIL ANALYTICAL SUMMARY FOR AREA OF ASSESSMENT 10

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Sample Location, Depth Interval (fbgs), and Type									Restricted-Commercial SCO (mg/kg)
	TP-10-1	TP-10-(1-3)	TP-10-(2-3)	TP-10-(4-5)	TP-10-(4-5)	TP-10-6	TP-10-6	TP-10-7	SS-14	
	1.0 - 4.5	0.0 - 1.0	1.0 - 4.0	0.0 - 1.0	1.0 - 2.5	0.0 - 1.0	1.0 - 5.5	1.0 - 2.5	0.0 - 1.0	
	grab	composite	composite	composite	composite	grab	grab	grab	grab	
Inorganic Compounds - mg/kg										
Arsenic, Total	**18 J**	**29.5 J**	2.4 J	**18.4 J**	2.7 J	--	--	--	--	**16**
Cadmium, Total	1.2	3.3	0.38	2.7	ND	--	--	--	--	**9.3**
Chromium, Total	28.8 J	167 J	9.8 J	29 J	7.5 J	--	--	--	--	**1,500**
Lead, Total	421 J	234 J	26.2 J	260 J	91.1 J	--	--	--	--	**1,000**
Mercury, Total	0.113 J	0.092 J	ND	0.356 J	0.043 J	--	--	--	--	**2.8**
Cyanide, Total	ND	10.3 J	ND	ND	ND	--	--	--	--	**27**
TCLP - (units shown parenthetically)										
2-Butanone (mg/L)	--	--	--	--	--	ND	0.026 J	--	--	**--**
Lead, Total (mg/L)	--	--	--	--	--	0.0167	0.0653	--	--	**--**
Flashpoint (°F)	--	--	--	--	--	> 200	> 200	--	--	**--**
H_2S Released from Waste (mg/kg)	--	--	--	--	--	ND	ND	--	--	**--**
HCN Released from Waste (mg/kg)	--	--	--	--	--	ND	ND	--	--	**--**
Leachable pH (S.U.)	--	--	--	--	--	8.39	9.04	--	--	**--**

Notes:
1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. J = Estimated value; result is less than the sample quantitation limit but greater than zero.
3. ND = parameter not detected above laboratory detection limit.
4. SCO = Soil Cleanup Objective (Protection of Public Health - Commercial), per NYSDEC 6NYCRR Part 375-6.8(b), Final December 2006.
5. " -- " = not analyzed for this parameter or no individual SCO
6. " RED TEXT " = Data was qualified per the third party Data Usability Summary Report (DUSR).

Color Code:

compound	= Polycyclic Aromatic Hydrocarbon (PAH)
BOLD	= Value exceeds Restricted-Commercial SCO

TABLE 14

SUMMARY OF MONITORING WELL / PIEZOMETER CONSTRUCTION DETAILS

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Well I.D.	Ground Elevation [1] (fmsl)	TOR Elevation [1] (fmsl)	Stick-up (feet)	Construction Date	Total Depth		Screened Interval (fbTOR)	Screen Length (feet)	Riser/Screen Diameter (in.)	Riser/Screen Material	Screen Slot Size (in.)	DTW Measured on 03/06/06 (fbTOR)	GWE (fmsl)	Stratigraphic Unit Monitored (per Final RFI)
					fbgs	fbTOR								
B-1	581.56	584.08	2.52	02/08/91	15.92	18.44	8.44 - 18.44	10.0	2.5 / 2.0	PVC	0.010	NM	NM	fill
B-2	582.99	584.85	1.86	02/11/91	16.00	17.86	7.86 - 17.86	10.0	2.5 / 2.0	PVC	0.010	8.35	576.50	fill
B-3	583.55	586.02	2.47	02/12/91	15.17	17.64	7.64 - 17.64	10.0	2.5 / 2.0	PVC	0.010	NM	NM	fill
ES1-2	584.16	585.53	1.37	08/10/90	19.00	20.37	10.37 - 20.37	10.0	2.0	PVC	0.010	6.75	578.78	fill
MW-08A	584.78	584.67	-0.11	05/13/80	16.18	16.07	6.07 - 16.07	10.0	4.0	PVC	NA	2.61	582.06	fill
MW-08B	584.74	584.62	-0.12	05/03/80	71.42	71.30	56.30 - 71.30	15.0	4.0	PVC	NA	NM	NM	sand, bedrock
MW-12A	584.43	586.91	2.48	02/01/06	13.59	16.07	6.07 - 16.07	10.0	2.0	PVC	0.010	7.20	579.71	fill
MW-13A	582.72	585.29	2.57	01/31/06	13.66	16.23	6.23 - 16.23	10.0	2.0	PVC	0.010	5.39	579.90	fill
MW-14A	583.82	586.30	2.48	01/31/06	13.81	16.29	6.29 - 16.29	10.0	2.0	PVC	0.010	6.34	579.96	fill
MW-15A	583.71	586.22	2.51	01/29/06	14.39	16.90	6.90 - 16.90	10.0	2.0	PVC	0.010	5.85	580.37	fill
MW-16A	583.42	585.96	2.54	01/29/06	14.24	16.78	6.78 - 16.78	10.0	2.0	PVC	0.010	7.70	578.26	fill
MW-17A	582.48	584.93	2.45	01/29/06	13.92	16.37	6.37 - 16.37	10.0	2.0	PVC	0.010	6.82	578.11	fill
MW-18A	584.00	586.75	2.75	02/01/06	14.11	16.86	6.86 - 16.86	10.0	2.0	PVC	0.010	4.99	581.76	fill
P-44S	584.24	587.20	2.96	01/18/01	11.44	14.40	4.40 - 14.40	10.0	0.75	PVC	0.010	NM	NM	fill, sand
P-45S	583.24	585.56	2.32	01/18/01	10.22	12.54	4.54 - 12.54	8.0	0.75	PVC	0.010	6.99	578.57	fill
P-50S	581.43	584.14	2.71	01/10/06	8.43	11.14	6.14 - 11.14	5.0	1.0	PVC	0.010	7.16	576.98	fill
P-51S	582.39	585.09	2.70	01/11/06	6.86	9.56	4.56 - 9.56	5.0	1.0	PVC	0.010	8.45	576.64	fill
P-52S	583.20	586.36	3.16	01/17/06	8.92	12.08	7.08 - 12.08	5.0	1.0	PVC	0.010	11.38	574.98	fill
P-54S	583.28	586.16	2.88	01/23/06	6.27	9.15	4.15 - 9.15	5.0	1.0	PVC	0.010	7.90	578.26	fill
P-55S	582.95	586.35	3.40	01/18/06	7.52	10.92	5.92 - 10.92	5.0	1.0	PVC	0.010	7.25	579.10	fill
P-56S	583.28	586.55	3.27	01/20/06	11.13	14.40	9.40 - 14.40	5.0	1.0	PVC	0.010	NM	NM	fill
P-57S	581.37	585.40	4.03	01/17/06	5.69	9.72	4.72 - 9.72	5.0	1.0	PVC	0.010	6.40	579.00	fill

Notes:
1. Elevations surveyed by TurnKey Environmental Restoration March and May 2006.
2. " DTW " = depth to water, fbTOR
3. " GWE " = groundwater elevation, fmsl
4. " fmsl " = feet above mean sea level.
5. " fbgs " = feet below ground surface
6. " fbTOR " = feet below Top of Riser
7. " NM " = not measured
8. " NA " = not applicable

TABLE 15

SUMMARY OF QA/QC SAMPLES

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

QA/QC Sample I.D.	Sample Location	Sample Type	Matrix	TCL + STARS VOCs	STARS VOCs	TCL SVOCs	SVOCs (BN only)	TAL Metals + CN	Metals + CN	PCBs
Matrix Spike / Matrix Spike Duplicates										
MS #1	TP-1-22 (2.0-6.5)	G	soil/fill	1		1				
MSD #1				1		1				
MS #2	TP-7-(1-3)/8-4 (0.0-2.0)	C	soil/fill						1	
MSD #2									1	
MS #3	TP-4-(1-5) (0.0-1.0)	C	soil/fill				1		1	
MSD #3							1		1	
MS #4	TP-4-(1-5) (1.0-3.0)	C	soil/fill				1		1	
MSD #4							1		1	
MS #5	TP-3-(1-2) (1.0-3.0)	C	soil/fill					1		
MSD #5								1		
MS #6	SS-(19-21)	C	soil/fill							1
MSD #6										1
MS #7	MW-12A	G	water	1		1		1		1
MSD #7		G	water	1		1		1		1
Blind Duplicates										
BLIND #1	TP-6-7 (2.0-4.0)	G	soil/fill						1	
BLIND #2	TP-2-(1-3) (2.0-5.5)	C	soil/fill				1		1	
BLIND #3	TP-5-(1-5) (0.0-1.0)	C	soil/fill					1		
BLIND #4	TP-5-(6-10) (0.0-1.0)	C	soil/fill						1	
BLIND #5	TP-9-1 (1.0-3.5)	G	soil/fill	1						
BLIND #6	TP-9-(125) (1.0-7.0)	C	soil/fill			1				
BLIND #7	SS-23	G	soil/fill				1			
BLIND #8	SS-03	G	soil/fill							1
BLIND #9	MW-14A	G	water		1		1		1	1
TOTALS:				**5**	**1**	**5**	**7**	**5**	**10**	**6**

TABLE 16

GROUNDWATER ANALYTICAL SUMMARY

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

Parameter [1]	Monitoring Well Location																GWQS/ GV [5]
	MW-8A		MW-12A [2]		MW-13A		MW-14A [3]		MW-15A [4]		MW-16A		MW-17A		MW-18A		
Field Measurements (units as indicated)																	
pH (units)	7.47	7.73	**9.69**	**9.46**	7.07	7.28	7.81	7.80	7.51	7.91	7.14	7.27	7.47	7.72	7.64	7.81	**6.5 - 8.5**
Temperature (°C)	9.1	7.6	7.7	5.6	8.0	7.1	6.9	6.2	7.2	6.2	6.9	4.7	7.1	6.5	7.4	8.8	--
Specific Conductance (uS)	2447	2410	507	483	843	1037	783	783	1331	1251	794	792	851	846	1129	1209	--
Turbidity	19.2	19.2	15.7	21.4	21.1	13.4	19	12.3	**82.1**	40.3	12.3	8.3	14.9	4.52	37	58.3	**50****
ORP (mV)	85	84	-79	-79	-28	-15	-51	-67	-107	-87	-4	8	-18	14	67	86	--
Volatile Organic Compounds (VOCs) [7] - ug/L																	
Acetone	--		3 J		--		--		--		--		--		--		**50***
n-Butylbenzene	ND		ND		ND		ND		0.97		ND		ND		ND		**5**
1,2,4-Trichlorobenzene	--		1.9 J		--		--		--		--		--		--		**10***
TOTAL VOCs (ug/L)	0		4.9		0		0		0.97		0		0		0		--
Base-Neutral Semi-Volatile Organic Compounds (SVOCs - Method 8270) [8] - ug/L																	
TOTAL SVOCs (ug/L)	ND		ND		ND		ND		ND		ND		ND		ND		--
Polychlorinated Biphenyls (PCBs) - ug/L																	
TOTAL PCBs (ug/L)	ND		ND		ND		ND		ND		ND		ND		ND		--
Total Inorganic Compounds [9] - mg/L																	
Aluminum, Total	--		307		--		--		--		--		--		--		**--**
Barium, Total	--		**8.7**		--		--		--		--		--		--		**1**
Calcium, Total	--		57,200		--		--		--		--		--		--		**--**
Iron, Total	--		**248**		--		--		--		--		--		--		**0.3**
Magnesium, Total	--		**2,260**		--		--		--		--		--		--		**35***
Manganese, Total	--		**74.3**		--		--		--		--		--		--		**0.3**
Potassium, Total	--		7,390		--		--		--		--		--		--		**--**
Sodium, Total	--		**44,000**		--		--		--		--		--		--		**20**
Cyanide, Total	ND		ND		ND		ND		0.013 J		0.024 J		0.16 J		ND		**0.2**
Dissolved Inorganic Compounds - mg/L																	
Arsenic, Dissolved	--		--		--		--		ND		--		--		--		**0.025**
Cadmium, Dissolved	--		--		--		--		ND		--		--		--		**0.005**
Chromium, Dissolved	--		--		--		--		ND		--		--		--		**0.05**
Lead, Dissolved	--		--		--		--		ND		--		--		--		**0.025**
Mercury, Dissolved	--		--		--		--		ND		--		--		--		**0.0007**

Notes:
1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. MS/MSD collected at monitoring well MW-12A.
3. Blind Duplicate collected at monitoring well MW-14A.
4. Due to turbidity greater than 50 NTU, a filtered sample was submitted for soluble metal analysis at this location.
5. NYSDEC Class "GA" Groundwater Quality Standards/Guidance Values (GWQS/GV) as per 6 NYCRR Part 703.
6. Groundwater collected from well MW-12A was analyzed for TCL VOCs plus STARS, all other wells were only analyzed for STARS VOCs.
7. Groundwater collected from well MW-12A was analyzed for TCL SVOCs (BNAs), all other wells were only analyzed for BN SVOCs.
8. Groundwater collected from well MW-12A was analyzed for TAL Metals, all other wells were only analyzed for arsenic, cadmium, chromium, cyanide, lead, and mercury.
9. J = Estimated value; result is less than the sample quantitation limit but greater than zero.
10. ND = parameter not detected above laboratory detection limit.
11. " -- " = not analyzed for this parameter
12. " * " = Groundwater Quality Guidance Value
13. " ** " = field threshold value; when exceeded, field filtered metals sample is collected (i.e., dissolved metals).
14. " RED TEXT " = Data was qualified per the third party Data Usability Summary Report (DUSR).

Color Scheme:
BOLD = value exceeds individual GWQS/GV concentration

TABLE 17

SUMMARY OF POTENTIALLY COMPLETE EXPOSURE PATHWAYS

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

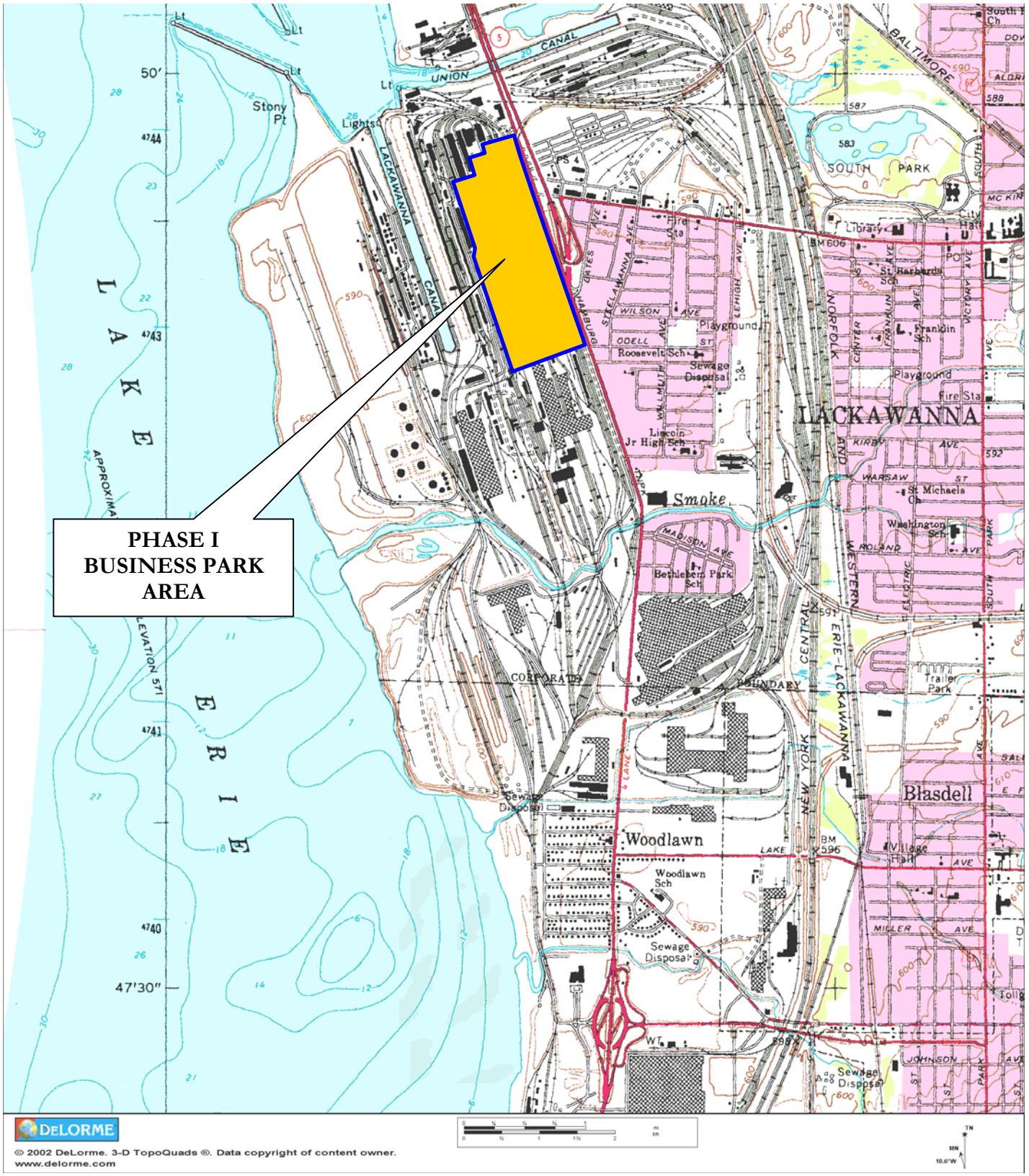
Receptor	Source	Release & Transport Mechanism	Point of Exposure	Route of Exposure
Current Use:				
Trespasser	Surface Soil/Fill	Direct Contact; Fugitive Dusts	On-site	Dermal Contact; Incidental Ingestion; Inhalation
	Subsurface Soil/Fill	Vapors	On-site	Inhalation
Construction Worker	Surface Soil/Fill	Direct Contact; Fugitive Dusts	On-site	Dermal Contact; Incidental Ingestion; Inhalation
	Subsurface Soil/Fill	Direct Contact; Fugitive Dusts; Vapors	On-site	Dermal Contact; Incidental Ingestion; Inhalation
Future Use:				
Indoor Worker	Subsurface Soil/Fill	Vapors	On-site	Inhalation
Outdoor Worker	Subsurface Soil/Fill	Direct Contact; Fugitive Dusts; Vapors	On-site	Dermal Contact; Incidental Ingestion; Inhalation
Construction Worker	Subsurface Soil/Fill	Direct Contact; Fugitive Dusts; Vapors	On-site	Dermal Contact; Incidental Ingestion; Inhalation

Notes:

1. "Future Use" Scenario reflects potentially complete exposure pathways in the absence of pre-development remedial measures or controls

FIGURES

FIGURE 1



TURNKEY ENVIRONMENTAL RESTORATION, LLC

726 EXCHANGE STREET
SUITE 624
BUFFALO, NEW YORK 14210
(716) 856-635

PROJECT NO.: 0071-006-100

DATE: MAY 2005

DRAFTED BY: BCH

SITE LOCATION AND VICINITY MAP

BROWNFIELD CLEANUP PROGRAM

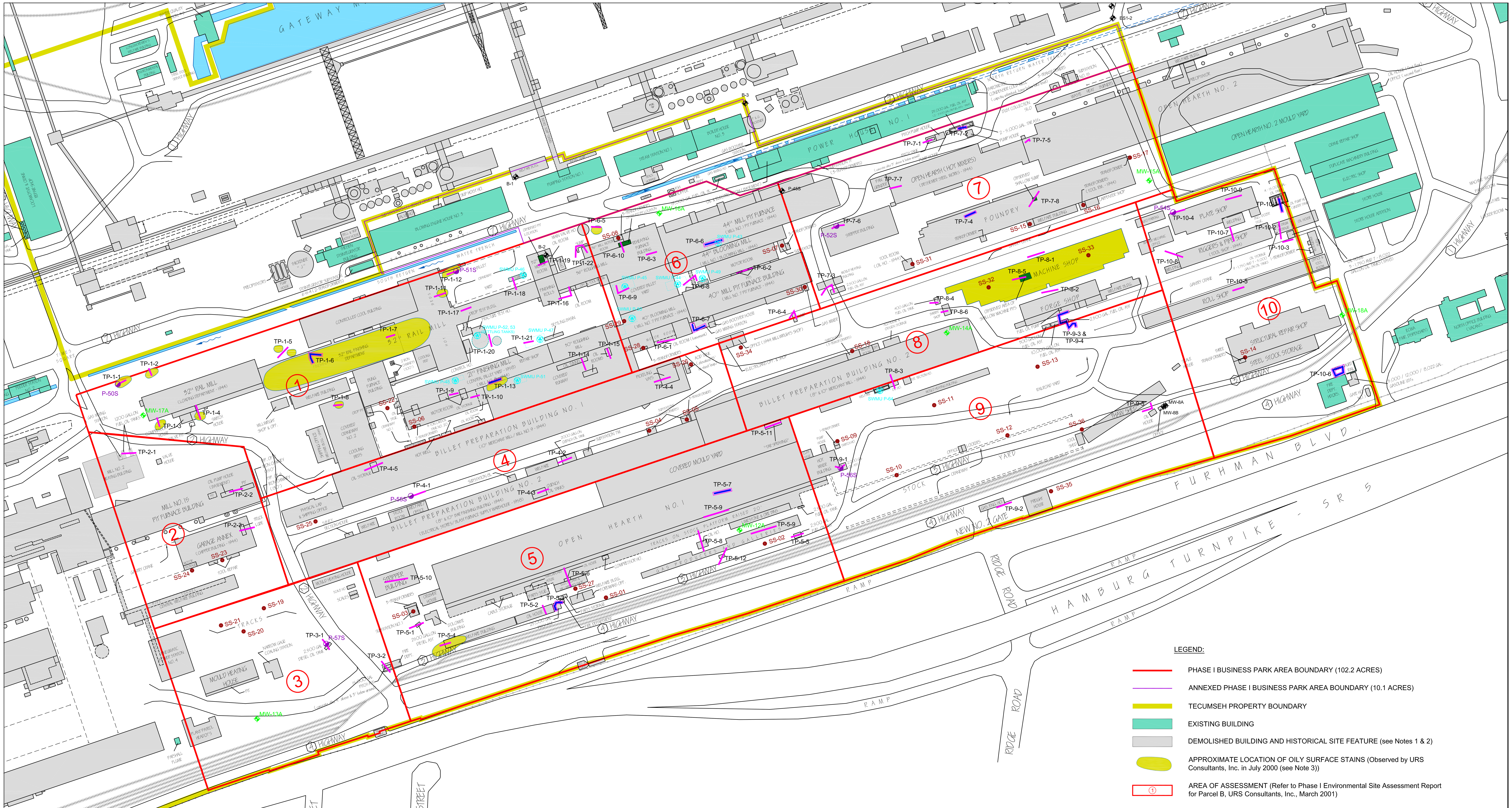
PHASE I BUSINESS PARK AREA
LACKAWANNA, NEW YORK

PREPARED FOR

TECUMSEH REDEVELOPMENT, INC.

FILEPATH(y:\cad\turnkey\international steel group (isg)\brownfield cleanup program (bcp)\phase i business park area\remediation work plan\figure 1) site location and vicinity map.dwg

F:\CAD\TurnKey\Tecumseh Redevelopment\Brownfield Cleanup Program (BCP)\Phase I Parcel\Remedial Investigation Report\Figure 2; Site Plan (revised June 2007).dwg



TEMPORARY PIEZOMETER LOCATIONS:	
PIEZOMETER ID	TEST PIT ID
P-50S	TP-1-1
P-51S	TP-1-12
P-52S	TP-7-6
P-53S	*see note below*
P-54S	TP-10-4
P-55S	TP-4-5
P-56S	TP-9-1
P-57S	TP-3-1

NOTE: Temporary piezometer P-53S was not installed as intended due to insufficient shallow groundwater at designated test pit location TP-7-5 as well as surrounding test pit locations within that AOA (i.e., TP-7-2, TP-7-4, TP-7-7, and TP-7-8).

SWMUs DESCRIPTION:

P-43	- 44" MILL SCALE PIT
P-44	- 40" MILL SCALE PIT
P-45	- 36" MILL SCALE PIT
P-46	- 32" MILL SCALE PIT
P-47	- 30" MILL SCALE PIT
P-48	- 21" MILL SCALE PIT
P-49	- 44" MILL SCALE PIT
P-50	- 40" MILL SCALE PIT
P-51	- 30" & 21" MILLS SCARFER PIT
P-52 / P-53	- MAIN SETTLING TANK (NORTH MILLS) / SEVEN SAND FILTERS (NORTH MILLS)
P-64	- SCALE PIT AT 8" BAR MILL

NOTE: All of the units listed above have received a "No Further Assessment" determination from the USEPA (Final RFI Report, URS, October 2004).

150' 0' 150' 300'

SCALE: 1 INCH = 150 FEET
SCALE IN FEET
(approximate)

LEGEND:

- PHASE I BUSINESS PARK AREA BOUNDARY (102.2 ACRES)
- ANNEXED PHASE I BUSINESS PARK AREA BOUNDARY (10.1 ACRES)
- TECUMSEH PROPERTY BOUNDARY
- EXISTING BUILDING
- DEMOLISHED BUILDING AND HISTORICAL SITE FEATURE (see Notes 1 & 2)
- APPROXIMATE LOCATION OF OILY SURFACE STAINS (Observed by URS Consultants, Inc. in July 2000 (see Note 3))
- ① AREA OF ASSESSMENT (Refer to Phase I Environmental Site Assessment Report for Parcel B, URS Consultants, Inc., March 2001)
- APPROXIMATE LOCATION OF PITS (4) (Observed in June 2000 by URS Consultants, Inc.)
- MW-8A EXISTING MONITORING WELL (2)
- SS-01 RI SURFACE SOIL SAMPLE (37)
- TP-5-3 RI TEST PIT (by Area of Assessment) (82)
- TP-1-6 RI TEST PIT (visual impacts identified) (11)
- MW-12A RI MONITORING WELL (7)
- P-50S RI TEMPORARY PIEZOMETER (7)
- SWMU P-47 SWMU LOCATION (see descriptions at left)

NOTES:

1. Building locations are based on historical surveys and maps, all locations should be considered approximate.
2. All buildings known to exist on site since 1944 are shown, some buildings were expanded or demolished following 1944, maximum building extents are shown.
3. Areas of observed staining represent numerous discrete stains within each noted boundary; surface staining was not observed during the 2006 RI.
4. All proposed locations were field verified and surveyed prior to initiation of field work.

TurnKey Environmental Restoration, LLC
2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0635

JOB NO.: 0071-006-202

REVISIONS

NO.	BY	DATE	REMARKS

SEAL

DRAWN BY: BCH
DATE: JUNE 2007
CHECKED BY:
APPROVED BY:

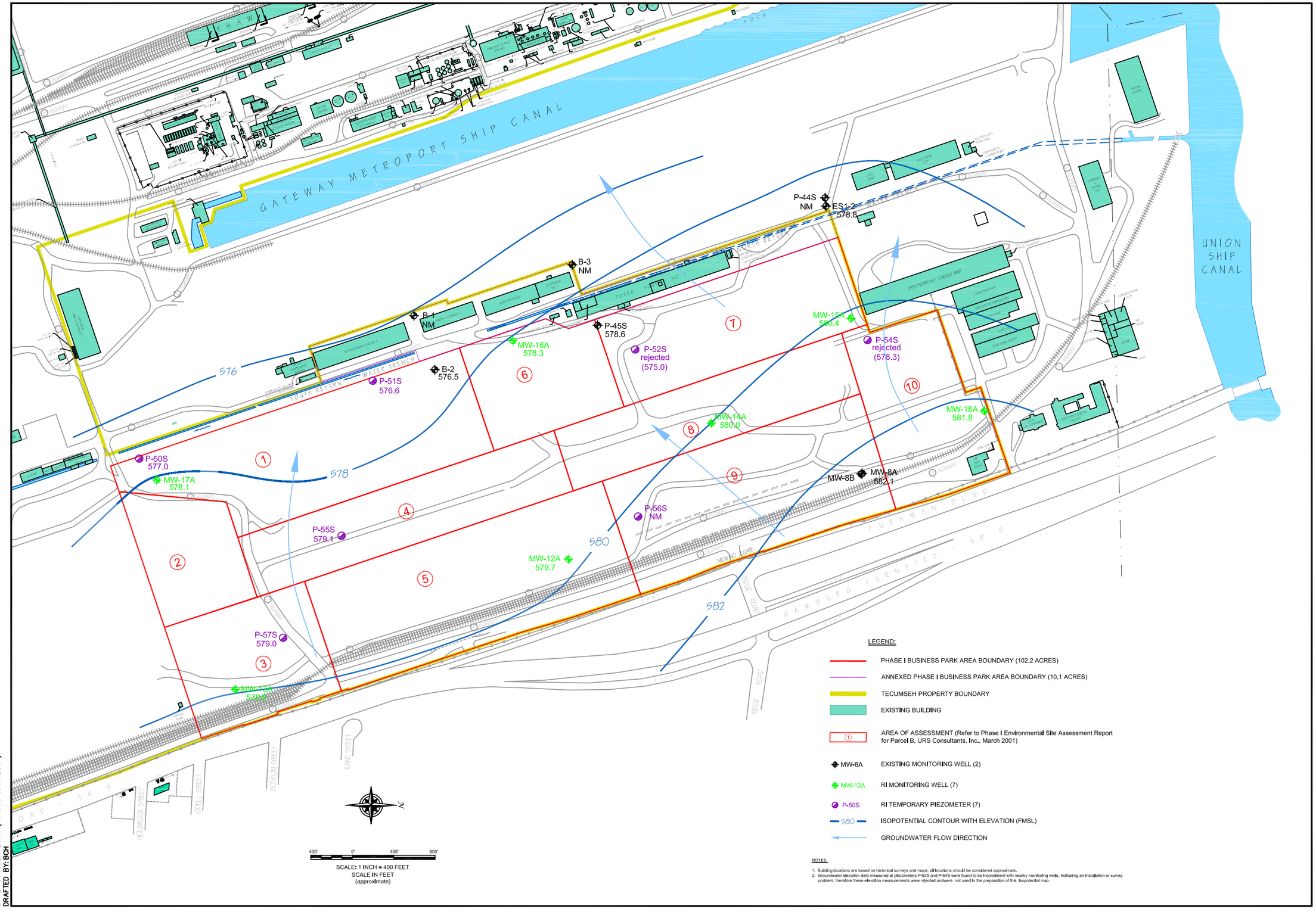
SITE PLAN

REMEDIAL INVESTIGATION REPORT
PHASE I BUSINESS PARK AREA
LACKAWANNA, NEW YORK

PREPARED FOR
TECUMSEH REDEVELOPMENT INC.

FIGURE 2

F:\CAD\TurnKey\Tecumseh Redevelopment\Brownfield Cleanup Program (BCP)\Phase I Parcel\Remedial Investigation Report\Figure 3- Shallow Groundwater Isopotential Map - May 6, 2006 (revised June 2007).dwg



NOTES:

1. Building locations are based on historical surveys and maps, all locations should be considered approximate.
2. Groundwater elevation data measured at piezometers P-52S and P-54S were found to be inconsistent with nearby monitoring wells, indicating an installation or survey problem, therefore these elevation measurements were rejected andwere not used in the preparation of this isopotential map.

DATE: OCTOBER 2006 (Revised June 2007)
DRAFTED BY: BCH

2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0635

TurnKey Environmental Restoration, LLC

JOB NO.: 0071-006-202

SHALLOW GROUNDWATER ISOPOTENTIAL MAP MAY 6, 2006

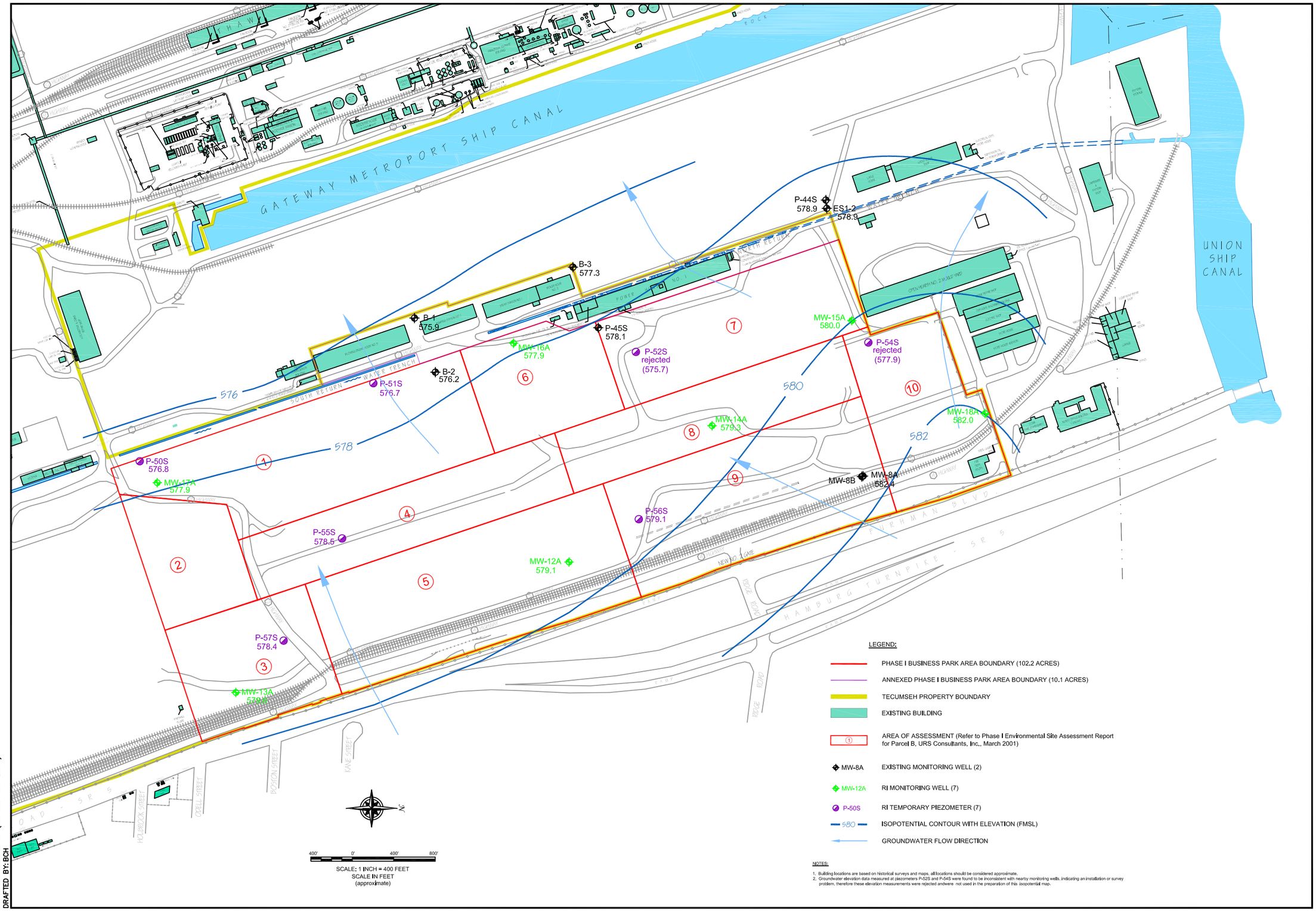
REMEDIAL INVESTIGATION REPORT

PHASE I BUSINESS PARK AREA
LACKAWANNA, NEW YORK

PREPARED FOR
TECUMSEH REDEVELOPMENT, INC.

FIGURE 3

F:\CAD\TurnKey\Tecumseh Redevelopment\Brownfield Cleanup Program (BCP)\Phase I Parcel\Remedial Investigation Report\Figure 4 - Shallow Groundwater Isopotential Map - June 1, 2006 (revised June 2007).dwg



LEGEND:

- PHASE I BUSINESS PARK AREA BOUNDARY (102.2 ACRES)
- ANNEXED PHASE I BUSINESS PARK AREA BOUNDARY (10.1 ACRES)
- TECUMSEH PROPERTY BOUNDARY
- EXISTING BUILDING
- ① AREA OF ASSESSMENT (Refer to Phase I Environmental Site Assessment Report for Parcel B, URS Consultants, Inc., March 2001)
- MW-8A EXISTING MONITORING WELL (2)
- MW-12A RI MONITORING WELL (7)
- P-50S RI TEMPORARY PIEZOMETER (7)
- 580 ISOPOTENTIAL CONTOUR WITH ELEVATION (FMSL)
- GROUNDWATER FLOW DIRECTION

NOTES:

1. Building locations are based on historical surveys and maps, all locations should be considered approximate.
2. Groundwater elevation data measured at piezometers P-52S and P-54S were found to be inconsistent with nearby monitoring wells, indicating an installation or survey problem, therefore these elevation measurements were rejected andwere not used in the preparation of this isopotential map.

DATE: OCTOBER 2006 (Revised June 2007)
DRAFTED BY: BCH

2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0635

TurnKey Environmental Restoration, LLC

JOB NO.: 0071-006-202

SHALLOW GROUNDWATER ISOPOTENTIAL MAP JUNE 1, 2006

REMEDIAL INVESTIGATION REPORT

PHASE I BUSINESS PARK AREA
LACKAWANNA, NEW YORK

PREPARED FOR
TECUMSEH REDEVELOPMENT, INC.

FIGURE 4

APPENDIX A

BORING LOGS &
WELL COMPLETION DETAILS

APPENDIX A

SURVEY SUMMARY

Remedial Investigation Report
Phase I Business Park Area - Brownfield Cleanup Program
Tecumseh Redevelopment, Inc.

fc:jtd/tb | date:030806 | wc:oc-38 | sc:gps-wendel

I.D.	ELEVATION Casing	Riser	Grade
B-1	584.03	584.08	581.56
B-2	585.04	584.85	582.99
B-3	585.96	586.02	583.55
ES1-2	585.84	585.53	584.16
MW-08A	585.29	584.67	584.78
MW-08B	585.32	584.62	584.74
MW-12A	587.16	586.91	584.43
MW-13A	585.54	585.29	582.72
MW-14A	586.51	586.30	583.82
MW-15A	586.44	586.22	583.71
MW-16A	586.14	585.96	583.42
MW-17A	585.10	584.93	582.48
MW-18A	587.01	586.75	584.00
P-44S	587.28	587.20	584.24
P-45S	585.81	585.56	583.24
P-50S	na	584.14	581.43
P-51S	na	585.09	582.39
P-52S	na	586.36	583.20
P-54S	na	586.16	583.28
P-55S	na	586.35	582.95
P-56S	na	586.55	583.28
P-57S	na	585.40	581.37

DATE
STARTED 2-8-91
FINISHED 2-8-91
SHEET 1 OF 1

EMPIRE SOILS INVESTIGATIONS INC. — **SUBSURFACE LOG**

HOLE NO. B-1MW
SURF. ELEV. 581.74
G.W. DEPTH See Notes

PROJECT Oxford Energy Cogeneration Facility (BTA-91-011)
LOCATION Hamburg Turnpike, Lackawanna, New York

DEPTH-FT	SAMPLES	SAMPLE NO	BLOWS ON SAMPLER 0/6	6/12	12/18	N	PID on Sample	SOIL OR ROCK CLASSIFICATION	NOTES	% Rec.	PID Top of Auge
0		1	6	6				Black to gray f-c SAND and Cinders, little Slag, tr. brick, tr. silt, tr. clay, tr. coal (moist, FILL)		50	
			12	8		18	BG				BG
		2	7	5				CONCRETE (0.4')			
			6	7		11	BG	Brown-black f-c Sand to Gravel sized SLAG, some Cinders, tr. coal, tr. gravel, tr. silt (moist,FILL)	Note: S-2 looks like "spent" iron-ores and slag.	80	
5		3	3	3						90	
			3	4		6	BG		Sample wet at 7.8' (perched)		BG
		4	4	3						20	
			2	2		5	BG	(moist to wet)			
		5	1	1				Gray to black organic SILT and CLAY, little f-c Sand, tr. wood, tr. roots, tr. brick (moist,FILL) Contains little Wood, tr. slag		50	
10			2	2		3	BG				BG
		6	1	2					Change at 11.8' Note: Water encountered at 10.0'	50	
			1	4		3	BG				
		7	3	3				Gray to black mottled f-m SAND, some Silt, little Clay, tr. organics (moist,loose) Contains gray Clayey Silt lenses (moist-wet, SC)		30	
			3	4		6	BG				BG
15		8	2	2					Poor recovery on S-8 possible stone in shoe of sampler	10	
			2	2		4	BG				
		9	2	2				(wet)		60	
			3	2		5	BG	Brown to black organic SILT and CLAY, little f-m Sand, tr. roots, tr. branches (wet-moist,soft, OL)			BG
		10	2	1							
20			2	2		3	BG			10	
								Boring Complete at 20.0'. Ground Water Monitoring Well installed at boring completion. Well tip set at 16.0'. See Monitor Well Completion Report for details.	Free Standing Water recorded at 16.0' at boring completion. PID-Organic vapors measured with Photoionization Detector (PID). Measurements recorded in parts per million (ppm). BG=Background PID measurements=0.0-0.3 ppm , using 10.2 eV probe.		

N = No blows to drive 2 " spoon 12 " with 140 lb. pin wt. falling 30 "per blow.
C = No blows to drive _____ " casing _____ " with _____ lb. weight falling _____ "per blow

CLASSIFICATION Visual by Onsite Geologist

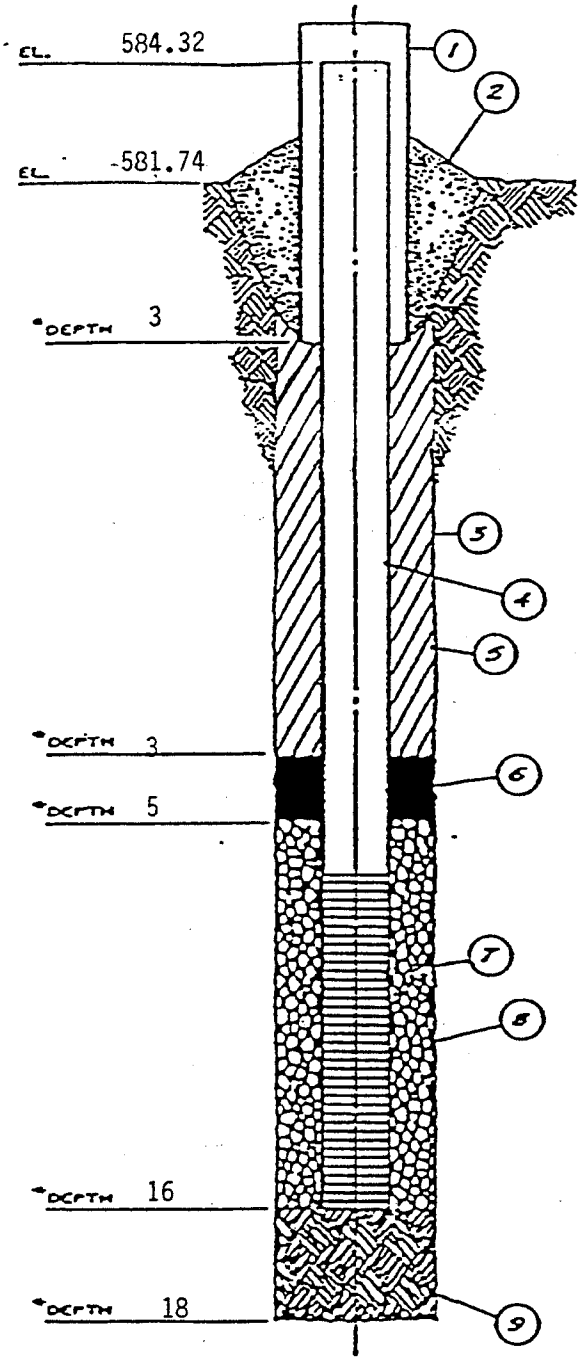
METHOD OF INVESTIGATION ASTM D-1586 USING 4-1/4" HOLLOW STEM AUGERS

R/T Form H

MONITOR WELL COMPLETION REPORT :

WELL Nº B-1MW JOB Nº BTA-91-011

PROJECT Oxford Energy
Co-generation Facility



*Depth in feet below grade.

1. PROTECTIVE CASING I.D. 4 INCHES.

2. SURFACE SEAL TYPE Cement/Bentonite Grout

3. BOREHOLE DIAMETER 8 INCHES.

4. RISER PIPE:
   a. Type Polyvinyl Chloride
   b. I.D. 2.5 INCHES
   c. Length 8 FEET
   d. Joint Type Threaded

5. BACKFILL:
   a. Type Cement/Bentonite Grout
   b. Installation Tremie

6. Type of SEAL Bentonite Pellet

7. SCREEN
   a. Type Polyvinyl Chloride
   b. I.D. 2 INCHES
   c. Slot Size 0.010 INCHES
   d. Length 10 FEET

8. SCREEN FILTER TYPE #4 O Rok Sand

9. BACKFILL TYPE #4 O Rok Sand

EMPIRE SOILS INVESTIGATIONS INC.

STARTED 2/11/91 - Mon.
FINISHED 2/11/91
SHEET 1 OF 1

EMPIRE SOILS INVESTIGATIONS INC.

SUBSURFACE LOG

HOLE NO. B-2MW
SURF. ELEV. 573.38
G. W. DEPTH See Note

PROJECT Oxford Energy - Co-generation (BTA-91-011)
LOCATION Hamburg Turnpike

DEPTH-FT	SAMPLES	SAMPLE NO	BLOWS ON SAMPLER 0/6	6/12	12/18	N	BLOW ON CASING C / PID	SOIL OR ROCK CLASSIFICATION	NOTES	
0		1						Asphalt (0.2') Crushed Stone (0.3')	Ref= split spoon refusal	100 BG
			100/6			REF.	BG	Gray to black f-c SAND, some cinders, little gravel, tr. silt, tr. concrete,		
		2	5	5				tr. slag, tr. brick, tr. coal (moist, FILL)		80 BG
			50/0.0			REF	BG			
5		3	100/6			REF	BG	Contains "and" CINDERS, little slag, tr. gravel (wet)	*Poor recovery on S-3	50 BG
									Concrete obstruction at 4.0'.	BG
		4	2	3						80
10			3	3		6	BG	Gray to brown, mottled f-c SILT and CLAY, some f-c sand, little gravel		
		5	2	3				(moist ~~wet~~, medium)		70 BG
			3	3		6	BG			
		6	4	4				Contains shale fragments		15 BG
			4	4		8	BG			
15		7	2	3				Wood (0.5')	Change at 14.3' / change at 14.8'	60 BG
			3	4		6	BG	Gray f-c SAND, some silt, little gravel, tr. shale fragments (wet, loose)		
		8	4	4					Note: boring relocated 4-times	90 BG
			5	7		9	BG			
		9	4	4						100 BG
20			4	4		8	BG	Brown to gray organic SILTS and CLAYS, little f-M sand, tr. roots, tr. wood (moist, medium)		
								Boring Complete at 20.0 ft	GW recorded at 9.7' at boring completion.	

groundwater 2/11/91

Monitoring well installed at boring completion. Well tip set at 16.0 ft. See monitor well completion report for details.

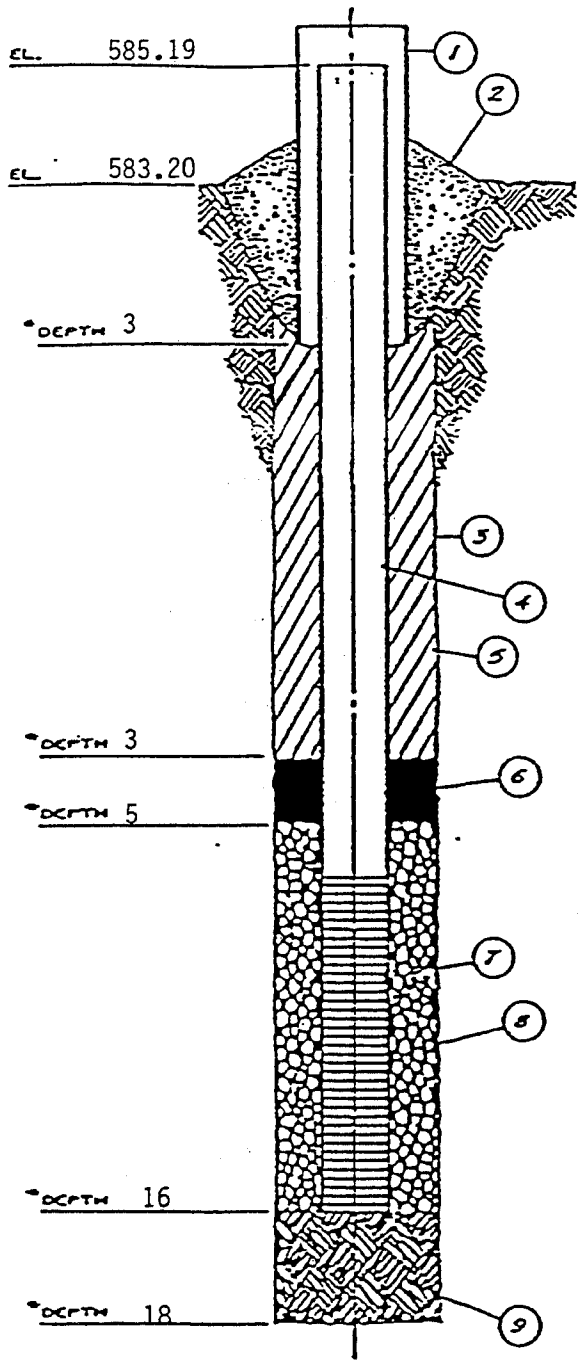
PID: ... with 10.2 eV probe
BG = 0.0 - 0.3 ppm

N = No. blows to drive 2" spoon 12" with 140 lb. pin wt. falling 30" per blow. CLASSIFICATION Visual by Myrle Geal
C = No. blows to drive ___" casing ___" with ___ lb. weight falling ___" per blow.
METHOD OF INVESTIGATION: ASTM D1586 using 4 1/4 HSA

MONITOR WELL COMPLETION REPORT :

WELL Nº B-2MW JOB Nº BTA-91-011

PROJECT Oxford Energy
Co-generation Facility



*Depth in feet below grade.

1. PROTECTIVE CASING I.D. 4 INCHES.

2. SURFACE SEAL TYPE Cement/Bentonite Grout

3. BOREHOLE DIAMETER 8 INCHES.

4. RISER PIPE:
   a. Type Polyvinyl Chloride
   b. I.D. 2.5 INCHES
   c. Length 8 FEET
   d. Joint Type Threaded

5. BACKFILL:
   a. Type Cement/Bentonite Grout
   b. Installation Tremie

6. Type of SEAL Bentonite Pellet

7. SCREEN
   a. Type Polyvinyl Chloride
   b. I.D. 2 INCHES
   c. Slot Size 0.010 INCHES
   d. Length 10 FEET

8. SCREEN FILTER TYPE #4 Q Rok Sand

9. BACKFILL TYPE #4 Q Rok Sand

EMPIRE SOILS INVESTIGATIONS INC.

DATE
STARTED 2-12-91
FINISHED 2-12-91
SHEET 1 OF 1

EMPIRE SOILS INVESTIGATIONS INC. SUBSURFACE LOG

HOLE NO. B-3MW
SURF. ELEV. 583.82
G. W. DEPTH See Note

PROJECT Oxford Energy Cogeneration Facility (BTA-91-011)
LOCATION Hamburg Turnpike, Lackawanna, New York

DEPTH-FT	SAMPLES	SAMPLE NO	BLOWS ON SAMPLER 0/6	6/12	12/18	N	PID on Sample	SOIL OR ROCK CLASSIFICATION	NOTES	% Rec	PID TOA
0											
		1	13	15				Black to gray f-c Sand to Gravel-sized CINDERS, some Slag, tr. gravel, tr. sand, tr. silt (moist, FILL)	REF=Refusal of Split-Spoon Sampler	100	BG
			50/0.0			REF	BG	CONCRETE (3.5')	Concrete Obstruction at 1.5' to 5.0'		BG
5		2	WOR	WOR				Brown to black f-c SAND, some f-c Gravel, little Slag, tr. silt, tr. clay, tr. brick, tr. cinders (moist, FILL)	WOR=Weight of Rods	30	
			1	1		1	BG				
		3	100/.5			REF	BG		Difficult drilling due to SLAG from 7.5' to 8.0'.	100	
		4	29	7							
			2	3		9	BG	Becomes gray to black, contains some Slag, little Gravel, tr. shale fragments (wet)		40	BG
10		5	WOR	1			0.3-		Water noted at 8.0'.	100	BG
			1	2		2	0.5	Black SILT and CLAY, little f-m Sand, tr. gravel, tr. slag (wet, FILL)			
		6	100/1			REF	--		S-5 has a distinct petroleum-like sheen & odor.	0	BG
								Gray f-c Sand to Gravel-sized SLAG, tr. brick, tr. sand (moist-wet, FILL)			
15		7	6	2			1.3-		S-6: No recovery obstructment at 12.1' to 14.0'.	40	BG
			2	2		4	2.0				
		8	2	2				Brown to black mottled organic SILT and CLAY, some f-c Sand, little Wood (moist, medium, OL) Contains tr. gravel		30	BG
			5	4		7	BG				
		9	3	3						50	BG
			3	3		6	BG				
20								Boring Complete at 20.0'	No Free Standing Water recorded at boring completion.		
								Ground Water Monitoring Well installed at boring completion. Well tip set at 16.0'. See Monitor Well Completion Report for details.			
25									PID-Organic vapors measured with Photoionization Detector (PID). Measurements recorded in parts per million (ppm). BG=Background PID measurements=0.0-0.3 ppm, using 10.2 eV probe.		

N = No blows to drive 2 " spoon 12 " with 140 lb. pin wt. falling 30 "per blow.
C = No blows to drive ____ " casing ____ " with ____ lb. weight falling ____ "per blow.

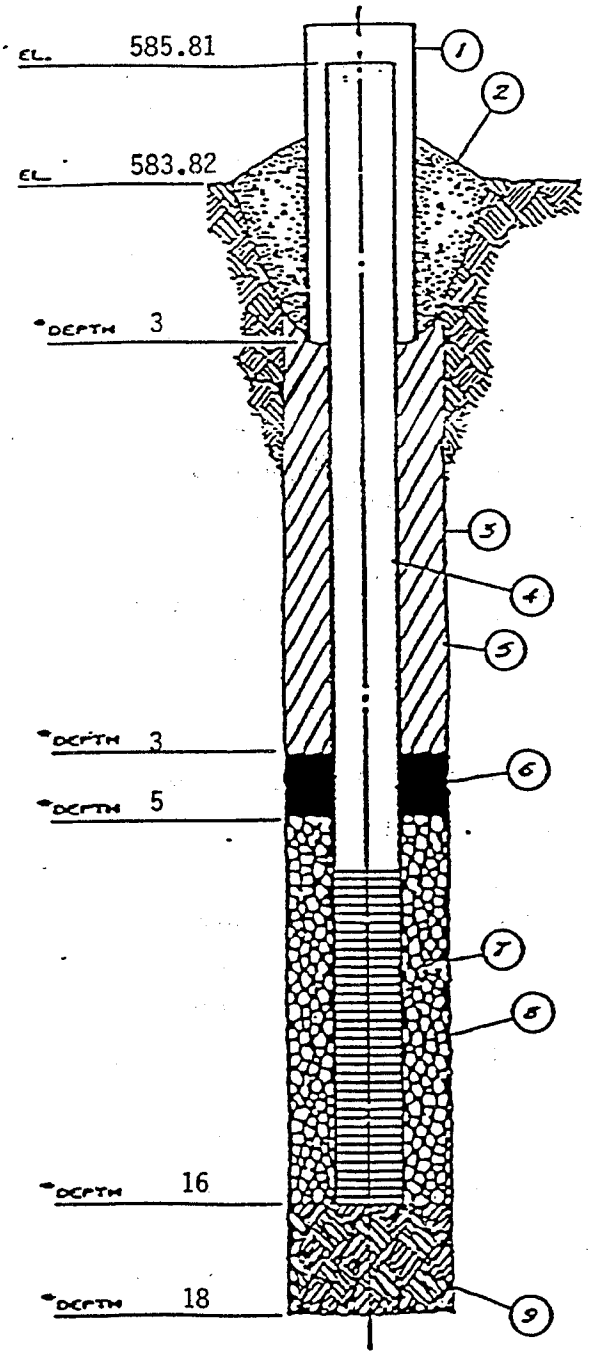
CLASSIFICATION Visual by Onsite Geologist

METHOD OF INVESTIGATION ASTM D-1586 USING 4-1/4" HOLLOW STEM AUGERS

MONITOR WELL COMPLETION REPORT :

WELL Nº B-3MW JOB Nº BTA-91-011

PROJECT Oxford Energy
Co-generation Facility



*Depth in feet below grade.

1. PROTECTIVE CASING I.D. 4 INCHES.

2. SURFACE SEAL TYPE Cement/Bentonite Grout

3. BOREHOLE DIAMETER 8 INCHES.

4. RISER PIPE:
   a. Type Polyvinyl Chloride
   b. I.D. 2.5 INCHES
   c. Length 8.5 FEET
   d. Joint Type Threaded

5. BACKFILL:
   a. Type Cement/Bentonite Grout
   b. Installation Tremie

6. Type of SEAL Bentonite Pellet

7. SCREEN
   a. Type Polyvinyl Chloride
   b. I.D. 2 INCHES
   c. Slot Size 0.010 INCHES
   d. Length 10 FEET

8. SCREEN FILTER TYPE #4 Q Rok Sand

9. BACKFILL TYPE #4 Q Rok Sand

EMPIRE SOILS INVESTIGATIONS INC.

DATE
STARTED 8-10-90
FINISHED 8-10-90
SHEET 1 OF 1

EMPIRE SOILS INVESTIGATIONS INC. — **SUBSURFACE LOG**

HOLE NO. ESI-2
SURF. ELEV. 574.9
G. W. DEPTH See Notes

PROJECT Erie Energy Associates (BTA-90-121)

LOCATION Hamburg Turnpike, Lackawanna, New York

DEPTH-FEET	SAMPLES	SAMPLE NO	BLOWS ON SAMPLER 0/6	6/12	12/18	N	PID Sample	SOIL OR ROCK CLASSIFICATION	NOTES	PID Top of Auger
0		1	4	13		23	BG	Black f-c SAND and Silt (cinders), tr. gravel, tr. brick, tr. coal (moist, FILL)		BG
			10	5						
		2	3	4		7	BG			BG
			3	5						
5		3	1	3		6	BG			BG
			3	4						
		4	2	3		5	BG	Brown Clayey SILT, some f-c Sand, tr. gravel, tr. wood (wet, FILL)		
			2	1						
		5	2	1		3	*		*No Recovery on Sample no. 5.	BG
			2	3						
10		6	5	2		4	BG	Becomes black-brown		BG
			2	2						
		7	34	100/.2		Ref	BG	Contains little-some Wood	Ref=Sample Spoon Refusal	BG
									Note: Wood at approx. 13.0' very difficult drilling.	
15										BG
		8	2	2		9	BG	Gray-brown Silty CLAY, little f-c Sand, tr. gravel, occasional gray Silt partings (moist, medium)		5-7
			7	7						
		9	9	12		27	BG	Becomes brown		
			15	21						
20								Contains Clayey SILT, some f-c Sand, tr. gravel (moist, HARD)	No Free Standing water measured inside augers below ground surface at boring completion.	
								Boring Complete at 20.0'		
25									PID=Organic vapor measurements taken with a Photoionization Detector (PID). Measurements recorded in parts per million (ppm).	
									BG=Background PID measurements=0-2.5 ppm	

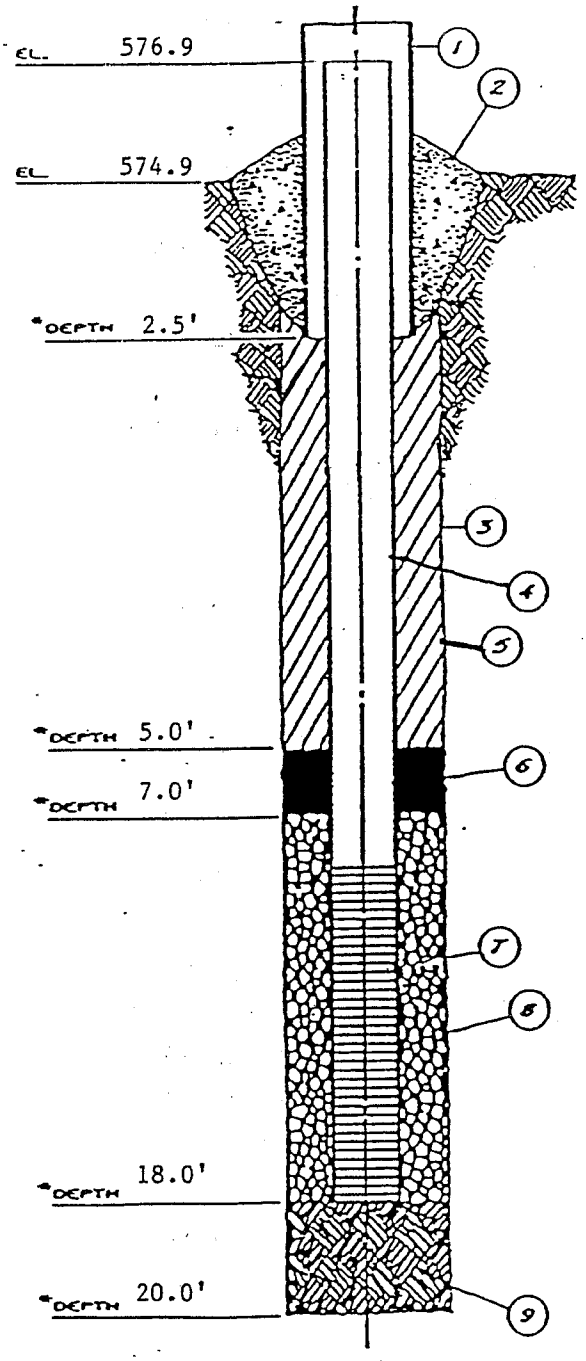
N = No blows to drive 2 " spoon 12 " with 140 lb pin wt falling 30 "per blow

C = No blows to drive _____ " casing _____ " with _____ lb weight falling _____ "per blow

CLASSIFICATION Visual by Geologist

METHOD OF INVESTIGATION ASTM D-1586 USING 4-1/4" HOLLOW STEM AUGERS

MONITOR WELL COMPLETION REPORT



*Depth in feet below grade.

WELL Nº ESI-2 JOB Nº BTA-90-121

PROJECT Erie Energy Associates
Lackawanna, New York

1. PROTECTIVE CASING I.D. 6 INCHES.

2. SURFACE SEAL TYPE Type I Portland Cement

3. BOREHOLE DIAMETER 8 . INCHES.

4. RISER PIPE:
   a. Type 40 Schedule PVC
   b. I.D. 2 INCHES
   c. Length 10 FEET
   d. Joint Type PTFE (Teflon) Taped Flush Couple Threaded

5. BACKFILL:
   a. Type 3% Bentonite/Cement Grout
   b. Installation Pour From Surface

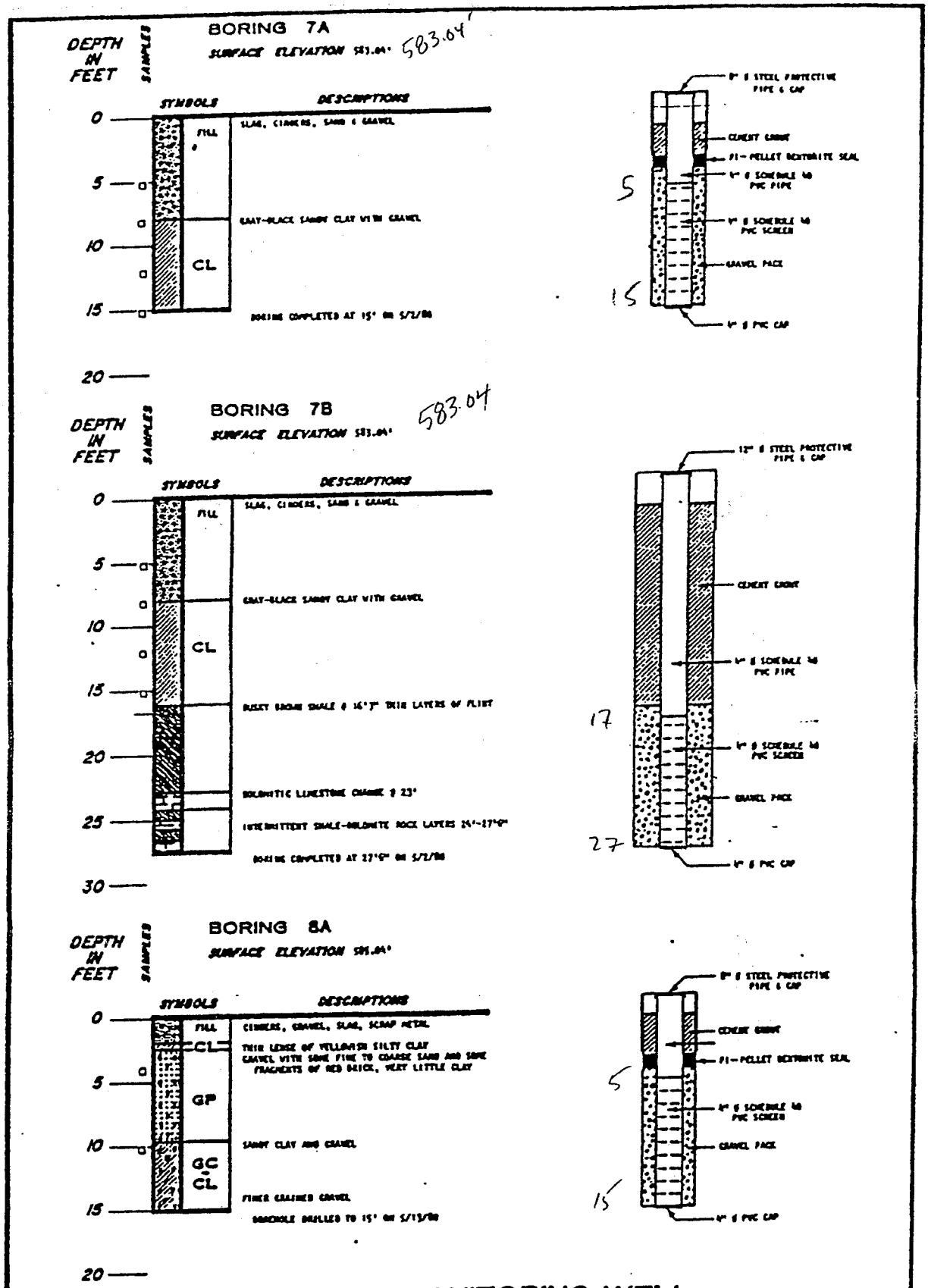
6. Type of SEAL Bentonite Pellet

7. SCREEN
   a. Type 40 Schedule PVC
   b. I.D. 2 INCHES
   c. Slot Size 0.010 INCHES
   d. Length 10 FEET

8. SCREEN FILTER TYPE #2 Q-Rok Sand

9. BACKFILL TYPE #2 Q-Rok Sand

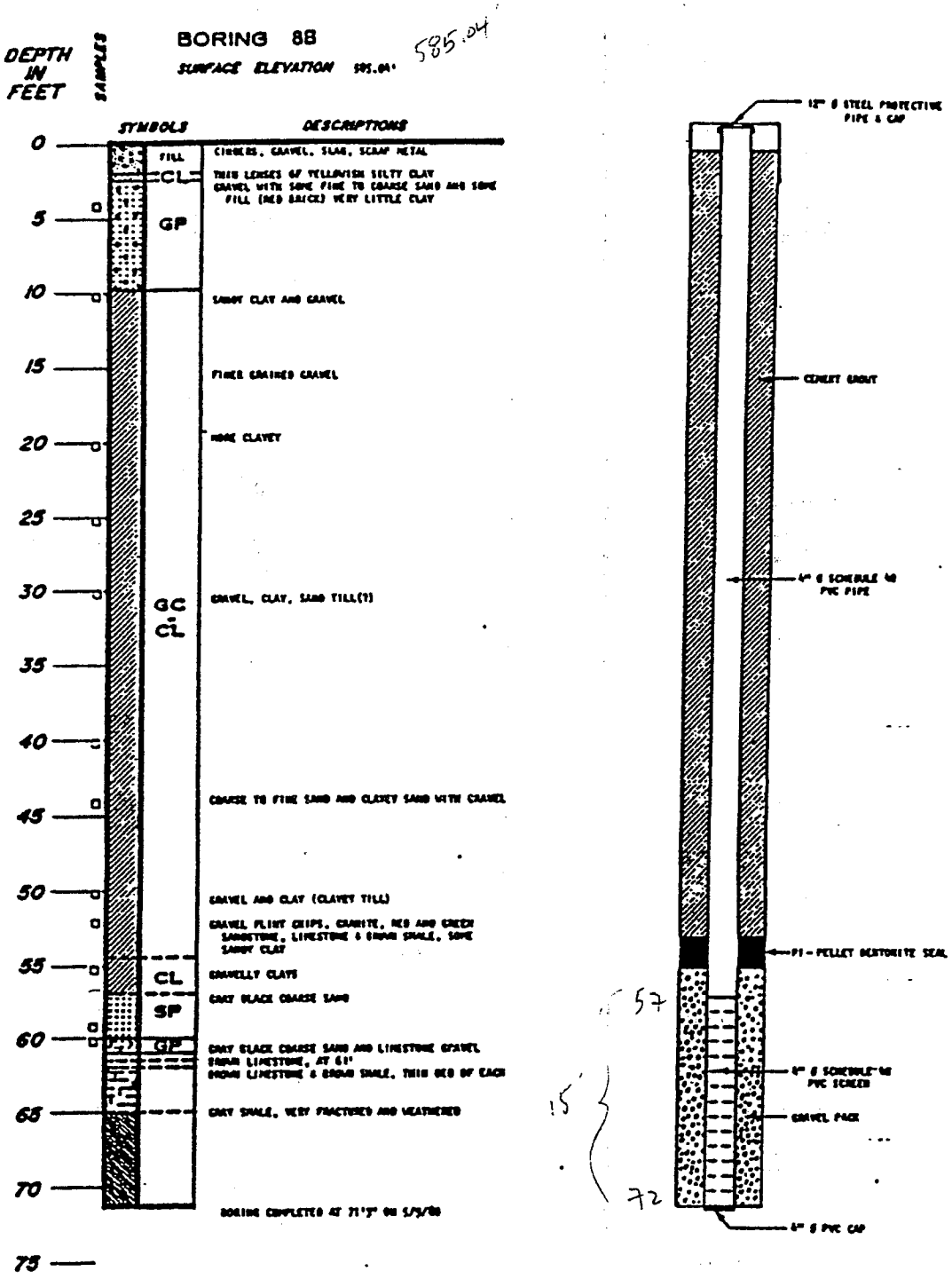
EMPIRE SOILS INVESTIGATIONS INC



LOG AND MONITORING WELL DETAILS

DAMES & MOORE

PLATE 8G



LOG AND MONITORING WELL DETAILS

DAMES & MOORE

PLATE 8H

FIELD BOREHOLE/MONITORING INSTALLATION LOG

Project Name:	Phase 1 BPA	**BORING NUMBER:**	**MW-12A**
Project Number:	0071-006-102	**Location:**	Phase I BPA
Client:	Tecumseh Redevelopment, Inc.	**Start Date/Time:**	01/31/06 13:30 PM
Drilling Company:	Earth Dimensions, Inc.	**End Date/Time:**	02/01/06 10:30 PM
Driller:	Brian Bartran	**Logged By:**	TAB
Helper:	Harold	**Drilling Method:**	4.25 HSA
Rig Type:	CME 85	**Weather:**	overcast, cold, breezey, Low 30's F

Elevation (fmsl)	Depth (fbgs)	Sample No.	Blows (per 6")	SPT N-Value	Recovery	SAMPLE DESCRIPTION USCS Classification: Color, Moisture Condition, Percentage of Soil Type, Texture, Plasticity, Fabric, Bedding, Weathering/Fracturing, Odor, Other	USCS Code	PID Scan (ppm)	PID HDSP (ppm)	Soil Unit	Well Construction Details
584.43	0	S1	4 7 100-3 --	0	1.0	**SOIL/FILL:** Black/Dark Brown, moist, dense, LWD, 90% NPF 10% Fine sand, w/ coal, slag & brick debris	FILL	0.0	0.0	FILL	
582.43	2	S2	9 9 7 10	16	1.0	Same as S1, wet	FILL	0.0	0.0	FILL	Bentonite Chips
580.43	4	S3	9 42 22 9	64	1.1	**SOIL/FILL:** Black/Dark Brown, moist, dense, LWD, 80% NPF 20% Fine sand, w/ coal, slag & brick debris	FILL	0.0	0.0	FILL	2" Sch. 40 PVC riser
578.43	6	S4	10 10 12 9	22	1.4	(0.0 - 0.3) Same as S3 (0.3 - 1.4) **SLAG:** Medium grey, wet	FILL	0.0	0.0	FILL	
576.43	8	S5	3 11 23 37	34	0.6	**SOIL/FILL:** Dark Brown to redish brown, wet, dense, LWD, 90% NPF 10% Fine sand, w/concrete debris	FILL	0.0	0.0	FILL	sand pack - #00N (14.0 - 3.0 fbgs)
574.43	10	S6	7 15 14 15	29	1.1	Same as S5	FILL	0.0	2.3	FILL	2" Sch. 40 PVC screen, 0.010"-slot
572.43	12	S7	3 12 22 22	34	1.1	(0.0 - 0.4) Same as S5 (0.4 - 1.4) **SLAG:** Blue, wet	FILL	0.0	0.0	FILL	
570.43	14	S8	11 19 13 7	32	1.5	Same as S7 (0.4 - 1.4)	FILL	0.0	0.0	FILL	
568.43	16	S9	3 2 2 6	4	1.5	(0.0 - 0.6) **SANDY ORGANIC SOIL:** Dark rown, firm, LWD, moist, 60% LPF, 40% Fine sand, w/ wood chips (0.6 - 1.5) **SANDY LEAN CLAY:** Medium brown, stiff, 30% M-HP, 70% Fine sand, slow dialatencey EOB @ 18.0 fbgs, installed well @ 16.0 fbgs	OL/OH CL	0.0	0.0	PEAT CLAY	
566.43	18										

ABREVIATIONS:

C = coarse	fbgs = feet below ground surface	HSA = hollow stem auger	MS = medium sand
CG = coarse gravel	FG = fine gravel	LP = low plasticity	NA = not applicable
CS = coarse sand	fmsl = feet above mean sea level	LWD = loose when disturbed	NPF = not plastic fines
EOB = end of boring	FS = fine sand	M = medium	SA = sub-angular
F = fines or fine	HP = high plasticity	MP = medium plasticity	SR = sub-rounded
			SS = split spoon

FIELD BOREHOLE/MONITORING INSTALLATION LOG

Project Name:	Phase 1 BPA	**BORING NUMBER:**	**MW-13A**
Project Number:	0071-006-102	**Location:**	Phase I BPA
Client:	Tecumseh Redevelopment, Inc.	**Start Date/Time:**	01/31/06 09:50 AM
Drilling Company:	Earth Dimensions, Inc.	**End Date/Time:**	01/31/06 12:20 PM
Driller:	Brian Bartran	**Logged By:**	TAB
Helper:	Harold	**Drilling Method:**	4.25 HSA
Rig Type:	CME 85	**Weather:**	overcast, cold, sl. breeze, Low 30's F

Elevation (fmsl)	Depth (fbgs)	Sample No.	Blows (per 6")	SPT N-Value	Recovery	SAMPLE DESCRIPTION USCS Classification: Color, Moisture Condition, Percentage of Soil Type, Texture, Plasticity, Fabric, Bedding, Weathering/Fracturing, Odor, Other	USCS Code	PID Scan (ppm)	PID HDSP (ppm)	Soil Unit
582.72	0	NA	NA	NA		**ASPHALT:** augered through	NA	--	--	ASPHALT
581.72	1	S1	39 56	0	0.9	**SOIL/FILL:** Black/Dark Brown, moist, 90% NPF 10% FS, w/brick & slag debris, dense, LWD	FILL	0.0	0.0	FILL
580.72	2	S2	100-5 -- -- --	100	0.6	**FILL:** Weathered concrete, medium grey, wet	FILL	0.0	0.0	FILL
578.72	4	S3	3 2 6 7	8	1.3	**SANDY LEAN CLAY:** Medium grey, wet, 80% MPF, 20% FS w/ peat lenses & wood chips, stiff, slow dialatency	CL OL/OH	0.0	0.3	CLAY PEAT
576.72	6	S4	4 2 2 4	4	1.5	same as S3	CL	0.0	6.6	CLAY
574.72	8	S5	5 5 6 8	11	2.0	(0.0 - 0.4) Same as S4 (0.4 - 1.4) **SANDY ORGANIC SOIL:** Dark brown, wet, 60% LPF, 40% FS, w/wood chips, loose, dense (1.4 - 2.0) Same as S4	CL OL/OH CL	0.0	0.0	CLAY PEAT CLAY
572.72	10	S6	5 9 5 7	14	1.8	(0.0 - 1.0) **SANDY ORGANIC SOIL:** Dark brown, moist, 60% LPF, 40% FS, w/rootletts & sandy clay lenses, dense, LWD (1.0 - 1.8) **SANDY LEAN CLAY**: Medium grey, wet, 70% MPF, 30% FS, soft	OL/OH CL	0.0	0.0	PEAT CLAY
570.72	12	S7	8 6 6 7	12	1.2	(0.0 - 0.2) Same as S7 (0.0 - 0.7) **SANDY ORGANIC SOIL:** Dark brown, wet, 70% LPF same as S6 (0.9 - 2.0), dense, LWD	CL OL/OH CL	0.0	0.0	CLAY PEAT CLAY
568.72	14					EOB @ 14.0 fbgs *Initial boring advanced to 4.0 fbgs to refusal, moved location ~10.0 ft east and continued from 4.0 to 14.0 fbgs*				
566.72	16									
564.72	18									

Well Construction Details: Bentonite Chips; 2" Sch. 40 PVC riser; sand pack - #00N (14.0 - 3.0 fbgs); 2" Sch. 40 PVC screen (10') 0.01" slot

ABREVIATIONS:

C = coarse	fbgs = feet below ground surface	HSA = hollow stem auger	MS = medium sand
CG = coarse gravel	FG = fine gravel	LP = low plasticity	NA = not applicable
CS = coarse sand	fmsl = feet above mean sea level	LWD = loose when disturbed	NPF = not plastic fines
EOB = end of boring	FS = fine sand	M = medium	SA = sub-angular
F = fines or fine	HP = high plasticity	MP = medium plasticity	SR = sub-rounded
			SS = split spoon

FIELD BOREHOLE/MONITORING INSTALLATION LOG

Project Name:	Phase 1 BPA	**BORING NUMBER:**	**MW-14A**
Project Number:	0071-006-102	**Location:**	Phase I BPA
Client:	Tecumseh Redevelopment, Inc.	**Start Date/Time:**	01/31/06 07:40 AM
Drilling Company:	Earth Dimensions, Inc.	**End Date/Time:**	01/31/06 09:40 AM
Driller:	Brian Bartran	**Logged By:**	TAB
Helper:	Harold	**Drilling Method:**	4.25 HSA
Rig Type:	CME 85	**Weather:**	overcast, cold, sl. breeze, Low 30's F

Elevation (fmsl)	Depth (fbgs)	Sample No.	Blows (per 6")	SPT N-Value	Recovery	SAMPLE DESCRIPTION USCS Classification: Color, Moisture Condition, Percentage of Soil Type, Texture, Plasticity, Fabric, Bedding, Weathering/Fracturing, Odor, Other	USCS Code	PID Scan (ppm)	PID HDSP (ppm)	Soil Unit	Well Construction Details
583.82	0	S1	4 9 14 20	23	1.4	**SOIL/FILL:** Black/Dark Brown, moist, 80% NPF 20% FS, w/ coal & brick debris, dense, LWD	FILL	0.0	0.0	FILL	Portasite Clips; 2" Sch. 40 PVC riser
581.82	2	S2	4 6 7 10	13	1.1	(0.0 - 0.5) **REWORKED CLAY:** Medium grey, moist, 70% MPF, 30% FS, w/ pieces of orange brick, stiff (0.5 - 1.1) Same as S1, wet	FILL	0.0	0.0	FILL	
579.82	4	S3	7 6 7 12	13	1.4	Same as S1, wet	FILL	0.0	0.0	FILL	
577.82	6	S4	9 11 11 13	22	0.5	Same as S1, wet	FILL	0.0	0.0	FILL	
575.82	8	S5	5 5 8 14	13	1.0	**SANDY LEAN CLAY:** Medium grey, wet, 50% MPF, 50% FS, w/ iron-stained mottling and gravel, stiff, slow dilatency	CL	0.0	0.0	CLAY	sand pack - #00N (14.0 - 3.0 fbgs); 2" Sch. 40 PVC screen (0.01" Slot)
573.82	10	S6	5 7 10 12	17	0.9	same as S5, w/ brick fragments	CL	0.0	0.0	CLAY	
571.82	12	S7	7 8 7 12	15	1.1	(0.0 - 0.8) Same as S5 (0.8 - 1.1) **SANDY ORGANIC SOIL:** Dark brown, moist, 60% LPF, 40% FS, w/rootletts, dense, LWD	CL OL/OH	0.0	0.0	CLAY PEAT	
569.82	14					EOB @ 14.0 fbgs					
567.82	16										
565.82	18										

ABREVIATIONS:

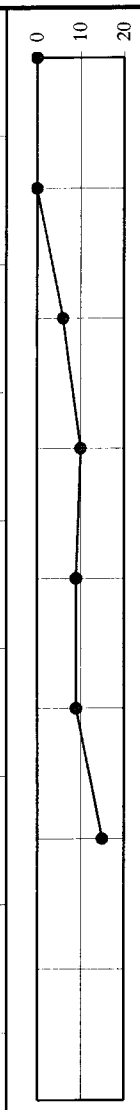
C = coarse	fbgs = feet below ground surface	HSA = hollow stem auger	MS = medium sand
CG = coarse gravel	FG = fine gravel	LP = low plasticity	NA = not applicable
CS = coarse sand	fmsl = feet above mean sea level	LWD = loose when disturbed	NPF = not plastic fines
EOB = end of boring	FS = fine sand	M = medium	SA = sub-angular
F = fines or fine	HP = high plasticity	MP = medium plasticity	SR = sub-rounded
			SS = split spoon

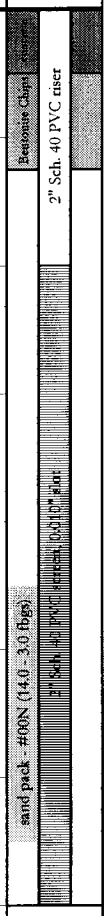
FIELD BOREHOLE/MONITORING INSTALLATION LOG

Project Name: Phase 1 BPA
Project Number: 0071-006-102
Client: Tecumseh Redevelopment, Inc.
Drilling Company: Earth Dimensions, Inc.
Driller: Brian Bartran
Helper: Harold
Rig Type: CME 85

BORING NUMBER: MW-15A
Location: Phase I BPA
Start Date/Time: 01/29/06 13:00:00 AM
End Date/Time: 01/29/06 14:45:00 PM
Logged By: TAB
Drilling Method: 4.25 HSA
Weather: Partly Cloudy, cool, sl. breeze, Low 40's F

Elevation (fmsl)	Depth (fbgs)	Sample No.	Blows (per 6")	SPT N-Value	Recovery	SAMPLE DESCRIPTION USCS Classification: Color, Moisture Condition, Percentage of Soil Type, Texture, Plasticity, Fabric, Bedding, Weathering/Fracturing, Odor, Other	USCS Code	PID Scan (ppm)	PID HDSP (ppm)	Soil Unit
583.71	0	NA	-- -- -- --	0	NA	Augered to 4.0 fbgs (description from soil cuttings) **SOIL/FILL:** Black/dark brown, moist, NPF, w/ brick fragments	FILL	0.0	--	FILL
581.71	2	NA	-- -- -- --	0	NA	Same as above	FILL	0.0	--	FILL
579.71	4	S1	2 2 4 4	6	1.0	**SANDY LEAN CLAY:** Medium grey to dark grey, wet, stiff, 40%MPF, 60% FS, slow dialatency w/ some gravel	FILL	0.0	0.0	FILL
577.71	6	S2	3 5 5 6	10	1.3	(0.0 - 0.3) **ORGANIC SANDY SOIL:** Dark brown, wet, 30% LPF, 70% FS, dense, LWD (0.3 - 1.3) **SANDY LEAN CLAY:** Medium grey, wet, medium soft, 40% MPF, 50% FS, 10%CG	OL/OH CL	0.0	0.0	PEAT CLAY
575.71	8	S3	3 3 6 7	9	0.9	(0.0 - 0.5) **SANDY ORGANIC SOIL:** Dark Brown, wet, 60% FS, 40% LPF, firm, LWD (0.5 - 0.9) **SANDY LEAN CLAY:** Medium grey with black specks, wet, 60% MPF, 40% FS, stiff, slow dilatency	OL/OH CL	0.0	0.4	PEAT CLAY
573.71	10	S4	2 3 6 7	9	1.7	(0.0 - 0.3) Same as S3 (0.0 - 0.5) (0.3 - 1.7) **SANDY LEAN CLAY:** Medium grey, wet, 60% MPF, 40% FS, w/ some gravel, stiff, rapid dilatency	OL/OH CL	0.0	0.0	PEAT CLAY
571.71	12	S5	8 6 9 9	15	1.5	Same as S4 (0.3 - 1.7)	CL	0.0	0.0	CLAY
569.71	14					EOB @ 14.0 fbgs				
567.71	16									
565.71	18									





Well Construction Details

ABREVIATIONS:

C = coarse
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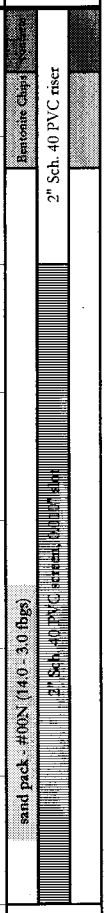
fmsl = feet above mean sea level
FS = fine sand
HP = high plasticity
HSA = hollow stem auger
LP = low plasticity
LWD = loose when disturbed
M = medium
MP = medium plasticity
MS = medium sand
NA = not applicable
NPF = not plastic fines
SA = sub-angular
SR = sub-rounded
SS = split spoon

FIELD BOREHOLE/MONITORING INSTALLATION LOG

Project Name:	Phase 1 BPA	**BORING NUMBER:**	**MW-16A**
Project Number:	0071-006-102	**Location:**	Phase I BPA
Client:	Tecumseh Redevelopment, Inc.	**Start Date/Time:**	01/29/06 10:30 AM
Drilling Company:	Earth Dimensions, Inc.	**End Date/Time:**	01/29/06 12:15 PM
Driller:	Brian Bartran	**Logged By:**	TAB
Helper:	Harold	**Drilling Method:**	4.25 HSA
Rig Type:	CME 85	**Weather:**	Partly Cloudy, cool, sl. breeze, Low 40's F

Elevation (fmsl)	Depth (fbgs)	Sample No.	Blows (per 6")	SPT N-Value	Recovery	SAMPLE DESCRIPTION USCS Classification: Color, Moisture Condition, Percentage of Soil Type, Texture, Plasticity, Fabric, Bedding, Weathering/Fracturing, Odor, Other	USCS Code	PID Scan (ppm)	PID HDSP (ppm)	Soil Unit
583.42	0		-- -- -- --	0	NA	Augered to 4.0 fbgs (description from soil cuttings) **SOIL/FILL:** Black/Dark Brown, moist, NPF	FILL	0.0	--	FILL
581.42	2		-- -- -- --	0	NA	Same as above	FILL	0.0	--	FILL
579.42	4	S1	4 6 10 8	16	1.2	(0.0 - 0.4) **SOIL/FILL:** Black, wet, 90% NPF, 10% FS, LWD (0.4 - 1.1) yellow refractory brick: wet (1.1 - 1.2) orange brick: wet	FILL	0.0	--	FILL
577.42	6	S2	4 7 3 7	10	0.7	(0.0 - 0.2) Same as S1 (0.0 - 0.4) (0.2 - 0.7) **SANDY LEAN CLAY:** Medium grey, wet, stiff, 60% MPF, 40% FS, slow dilatency	FILL CL	0.0	--	FILL CLAY
575.42	8	S3	3 2 2 4	4	1.2	Same as S2 (0.2 - 0.7) w/ lenses of peat	CL	0.0	--	CLAY
573.42	10	S4	2 4 6 11	10	1.5	Same as S2 (0.2 - 0.7) w/ lenses of peat & iron-stained mottling	CL	0.0	--	CLAY
571.42	12	S5	2 7 5 7	12	0.5	Same as S2 (0.2 - 0.7) w/ lenses of peat & iron-stained mottling	CL	0.0	--	CLAY
569.42	14					EOB @ 14.0 fbgs				
567.42	16									
565.42	18									

Well Construction Details



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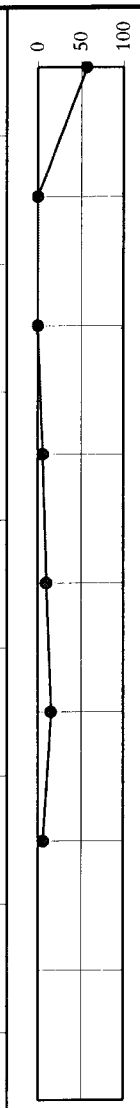
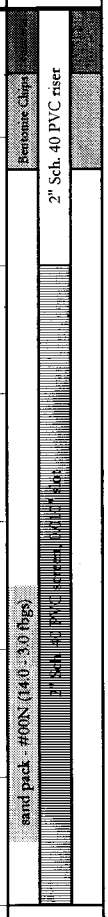
HSA = hollow stem auger
LP = low plasticity
LWD = loose when disturbed
M = medium
MP = medium plasticity
MS = medium sand
NA = not applicable
NPF = not plastic fines
SA = sub-angular
SR = sub-rounded
SS = split spoon

FIELD BOREHOLE/MONITORING INSTALLATION LOG

Project Name:	Phase 1 BPA	**BORING NUMBER:**	**MW-17A**
Project Number:	0071-006-102	**Location:**	Phase I BPA
Client:	Tecumseh Redevelopment, Inc.	**Start Date/Time:**	01/29/06 08:00 AM
Drilling Company:	Earth Dimensions, Inc.	**End Date/Time:**	01/29/06 10:20 AM
Driller:	Brian Bartran	**Logged By:**	TAB
Helper:	Harold	**Drilling Method:**	4.25 HSA
Rig Type:	CME 85	**Weather:**	overcast, cool, sl. breeze, Low 40's F

Elevation (fmsl)	Depth (fbgs)	Sample No.	Blows (per 6")	SPT N-Value	Recovery	SAMPLE DESCRIPTION USCS Classification: Color, Moisture Condition, Percentage of Soil Type, Texture, Plasticity, Fabric, Bedding, Weathering/Fracturing, Odor, Other	USCS Code	PID Scan (ppm)	PID HDSP (ppm)	Soil Unit
582.48	0	S1	17 28 29 12	57	1.0	**SOIL/FILL:** Black/Dark Brown, moist, 80% NPF, 20% slag, 20% FS, medium dense, LWD	FILL	0.0	--	FILL
580.48	2	S2	100-5 -- -- --	0	1.5	Same as S1 above, wet	FILL	0.0	--	FILL
578.48	4	S3	7 100-2 -- --	0	0.4	**FILL:** Medium grey, wet, 90% Concrete, 10% FS, SA, LWD	FILL	0.0	--	FILL
576.48	6	S4	2 2 4 4	6	1.2	(0.0 - 0.7) **SANDY LEAN CLAY:** Medium grey, stiff, wet, 60% MPF, 40% Fine Sand, slow dialatency (0.7 - 1.2) **ORGANIC SOIL:** Dark brown, wet, 60% LPF, 40% FS, LWD, slow dilatencey, w/ rootletts and wood chips	CL OL/OH	0.0	--	CLAY PEAT
574.48	8	S5	4 5 5 7	10	1.3	Same as S4 (0.0 - 0.7) w/ lenses of Peat	CL	0.0	--	CLAY
572.48	10	S6	4 7 8 8	15	1.5	Same as S4 (0.0 - 0.7); clay is softer from 0.0 - 0.8 w/ rapid dilatencey. Clay stiffens from 0.5 - 1.5	Cl	0.0	--	CLAY
570.48	12	S7	3 3 3 7	6	2.0	**SANDY ORGANIC SOIL:** Dark brown to brownish grey, wet, firm, 60% LPF, 40% FS w/ rootlets and wood fibers, LWD	OL/OH	0.0	--	PEAT
568.48	14	S8				EOB @ 14.0 fbgs				
566.48	16	S9								
564.48	18									





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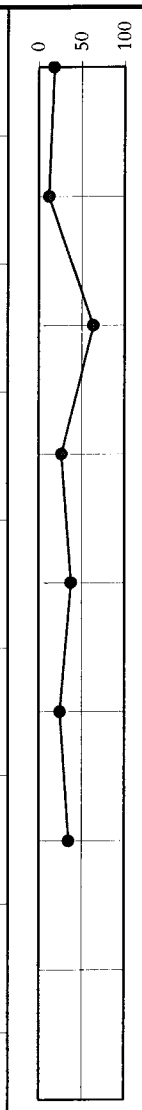
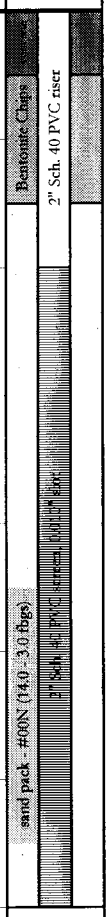
FIELD BOREHOLE/MONITORING INSTALLATION LOG

Project Name: Phase 1 BPA
Project Number: 0071-006-102
Client: Tecumseh Redevelopment, Inc.
Drilling Company: Earth Dimensions, Inc.
Driller: Brian Bartran
Helper: Harold
Rig Type: CME 85

BORING NUMBER: MW-18A
Location: Phase I BPA
Start Date/Time: 02/01/06 11:00 AM
End Date/Time: 02/01/06 12:20 PM
Logged By: TAB
Drilling Method: 4.25 HSA
Weather: overcast, cold, sl. breeze, Low 30's F

Elevation (fmsl)	Depth (fbgs)	Sample No.	Blows (per 6")	SPT N-Value	Recovery	SAMPLE DESCRIPTION USCS Classification: Color, Moisture Condition, Percentage of Soil Type, Texture, Plasticity, Fabric, Bedding, Weathering/Fracturing, Odor, Other	USCS Code	PID Scan (ppm)	PID HDSP (ppm)	Soil Unit
584.00	0	S1	5 9 9 8	18	1.0	(0.0 - 0.9) **SOIL/FILL:** Black/Dark Brown, moist, dense, LWD, 90% NPF 10% Fine sand, w/ slag & brick debris (0.9 - 1.2) **SANDY LEAN CLAY:** Medium brown, stiff, moist, 60% MPF, 40% Fine sand (1.2 - 1.8) Same as S1 (0.0 - 0.9)	FILL CL FILL	0.0	0.0	FILL CLAY FILL
582.00	2	S2	3 4 8 11	12	1.8	**SANDY LEAN CLAY:** Medium brown, stiff, slow dilatency, moist, 70% MPF, 30% Fine sand w/ gravel	CL	0.0	0.0	CLAY
580.00	4	S3	9 42 22 9	64	1.1	Same as S2, wet	CL	0.0	0.0	CLAY
578.00	6	S4	9 12 15 16	27	1.1	Same as S2 w/ iron staining	CL	0.0	0.0	CLAY
576.00	8	S5	8 11 27 15	38	1.3	Same as S2	CL	0.0	0.0	CLAY
574.00	10	S6	7 10 15 15	25	1.7	Same as S2 w/ angular gravel form (0.2 - 0.3) & (1.1 - 1.2)	CL	0.0	0.0	CLAY
572.00	12	S7	7 18 17 29	35	1.1	**SANDY LEAN CLAY:** Medium grey, stiff, moist, 70% MPF, 30% Fine sand, slow dialatency, with angular gravel	CL	0.0	0.0	CLAY
570.00	14					EOB @ 14.0 fbgs				
568.00	16									
566.00	18									





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SS = split spoon

URS Corporation

TEST BORING LOG

PROJECT:	Supplemental SWMU Investigation
CLIENT:	Bethlehem Steel Corp.
BORING CONTRACTOR:	SJB Services Inc
BORING NO:	P-44S
SHEET:	1 of 1
JOB NO.:	4200008BSC.15
BORING LOCATION:	S of Riefler Concrete
GROUND ELEVATION:	
DATE STARTED:	01/18/01
DATE FINISHED:	01/18/01
DRILLER:	D. Mathies
GEOLOGIST:	J. Doerr
REVIEWED BY:	J. Boyd

GROUNDWATER:

DATE	TIME	LEVEL	TYPE

	CAS.	SAMPLER	CORE	TUBE
TYPE		Split spoon		
DIA.		2"		
WT.		140#		
FALL		30"		

* POCKET PENETROMETER READING

DEPTH FEET	SAMPLE STRATA	NO.	TYPE	BLOWS PER 6"		REC% ROD%	DESCRIPTION COLOR	CONSIST HARD	MATERIAL DESCRIPTION	USCS	REMARKS PID	REMARKS Moist
		1	SS	3	4	30%	Red/ Black	Medium Dense	0.0-6.0: FILL; Brick and concrete, some silt and sand, ash and cinder		0.0	Moist
				9	50/3							
		2	SS	50/0		10%		Very Dense	2.0-4.0: Concrete Floor		0.0	
5		3	SS	1	2	20%	Gray	Very Loose			0.0	
				1/12								
		4	SS	1	2	30%	Blue/ Gray	Loose	6.0-15.0: Medium to coarse SAND, some fine sand, trace fine gravel and silt	SP	0.0	Wet
				3	1							
		5	SS	2	2	60%		Medium Dense			0.0	
10				9	9							
		6	SS	3	4	80%	Blue				0.0	
				6	8							
		7	SS	5	7	75%					0.0	
				9	7							
15									End Boring at 15' BGS			
20												
25												
30												
35												

Comments: Boring advanced with ATV mounted CME 550 utilizing 4 1/4-inch HSA for piezometers Sampling accomplished with a 2-inch split barrel sampler.

PROJECT NO.	4200008BSC.15
BORING NO.	P-44S

DRILLING SUMMARY

Geologist:
John Doerr

Drilling Company:
SJB Services, Inc.

Driller:
D. Mathies

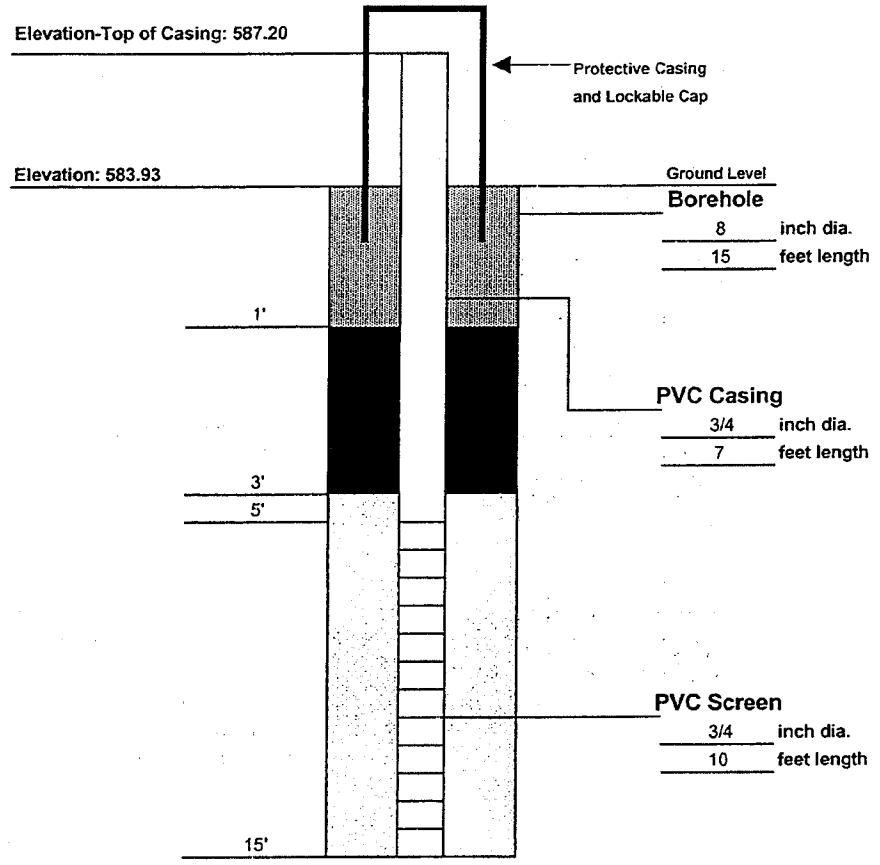
Rig Make/Model:
CME 550

Date:
1/18/01

GEOLOGIC LOG

Depth(ft.)	Description
0.0-2.0	FILL: Brick , concrete
	Some silt and fine to
	coarse sand
2.0-4.0	Concrete floor
4.0-6.0	Cinder and ash
6.0-15.0	Coarse SAND

DEPTH



WELL DESIGN

CASING MATERIAL	SCREEN MATERIAL	FILTER MATERIAL
Surface: 4" Steel Protective Casing	**Type:** 3/4" Schedule 80 PVC	**Type:** #2 Sand **Setting:** 3'-15'
Monitor: 3/4" Schedule 80 PVC	**Slot Size:** .010"	**SEAL MATERIAL**
		Type: Bentonite **Setting:** 1'-3'

COMMENTS:

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: Bethlehem Steel Corp.	**Location: Lackawanna, NY**	**Project No.: 4200008BSC.15**
URS Corporation	**PIEZOMETER CONSTRUCTION DETAILS**	**Piezometer Number: P-44S**

URS Corporation

TEST BORING LOG

PROJECT:	Supplemental SWMU Investigation
CLIENT:	Bethlehem Steel Corp.
BORING CONTRACTOR:	SJB Services Inc
GROUNDWATER:	

	CAS.	SAMPLER	CORE	TUBE
TYPE		Split spoon		
DIA.		2"		
WT.		140#		
FALL		30"		
* POCKET PENETROMETER READING				

DATE	TIME	LEVEL	TYPE

BORING NO:	P-45S
SHEET:	1 of 1
JOB NO.:	4200008BSC.15
BORING LOCATION:	E of Power House
GROUND ELEVATION:	
DATE STARTED:	01/18/01
DATE FINISHED:	01/18/01
DRILLER:	D. Mathies
GEOLOGIST:	J. Doerr
REVIEWED BY:	J. Boyd

DEPTH FEET	SAMPLE STRATA	NO.	TYPE	BLOWS PER 6"		REC% ROD%	DESCRIPTION COLOR	CONSIST HARD	MATERIAL DESCRIPTION	USCS	REMARKS PID	REMARKS Moist
		1	SS	3	5	20%	Dark Brown	Medium Dense	0.0-11.0: FILL; Fine to coarse sand and silt, some brick, trace gravel. (slag)		0.0	Moist
				8	50/4							
		2	SS	6	9	20%					0.0	
				6	10							
5		3	SS	5	7	30%					0.0	Wet
				18	22							
		4	SS	11	9	25%					0.0	
				8	10							
		5	SS	4	7	0%					0.0	
10				3	4							
				50/2							0.0	
									End of Boring at 11' BGS, due to auger refusal.			
15												
20												
25												
30												
35												

Comments: Boring advanced with a fully tracked Nodwell ATV mounted CME 75 using 4-1/4 inch HSA. Sampling accomplished with a 2-inch split barrel sampler. WoH = Weight of Hammer.

PROJECT NO.	4200008BSC.15
BORING NO.	P-45S

J:\420008bsc.15\draft logs\BSC piezo boring logs\P-45S

DRILLING SUMMARY

Geologist:
[illegible]oerr

[illegible]g Company:
SJB Services, Inc.

Driller:
D. Mathies

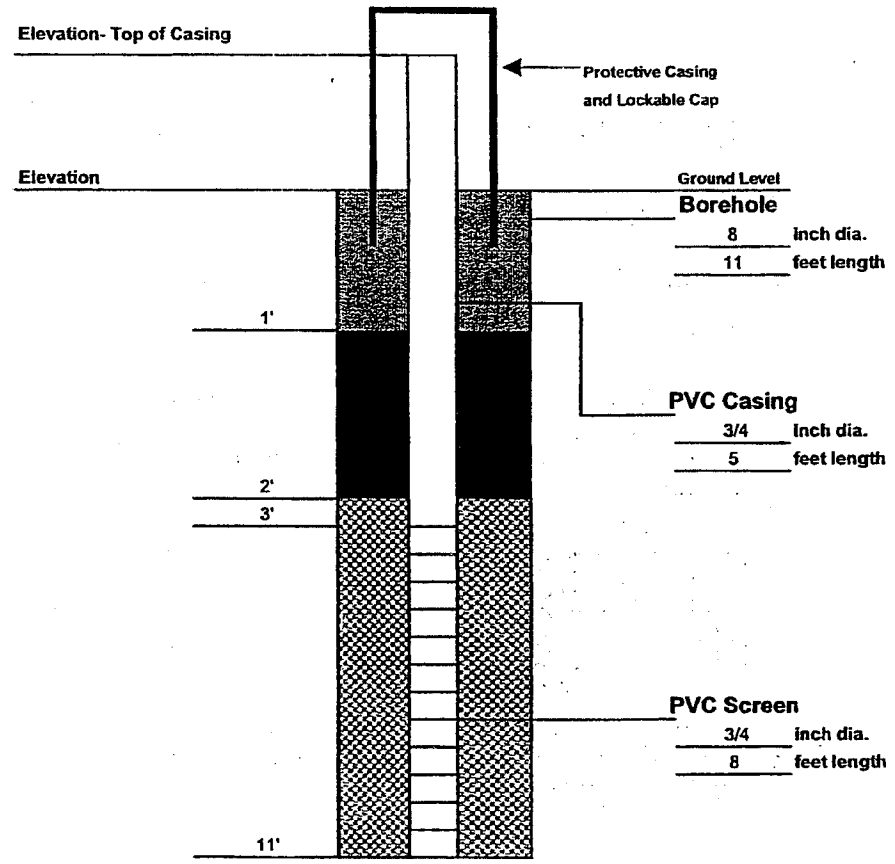
Rig Make/Model:
CME 550

Date:
1/18/2001

GEOLOGIC LOG

Depth(ft.)	Description
0.0-8.0	FILL: Fine to coarse sand some silt, trace fine to coarse gravel, brick
8.0-11.0	FILL: Fine sand and silt

DEPTH



WELL DESIGN

CASING MATERIAL	SCREEN MATERIAL	FILTER MATERIAL
Surface: 4" Steel Protective Casing	**Type:** 3/4" Schedule 80 PVC	Type: #2 Sand Setting: 2'-11'
Monitor: 3/4" Schedule 80 PVC	**Slot Size:** .010"	**SEAL MATERIAL** Type: Bentonite Setting: 1'-2'

COMMENTS:
Auger refusal at 11.0' set 8' screen

LEGEND
- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

t: Bethlehem Steel Corp.	Location: Lackawanna, NY	Project No.: 4200008BSC.15
URS Corporation	PIEZOMETER CONSTRUCTION DETAILS	Piezometer Number: P-45S

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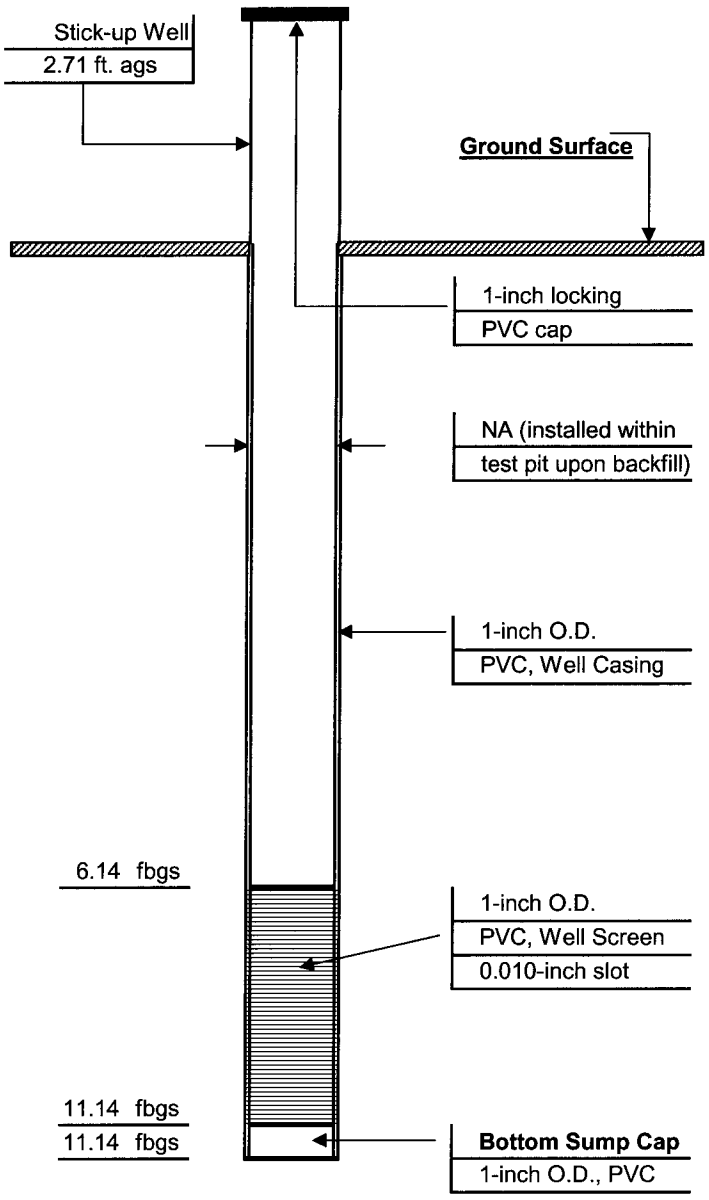
2/7/2001

STICK-UP PIEZOMETER COMPLETION DETAIL

Project Name:	Phase I Business Park Area	WELL NUMBER:	**P-50S**
Client:	Tecumseh Redevelopment, Inc.	Date Installed:	01/10/06
Boring Location:	Phase I BPA	Project Number:	0071-006-202



Driller Information

Company:	Earth Dimensions, Inc.
Driller:	Brian Bartron
Helper:	Harold
Permit Number:	*NA*
Drill Rig Type:	CME 85

Well Information

Land Surface Elevation:	581.43	fmsl (approximate)
Drilling Method:	installed within test pit upon backfill	
Soil Sample Collection Method:	excavator bucket	
Drilling Fluid:	*none*	
Fluid Loss During Drilling:	*none*	gallons (approximate)

Material of Well Construction

Casing:	1-inch Schedule 40 PVC
Screen:	1-inch Schedule 40 PVC, 0.010-inch slot
Sump:	*none*
Sand Pack:	*none*
Annular Seal:	*none*

Well Development

Well Purpose:	
Techneque(s):	
Date Completed:	
BM/TK Personnel:	
Total Volume Purged:	gallons
Static Water Level:	fbTOR
Pump Depth:	
Pumping Dur[illegible]	minutes
Yeild:	gpm
Specific Capacity:	gpm/ft

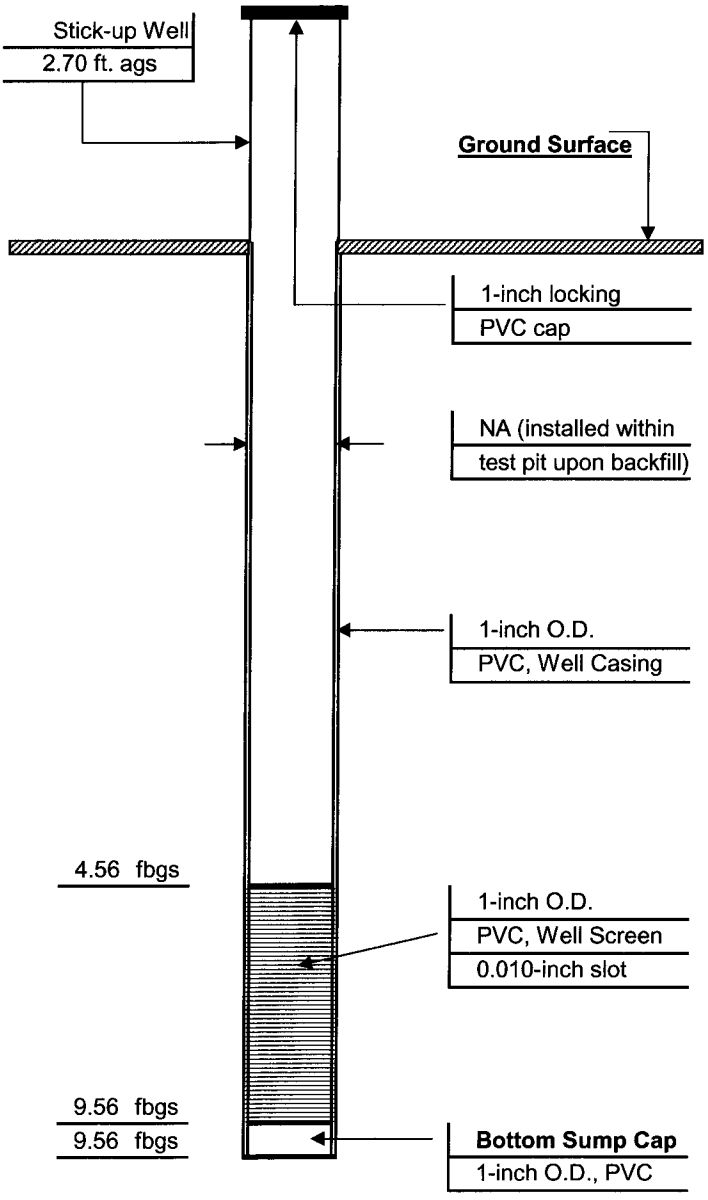
NOT APPLICABLE

Comments:

PREPARED BY: DATE: 06/05/07

STICK-UP PIEZOMETER COMPLETION DETAIL

Project Name:	Phase I Business Park Area	WELL NUMBER:	**P-51S**
Client:	Tecumseh Redevelopment, Inc.	Date Installed:	01/11/06
Boring Location:	Phase I BPA	Project Number:	0071-006-202



Driller Information

Company:	Earth Dimensions, Inc.
Driller:	Brian Bartron
Helper:	Harold
Permit Number:	*NA*
Drill Rig Type: CME 85	

Well Information

Land Surface Elevation:	582.39	fmsl (approximate)
Drilling Method:	installed within test pit upon backfill	
Soil Sample Collection Method:	excavator bucket	
Drilling Fluid:	*none*	
Fluid Loss During Drilling:	*none*	gallons (approximate)

Material of Well Construction

Casing:	1-inch Schedule 40 PVC
Screen:	1-inch Schedule 40 PVC, 0.010-inch slot
Sump:	*none*
Sand Pack:	*none*
Annular Seal:	*none*

Well Development

Well Purpose:	
Techneque(s):	
Date Completed:	
BM/TK Personnel:	
Total Volume Purged:	gallons
Static Water Level:	fbTOR
Pump Depth:	
Pumping Dur[illegible]	minutes
Yeild:	gpm
Specific Capacity:	gpm/ft

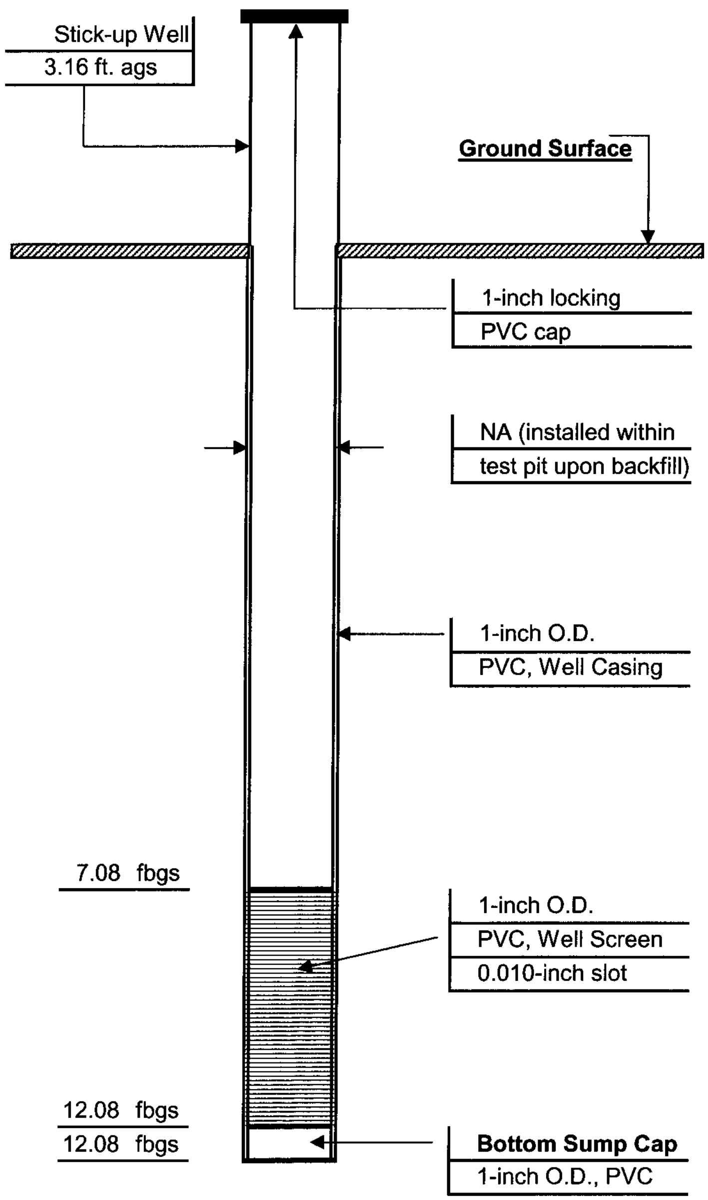
NOT APPLICABLE

Comments:

PREPARED BY: [signature] DATE: 06/05/07

STICK-UP PIEZOMETER COMPLETION DETAIL

Project Name:	Phase I Business Park Area	WELL NUMBER:	**P-52S**
Client:	Tecumseh Redevelopment, Inc.	Date Installed:	01/17/06
Boring Location:	Phase I BPA	Project Number:	0071-006-202



Driller Information

Company:	Earth Dimensions, Inc.
Driller:	Brian Bartron
Helper:	Harold
Permit Number:	*NA*
Drill Rig Type:	CME 85

Well Information

Land Surface Elevation:	583.20	fmsl (approximate)
Drilling Method:	installed within test pit upon backfill	
Soil Sample Collection Method:	excavator bucket	
Drilling Fluid:	*none*	
Fluid Loss During Drilling:	*none*	gallons (approximate)

Material of Well Construction

Casing:	1-inch Schedule 40 PVC
Screen:	1-inch Schedule 40 PVC, 0.010-inch slot
Sump:	*none*
Sand Pack:	*none*
Annular Seal:	*none*

Well Development

NOT APPLICABLE

Well Purpose:		
Techneque(s):		
Date Completed:		
BM/TK Personnel:		
Total Volume Purged:		gallons
Static Water Level:		fbTOR
Pump Depth:		
Pumping Duration:		minutes
Yeild:		gpm
Specific Capacity:		gpm/ft

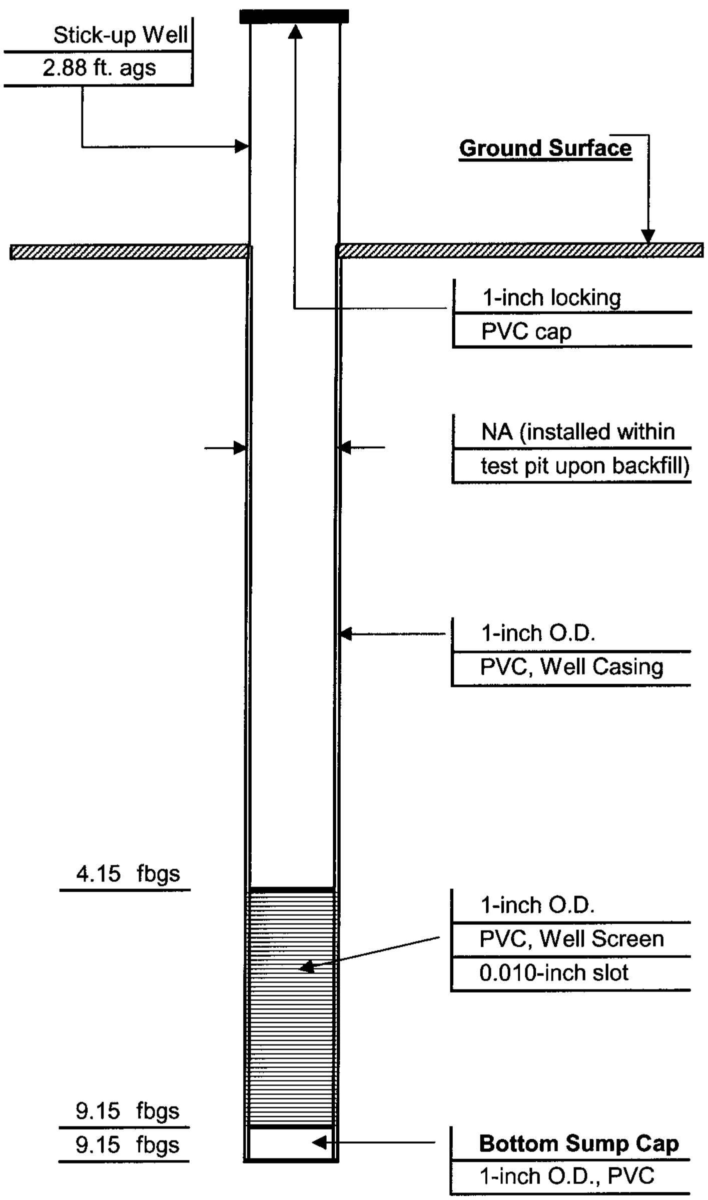
Comments:

PREPARED BY: [signature] DATE: 06/05/07

P-52S.xls

STICK-UP PIEZOMETER COMPLETION DETAIL

Project Name:	Phase I Business Park Area	WELL NUMBER:	**P-54S**
Client:	Tecumseh Redevelopment, Inc.	Date Installed:	01/23/06
Boring Location:	Phase I BPA	Project Number:	0071-006-202



Driller Information

Company:	Earth Dimensions, Inc.
Driller:	Brian Bartron
Helper:	Harold
Permit Number:	*NA*
Drill Rig Type:	CME 85

Well Information

Land Surface Elevation:	583.28	fmsl (approximate)
Drilling Method:	installed within test pit upon backfill	
Soil Sample Collection Method:	excavator bucket	
Drilling Fluid:	*none*	
Fluid Loss During Drilling:	*none*	gallons (approximate)

Material of Well Construction

Casing:	1-inch Schedule 40 PVC
Screen:	1-inch Schedule 40 PVC, 0.010-inch slot
Sump:	*none*
Sand Pack:	*none*
Annular Seal:	*none*

Well Development

NOT APPLICABLE

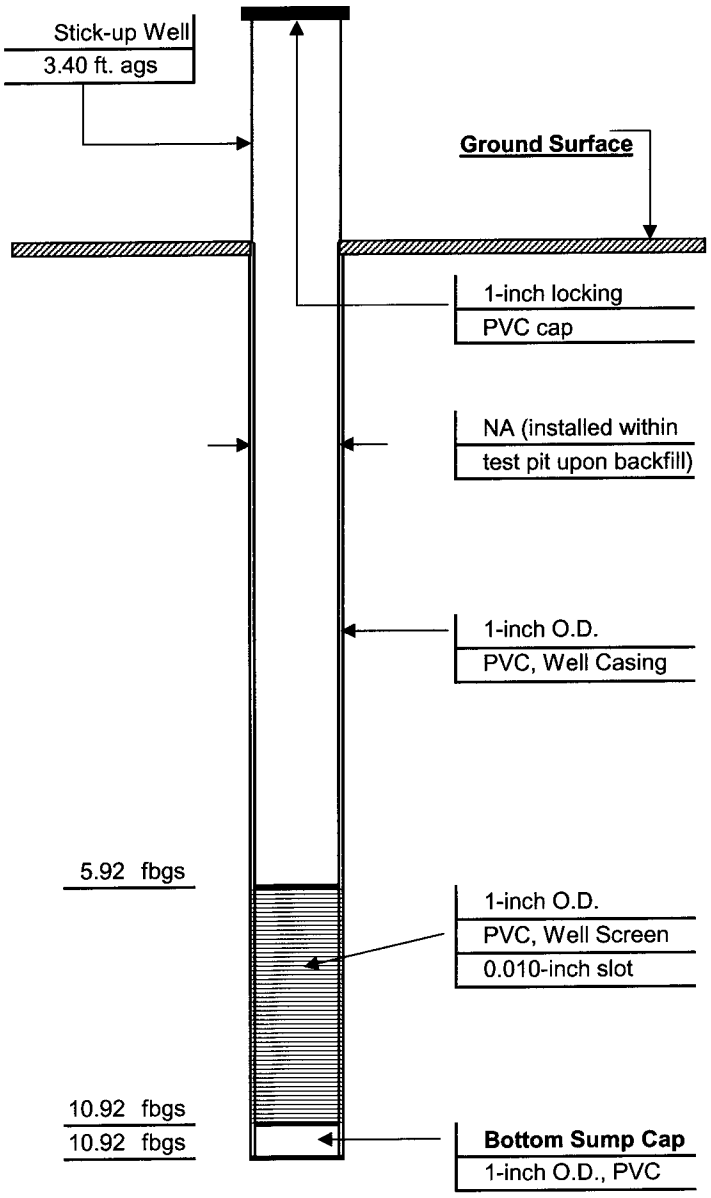
Well Purpose:	
Techneque(s):	
Date Completed:	
BM/TK Personnel:	
Total Volume Purged:	gallons
Static Water Level:	fbTOR
Pump Depth:	
Pumping Duration:	minutes
Yeild:	gpm
Specific Capacity:	gpm/ft

Comments:

PREPARED BY: [signature] DATE: 06/05/07

STICK-UP PIEZOMETER COMPLETION DETAIL

Project Name:	Phase I Business Park Area	WELL NUMBER:	**P-55S**
Client:	Tecumseh Redevelopment, Inc.	Date Installed:	01/18/06
Boring Location:	Phase I BPA	Project Number:	0071-006-202



Driller Information

Company:	Earth Dimensions, Inc.
Driller:	Brian Bartron
Helper:	Harold
Permit Number:	*NA*
Drill Rig Type:	CME 85

Well Information

Land Surface Elevation:	582.95	fmsl (approximate)
Drilling Method:	installed within test pit upon backfill	
Soil Sample Collection Method:	excavator bucket	
Drilling Fluid:	*none*	
Fluid Loss During Drilling:	*none*	gallons (approximate)

Material of Well Construction

Casing:	1-inch Schedule 40 PVC
Screen:	1-inch Schedule 40 PVC, 0.010-inch slot
Sump:	*none*
Sand Pack:	*none*
Annular Seal:	*none*

Well Development

Well Purpose:	
Techneque(s):	
Date Completed:	
BM/TK Personnel:	
Total Volume Purged:	gallons
Static Water Level:	fbTOR
Pump Depth:	
Pumping Dur[illegible]	minutes
Yeild:	gpm
Specific Capacity:	gpm/ft

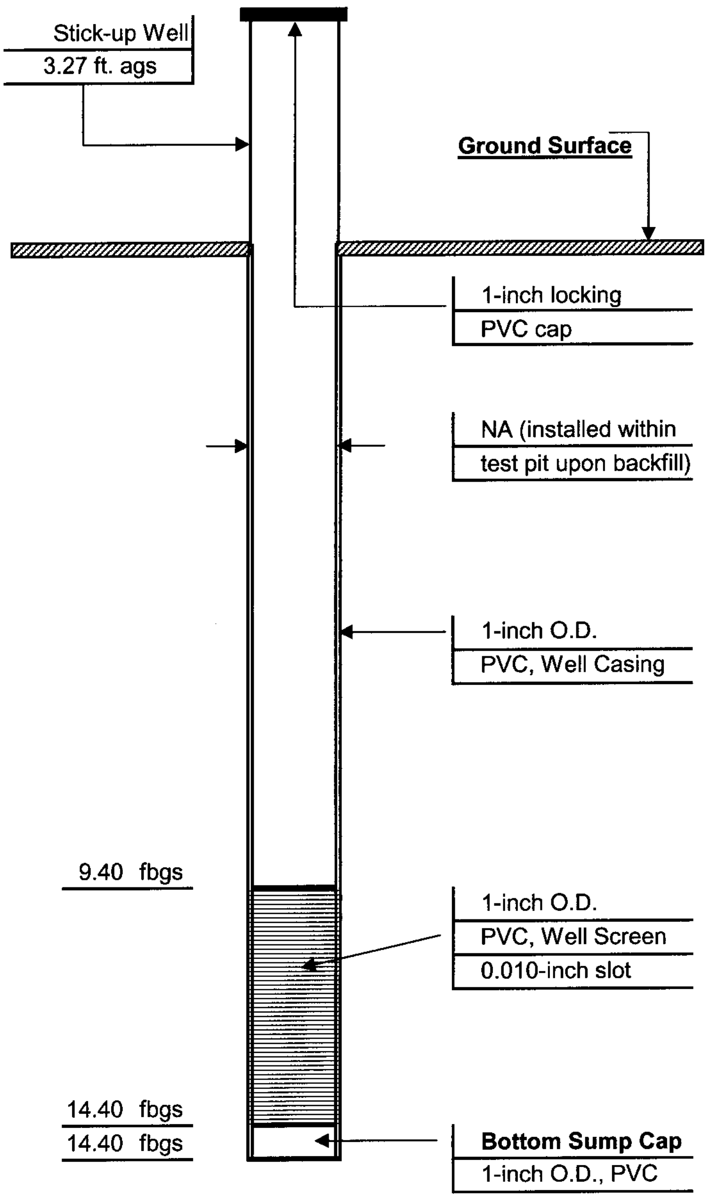
NOT APPLICABLE

Comments:

PREPARED BY: [signature] DATE: 06/05/07

STICK-UP PIEZOMETER COMPLETION DETAIL

Project Name:	Phase I Business Park Area	WELL NUMBER:	**P-56S**
Client:	Tecumseh Redevelopment, Inc.	Date Installed:	01/20/06
Boring Location:	Phase I BPA	Project Number:	0071-006-202



Driller Information

Company:	Earth Dimensions, Inc.
Driller:	Brian Bartron
Helper:	Harold
Permit Number:	*NA*
Drill Rig Type:	CME 85

Well Information

Land Surface Elevation:	583.28	fmsl (approximate)
Drilling Method:	installed within test pit upon backfill	
Soil Sample Collection Method:	excavator bucket	
Drilling Fluid:	*none*	
Fluid Loss During Drilling:	*none*	gallons (approximate)

Material of Well Construction

Casing:	1-inch Schedule 40 PVC
Screen:	1-inch Schedule 40 PVC, 0.010-inch slot
Sump:	*none*
Sand Pack:	*none*
Annular Seal:	*none*

Well Development

NOT APPLICABLE

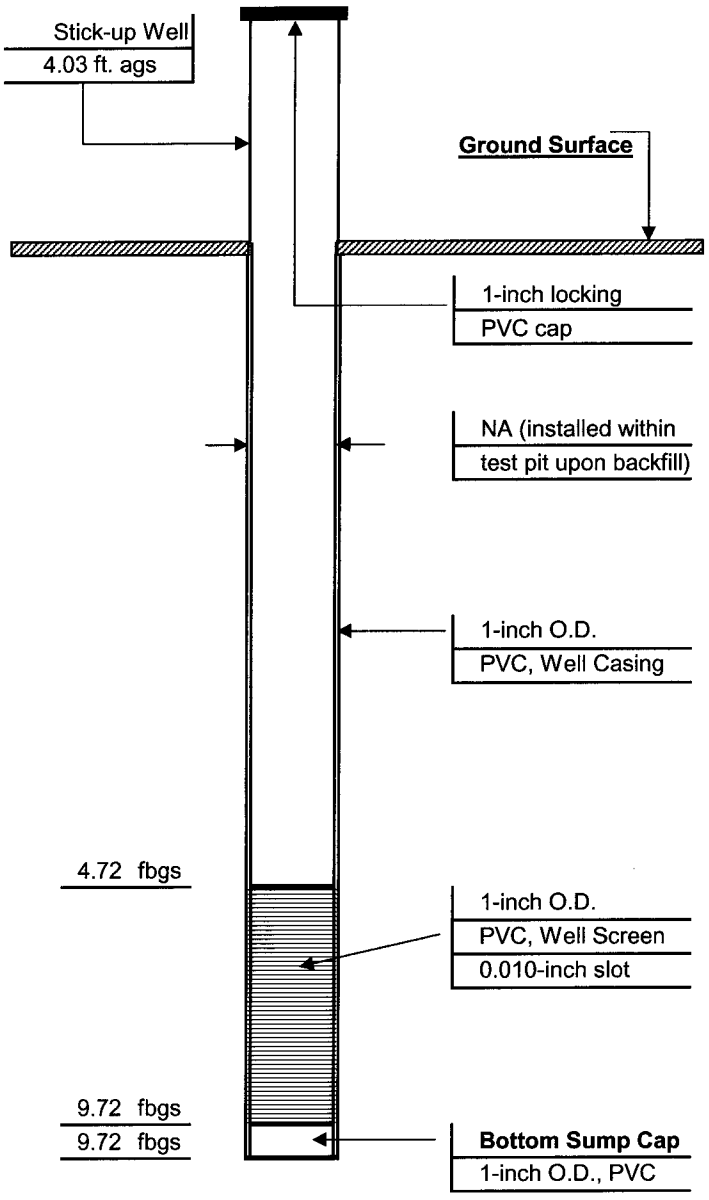
Well Purpose:		
Techneque(s):		
Date Completed:		
BM/TK Personnel:		
Total Volume Purged:		gallons
Static Water Level:		fbTOR
Pump Depth:		
Pumping Duration:		minutes
Yeild:		gpm
Specific Capacity:		gpm/ft

Comments:

PREPARED BY: [signature] DATE: 06/05/07

STICK-UP PIEZOMETER COMPLETION DETAIL

Project Name:	Phase I Business Park Area	WELL NUMBER:	**P-57S**
Client:	Tecumseh Redevelopment, Inc.	Date Installed:	01/17/06
Boring Location:	Phase I BPA	Project Number:	0071-006-202



Driller Information

Company:	Earth Dimensions, Inc.
Driller:	Brian Bartron
Helper:	Harold
Permit Number:	*NA*
Drill Rig Type:	CME 85

Well Information

Land Surface Elevation:	581.37	fmsl (approximate)
Drilling Method:	installed within test pit upon backfill	
Soil Sample Collection Method:	excavator bucket	
Drilling Fluid:	*none*	
Fluid Loss During Drilling:	*none*	gallons (approximate)

Material of Well Construction

Casing:	1-inch Schedule 40 PVC
Screen:	1-inch Schedule 40 PVC, 0.010-inch slot
Sump:	*none*
Sand Pack:	*none*
Annular Seal:	*none*

Well Development

Well Purpose:	
Techneque(s):	
Date Completed:	
BM/TK Personnel:	
Total Volume Purged:	gallons
Static Water Level:	fbTOR
Pump Depth:	
Pumping Dur[illegible]	minutes
Yeild:	gpm
Specific Capacity:	gpm/ft

NOT APPLICABLE

Comments:

PREPARED BY: [signature] DATE: 06/05/07

P-57S.xls

APPENDIX B

TEST PIT EXCAVATION LOGS & MONITORING WELL SAMPLING LOGS

TEST PIT SUMMARY

Phase I Business Park Area
Tecumseh Redevelopment, Inc.
Lackawanna, New York

	Test pit No.	Depth to GW (fbgs)	Total Depth (fbgs)	Fill		Native?
AREA 1	TP - 1 - 1	4.0	9.0	0.0	6.0	yes
	TP - 1 - 2	5.0	5.0	0.0	5.0	no
	TP - 1 - 3	5.0	5.0	0.0	5.0	no
	TP - 1 - 4	5.0	5.5	0.0	5.5	yes
	TP - 1 - 5	2.5	3.2	0.0	3.2	no
	TP - 1 - 6	--	5.0	0.0	5.0	yes
	TP - 1 - 7	4.0	5.0	0.0	4.0	yes
	TP - 1 - 8	4.8	4.8	0.0	4.8	no
	TP - 1 - 9	4.8	4.8	0.0	4.8	no
	TP - 1 - 10	4.0	4.5	0.0	4.5	no
	TP - 1 - 11	4.0	4.5	0.0	4.5	no
	TP - 1 - 12	5.0	5.4	0.0	4.2	yes
	TP - 1 - 13	3.8	4.2	0.0	4.2	no
	TP - 1 - 14	2.8	3.5	0.0	3.5	no
	TP - 1 - 15	3.9	3.9	0.0	3.9	no
	TP - 1 - 16	--	5.0	0.0	4.0	yes
	TP - 1 - 17	4.8	5.0	0.0	4.8	yes
	TP - 1 - 18	--	5.0	0.0	5.0	no
	TP - 1 - 19	6.7	7.0	0.0	7.0	no
	TP - 1 - 20	4.8	5.0	0.0	5.0	no
	TP - 1 - 21	3.5	4.5	0.0	4.0	yes
	TP - 1 - 22	--	7.0	0.0	7.0	no
AREA 6	TP - 6 - 1	3.0	3.0	0.0	3.0	no
	TP - 6 - 2	6.0	6.5	0.0	6.5	no
	TP - 6 - 3	5.7	6.0	0.0	6.0	no
	TP - 6 - 4	5.0	5.5	0.0	5.5	no
	TP - 6 - 5	6.3	6.5	0.0	6.5	no
	TP - 6 - 6	5.5	6.0	0.0	6.0	no
	TP - 6 - 7	3.6	4.0	0.0	4.0	no
	TP - 6 - 8	3.8	4.0	0.0	4.0	no
	TP - 6 - 9	4.3	4.5	0.0	4.5	no
	TP - 6 - 10	5.6	6.0	0.0	6.0	no
AREA 7 & 8	TP - 7 - 1	--	7.0	0.0	5.5	yes
	TP - 7 - 2	4.5	5.3	0.0	4.0	yes
	TP - 7 - 3	5.0	5.5	0.0	5.5	no
	TP - 8 - 4	3.0	5.5	0.0	1.0	yes
	TP - 7 - 4	3.5	4.5	0.0	3.5	yes
	TP - 7 - 5	--	6.0	0.0	5.0	yes
	TP - 7 - 6	6.0	7.0	0.0	7.0	no
	TP - 7 - 7	3.5	5.0	0.0	3.0	yes
	TP - 7 - 8	2.0	2.5	0.0	1.0	yes

TEST PIT SUMMARY

Phase I Business Park Area
Tecumseh Redevelopment, Inc.
Lackawanna, New York

	Test pit No.	Depth to GW (fbgs)	Total Depth (fbgs)	Fill		Native?
AREA 8	TP - 8 - 1	3.5	7.0	0.0	3.5	yes
	TP - 8 - 2	6.5	7.0	0.0	1.5	yes
	TP - 8 - 3	4.0	4.5	0.0	4.5	no
	TP - 8 - 5	4.5	5.0	0.0	1.0	yes
	TP - 8 - 6	3.0	3.5	0.0	3.5	no
AREA 4	TP - 4 - 1	3.5	3.5	0.0	3.5	no
	TP - 4 - 2	3.0	3.0	0.0	3.0	no
	TP - 4 - 3	3.0	3.0	0.0	3.0	no
	TP - 4 - 4	3.0	3.0	0.0	3.0	no
	TP - 4 - 5	2.0	2.5	0.0	2.5	no
AREA 2	TP - 2 - 1	5.5	6.0	0.0	6.0	no
	TP - 2 - 2	4.0	4.5	0.0	4.5	no
	TP - 2 - 3	4.0	4.5	0.0	4.5	no
AREA 3	TP - 3 - 1	3.0	3.5	0.0	3.5	no
	TP - 3 - 2	3.0	4.0	0.0	3.0	yes
AREA 5	TP - 5 - 1	3.5	3.5	0.0	3.5	no
	TP - 5 - 2	4.0	4.0	0.0	4.0	no
	TP - 5 - 3	4.5	4.5	0.0	4.5	no
	TP - 5 - 4	4.0	4.0	0.0	3.0	yes
	TP - 5 - 5	3.5	3.5	0.0	3.5	no
	TP - 5 - 6	3.0	3.0	0.0	3.0	no
	TP - 5 - 7	2.0	2.0	0.0	2.0	no
	TP - 5 - 8	3.0	3.5	0.0	3.5	no
	TP - 5 - 9	4.0	4.0	0.0	4.0	no
	TP - 5 - 10	2.5	3.0	0.0	3.0	no
	TP - 5 - 11	4.0	4.5	0.0	4.5	no
	TP - 5 - 12	3.5	4.0	0.0	4.0	no
AREA 9	TP - 9 - 1	3.5	3.5	0.0	3.5	no
	TP - 9 - 2	7.0	7.5	0.0	1.0	yes
	TP - 9 - 3	4.5	6.0	0.0	6.0	no
	TP - 9 - 4	~ REFUSAL ~				
	TP - 9 - 5	4.5	4.5	0.0	1.0	yes

TEST PIT SUMMARY

Phase I Business Park Area
Tecumseh Redevelopment, Inc.
Lackawanna, New York

	Test pit No.	Depth to GW (fbgs)	Total Depth (fbgs)	Fill		Native?
AREA 10	TP - 10 - 1	--	9.0	0.0	1.0	yes
	TP - 10 - 2	2.5	4.0	0.0	1.0	yes
	TP - 10 - 3	--	4.0	0.0	1.5	yes
	TP - 10 - 4	2.5	3.0	0.0	1.0	yes
	TP - 10 - 5	2.0	3.0	0.0	1.0	yes
	TP - 10 - 6	5.5	10.0	0.0	1.0	yes
	TP - 10 - 7	2.5	3.0	0.0	1.0	yes
	TP - 10 - 8	3.0	4.0	0.0	3.0	yes
	TP - 10 - 9	--	5.5	0.0	1.0	yes

Average:	4.0	4.8	3.8
Minimum:	2.0	2.0	1.0
Maximum:	7.0	10.0	7.0
S.D.	1.2	1.5	1.7

	Test pit No.	Headspace scan (ppm)	Field Scan (ppm)	
			Surface	Sub-surface
AREA 1	TP - 1 - 1	5.0	0.0	0.0
	TP - 1 - 2	1.1	0.0	0.5
	TP - 1 - 3	1.1	0.0	0.0
	TP - 1 - 4	0.4	0.0	1.4
	TP - 1 - 5	0.8	0.0	0.0
	TP - 1 - 6	2.8	0.0	5.7
	TP - 1 - 7	2.7	1.8	0.0
	TP - 1 - 8	0.6	0.0	0.0
	TP - 1 - 9	1.4	2.4	0.2
	TP - 1 - 10	2.2	0.0	0.0
	TP - 1 - 11	0.5	0.0	0.0
	TP - 1 - 12	0.8	2.1	4.3
	TP - 1 - 13	2.3	0.0	0.0
	TP - 1 - 14	2.0	0.0	0.0
	TP - 1 - 15	0.4	0.0	0.0
	TP - 1 - 16	0.7	0.0	0.0
	TP - 1 - 17	0.0	0.0	0.0
	TP - 1 - 18	0.0	--	--
	TP - 1 - 19	0.0	--	--
	TP - 1 - 20	0.0	0.0	0.0
	TP - 1 - 21	0.0	0.0	0.0
	TP - 1 - 22	0.0	0.0	0.0
AREA 6	TP - 6 - 1	0.0	0.0	0.0
	TP - 6 - 2	0.0	0.0	0.3
	TP - 6 - 3	0.0	1.0	1.1
	TP - 6 - 4	0.0	0.0	0.2
	TP - 6 - 5	0.0	0.0	0.0
	TP - 6 - 6	0.0	0.0	0.0
	TP - 6 - 7	0.0	0.0	0.0
	TP - 6 - 8	0.0	0.0	0.0
	TP - 6 - 9	0.0	0.0	0.0
	TP - 6 - 10	0.0	0.0	0.0
AREA 7 & 8	TP - 7 - 1	0.0	0.0	0.0
	TP - 7 - 2	3123	0.0	12.8
	TP - 7 - 3	0.0	0.0	0.0
	TP - 8 - 4	0.0	0.0	0.0
	TP - 7 - 4	0.0	0.0	0.0
	TP - 7 - 5	0.0	0.0	0.0
	TP - 7 - 6	0.0	0.0	0.0
	TP - 7 - 7	0.0	0.0	0.0
	TP - 7 - 8	**	**	**
AREA 8	TP - 8 - 1	0.0	0.0	0.0
	TP - 8 - 2	0.0	--	--
	TP - 8 - 3	0.0	--	--
	TP - 8 - 5	0.0	--	--
	TP - 8 - 6	0.0	0.0	0.0

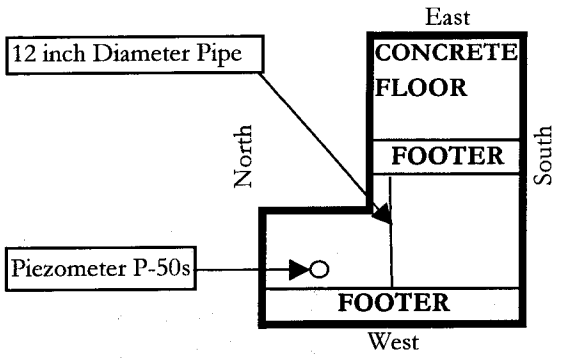
	Test pit No.	Headspace scan (ppm)		Field Scan (ppm)	
				Surface	Sub-surface
AREA 4	TP - 4 - 1	0.0		--	--
	TP - 4 - 2	0.0		--	--
	TP - 4 - 3	0.0		--	--
	TP - 4 - 4	0.0		--	--
	TP - 4 - 5	0.0		--	--
AREA 2	TP - 2 - 1	0.0		--	--
	TP - 2 - 2	0.0		--	--
	TP - 2 - 3	0.0		--	--
AREA 3	TP - 3 - 1	0.0		0.0	0.0
	TP - 3 - 2	0.0		0.0	0.0
AREA 5	TP - 5 - 1	0.0		0.0	0.0
	TP - 5 - 2	0.0		0.0	0.0
	TP - 5 - 3	0.0		0.0	0.0
	TP - 5 - 4	0.0		0.0	0.0
	TP - 5 - 5	0.0		0.0	0.0
	TP - 5 - 6	0.0		0.0	0.0
	TP - 5 - 7	0.0		0.0	0.0
	TP - 5 - 8	0.0		0.0	0.0
	TP - 5 - 9	0.0		0.0	0.0
	TP - 5 - 10	0.0		0.0	0.0
	TP - 5 - 11	0.0		0.0	0.0
	TP - 5 - 12	0.0		0.0	0.0
AREA 9	TP - 9 - 1	0.0		0.0	0.0
	TP - 9 - 2	0.0		0.0	0.0
	TP - 9 - 3	surface 0.0	Sub- Surface 328 ppm	0.0	25.8
	TP - 9 - 5	0.0		0.0	0.0
AREA 10	TP - 10 - 1	216		0.0	10.2
	TP - 10 - 2	0.0		0.0	0.0
	TP - 10 - 3	0.0		0.0	0.0
	TP - 10 - 4	0.0		0.0	0.0
	TP - 10 - 5	0.0		0.0	0.0
	TP - 10 - 6	surface 25.3	Sub- Surface 3002 ppm	0.5	410
	TP - 10 - 7	0.0		0.0	0.0
	TP - 10 - 8	0.0		0.0	0.0
	TP - 10 - 9	0.0		0.0	0.0

-- No Field scans due to weather

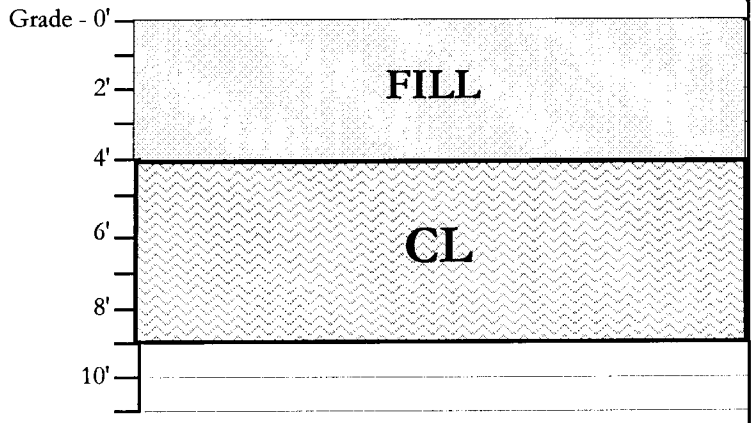
** No field scans performed, or headspace taken.

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-1-1**
Project No.:	0071-006-100	Excavation Date:	01/10/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	8:25	Length:	29.0 ft	(approx.)
End:	9:45	Width:	4 ft to 18 ft	(approx.)
		Depth:	9.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -4.0	**Fill:** Dark brown/Black, Moist to wet, Loose 80% NPF 10% Fine Sand 10% Large Gravel w/ wood and brick debris	FILL	Y	0.0 -2.0 2.0 5.0
4.0-9.0	**SANDY LEAN CLAY:** Medium gray/ wet, stiff, 70% MPF 30% Fine Sand w/ rootlets and wood fragments	CL	Y	

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 2.0 fbgs 0.0ppm SUB - SURFACE 2.0 - 5.0fbgs 0.0ppm

COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 2.0 FOR SVOC's AND METALS

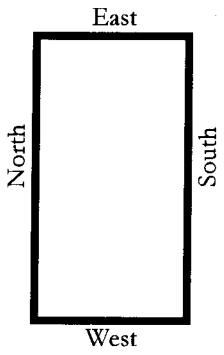
COLLECTED SOIL SAMPLE FROM 2.0 - 5.0 FOR VOC's, COMPOSITE FOR SVOC's AND METALS

INSTALLED PIEZOMETER P-50S AT ~9.0 fbgs

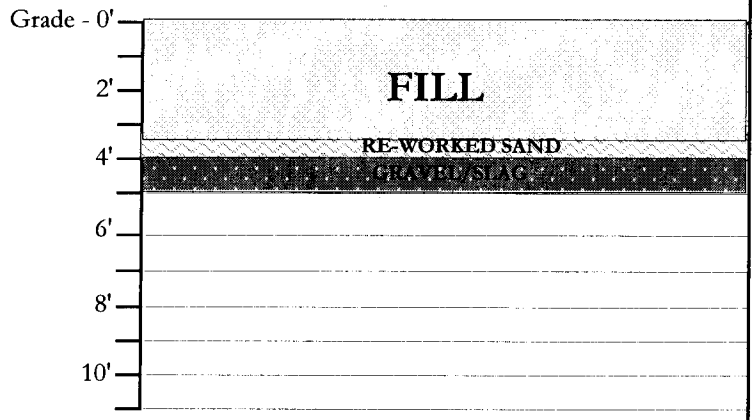
GROUNDWATER ENCOUNTERED:	4.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Concrete and piping, Headspace 5.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-1-2**
Project No.:	0071-006-100	Excavation Date:	01/10/26
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	10:00	Length:	25.0 ft	(approx.)
End:	10:20	Width:	4.0 ft	(approx.)
		Depth:	5.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -3.5	**Fill:** Dark brown/Black, Moist, Loose 80% NPF 10% Fine Sand 10% Large Gravel/Slag With Wood and Brick Fragments	FILL	Y	0.0 -2.0 2.0 5.0
3.5 - 4.0	**RE-WORKED SAND:** Medium gray/ moist, stiff, 70% MPF 30% Fine Sand w/ rootletts and wood debris	RE-WORKED SAND	Y	2.0 - 5.0
4.0 - 5.0	**GRAVEL/SLAG:** Brown to Black/ wet, 80% gravel/slag, 20% Fine Sand	GRAVEL/ SLAG	Y	

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 2.0 fbgs 0.0ppm SUB - SURFACE 2.0 - 5.0fbgs 0.5ppm

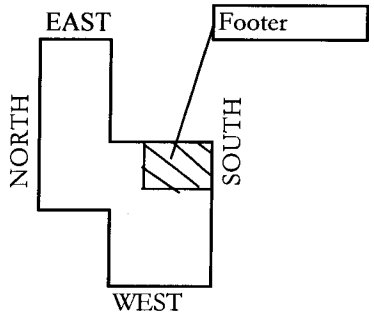
COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 2.0 FOR SVOC's AND METALS

COLLECTED SOIL SAMPLE FROM 2.0 - 5.0 FOR VOC's, COMPOSITE FOR SVOC's AND METALS

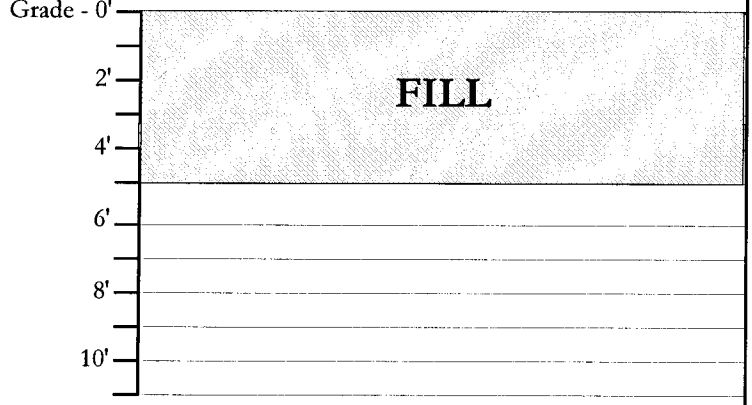
GROUNDWATER ENCOUNTERED:	5.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 1.1 ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-1-3**
Project No.:	0071-006-100	Excavation Date:	01/10/26
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	10:30	Length:	31.0 ft	(approx.)
End:	10:50	Width:	4.0 ft	(approx.)
		Depth:	5.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -5.0	**Fill:** Dark brown/Black, Moist to wet, Loose 80% NPF 20% Fine Sand W/ Brick, Wood steel	FILL	Y	0.0 -2.0 2.0 5.0

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 2.0 fbgs 0.0ppm SUB - SURFACE 2.0 - 5.0fbgs 0.0ppm

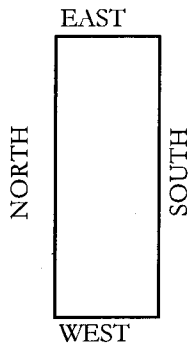
COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 2.0 FOR SVOC's AND METALS

COLLECTED SOIL SAMPLE FROM 2.0 - 5.0 FOR VOC's, COMPOSITE FOR SVOC's AND METALS

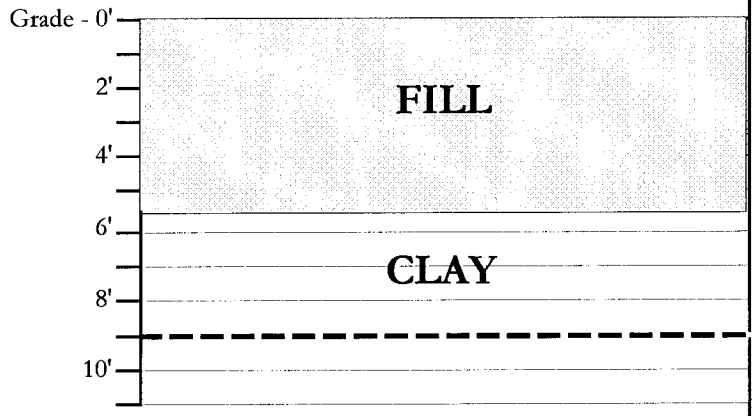
GROUNDWATER ENCOUNTERED:	5.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	Musty odor
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 1.1 ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-1-4**
Project No.:	0071-006-100	Excavation Date:	01/10/26
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	11:00	Length:	26.0 ft	(approx.)
End:	11:25	Width:	4.0 ft	(approx.)
		Depth:	5.5 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -5.5	**Fill:** Dark brown/Black, Moist to wet, Loose 80% NPF 20% Fine Sand W/ Brick, Wood steel	FILL	Y	0.0 -2.0 2.0 5.0
5.5 - ???	**SANDY LEAN CLAY:** Medium gray/ wet, stiff, 70% MPF 30% Fine Sand, Depth of Layer Undetermined	CL	Y	

FIELD MEASUREMENTS:

PID (ppm): **SURFACE 0.0 - 2.0 fbgs 0.0ppm SUB - SURFACE 2.0 - 5.0fbgs 1.4ppm**

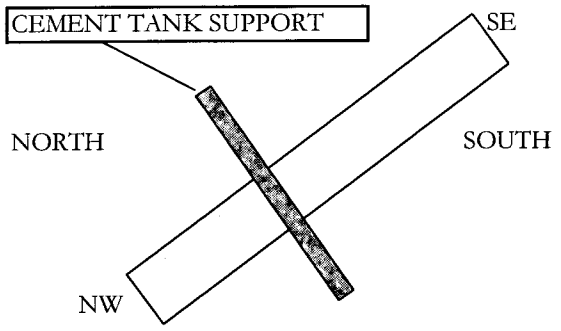
COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 2.0 FOR SVOC's AND METALS

COLLECTED SOIL SAMPLE FROM 2.0 - 5.0 FOR VOC's, COMPOSITE FOR SVOC's AND METALS

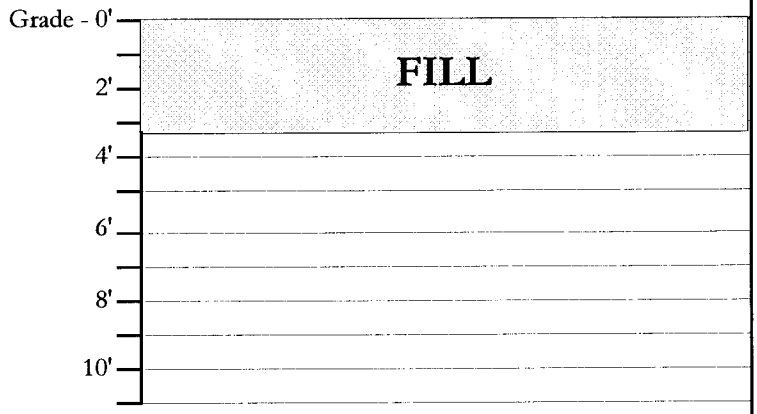
GROUNDWATER ENCOUNTERED:	5.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.4 ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-1-5**
Project No.:	0071-006-100	Excavation Date:	01/10/26
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	11:00	Length:	32.0 ft	(approx.)
End:	11:25	Width:	4.0 ft	(approx.)
		Depth:	3.2 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -3.2	**Fill:** Dark brown/Black, Moist to wet, Loose 80% NPF 20% Fine Sand W/ Refractory Brick and Large pieces of concrete	FILL	Y	0.0 -2.0 2.0 3.0

FIELD MEASUREMENTS:

PID (ppm): **SURFACE 0.0 - 2.0 fbgs 0.0ppm SUB - SURFACE 2.0 - 3.0fbgs 1.4ppm**

COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 2.0 FOR SVOC's AND METALS

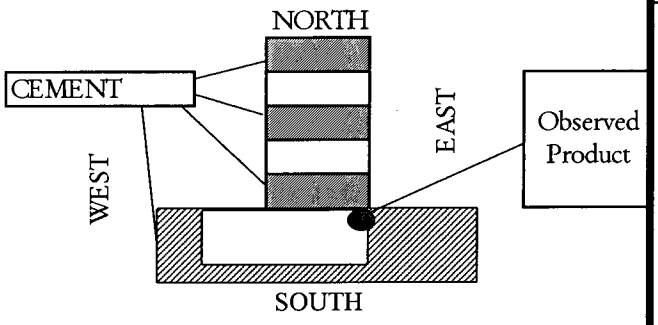
COLLECTED SOIL SAMPLE FROM 2.0 - 3.0 FOR VOC's, COMPOSITE FOR SVOC's AND METALS

COMPOSITED TP-1- (1-5) FOR METALS AND SVOC'S SURFACE & SUB SURFACE

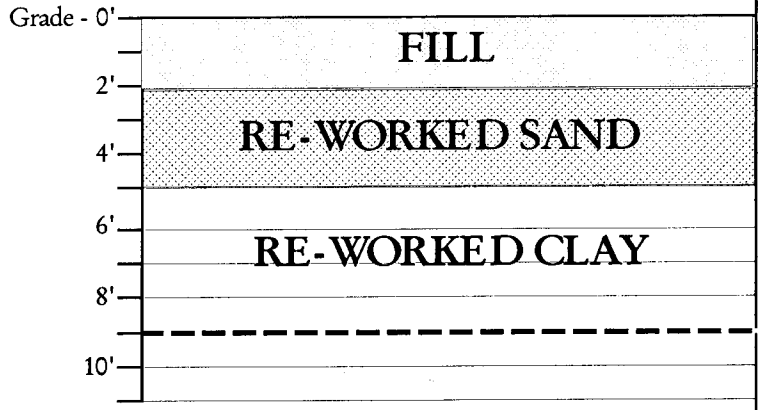
GROUNDWATER ENCOUNTERED:	2.5 fbgs
VISUAL IMPACTS:	Blackish Blue staining on srface
OLFACTORY OBSERVATIONS:	Heavy Musty Odor
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.8 ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-1-6**
Project No.:	0071-006-100	Excavation Date:	01/10/26
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	13:10:(	Length:	35.0 ft	(approx.)
End:	13:40:(	Width:	4.0ft to 30ft	(approx.)
		Depth:	5.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -2.0	**Fill:** Dark brown/Black, Moist to wet, Loose 80% NPF 20% Fine Sand W/ Rail Road Ties and Oily Tar located SE Corner	FILL	Y	0.0 -2.0
2.0 - 5.0	**Re - Worked Sand:** Med-Brown, Moist, Loose 90% Fine Sand 10% Fine Sand W/ Oily Material located in SE Corner	RE - WORKED SAND	Y	2.0 - 5.0
5.0 - ???	**Re - Worked Sandy Lean Clay:** Medium gray/ Moist, stiff, 70% MPF 30% Fine Sand, Depth of Layer Undetermined	CL	Y	

FIELD MEASUREMENTS:

PID (ppm): **SURFACE 0.0 - 2.0 fbgs 0.0ppm SUB - SURFACE 2.0 - 5.0fbgs 5.7ppm**

COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 2.0 FOR SVOCs AND METALS

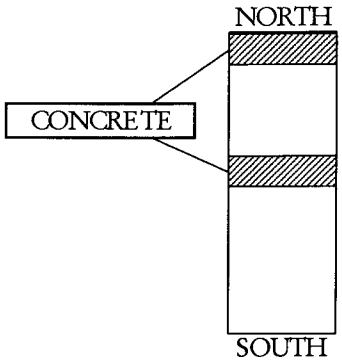
COLLECTED SOIL SAMPLE FROM 2.0 - 5.0 FOR VOCs, COMPOSITE FOR SVOCs AND METALS

OILY MATERIAL LOCATED ON SE WALL OF TP-1-6

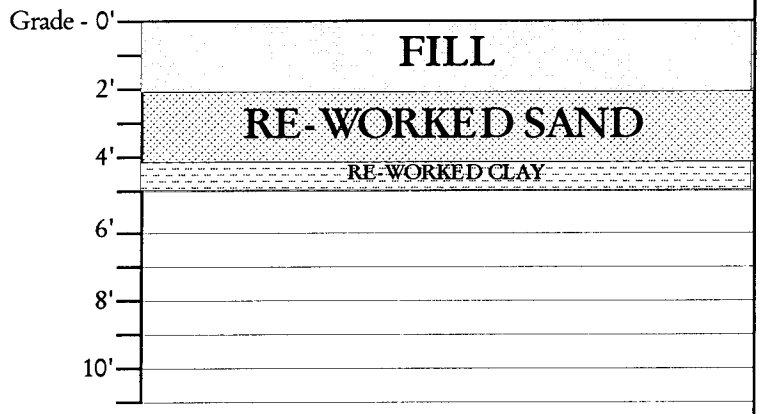
GROUNDWATER ENCOUNTERED:	none observed
VISUAL IMPACTS:	Oily material on SE wall
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 2.8 ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-1-7**
Project No.:	0071-006-100	Excavation Date:	01/10/26
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	14:05:	Length:	25.0 ft	(approx.)
End:	13:40:	Width:	4.0ft	(approx.)
		Depth:	5.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -2.0	**Fill:** Dark brown/Black, Moist to wet, Loose 80% NPF 20% Fine Sand W/ Rail Road Ties	FILL	Y	0.0 -2.0
2.0 - 4.0	**Re - Worked Sand:** Med-Brown, Moist, Loose 90% Fine Sand 10% Fine Sand	RE - WORKED SAND	Y	2.0 - 5.0
4.0 - 5.0	**Re - Worked Sandy Lean Clay:** Medium gray/ Moist, stiff, 70% MPF 30% Fine Sand, Depth of Layer Undetermined	CL	Y	

FIELD MEASUREMENTS:

PID (ppm): **SURFACE 0.0 - 2.0 fbgs 1.8ppm SUB - SURFACE 2.0 - 5.0fbgs 0.0ppm**

COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 2.0 FOR SVOCs AND METALS
COLLECTED SOIL SAMPLE FROM 2.0 - 5.0 FOR VOC's, COMPOSITE FOR SVOCs AND METALS

GROUNDWATER ENCOUNTERED:	4.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 2.7 ppm
SAMPLES COLLECTED:	yes

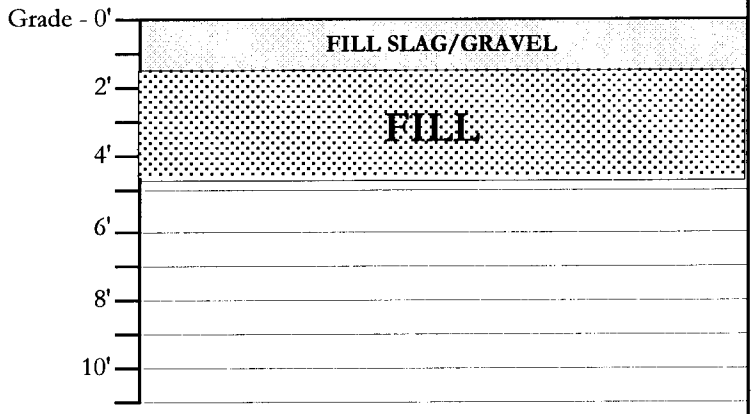
TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-1-8**
Project No.:	0071-006-100	Excavation Date:	01/10/26
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB

NORTH

SOUTH

Test Pit Cross Section:



TIME				
Start:	14:05:	Length:	29.0 ft	(approx.)
End:	13:40:	Width:	4.0ft	(approx.)
		Depth:	5.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -1.5	**Fill:** Medium grey coarse grained slag/gravel 90% Slag/Gravel 10% Fine Grained Sand	FILL	Y	0.0 -1.5
1.5 - 3.0	**Fill:** Dark brown/Black, Moist, Loose 80% NPF 10% Fine Sand 10% Large Gravel w/ wood and brick debris	FILL	Y	1.5 - 4.8
3.0 - 4.8	**Fill:** Redish brown to Dark brown, Moist to wet, Loose 80% NPF 10% Fine Sand 10% Large Gravel w/ wood and brick debris	FILL	Y	

FIELD MEASUREMENTS:

PID (ppm): **SURFACE 0.0 - 1.5 fbgs 1.8ppm SUB - SURFACE 1.5 - 4.8fbgs 0.0ppm**

COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 1.5 FOR SVOC's AND METALS

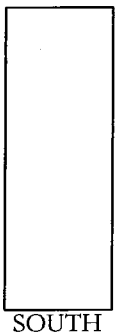
COLLECTED SOIL SAMPLE FROM 1.5 - 4.8 FOR VOC's, COMPOSITE FOR SVOC's AND METALS

GROUNDWATER ENCOUNTERED:	4.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.6 ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

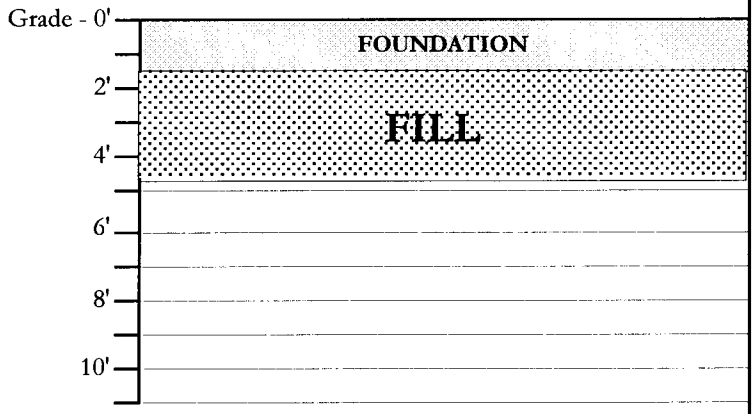
Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-1-9**
Project No.:	0071-006-100	Excavation Date:	01/10/26
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB

NORTH



SOUTH

Test Pit Cross Section:



TIME				
Start:	14:40:	Length:	21.0 ft	(approx.)
End:	15:20:	Width:	4.0ft	(approx.)
		Depth:	4.8 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 - 1.0	**Concrete Foundation:**	FILL	Y	0.0 -1.0
1.0 - 4.8	**Fill:** Dark brown/Black, Moist, Loose 80% NPF 10% Fine Sand 10% w/ wood and brick debris	FILL	Y	1.0 - 4.8

FIELD MEASUREMENTS:

PID (ppm): **SURFACE 0.0 - 1.0 fbgs 0.2ppm SUB - SURFACE 1.0 - 4.8fbgs 2.4ppm**

COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 1.0 FOR SVOC's AND METALS

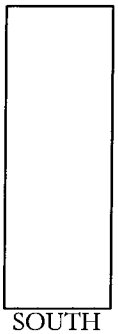
COLLECTED DISCRETE SOIL SAMPLE FROM 1.0 - 4.8 FOR VOC's, SVOC's AND METALS

GROUNDWATER ENCOUNTERED:	4.8 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	Slight mothball smell.
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 1.4 ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

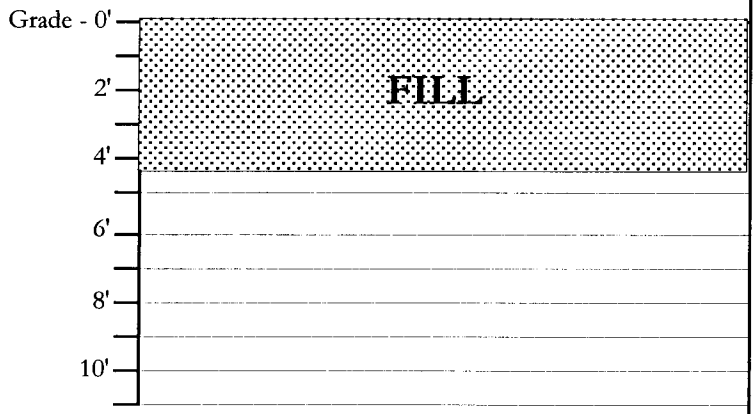
Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-1-10**
Project No.:	0071-006-100	Excavation Date:	01/10/26
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB

NORTH



SOUTH

Test Pit Cross Section:



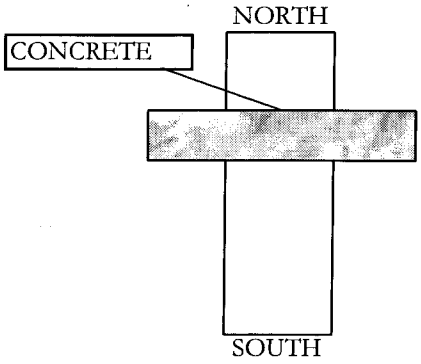
TIME				
Start:	15:25:	Length:	21.0 ft	(approx.)
End:	15:57:	Width:	4.0ft	(approx.)
		Depth:	4.8 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 - 4.5	**Fill:** Dark Brown/Black, Moist, Loose 80% NPF 20% Fine Sand w/ Miscellaneous wood, brick and concrete debris	FILL	Y	0.0 -2.0 2.0 - 4.5

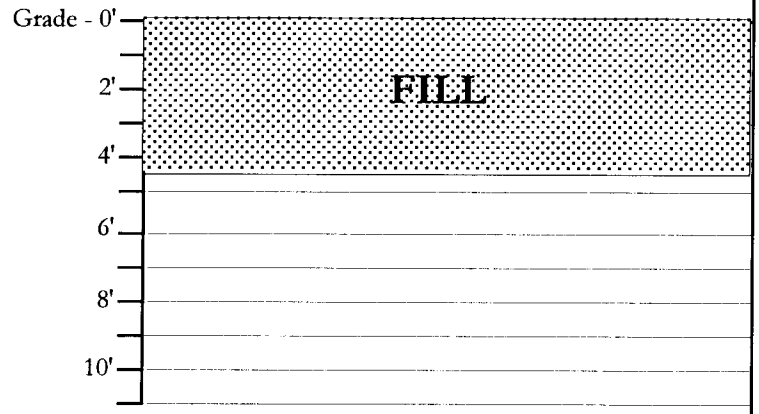
FIELD MEASUREMENTS:	
PID (ppm):	**SURFACE 0.0 - 2.0 fbgs 0.0ppm SUB - SURFACE 2.0 - 4.5fbgs 0.0ppm**
COMMENTS:	COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 2.0 FOR SVOC's AND METALS
	COLLECTED SOIL SAMPLE FROM 2.0 - 4.5 FOR VOC's COMPOSITED SVOC's AND METALS
	COMPOSITED SURFACE SOILS TP-1-(6-10) COPOSITED SUBSURFACE SOILS TP -(6-8 & 10)
GROUNDWATER ENCOUNTERED:	4.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 2.2 ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-1-11**
Project No.:	0071-006-100	Excavation Date:	01/11/26
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	8:00	Length:	34.0 ft	(approx.)
End:	8:25	Width:	4.0ft	(approx.)
		Depth:	4.5 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 - 4.5	**Fill:** Redish Brown/Black, Moist, Loose 90% NPF 10% Fine Sand w/ Miscellaneous wood, brick and concrete and steel debris	FILL	Y	0.0 -2.0 2.0 - 4.5

FIELD MEASUREMENTS:

PID (ppm): **SURFACE 0.0 - 2.0 fbgs 0.0ppm SUB - SURFACE 2.0 - 4.5fbgs 0.0ppm**

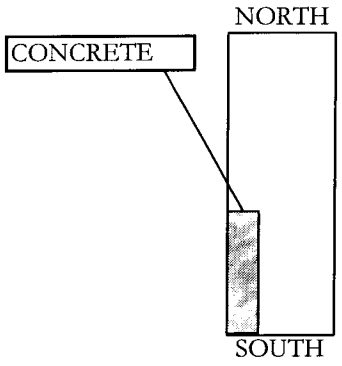
COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 2.0 FOR SVOC's AND METALS

COLLECTED SOIL SAMPLE FROM 2.0 - 4.5 FOR VOC's COMPOSITE SAMPLE FOR SVOC's & METALS

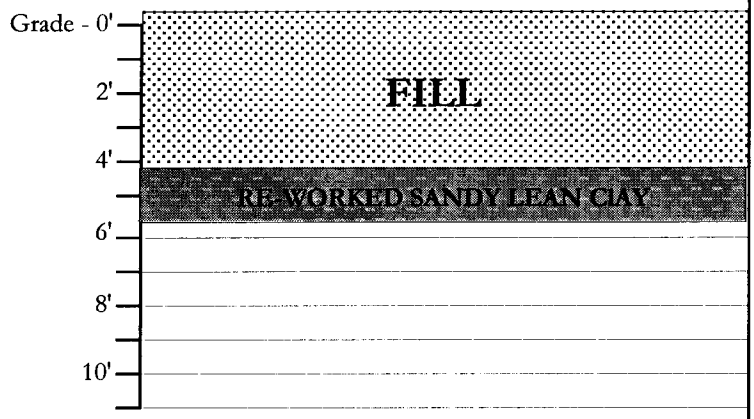
GROUNDWATER ENCOUNTERED:	4.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.5 ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-1-12**
Project No.:	0071-006-100	Excavation Date:	01/11/26
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



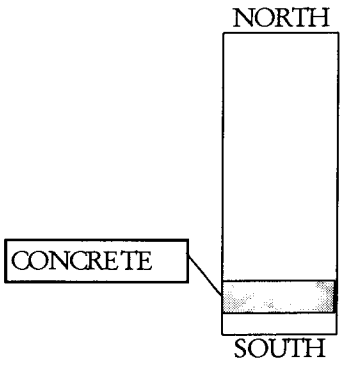
TIME		Length:	31.0 ft	(approx.)
Start:	8:35	Width:	4.0ft	(approx.)
End:	9:10	Depth:	5.4 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 - 3.2	**Fill:** Dark Brown/Black, Moist, Loose 90% NPF 10% Fine Sand w/ Miscellaneous wood, brick and Large Pieces of Concrete and Steel Debris	FILL	Y	0.0 -2.0 2.0 - 4.5
3.2 - 4.2	**Fill:** Redish Brown, Moist, Loose 90% NPF 10% Fine Sand w/ Miscellaneous wood, brick, Concrete and Steel Debris	FILL	Y	
4.2 - 5.4	**Re - Worked Sandy Lean Clay:** Medium gray/ Moist, stiff, 70% MPF 30% Fine Sand	CL	Y	

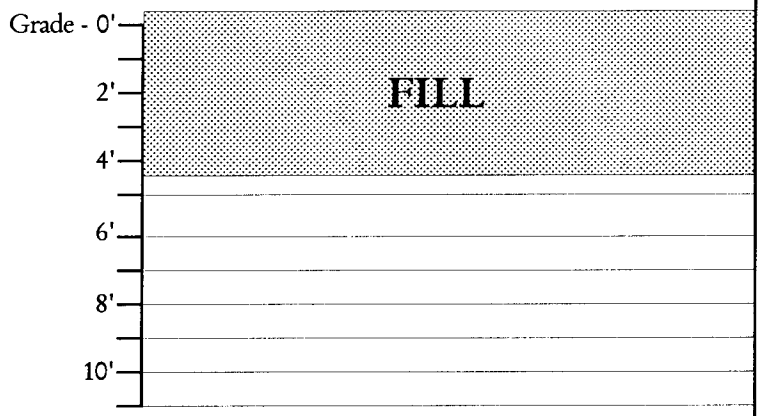
FIELD MEASUREMENTS:	
PID (ppm):	**SURFACE 0.0 - 2.0 fbgs 2.1ppm SUB - SURFACE 2.0 - 4.5 fbgs 4.3ppm**
COMMENTS:	COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 2.0 FOR SVOC's AND METALS
	COLLECTED SOIL SAMPLE FROM 2.0 - 4.5 FOR VOC's COMPOSITE SAMPLE FOR SVOC's & METALS
	INSTALLED PIEZOMETER P-51s TO ~9.0 ft. COMPOSITED TP-1-(11-12) FOR SVOC'S & METALS
GROUNDWATER ENCOUNTERED:	4.0 fbgs (slight sheen on GW)
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.8 ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-1-13**
Project No.:	0071-006-100	Excavation Date:	01/11/26
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	9:55	Length:	34.0 ft	(approx.)
End:	10:35	Width:	4.0ft	(approx.)
		Depth:	4.2 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 - 4.2	**Fill:** Dark Brown/Black, Moist, Loose 90% NPF 10% Fine Sand w/ Miscellaneous wood, brick and Large Pieces of Concrete and Steel Debris	FILL	Y	0.0 - 1.5 1.5 - 4.2

FIELD MEASUREMENTS:

PID (ppm): **SURFACE 0.0 - 1.5 fbgs 0.0ppm SUB - SURFACE 1.5 - 4.2fbgs 0.0ppm**

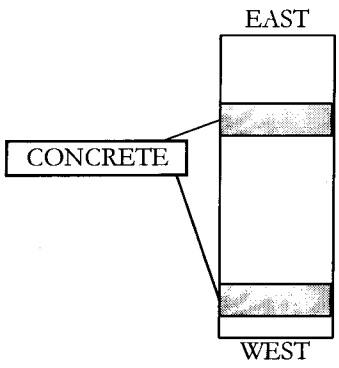
COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 1.5 FOR SVOC's AND METALS

COLLECTED SOIL SAMPLE FROM 1.5 - 4.2 FOR VOC's COMPOSITE SAMPLE FOR SVOC's & METALS

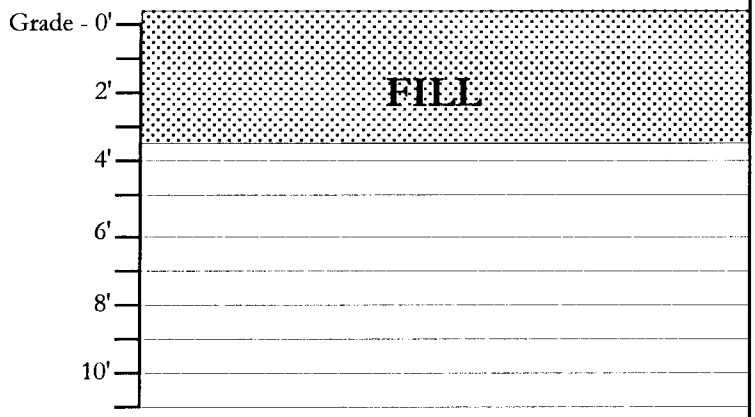
GROUNDWATER ENCOUNTERED:	3.8 fbgs
VISUAL IMPACTS:	Oily blebs & sheen observed on groundwater within test pit
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 2.3 ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-1-14**
Project No.:	0071-006-100	Excavation Date:	01/11/26
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	10:40	Length:	51.0 ft	(approx.)
End:	11:30	Width:	4.0ft	(approx.)
		Depth:	3.5 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 - 3.5	**Fill:** Dark Brown/Black, Moist, Loose 90% NPF 10% Fine Sand w/ Concrete Wall & Flooring	FILL	Y	0.0 -1.0 1.0 - 3.5

FIELD MEASUREMENTS:

PID (ppm): **SURFACE 0.0 - 1.0 fbgs 0.0ppm SUB - SURFACE 1.0 - 3.5fbgs 0.0ppm**

COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 1.0 FOR SVOC's AND METALS

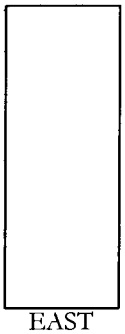
COLLECTED SOIL SAMPLE FROM 1.0 - 3.5 FOR VOC's COMPOSITE SAMPLE FOR SVOC's & METALS

GROUNDWATER ENCOUNTERED:	2.8 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 2.0 ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

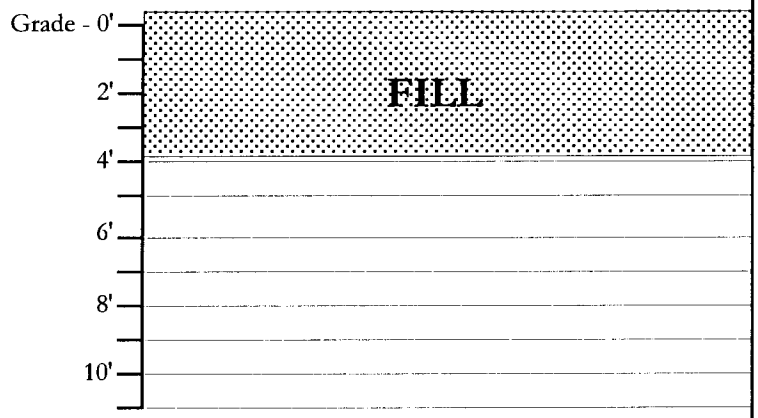
Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-1-15**
Project No.:	0071-006-100	Excavation Date:	01/11/26
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB

WEST



EAST

Test Pit Cross Section:



TIME				
Start:	11:00	Length:	31.0 ft	(approx.)
End:	11:30	Width:	4.0ft	(approx.)
		Depth:	3.5 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 - 3.9	**Fill:** Black, Moist, Loose 90% NPF 10% Fine Sand w/ Red Brick Debris Towards The East	FILL	Y	0.0 -1.0 1.0 - 3.9

FIELD MEASUREMENTS:

PID (ppm): **SURFACE 0.0 - 1.0 fbgs 0.0ppm SUB - SURFACE 1.0 - 3.9fbgs 0.0ppm**

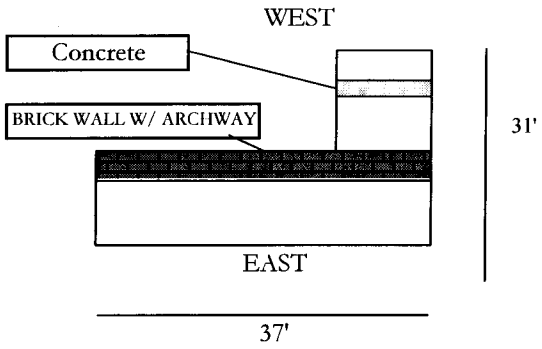
COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 1.0 FOR SVOC's AND METALS

COLLECTED SOIL SAMPLE FROM 1.0 - 3.9 FOR VOC's COMPOSITE SAMPLE FOR SVOC's & METALS

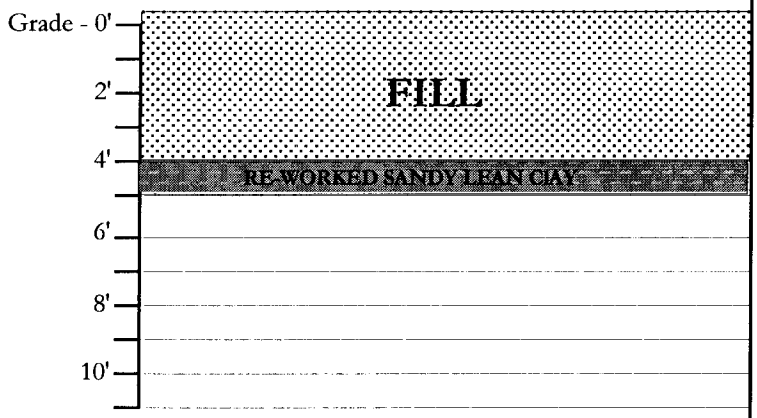
GROUNDWATER ENCOUNTERED:	3.9 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.4 ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-1-16**
Project No.:	0071-006-100	Excavation Date:	01/11/26
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	11:20	Length:	31.0 ft	(approx.)
End:	15:05:(	Width:	4.0ft	(approx.)
		Depth:	3.5 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 - 4.0	**Fill:** Dark Brown/Black, Moist, Loose 90% NPF 10% Fine Sand w/ Red Brick Debris	FILL	Y	0.0 -2.0 2.0 - 5.0
4.0 - 5.0	**Re - Worked Sandy Lean Clay:** Medium gray/ Moist, stiff, 70% MPF 30% Fine Sand	RE-WORKED CLAY	Y	

FIELD MEASUREMENTS:

PID (ppm): **SURFACE 0.0 - 2.0 fbgs 0.0ppm SUB - SURFACE 2.0 - 5.0fbgs 0.0ppm**

COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 2.0 FOR SVOC's AND METALS

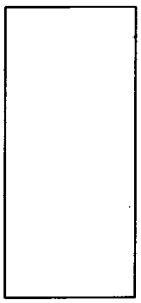
COLLECTED SOIL SAMPLE FROM 2.0 - 5.0 FOR VOC's COMPOSITE SAMPLE FOR SVOC's & METALS

GROUNDWATER ENCOUNTERED:	none observed
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.7 ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

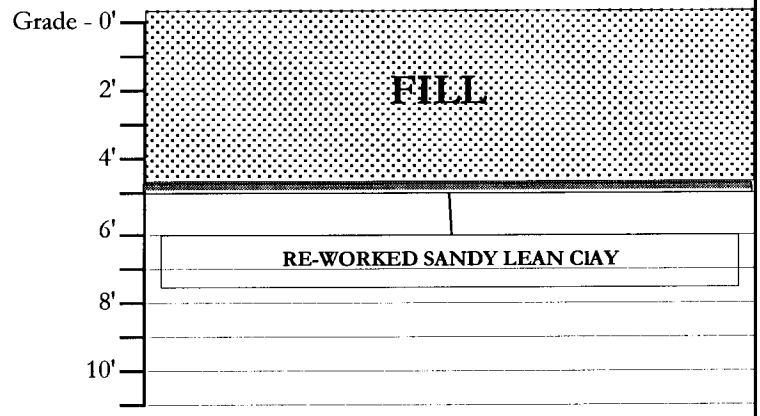
Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-1-17**
Project No.:	0071-006-100	Excavation Date:	01/11/26
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB

NORTH



SOUTH

Test Pit Cross Section:



TIME				
Start:	11:20	Length:	26.0 ft	(approx.)
End:	15:05:(	Width:	4.0ft	(approx.)
		Depth:	5.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 - 4.8	**Fill:** Dark Brown/Black, Moist, Loose 90% NPF 10% Fine Sand w/ Rail Road Ties	FILL	Y	0.0 -2.0 2.0 - 4.8
4.8 - 5.0	**Re - Worked Sandy Lean Clay:** Medium gray/ Moist, stiff, 70% MPF 30% Fine Sand	RE-WORKED CLAY	Y	

FIELD MEASUREMENTS:

PID (ppm): **SURFACE 0.0 - 2.0 fbgs 0.0ppm SUB - SURFACE 2.0 - 4.8 fbgs 0.0ppm**

COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 2.0 FOR SVOC's AND METALS

COLLECTED SOIL SAMPLE FROM 2.0 - 4.8 FOR VOC's COMPOSITE SAMPLE FOR SVOC's & METALS

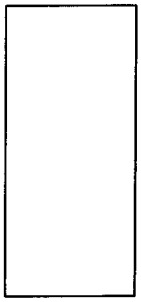
COMPOSITED TP-1-(13-17) FOR SVOC'S & METALS

GROUNDWATER ENCOUNTERED:	4.8 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0 ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

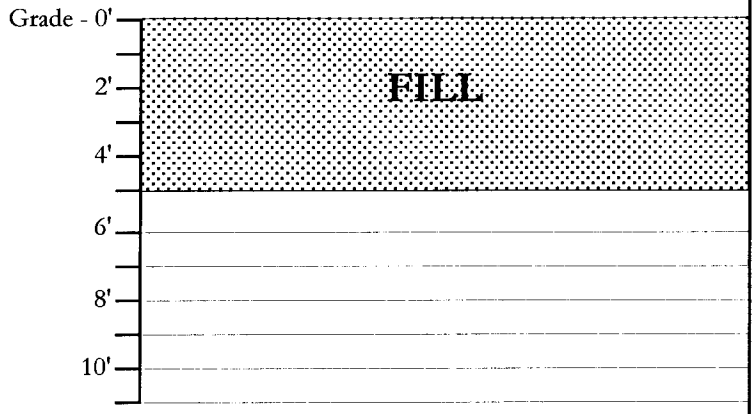
Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-1-18**
Project No.:	0071-006-100	Excavation Date:	01/11/26
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB

NORTH



SOUTH

Test Pit Cross Section:



TIME				
Start:	14:07:	Length:	34.0 ft	(approx.)
End:	14:25:	Width:	4.0ft	(approx.)
		Depth:	5.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 - 3.5	**Fill:** Redish Brown, Moist, Loose 90% NPF 10% Fine Sand w/ Rail Road Ties	FILL	Y	0.0 -2.0 2.0 - 5.0
3.5 - 5.0	**Fill:** Black, Moist, Loose 90% NPF 10% Fine Sand w/ Coal Coke Fines	FILL	Y	

FIELD MEASUREMENTS:

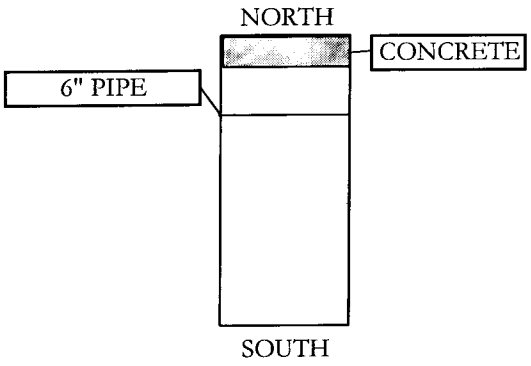
PID (ppm): NO READINGS TAKEN DUE TO RAIN.

COMMENTS: COLLECTED SOIL SAMPLE FROM 2.0 - 5.0 FOR VOC's & SVOC's

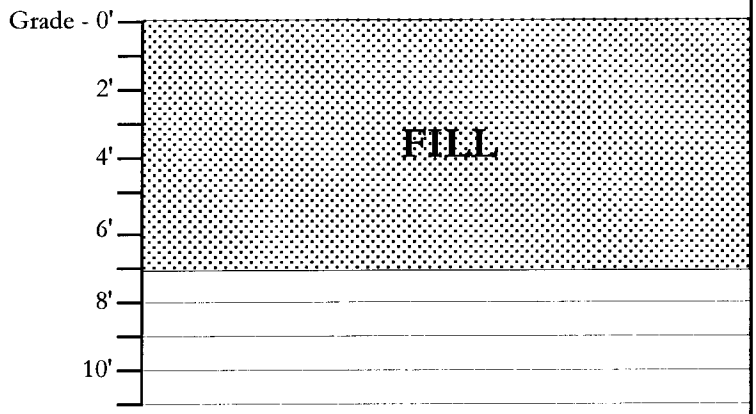
GROUNDWATER ENCOUNTERED:	5.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0 ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-1-19**
Project No.:	0071-006-100	Excavation Date:	01/11/26
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	14:40:	Length:	34.0 ft	(approx.)
End:	15:05:	Width:	4.0ft	(approx.)
		Depth:	7.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 - 7.0	**Fill:** Black, Moist, Loose 90% NPF 10% Fine Sand	FILL	Y	0.0 -2.0 2.0 - 7.0

FIELD MEASUREMENTS:

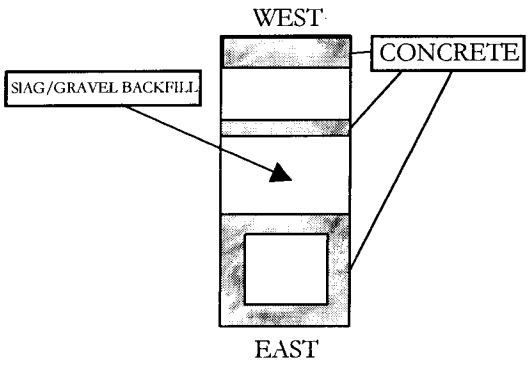
PID (ppm): NO READINGS TAKEN DUE TO RAIN.

COMMENTS: COLLECTED SOIL SAMPLE FROM 2.0 - 7.0 FOR VOC's & SVOC's

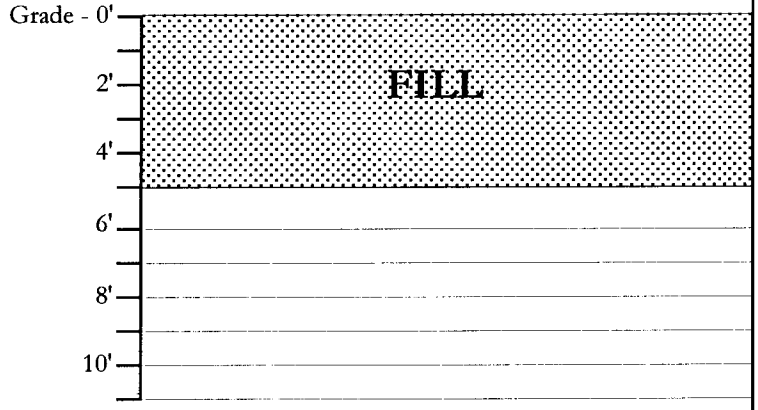
GROUNDWATER ENCOUNTERED:	6.7 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0 ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-1-20**
Project No.:	0071-006-100	Excavation Date:	01/12/26
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	7:55	Length:	32.0 ft	(approx.)
End:	15:05:	Width:	4.0ft	(approx.)
		Depth:	5.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 - 5.0	**Fill:** Dark Brown/Black, Moist, Loose, Slag/Gravel Backfill in ceter of Test Pit. 90% NPF 10% Fine Sand	FILL	Y	0.0 -2.0 2.0 - 5.0

FIELD MEASUREMENTS:

PID (ppm): **SURFACE 0.0 - 2.0 fbgs 0.0ppm SUB - SURFACE 2.0 - 5.0 fbgs 0.0ppm**

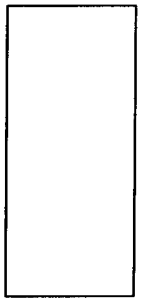
COMMENTS: COLLECTED SOIL SAMPLE FROM 2.0 - 5.0 FOR VOC's

GROUNDWATER ENCOUNTERED:	4.8 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0 ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

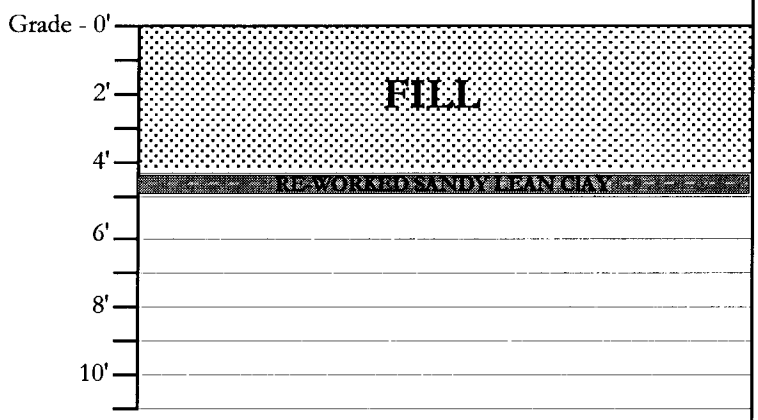
Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-1-21**
Project No.:	0071-006-100	Excavation Date:	01/12/26
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB

NORTH



SOUTH

Test Pit Cross Section:



TIME				
Start:	8:30	Length:	32.0 ft	(approx.)
End:	8:50	Width:	4.0ft	(approx.)
		Depth:	4.5 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 - 4.0	**Fill:** Dark Brown/Black, Moist, Loose, Slag/Gravel Backfill in ceter of Test Pit. 90% NPF 10% Fine Sand Gravel is Tightly Packed	FILL	Y	0.0 -2.0 2.0 - 4.0
4.0 - 4.5	**Re - Worked Sandy Lean Clay:** Medium gray/ Moist, stiff, 70% MPF 30% Fine Sand	CL	Y	

FIELD MEASUREMENTS:

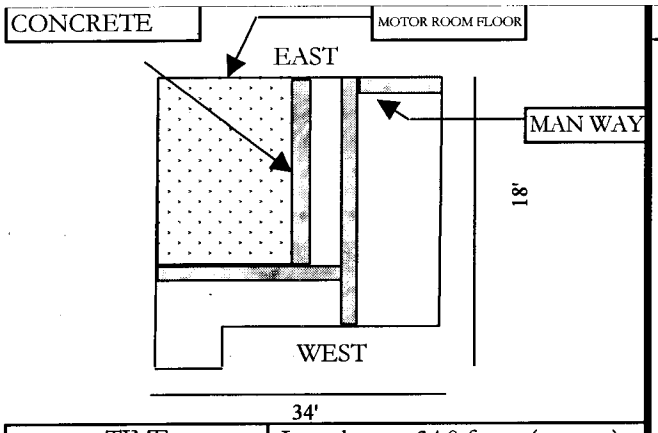
PID (ppm): **SURFACE 0.0 - 2.0 fbgs 0.0ppm SUB - SURFACE 2.0 - 4.0 fbgs 0.0ppm**

COMMENTS: COLLECTED SOIL SAMPLE FROM 2.0 - 4.0 FOR VOC's

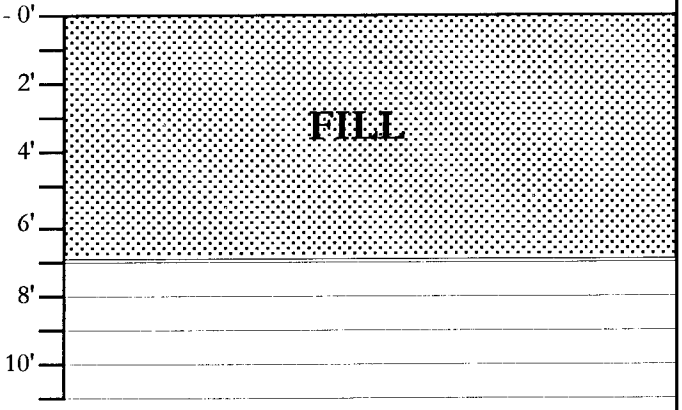
GROUNDWATER ENCOUNTERED:	3.5 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0 ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-1-22**
Project No.:	0071-006-100	Excavation Date:	01/12/26
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	9:05	Length:	34.0 ft	(approx.)
End:	10:07	Width:	18.0ft	(approx.)
		Depth:	6.5' to 7.0'	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 - 6.5	**Fill:** Dark Brown To Black, Loosly Packed Gravel Coal And Coke Fines, Misc. Piping and Steel Debris Loose Brick Debris on East Side of Test Pit (Rubble), Possible Sump on West Side of Test Pit Some Orange Staining, Oily Odor	FILL	Y	0.0 -2.0 2.0 - 6.5

FIELD MEASUREMENTS:

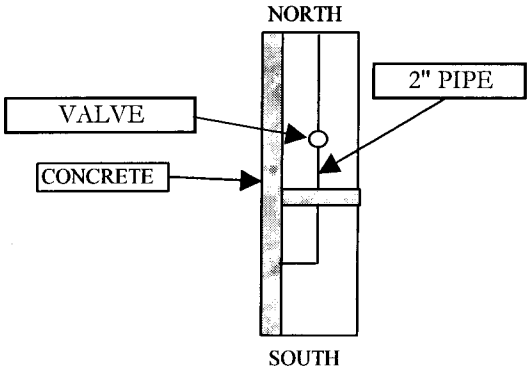
PID (ppm): **SURFACE 0.0 - 2.0 fbgs 0.0ppm SUB - SURFACE 2.0 - 6.5 fbgs 0.0ppm**

COMMENTS: COLLECTED SOIL SAMPLE FROM 2.0 - 6.5 FOR VOC's & SVOC's, MS/MSD TAKEN

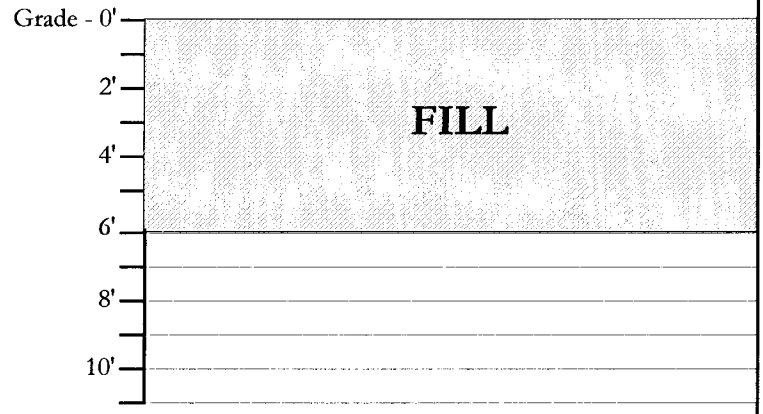
GROUNDWATER ENCOUNTERED:	6.5 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	Oily Odor
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0 ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-2-1**
Project No.:	0071-006-100	Excavation Date:	01/18/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	13:30:0	Length:	37.0 ft	(approx.)
End:	14:10:0	Width:	4.0ft	(approx.)
		Depth:	6.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -6.0	**Fill:** Dark Brown to Black, Loose, 90% NPF, 10% Fine Sand w/ Slag & Brick	FILL	Y	0.0 -2.0 2.0 - 5.5

FIELD MEASUREMENTS:

PID (ppm): NO PID SCANS TAKEN DUE TO SNOW

COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 2.0 FOR SVOC's AND METALS

COLLECTED SOIL SAMPLE FROM 2.0 - 5.5 FOR VOC's, COMPOSITE FOR SVOC's AND METALS

GROUNDWATER ENCOUNTERED:	5.5 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

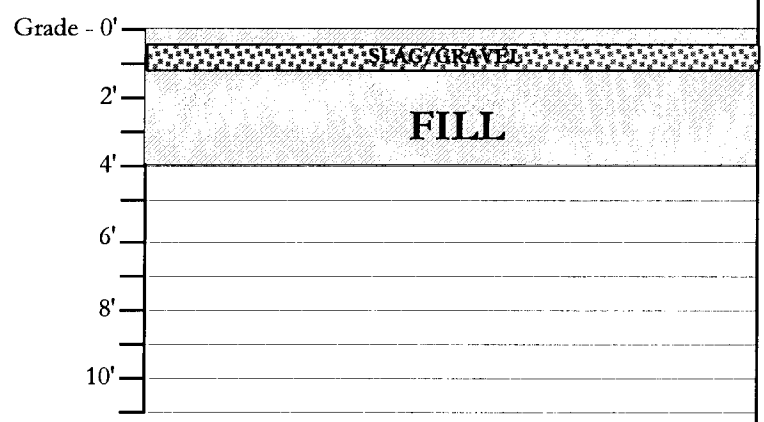
TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-2-2**
Project No.:	0071-006-100	Excavation Date:	01/18/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB

NORTH

SOUTH

Test Pit Cross Section:



TIME				
Start:	14:15:(	Length:	45.0 ft	(approx.)
End:	14:30:(	Width:	4.0ft	(approx.)
		Depth:	4.5 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -4.5	**Fill:** Dark Brown to Black, Loose, 90% NPF, 10% Fine Sand w/ Slag & Brick	FILL	Y	0.0 -2.0 2.0 - 4.0

FIELD MEASUREMENTS:

PID (ppm): NO PID SCANS TAKEN DUE TO SNOW

COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 2.0 FOR SVOC's AND METALS

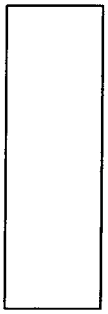
COLLECTED SOIL SAMPLE FROM 2.0 - 4.0 FOR VOC's, COMPOSITE FOR SVOC's AND METALS

GROUNDWATER ENCOUNTERED:	4.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

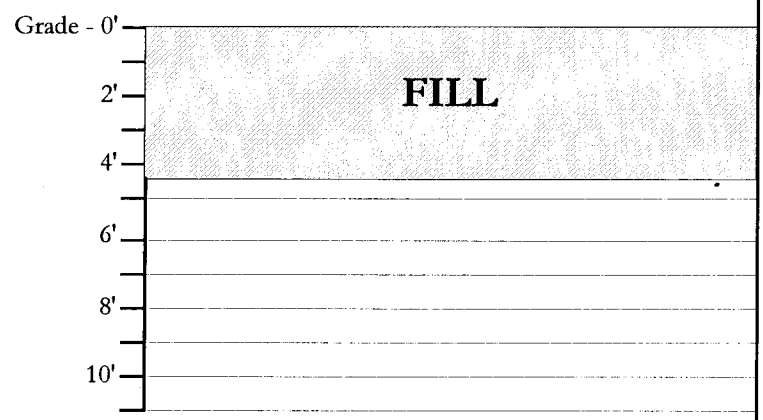
Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-2-3**
Project No.:	0071-006-100	Excavation Date:	01/18/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB

NORTH



SOUTH

Test Pit Cross Section:



TIME				
Start:	14:35:(	Length:	43.0 ft	(approx.)
End:	15:00:(	Width:	4.0ft	(approx.)
		Depth:	4.5 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -4.5	**Fill:** Dark Brown to Black, Loose, 90% NPF, 10% Fine Sand w/ Slag & Brick	FILL	Y	0.0 -2.0 2.0 - 4.0

FIELD MEASUREMENTS:

PID (ppm): NO PID SCANS TAKEN DUE TO SNOW

COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 2.0 FOR SVOC's AND METALS

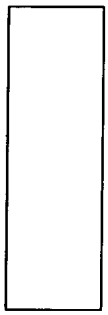
COLLECTED SOIL SAMPLE FROM 2.0 - 4.0 FOR VOC's, COMPOSITE FOR SVOC's AND METALS

GROUNDWATER ENCOUNTERED:	4.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

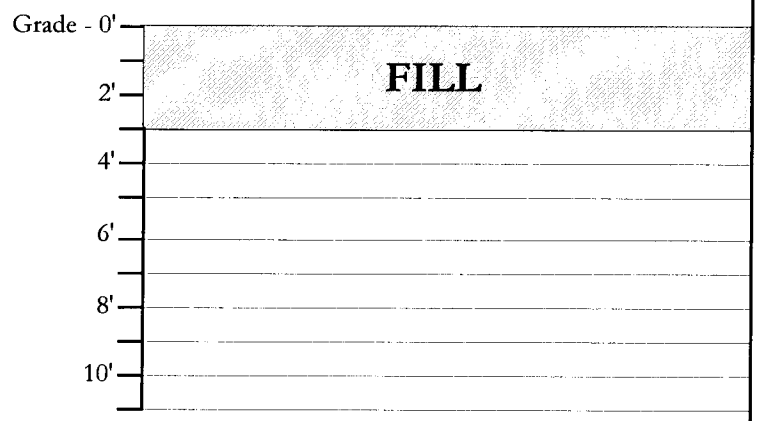
Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-3-1**
Project No.:	0071-006-100	Excavation Date:	01/19/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB

WEST



EAST

Test Pit Cross Section:



TIME				
Start:	7:50	Length:	51.0 ft	(approx.)
End:	8:05	Width:	4.0ft	(approx.)
		Depth:	3.5 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -3.5	**Fill:** Dark Brown to Black, Loose, 90% NPF, 10% Fine Sand w/ Slag & Gravel	FILL	Y	0.0 -1.0 1.0 - 3.0

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 1.0 fbgs 0.0ppm SUB - SURFACE 1.0 - 3.0fbgs 0.0ppm

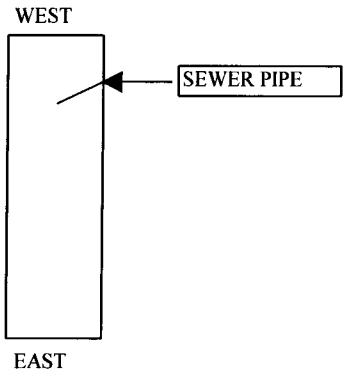
COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 1.0 FOR SVOC's AND METALS

COLLECTED SOIL SAMPLE FROM 1.0 - 3.0 FOR VOC's, COMPOSITE FOR SVOC's AND METALS

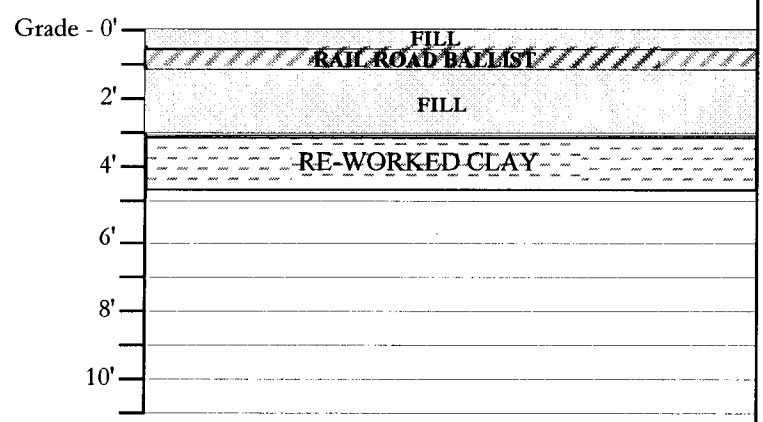
GROUNDWATER ENCOUNTERED:	3.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm, Installed piezometer P - 57s @ ~ 9.0 fbgs
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-3-2**
Project No.:	0071-006-100	Excavation Date:	01/19/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	8:20	Length:	41.0 ft	(approx.)
End:	8:40	Width:	4.0ft	(approx.)
		Depth:	4.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -0.5	**Fill:** Dark Brown to Black, Loose, 90% NPF, 10% Fine Sand w/ Slag & Gravel	FILL	Y	0.0 -1.0 1.0 - 3.0
0.5 - 1.0	**Rail Road Ballist:** Dark Brown to Black, loose, 90% Gravel/Slag 10% Fine Slag	FILL	Y	
1.0- 3.0	**Fill:** Dark Brown to Black, Loose, 90% NPF, 10% Fine Sand w/ Slag & Gravel	FILL	Y	
3.0 -4.0	**REWORKED SANDY CLAY:** Med. Grey, Stiff, 60%MPF,40% Fine Sand	CL	Y	

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 1.0 fbgs 0.0ppm SUB - SURFACE 1.0 - 3.0fbgs 0.0ppm

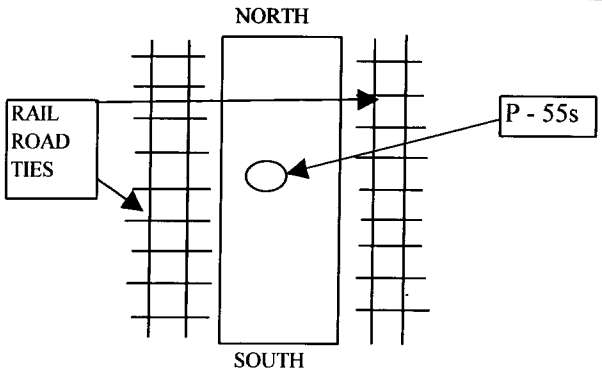
COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 1.0 FOR SVOC's AND METALS

COLLECTED SOIL SAMPLE FROM 1.0 - 3.0 FOR VOC's, COMPOSITE FOR SVOC's AND METALS

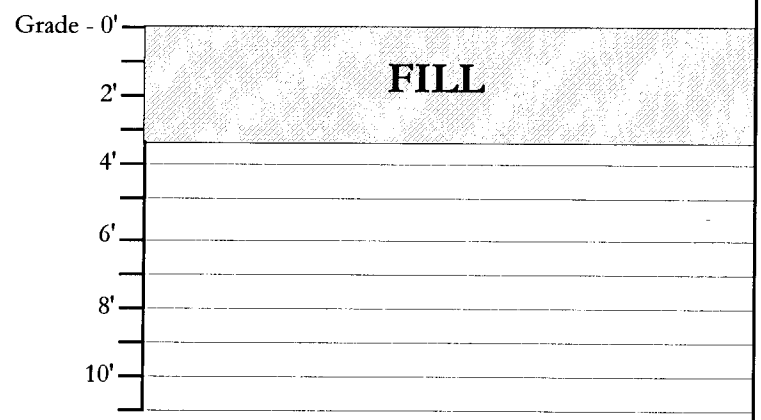
GROUNDWATER ENCOUNTERED:	3.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-4-1**
Project No.:	0071-006-100	Excavation Date:	01/18/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	9:15	Length:	46.0 ft	(approx.)
End:	9:30	Width:	4.0ft	(approx.)
		Depth:	3.5 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -3.5	**Fill:** Dark Brown to Black, Loose, 90% Gravel/Slag 30% NPF (Rail Road Ballist)	FILL	Y	0.0 -1.0 1.0 - 3.5

FIELD MEASUREMENTS:

PID (ppm): NO PID SCANS TAKEN DUE TO RAIN

COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 1.0 FOR SVOC's AND METALS

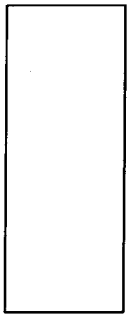
COLLECTED SOIL SAMPLE FROM 1.0 - 3.5 FOR VOC's, COMPOSITE FOR SVOC's AND METALS

GROUNDWATER ENCOUNTERED:	3.5 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm, Installed Piezometer P-55s
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

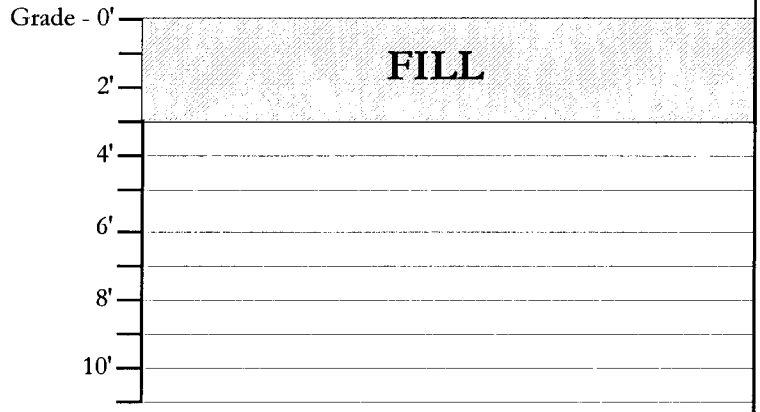
Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-4-2**
Project No.:	0071-006-100	Excavation Date:	01/18/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB

NORTH



SOUTH

Test Pit Cross Section:



TIME				
Start:	9:15	Length:	43.0 ft	(approx.)
End:	9:30	Width:	4.0ft	(approx.)
		Depth:	3.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -3.0	**Fill:** Dark Brown to Black, Loose, 90% Gravel/Slag 30% NPF (Rail Road Ballist)	FILL	Y	0.0 -1.0 1.0 - 3.0

FIELD MEASUREMENTS:

PID (ppm): NO PID SCANS TAKEN DUE TO RAIN

COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 1.0 FOR SVOC's AND METALS

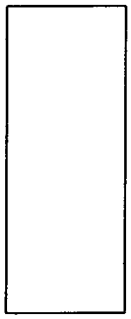
COLLECTED SOIL SAMPLE FROM 1.0 - 3.0 FOR VOC's, COMPOSITE FOR SVOC's AND METALS

GROUNDWATER ENCOUNTERED:	3.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

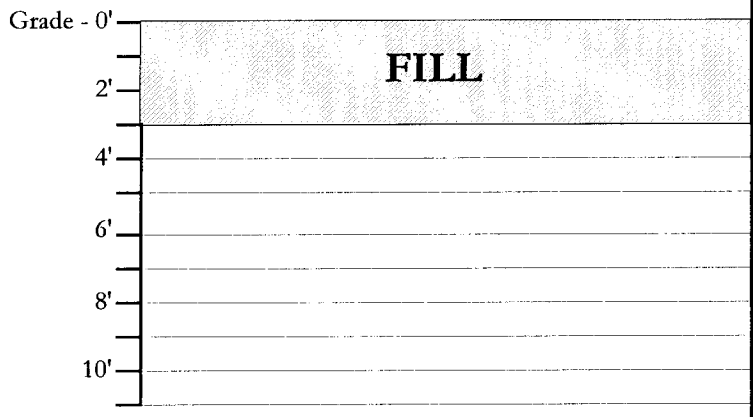
Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-4-3**
Project No.:	0071-006-100	Excavation Date:	01/18/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB

NORTH



SOUTH

Test Pit Cross Section:



TIME				
Start:	9:55	Length:	43.0 ft	(approx.)
End:	10:20	Width:	4.0ft	(approx.)
		Depth:	3.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -3.0	**Fill:** Dark Brown to Black, loose, Moist to Wet w/ Brick and Steel Debris 90%NPF, 10% Fine Sand	FILL	Y	0.0 -1.0 1.0 - 3.0

FIELD MEASUREMENTS:

PID (ppm): NO PID SCANS TAKEN DUE TO RAIN

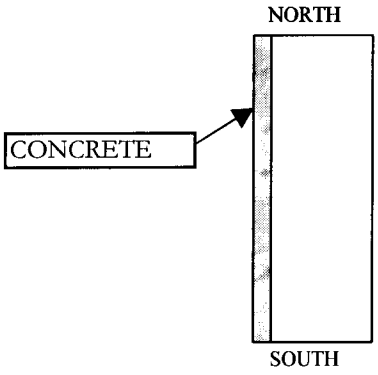
COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 1.0 FOR SVOC's AND METALS

COLLECTED SOIL SAMPLE FROM 1.0 - 3.0 FOR VOC's, COMPOSITE FOR SVOC's AND METALS

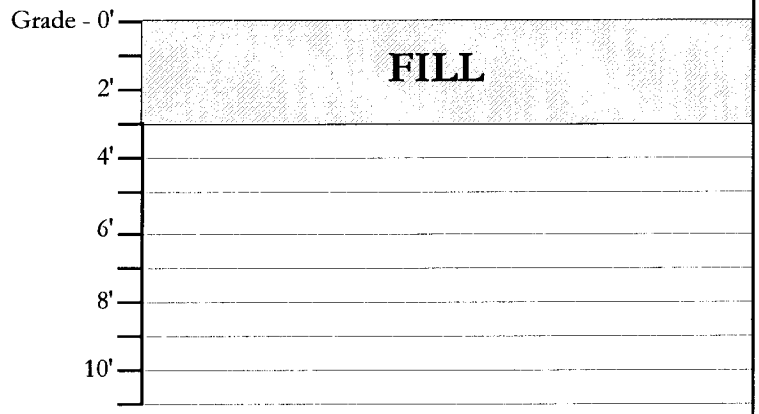
GROUNDWATER ENCOUNTERED:	3.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-4-4**
Project No.:	0071-006-100	Excavation Date:	01/18/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	10:30	Length:	50.0 ft	(approx.)
End:	10:45	Width:	4.0ft	(approx.)
		Depth:	3.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -1.0	**Fill:** Dark Brown/Black & Orange, Non-Plastic Fines w/Brick and Slag Debris, Loose	FILL	Y	0.0 -1.0
1.0 - 3.0	**Fill:** Dark Brown to Black, loose, Moist to Wet w/ Brick and Steel Debris 90%NPF, 10% Fine Sand	FILL	Y	1.0 - 3.0

FIELD MEASUREMENTS:

PID (ppm): NO PID SCANS TAKEN DUE TO RAIN

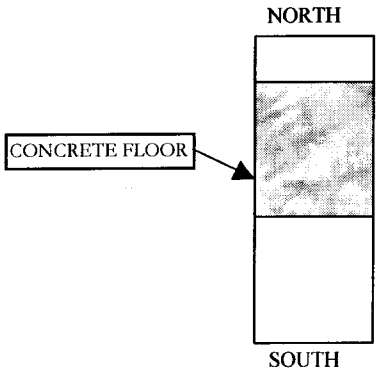
COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 1.0 FOR SVOC's AND METALS

COLLECTED SOIL SAMPLE FROM 1.0 - 3.0 FOR VOC's, COMPOSITE FOR SVOC's AND METALS

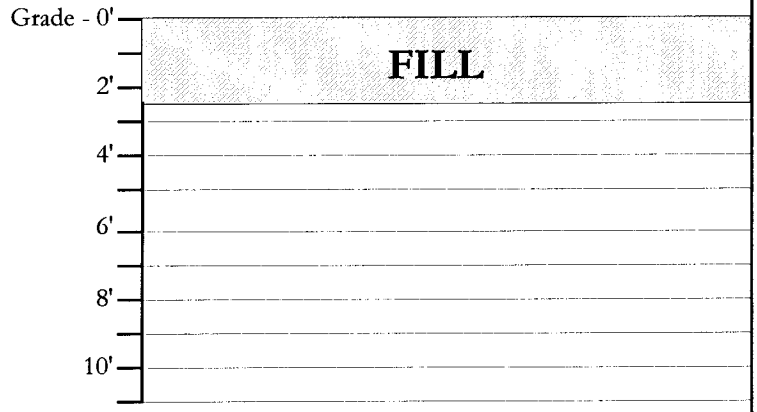
GROUNDWATER ENCOUNTERED:	3.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-4-5**
Project No.:	0071-006-100	Excavation Date:	01/18/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



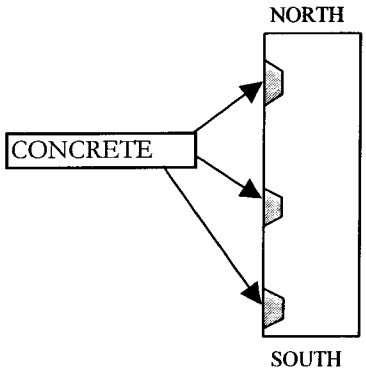
TIME				
Start:	10:30	Length:	50.0 ft	(approx.)
End:	10:45	Width:	4.0ft	(approx.)
		Depth:	3.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -2.5	**Fill:** Dark Brown to Black, loose, Moist to Wet w/ Brick and Steel Debris 90%NPF, 10% Fine Sand	FILL	Y	0.0 -1.0 1.0 - 2.5

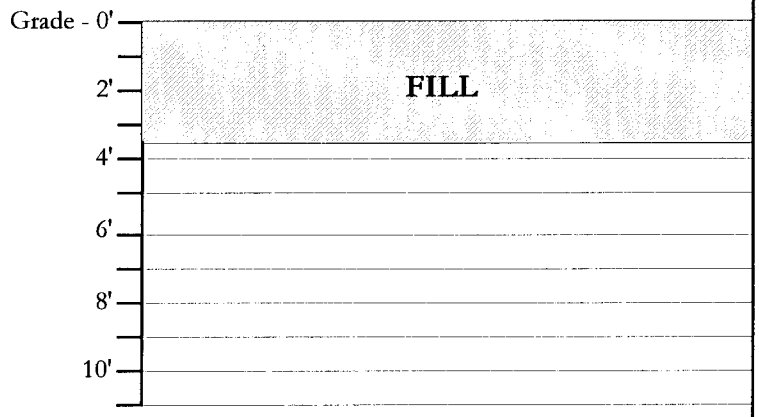
FIELD MEASUREMENTS:	
PID (ppm):	NO PID SCANS TAKEN DUE TO RAIN
COMMENTS:	COMPOSITED SOIL SAMPLE FROM 0.0 - 1.0 FOR SVOC's AND METALS FOR TP-4-(1-5)
	COLLECTED SOIL SAMPLE FROM 1.0 - 2.5 FOR VOC's
	COMPOSITED SOIL SAMPLE FROM 1.0 - 3.0 FOR SVOC's AND METALS FOR TP-4-(1-5)
GROUNDWATER ENCOUNTERED:	2.5 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-5-1**
Project No.:	0071-006-100	Excavation Date:	01/19/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	9:00	Length:	47.0 ft	(approx.)
End:	9:25	Width:	4.0ft	(approx.)
		Depth:	4.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -3.5	**Fill:** Dark Brown to Black w/Red Brown and Orange Lenses, Loose, 90% NPF, 10% Fine Sand w/ Slag & Gravel	FILL	Y	0.0 -1.0 1.0 - 3.5

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 1.0 fbgs 0.0ppm SUB - SURFACE 1.0 - 3.0fbgs 0.0ppm

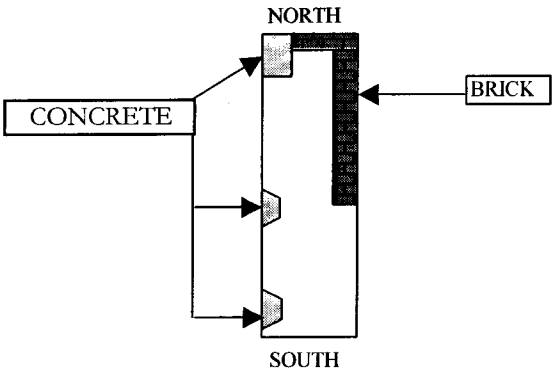
COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 1.0 FOR SVOC's AND METALS

COLLECTED SOIL SAMPLE FROM 1.0 - 3.5 FOR VOC's, COMPOSITE FOR SVOC's AND METALS

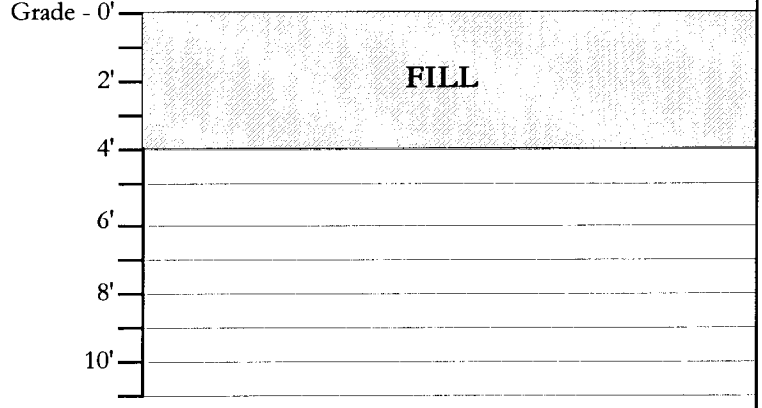
GROUNDWATER ENCOUNTERED:	3.5 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-5-2**
Project No.:	0071-006-100	Excavation Date:	01/19/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	11:15	Length:	27.0 ft	(approx.)
End:	11:45	Width:	4.0ft	(approx.)
		Depth:	4.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -4.0	**Fill:** Dark Brown to Black, Loose, 90% NPF, 10% Fine Sand w/ Slag & Gravel	FILL	Y	0.0 -1.0 1.0 - 4.0
4.0	**REWORKED SANDY CLAY:** Redish Brown, Firm, 60%MPF,40% Fine Sand	CL	Y	

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 1.0 fbgs 0.0ppm SUB - SURFACE 1.0 - 4.0fbgs 0.0ppm

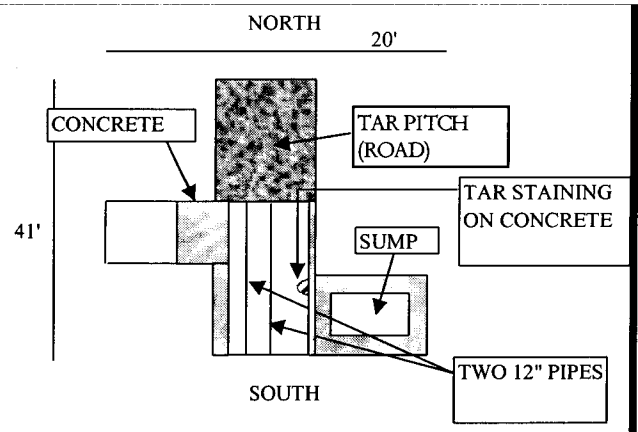
COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 1.0 FOR SVOC's AND METALS

COLLECTED SOIL SAMPLE FROM 1.0 - 4.0 FOR VOC's, COMPOSITE FOR SVOC's AND METALS

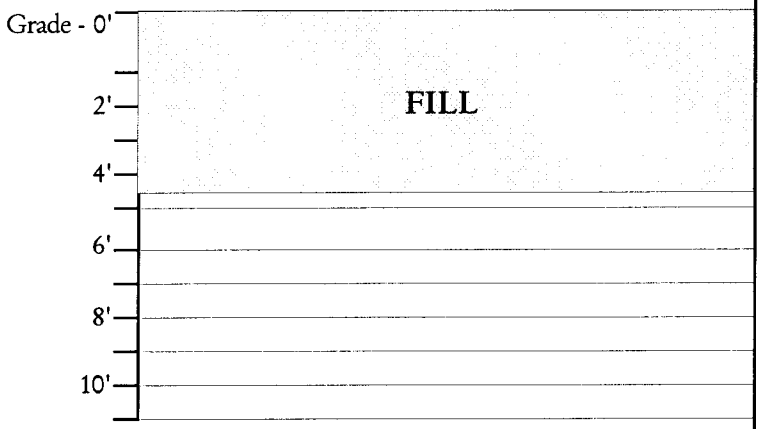
GROUNDWATER ENCOUNTERED:	4.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-5-3**
Project No.:	0071-006-100	Excavation Date:	01/19/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	12:50	Length:	27.0 ft	(approx.)
End:	13:30	Width:	4.0ft	(approx.)
		Depth:	4.5 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -4.5	**Fill:** Black/Redish Brown to Dark Brown, Loose, Rail Road Ballist, Bricks (Bricks and Ballist Have Tar Staining)	FILL	Y	0.0 -1.0 1.0 - 4.5
4.5	**REWORKED SANDY CLAY:** Med. Grey, Firm, 60%MPF,40% Fine Sand			

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 1.0 fbgs 0.0ppm SUB - SURFACE 1.0 - 4.0fbgs 0.0ppm

COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 1.0 FOR SVOC's AND METALS

COLLECTED SOIL SAMPLE FROM 1.0 - 4.5 FOR VOC's, DISCRETE SAMPLE FOR SVOC's AND METALS

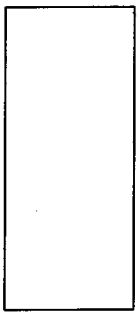
HEATED TAR PITCH, BECAME SOFT & LEFT GREEN STAINING ON BAG.

GROUNDWATER ENCOUNTERED:	4.5 fbgs
VISUAL IMPACTS:	0.5-2.0: tar pitch road; some coal tar staining on cement footers.
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

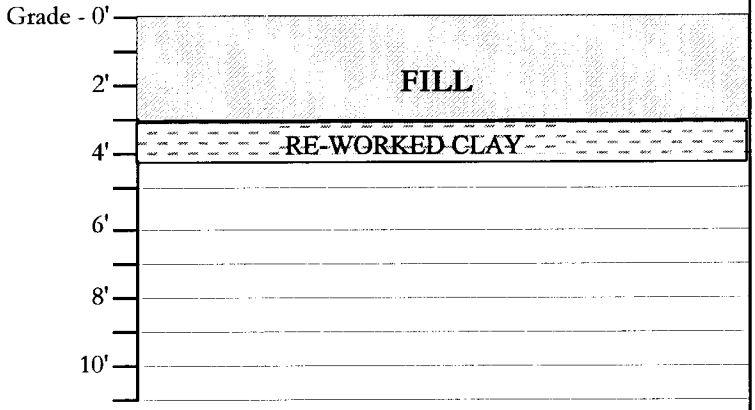
Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-5-4**
Project No.:	0071-006-100	Excavation Date:	01/19/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB

NORTH



SOUTH

Test Pit Cross Section:



TIME				
Start:	10:45	Length:	35.0 ft	(approx.)
End:	11:05	Width:	4.0ft	(approx.)
		Depth:	4.5 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -3.0	**Fill:** Black to Dark Brown, Loose, 90% NPF 10% Fine Sand w/Brick, Slag and Steel Debris	FILL	Y	0.0 -1.0 1.0 - 3.0
3.0 - 4.0	**REWORKED SANDY CLAY:** Med. Grey, Firm, 60%MPF,40% Fine Sand			

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 1.0 fbgs 0.0ppm SUB - SURFACE 1.0 - 3.0fbgs 0.0ppm

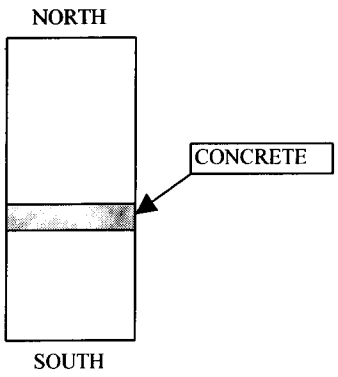
COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 1.0 FOR SVOC's AND METALS

COLLECTED SOIL SAMPLE FROM 1.0 - 3.0 FOR VOC's, COMPOSITE FOR SVOC's AND METALS

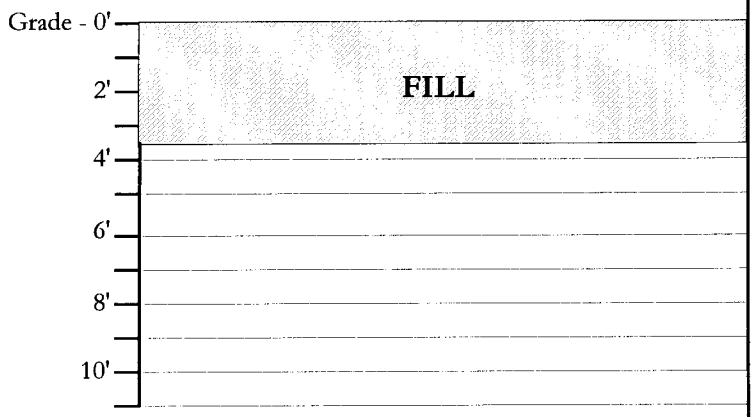
GROUNDWATER ENCOUNTERED:	4.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-5-5**
Project No.:	0071-006-100	Excavation Date:	01/19/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



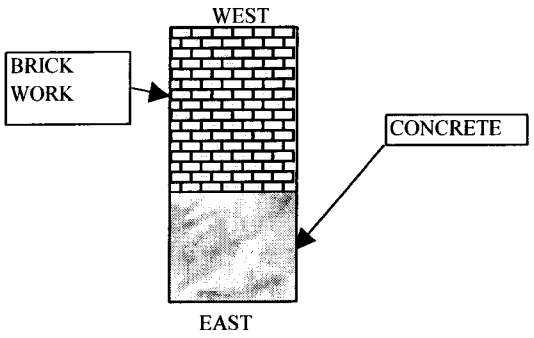
TIME				
Start:	13:45:(	Length:	44.0 ft	(approx.)
End:	14:00:(	Width:	4.0ft	(approx.)
		Depth:	3.5 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -3.5	**Fill:** Black to Medium Redish Brown, Loose, 50% NPF 20% Brick 20% Gravel(Ballist) 10% Fine Sand w/Railroad Ties	FILL	Y	0.0 -1.0 1.0 - 3.5

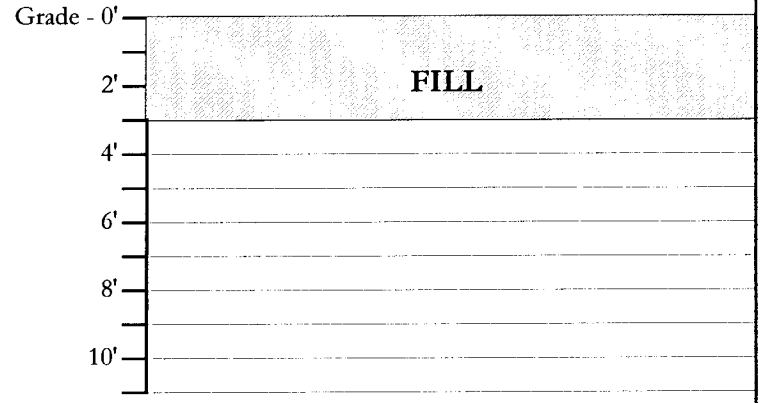
FIELD MEASUREMENTS:	
PID (ppm):	SURFACE 0.0 - 1.0 fbgs 0.0ppm SUB - SURFACE 1.0 - 3.5 fbgs 0.0ppm
COMMENTS:	COMPOSITED SOIL SAMPLES FROM 0.0 - 1.0 FOR SVOC's AND METALS FOR TP - 5 -(1 - 5)
	COLLECTED SOIL SAMPLE FROM 1.0 - 3.5 FOR VOC's.
	COMPOSITED SOIL SAMPLE FOR SVOC's AND METALS FOR TP - 5 - (1,2,4,5)
GROUNDWATER ENCOUNTERED:	3.5 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-5-6**
Project No.:	0071-006-100	Excavation Date:	01/19/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	14:10:(	Length:	57.0 ft	(approx.)
End:	14:40:(	Width:	4.0ft	(approx.)
		Depth:	3.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -1.0	**Fill:** Black to Dark Brown, Loose, 90% NPF 10% Fine Sand w/Roots	FILL	Y	0.0 -1.0 1.0 - 3.0
1.0 - 3.0	**BRICK WORK:** Refactory Brick Loosly Set Into Place, at Least 10 Layers	FILL	Y	

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 1.0 fbgs 0.0ppm SUB - SURFACE 1.0 - 3.5 fbgs 0.0ppm

COMMENTS: COLLECTED COMPOSITE SOIL SAMPLES FROM 0.0 - 1.0 FOR SVOC's AND METALS

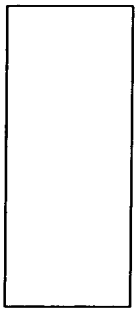
COLLECTED SAMPLE FROM 1.0 - 3.0 FOR VOC's. COMPOSITE FOR SVOC's AND METALS

GROUNDWATER ENCOUNTERED:	3.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

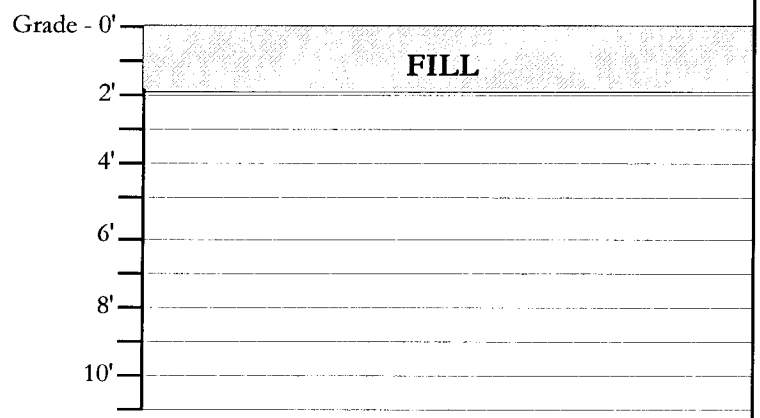
Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-5-7**
Project No.:	0071-006-100	Excavation Date:	01/19/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB

WEST



EAST

Test Pit Cross Section:



TIME				
Start:	14:55:(	Length:	57.0 ft	(approx.)
End:	15:15:(	Width:	4.0ft	(approx.)
		Depth:	3.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -1.0	**Fill:** Black to Dark Brown, Loose, 90% NPF 10% Fine Sand	FILL	Y	0.0 -1.0 1.0 - 2.0
1.0 - 2.0	**BALLIST:** Stone Bound with Tar Pitch.	FILL	Y	

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 1.0 fbgs 0.0ppm SUB - SURFACE 1.0 - 2.0 fbgs 0.0ppm

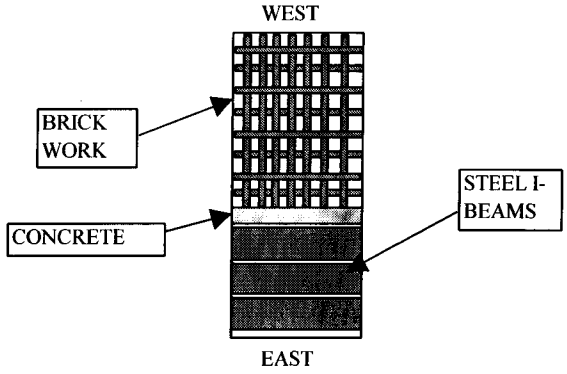
COMMENTS: COLLECTED COMPOSITE SOIL SAMPLES FROM 0.0 - 1.0 FOR SVOC's AND METALS

COLLECTED SAMPLE FROM 1.0 - 2.0 FOR VOC's. COMPOSITE FOR SVOC's AND METALS

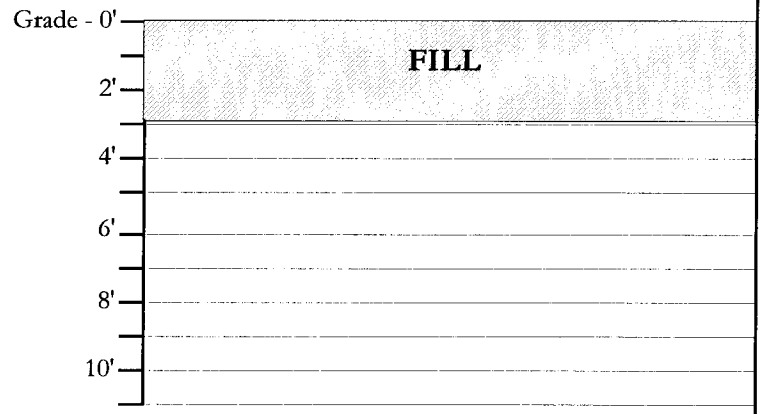
GROUNDWATER ENCOUNTERED:	2.0 fbgs
VISUAL IMPACTS:	1.0 - 2.0 Had stone bound with Tar Pitch possibly an old road.
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-5-8**
Project No.:	0071-006-100	Excavation Date:	01/20/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	8:40	Length:	64.0 ft	(approx.)
End:	9:20	Width:	4.0ft	(approx.)
		Depth:	3.5 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -3.0	**Fill:** Black to Dark Brown, Loose, 90% NPF 10% Fine Sand	FILL	Y	0.0 -1.0 1.0 - 3.0
1.0 - 3.5	**Fill:** Honeycomb Of Refactory Brick Work	FILL	Y	

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 1.0 fbgs 0.0ppm SUB - SURFACE 1.0 - 3.0 fbgs 0.0ppm

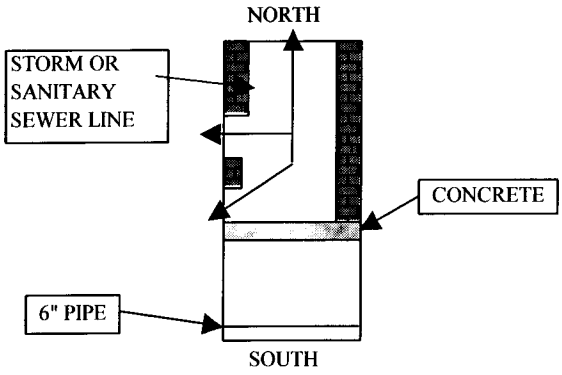
COMMENTS: COLLECTED COMPOSITE SOIL SAMPLES FROM 0.0 - 1.0 FOR SVOC's AND METALS

COLLECTED SAMPLE FROM 1.0 - 3.0 FOR VOC's. COMPOSITE FOR SVOC's AND METALS

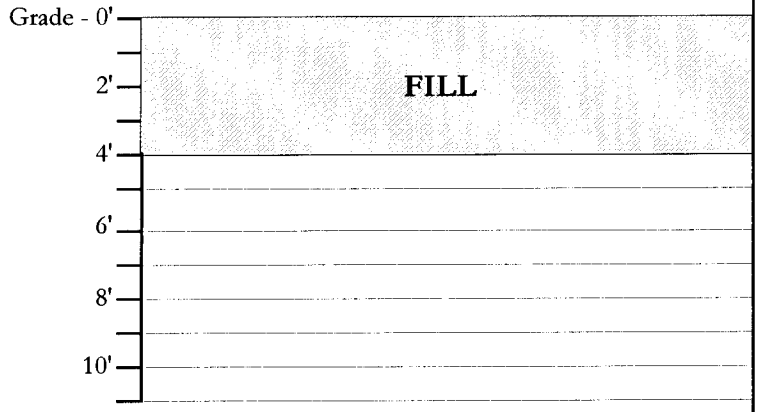
GROUNDWATER ENCOUNTERED:	3.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-5-9**
Project No.:	0071-006-100	Excavation Date:	01/20/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	9:35	Length:	81.0 ft	(approx.)
End:	10:15	Width:	4.0ft	(approx.)
		Depth:	3.5 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -4.0	**Fill:** Black to Dark Brown, Loose, 90% NPF 10% Fine Sand. At North End of Test Pit Exposed Storm Sewer/ Sanitary Sewer Loose Brick Archway Running North to South w/ 2 Connecting Lines One Running West and Another Running to the SW.	FILL	Y	0.0 -1.0 1.0 - 3.0

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 1.0 fbgs 0.0ppm SUB - SURFACE 1.0 - 3.0 fbgs 0.0ppm

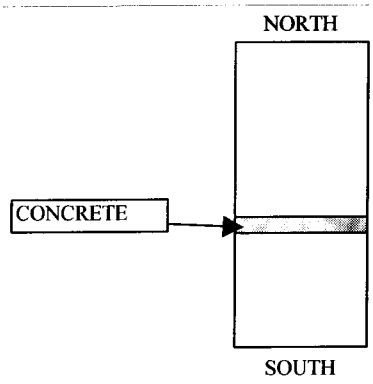
COMMENTS: COLLECTED COMPOSITE SOIL SAMPLES FROM 0.0 - 1.0 FOR SVOC's AND METALS

COLLECTED SAMPLE FROM 1.0 - 3.0 FOR VOC's. COMPOSITE FOR SVOC's AND METALS

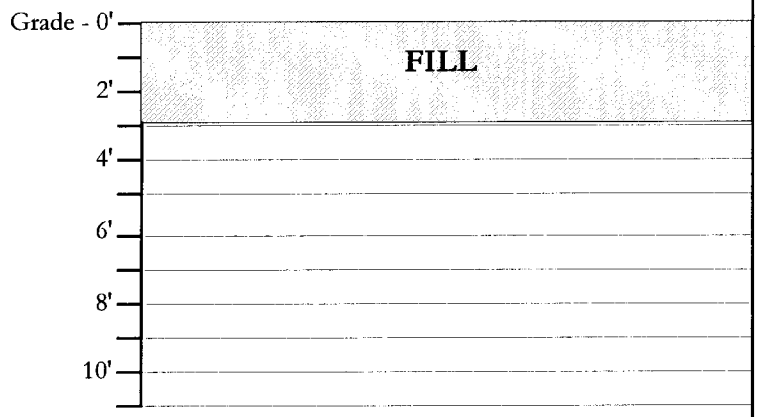
GROUNDWATER ENCOUNTERED:	3.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm, Uncoverd former sewer line.
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-5-10**
Project No.:	0071-006-100	Excavation Date:	01/20/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	8:10	Length:	70.0 ft	(approx.)
End:	8:25	Width:	4.0ft	(approx.)
		Depth:	3.0 ft	(approx.)

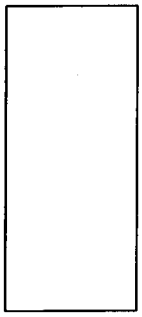
Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -3.0	**Fill:** Black to Dark Brown, Loose, 70% NPF, 20% Slag/Gravel, 10% Fine Sand	FILL	Y	0.0 -1.0 1.0 - 2.5

FIELD MEASUREMENTS:	
PID (ppm):	SURFACE 0.0 - 1.0 fbgs 0.0ppm SUB - SURFACE 1.0 - 2.5 fbgs 0.0ppm
COMMENTS:	COMPOSITED SOIL SAMPLES FROM 0.0 - 1.0 FOR SVOC's AND METALS FOR TP - 5 (6 - 10)
	COLLECTED SAMPLE FROM 1.0 - 2.5 FOR VOC's.
	COMPOSITED SOIL SAMPLES FROM 0.0 - 4.0 FOR SVOC's AND METALS FOR TP - 5 (6 - 10)
GROUNDWATER ENCOUNTERED:	2.5 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

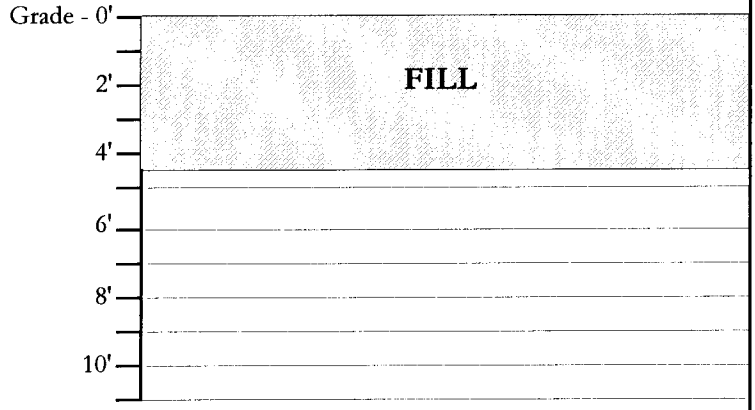
Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-5-11**
Project No.:	0071-006-100	Excavation Date:	01/20/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB

NORTH



SOUTH

Test Pit Cross Section:



TIME				
Start:	11:10	Length:	64.0 ft	(approx.)
End:	11:35	Width:	4.0ft	(approx.)
		Depth:	4.5 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -4.5	**Fill:** Black to Dark Brown, Loose, 90% NPF 10% Fine Sand w/slag and Brick w/Rail Road Ties to the West	FILL	Y	0.0 -1.0 1.0 - 4.0

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 1.0 fbgs 0.0ppm SUB - SURFACE 1.0 - 4.0 fbgs 0.0ppm

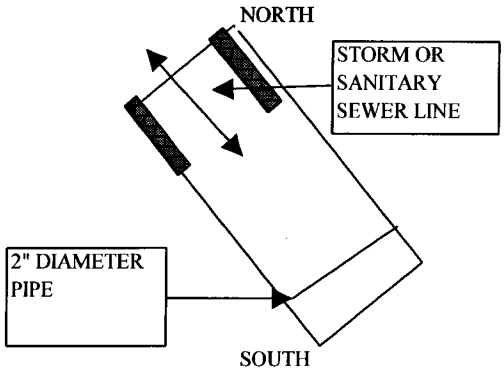
COMMENTS: COLLECTED SOILSAMPLE FROM 0.0 - 1.0METALS & SVOC's

COLLECTED SOILSAMPLE FROM 1.0 - 4.0 FOR VOC's, METALS & SVOC's

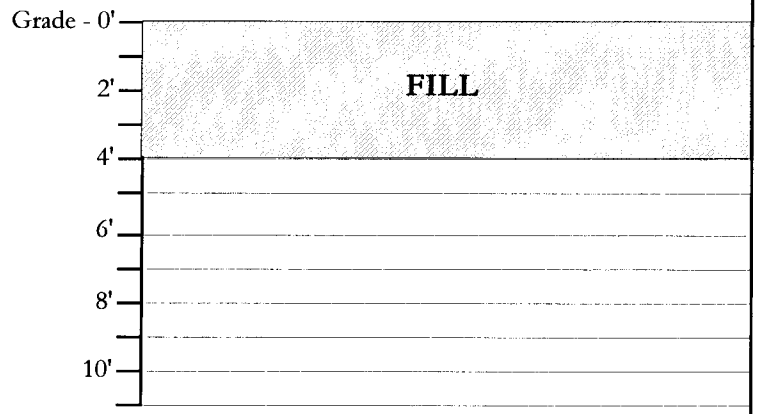
GROUNDWATER ENCOUNTERED:	4.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-5-12**
Project No.:	0071-006-100	Excavation Date:	01/20/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	10:30	Length:	60.0 ft	(approx.)
End:	11:00	Width:	4.0ft	(approx.)
		Depth:	4.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -4.0	**Fill:** Black to Dark Brown, Loose, 90% NPF, 10% Fine Sand w/ Foundation & Re-bar, Brick Sewer or Strom Drain at NW End of Test Pit (Bricks Were Stained Blackish Blue)	FILL	Y	0.0 -1.0 1.0 - 3.5

FIELD MEASUREMENTS:

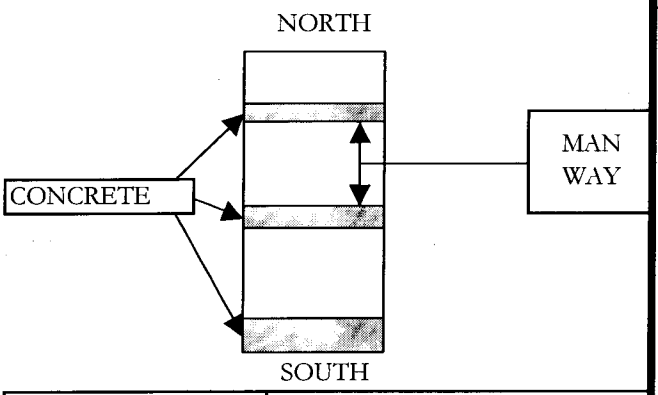
PID (ppm): SURFACE 0.0 - 1.0 fbgs 0.0ppm SUB - SURFACE 1.0 - 3.5 fbgs 0.0ppm

COMMENTS: COLLECTED SOILSAMPLE FROM 1.0 - 4.0 FOR VOC's & METALS.

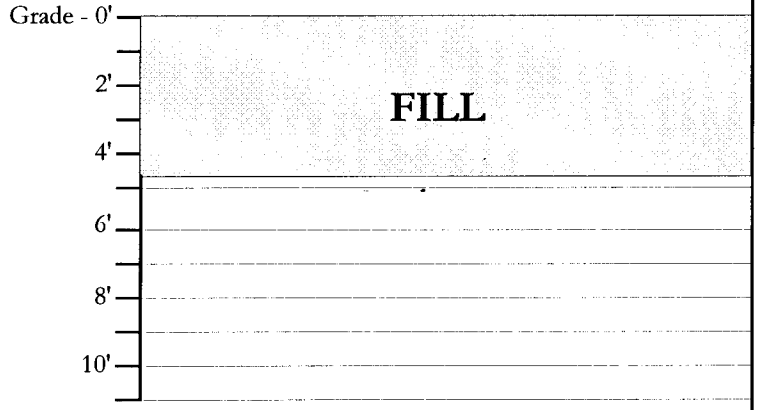
GROUNDWATER ENCOUNTERED:	3.5 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-6-1**
Project No.:	0071-006-100	Excavation Date:	01/12/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	10:45	Length:	48.0 ft	(approx.)
End:	11:15	Width:	4.0ft	(approx.)
		Depth:	4.5 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -4.5	**Fill:** Dark Brown, Loose, Brick, Concrete & Piping Debris (Rubble)	FILL	Y	0.0 -1.0 1.0 3.0

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 1.0 fbgs 0.0ppm SUB - SURFACE 1.0 - 3.0fbgs 0.0ppm

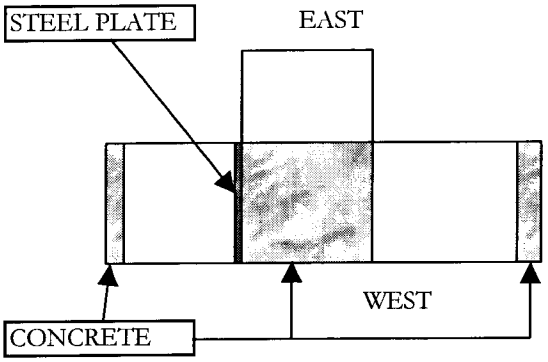
COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 1.0 FOR SVOC's AND METALS

COLLECTED SOIL SAMPLE FROM 1.0 - 3.0 FOR VOC's, COMPOSITE FOR SVOC's AND METALS

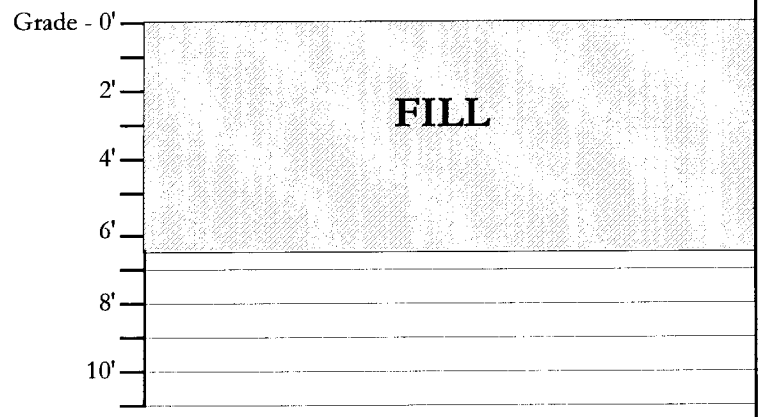
GROUNDWATER ENCOUNTERED:	3.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-6-2**
Project No.:	0071-006-100	Excavation Date:	01/12/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	11:25	Length:	39.0 ft	(approx.)
End:	13:05:0	Width:	24.0ft	(approx.)
		Depth:	6.5 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -6.5	**Fill:** Dark Brown/Black, Loose, 30% LPF, 60% Fine Sand 10% Large Concrete Debris w/Brick & Slag	FILL	Y	0.0 -2.0 2.0 6.5

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 2.0 fbgs 0.0ppm SUB - SURFACE 2.0 - 6.5fbgs 0.3ppm

COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 2.0 FOR SVOC's AND METALS

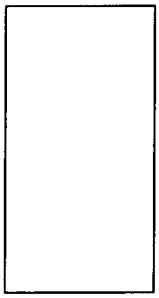
COLLECTED SOIL SAMPLE FROM 2.0 - 6.5 FOR VOC's, COMPOSITE FOR SVOC's AND METALS

GROUNDWATER ENCOUNTERED:	6.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

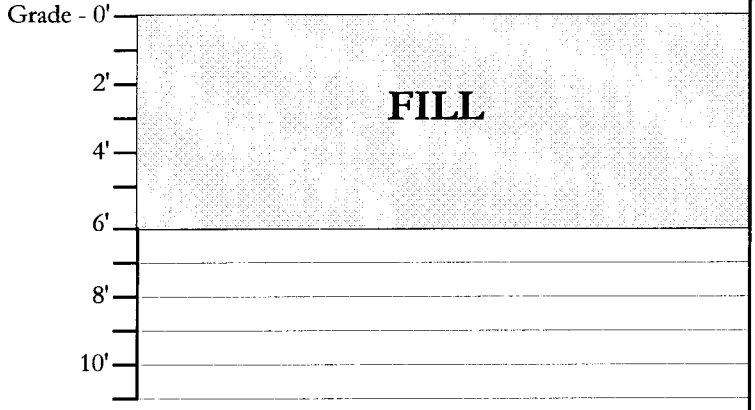
Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-6-3**
Project No.:	0071-006-100	Excavation Date:	01/12/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB

NORTH



SOUTH

Test Pit Cross Section:



TIME				
Start:	13:20:	Length:	33.0 ft	(approx.)
End:	13:35:	Width:	4.0ft	(approx.)
		Depth:	6.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -6.0	**Fill:** Black/Dark Brown Loose, 80% NPF 20% Concrete Debris w/Miscellaneous Piping & Refactory Brick	FILL	Y	0.0 -2.0 2.0 6.0

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 2.0 fbgs 1.0ppm SUB - SURFACE 2.0 - 6.0fbgs 1.1ppm

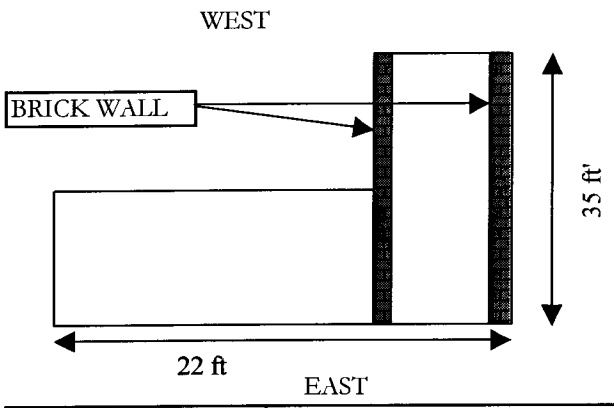
COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 2.0 FOR SVOC's AND METALS

COLLECTED SOIL SAMPLE FROM 2.0 - 6.0 FOR VOC's, COMPOSITE FOR SVOC's AND METALS

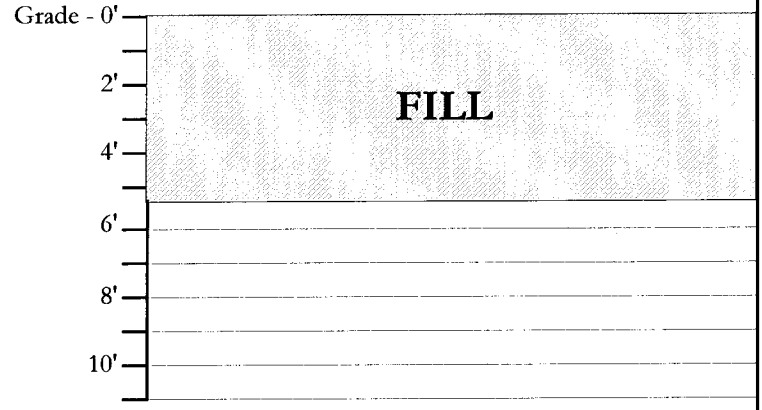
GROUNDWATER ENCOUNTERED:	5.7 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-6-4**
Project No.:	0071-006-100	Excavation Date:	01/12/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	13:52:(	Length:	35.0 ft.	(approx.)
End:	14:15:(	Width:	22.0ft	(approx.)
		Depth:	5.5 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -5.5	**Fill:** Black/Dark Brown Loose, 80% NPF 20% Concrete Debris w/Miscellaneous Piping & Refactory Brick	FILL	Y	0.0 -2.0 2.0 5.5

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 2.0 fbgs 0.0ppm SUB - SURFACE 2.0 - 5.5fbgs 0.2ppm

COMMENTS: SOIL FROM 0.0 - 2.0 FOR SVOC's AND METALS

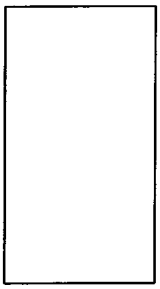
COLLECTED SOIL SAMPLE FROM 2.0 - 5.5 FOR VOC's, COMPOSITE FOR SVOC's AND METALS

GROUNDWATER ENCOUNTERED:	5.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

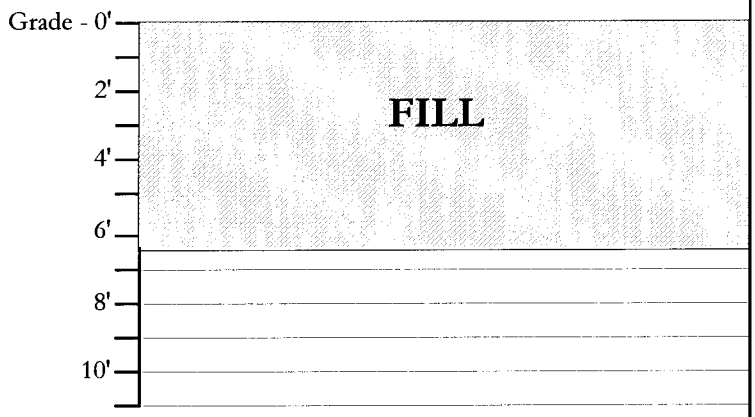
Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-6-5**
Project No.:	0071-006-100	Excavation Date:	01/12/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB

NORTH



SOUTH

Test Pit Cross Section:



TIME				
Start:	14:45:0	Length:	31.0 ft.	(approx.)
End:	15:00:0	Width:	4.0ft	(approx.)
		Depth:	6.5 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -6.5	**Fill:** Black/Dark Brown Loose, 80% NPF 20% Fine Sand w/ Concrete Debris, Miscellaneous Piping & Refactory Brick	FILL	Y	0.0 -2.0 2.0 6.5

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 2.0 fbgs 0.0ppm SUB - SURFACE 2.0 - 6.5fbgs 0.2ppm

COMMENTS: COMPOSITED SOIL SAMPLE FROM 0.0 - 2.0 FOR SVOC's AND METALS FOR TP 6-(1,2,3,4,5)

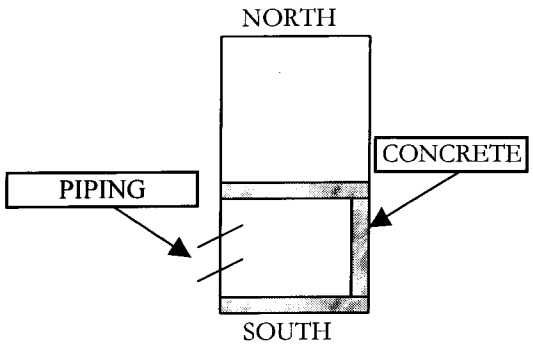
COLLECTED SOIL SAMPLE FROM 2.0 - 6.5 FOR VOC's

COMPOSITED SOIL SAMPLE FROM 2.0 - 6.0 FOR SVOC's AND METALS FOR TP 6-(1,2,3,4,5)

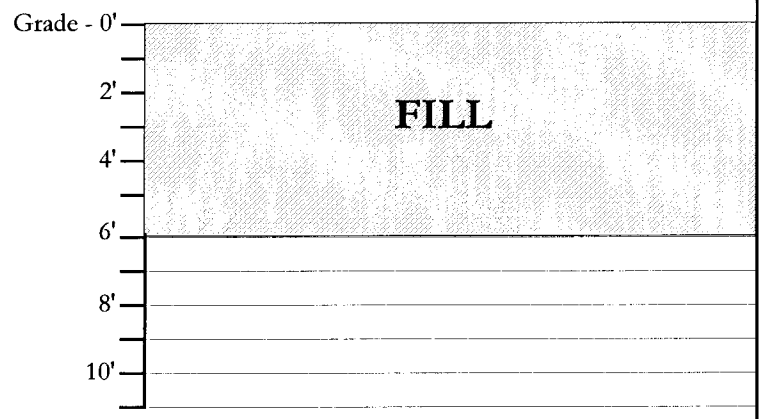
GROUNDWATER ENCOUNTERED:	6.3 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-6-6**
Project No.:	0071-006-100	Excavation Date:	01/12/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	15:15:(	Length:	56.0ft	(approx.)
End:	16:00:(	Width:	4.0ft	(approx.)
		Depth:	6.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -6.0	**Fill:** Black/Dark Brown Loose, 80% NPF 20% Fine Sand w/ Concrete Debris, Miscellaneous Piping & Refactory Brick	FILL	Y	0.0 -2.0 2.0 6.0

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 2.0 fbgs 0.0ppm SUB - SURFACE 2.0 - 6.0fbgs 0.0ppm

COMMENTS: COLLECTED SOIL SAMPLE FROM 2.0 - 6.0 FOR VOC's

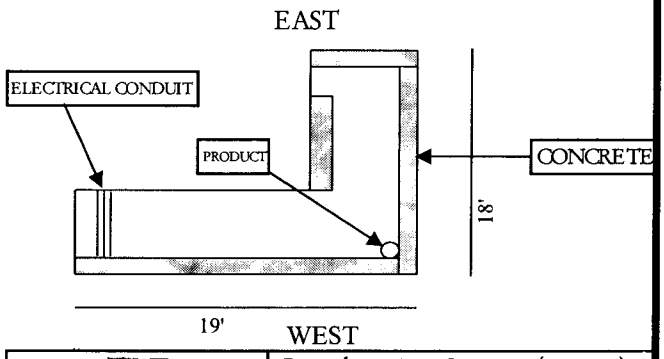
COLLECTED SOIL SAMPLE FROM 2.0 - 6.0 FOR SVOC's AND METALS

EXTRA SVOC's SAMPLE TAKEN DUE TO PETROLEUM ODOR

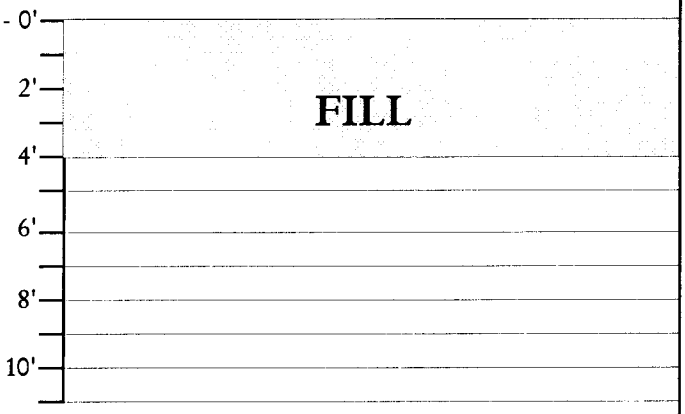
GROUNDWATER ENCOUNTERED:	5.5 fbgs
VISUAL IMPACTS:	Oliy Sheen on Water, Foamy Material on Water Surface
OLFACTORY OBSERVATIONS:	Musty Petroleum Odor
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-6-7**
Project No.:	0071-006-100	Excavation Date:	01/13/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	8:05	Length:	19.0 & 18.0	(approx.)
End:	8:45	Width:	4.0ft	(approx.)
		Depth:	4.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -4.0	Fill: Black/Dark Brown Loose, 80% NPF 20% Fine Sand w/ Concrete Debris, Miscellaneous Piping & Refactory Brick	FILL	Y	2.0 -4.0

FIELD MEASUREMENTS:

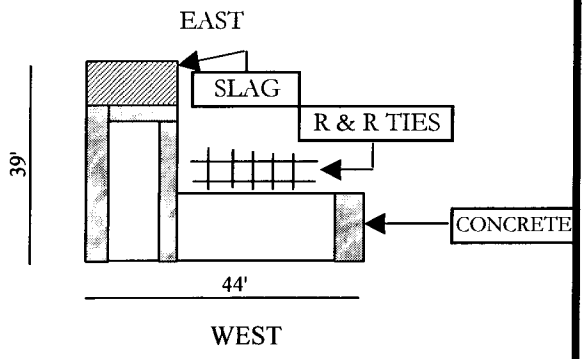
PID (ppm): SURFACE 0.0 - 2.0 fbgs 0.0ppm SUB - SURFACE 2.0 - 4.0fbgs 0.0ppm

COMMENTS: COLLECTED SOIL SAMPLE FROM 2.0 - 4.0 FOR VOC's & METALS. METALS DUP TAKEN

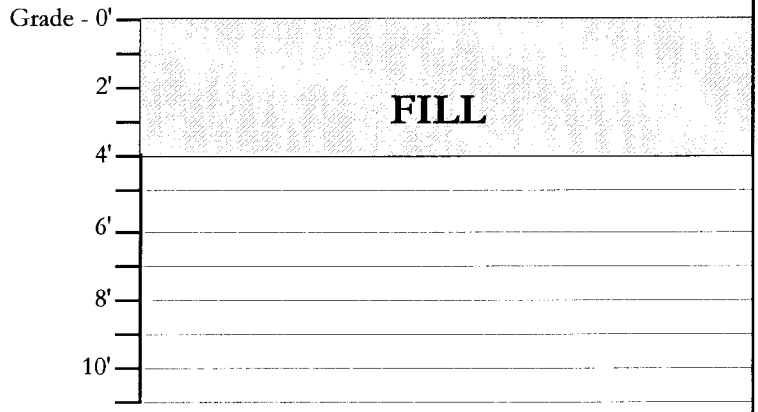
GROUNDWATER ENCOUNTERED:	3.6 fbgs
VISUAL IMPACTS:	Oily product noticed at southwest end of TP - 6-7
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-6-8**
Project No.:	0071-006-100	Excavation Date:	01/13/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	8:55	Length:	39.0 & 44.0	(approx.)
End:	9:30	Width:	4.0ft	(approx.)
		Depth:	4.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -4.0	**Fill:** Black/Dark Brown - Redish Brown, Loose, 80% NPF 20% Fine Sand w/ Concrete Debris, Refactory Brick	FILL	Y	2.0 -4.0

FIELD MEASUREMENTS:

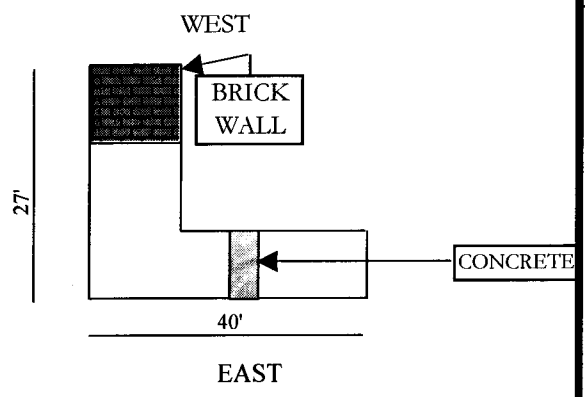
PID (ppm): SURFACE 0.0 - 2.0 fbgs 0.0ppm SUB - SURFACE 2.0 - 4.0fbgs 0.0ppm

COMMENTS: COLLECTED SOIL SAMPLE FROM 2.0 - 4.0 FOR VOC's

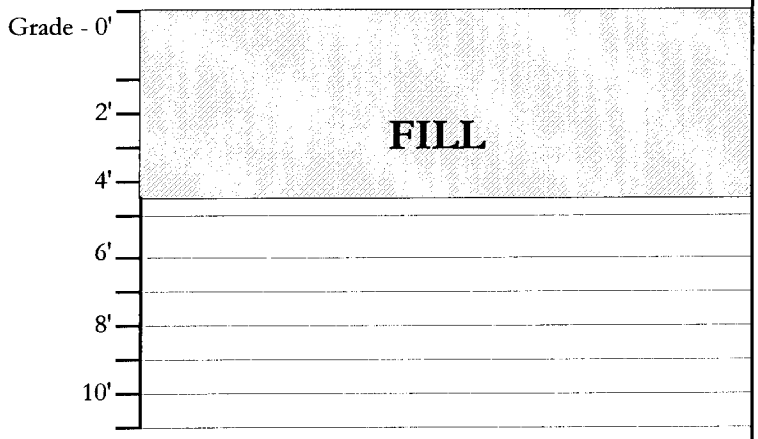
GROUNDWATER ENCOUNTERED:	3.8 fbgs
VISUAL IMPACTS:	Possible Mill Scale
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-6-9**
Project No.:	0071-006-100	Excavation Date:	01/13/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	8:40	Length:	39.0 & 44.0	(approx.)
End:	10:35	Width:	4.0ft	(approx.)
		Depth:	4.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -4.5	**Fill:** Black/Dark Brown Towards South Fill Becomes Med. Grey (Fly Ash), West Side Has Redish Brown (Mill Scale) Loose, 80% NPF 20% Fine Sand w/ Concrete & Steel Debris, Refactory Brick	FILL	Y	2.0 -4.5

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 2.0 fbgs 0.0ppm SUB - SURFACE 2.0 - 4.5fbgs 0.0ppm

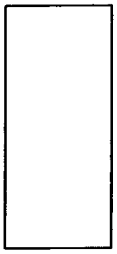
COMMENTS: COLLECTED SOIL SAMPLE FROM 2.0 - 4.5 FOR VOC's

GROUNDWATER ENCOUNTERED:	4.3 fbgs
VISUAL IMPACTS:	Possible Mill Scale & Fly Ash, Orange Tint to Groundwater.
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

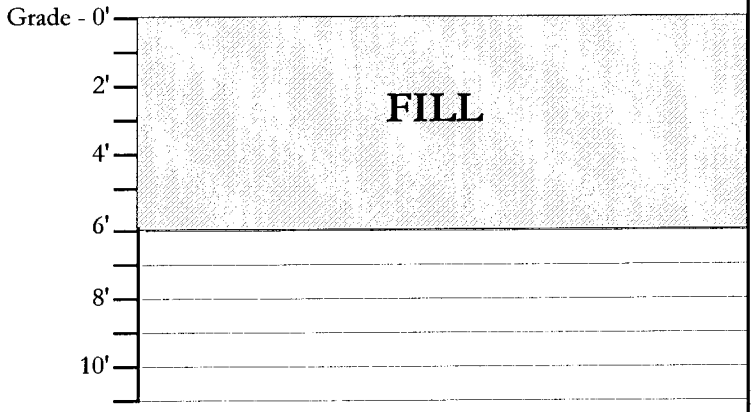
Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-6-10**
Project No.:	0071-006-100	Excavation Date:	01/13/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB

EAST



WEST

Test Pit Cross Section:



TIME				
Start:	10:45	Length:	29.0ft	(approx.)
End:	11:05	Width:	4.0ft	(approx.)
		Depth:	4.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -6.0	**Fill:** Black/Dark Brown Loose, 80% NPF 20% Fine Sand w/ Concrete & Steel Debris, Refactory Brick	FILL	Y	2.0 -6.0

FIELD MEASUREMENTS:

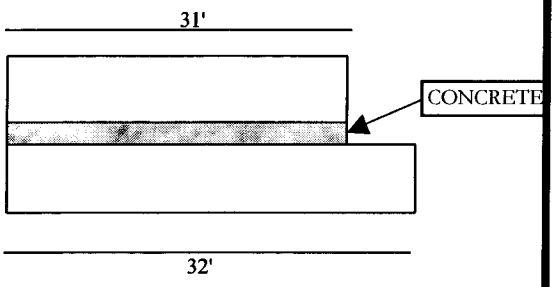
PID (ppm): SURFACE 0.0 - 2.0 fbgs 0.0ppm SUB - SURFACE 2.0 - 6.0 fbgs 0.0ppm

COMMENTS: COLLECTED SOIL SAMPLE FROM 2.0 - 6.0 FOR VOC's & PCB's

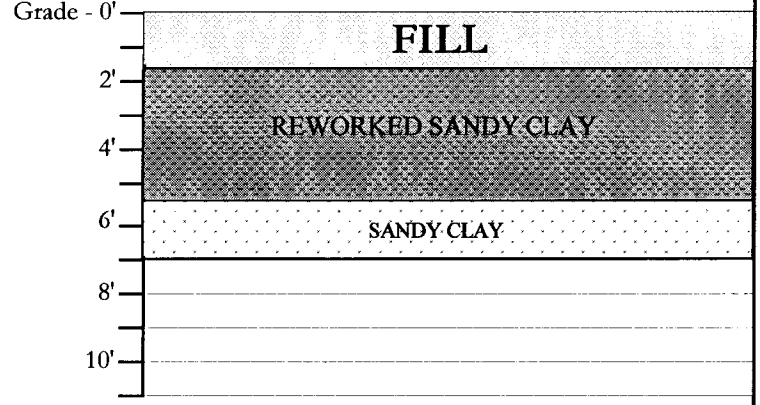
GROUNDWATER ENCOUNTERED:	5.6 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-7-1**
Project No.:	0071-006-100	Excavation Date:	01/13/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	10:45	Length:	31' & 32'	(approx.)
End:	11:40	Width:	9.0ft	(approx.)
		Depth:	7.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -1.5	**Fill:** Black, Loose, 80% NPF, 20% Fine Sand	FILL	Y	0.0 -1.5
1.5 - 5.5	**REWORKED SANDY CLAY:** Med. Grey, Stiff, 80% MPF, 20% Fine Sand w/Brick & Slag Debris	CL	Y	1.5 - 5.5
5.5 - 7.0	**SANDY CLAY:** Med. Grey, Stiff, 60% MPF, 40% Fine Sand	CL	Y	

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 1.5 fbgs 0.0ppm SUB - SURFACE 1.5 - 5.5fbgs 0.0ppm

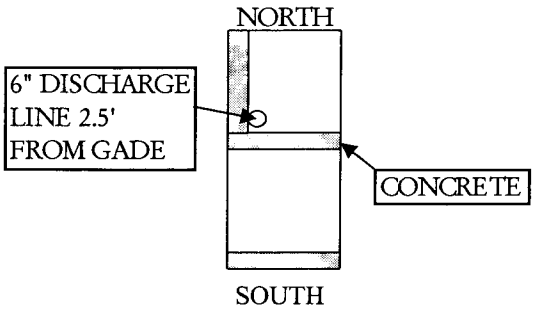
COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 1.5 FOR SVOC's AND METALS

COLLECTED SOIL SAMPLE FROM 1.5 - 5.5FOR VOC's, COMPOSITE FOR SVOC's AND METALS

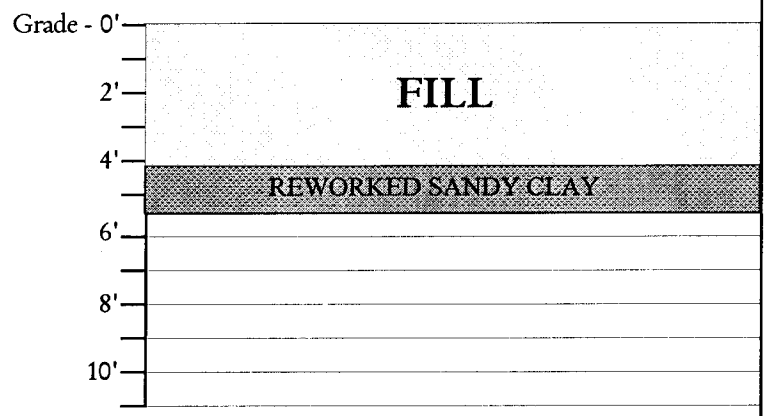
GROUNDWATER ENCOUNTERED:	None Observed
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-7-2**
Project No.:	0071-006-100	Excavation Date:	01/13/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	13:10:(	Length:	20.0 ft	(approx.)
End:	13:45:(	Width:	4.0ft	(approx.)
		Depth:	5.5ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -4.0	**Fill:** Black, Loose, 80% NPF, 20% Fine Sand w/Brick Debris	FILL	Y	0.0 -2.0 2.0 -5.5
4.0 - 5.5	**REWORKED SANDY CLAY:** Med. Grey, Stiff, 20% LPF, 80% Fine Sand w/Some Petroleum Product mixed in & Visible Coal Tar	CL	Y	

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 2.0 fbgs 0.0ppm SUB - SURFACE 2.0 - 5.5fbgs 12.8ppm

COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 2.0 FOR SVOC's AND METALS

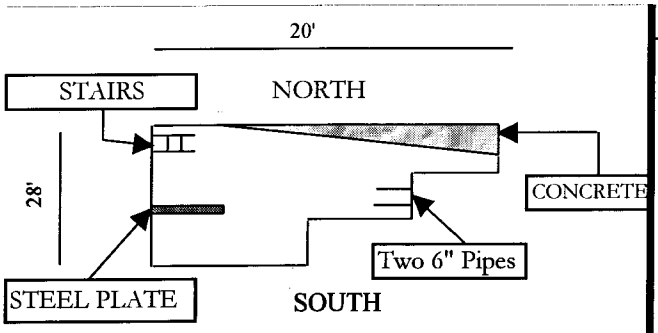
COLLECTED SOIL SAMPLE FROM 2.0 - 5.5FOR VOC's, DISCRETE SVOC's AND METALS

CONCRETE ON BOTTOM OF TEST PIT BUT NOT CONTINOUS

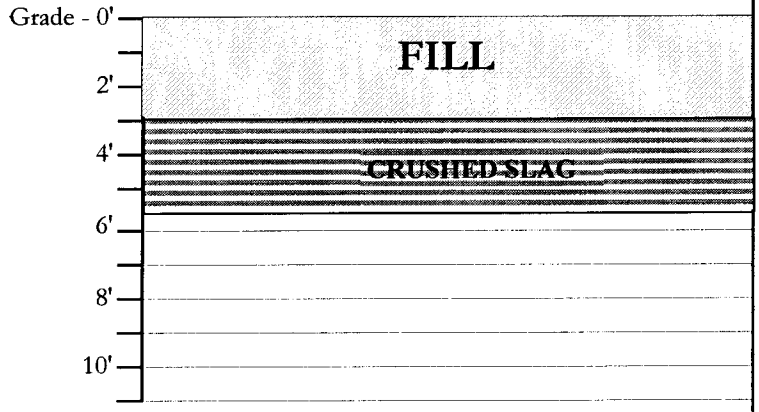
GROUNDWATER ENCOUNTERED:	4.5 fbgs
VISUAL IMPACTS:	Floating product on water surface, oily tar-like material on footer wall
OLFACTORY OBSERVATIONS:	Strong Petroleum Odor
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 3123 ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-7-3**
Project No.:	0071-006-100	Excavation Date:	01/13/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	13:50:0	Length:	28' & 20'	(approx.)
End:	14:50:0	Width:	4.0ft	(approx.)
		Depth:	5.5ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -3.0	**Fill:** Black, Loose, 80% NPF, 20% Fine Sand w/Brick Debris	FILL	Y	0.0 -2.0 2.0 -5.0
3.0 - 5.5	**CRUSHED SLAG:** Med. Grey, Loose, 80% Coarse Grained non-plastic slag 20% Fine Slag	FILL	Y	

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 2.0 fbgs 0.0ppm SUB - SURFACE 2.0 - 5.5fbgs 0.0ppm

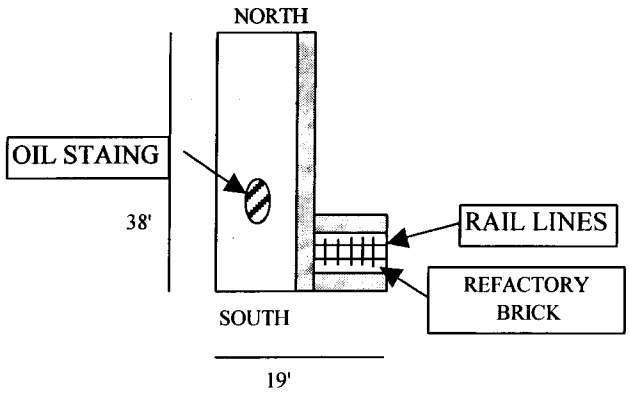
COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 2.0 FOR SVOC's AND METALS

COLLECTED SOIL SAMPLE FROM 2.0 - 5.0 FOR VOC's, COMPOSITE FOR SVOC's AND METALS

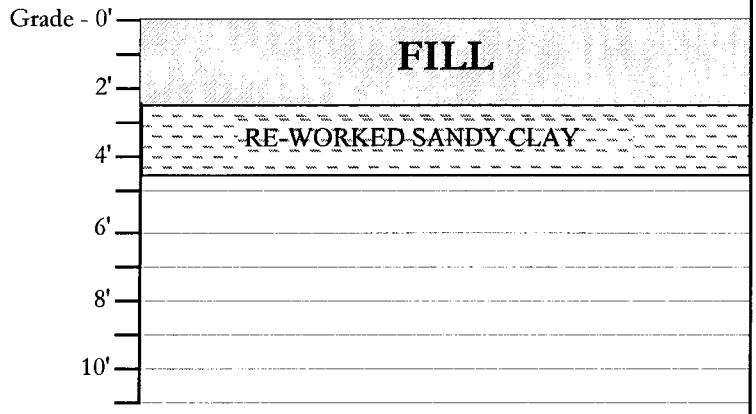
GROUNDWATER ENCOUNTERED:	5.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-7-4**
Project No.:	0071-006-100	Excavation Date:	01/17/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	8:00	Length:	38.0 ft	(approx.)
End:	8:40	Width:	4.0ft to 19ft	(approx.)
		Depth:	5.5ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -3.5	**Fill:** Black, Orange from 0.0 - 1.0, Dark Brown From 1.0 - 3.5, Loose, Moist, 90% NPF, 10% Fine Sand w/Brick Debris	FILL	Y	0.0 -1.0 1.0 -4.5
3.5 - 4.5	**REWORKED SANDY CLAY:** Med. Grey,Stiff, 60%MPF,40% Fine Sand	CL	Y	

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 1.0 fbgs 0.0ppm SUB - SURFACE 1.0 - 4.5fbgs 0.0ppm

COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 1.0 FOR SVOC's AND METALS

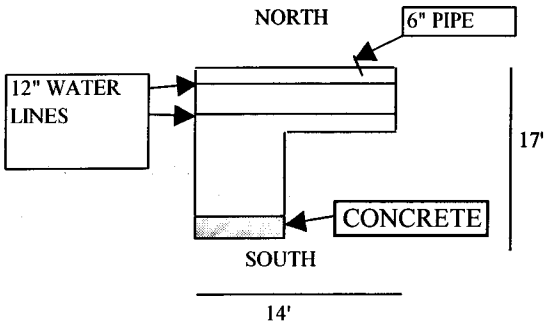
COLLECTED SOIL SAMPLE FROM 1.0 - 4.5 FOR VOC's

COLLECTED COMPOSITE SOIL SAMPLE FROM 1.0 - 4.5 FOR SVOC's AND METALS

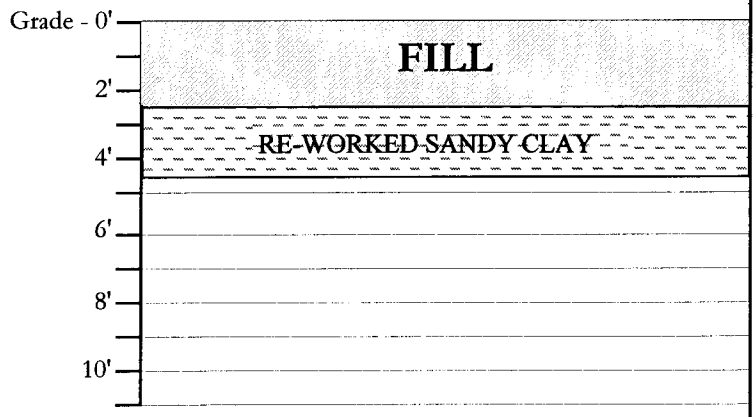
GROUNDWATER ENCOUNTERED:	3.5 fbgs
VISUAL IMPACTS:	Oil Staining at Bottom of Test Pit.
OLFACTORY OBSERVATIONS:	Musty Odor
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-7-5**
Project No.:	0071-006-100	Excavation Date:	01/17/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	8:55	Length:	17.0 ft	(approx.)
End:	9:35	Width:	4.0ft to 14.0ft	(approx.)
		Depth:	5.5ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -5.0	**Fill:** Black, Dark Brown, Loose, Moist, 90% NPF, 10% Fine Sand w/Brick Debris	FILL	Y	0.0 -2.0 2.0 -5.0
5.0 - 6.0	**REWORKED SANDY CLAY:** Med. Grey, Stiff, 60%MPF,40% Fine Sand	CL	Y	

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 2.0 fbgs 0.0ppm SUB - SURFACE 2.0 - 5.0fbgs 0.0ppm

COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 2.0 FOR SVOC's AND METALS

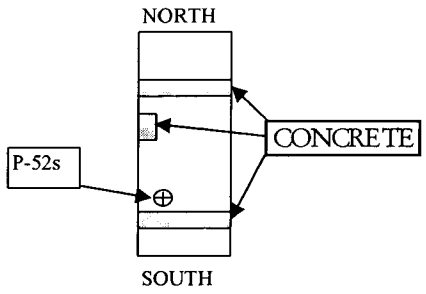
COLLECTED SOIL SAMPLE FROM 2.0 - 5.0 FOR VOC's

COLLECTED COMPOSITE SOIL SAMPLE FROM 2.0 - 5.0 FOR SVOC's AND METALS

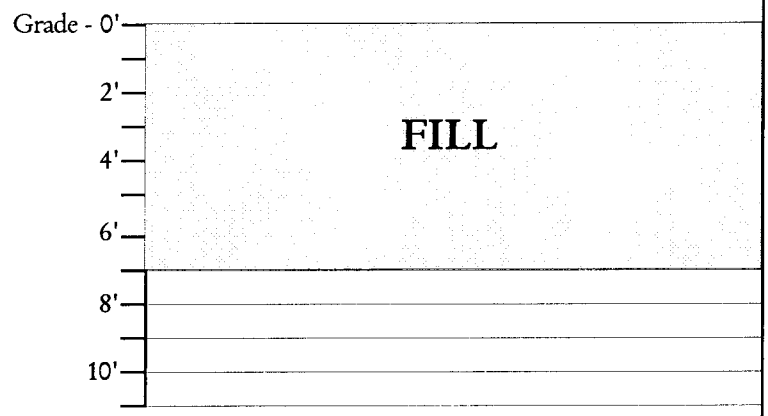
GROUNDWATER ENCOUNTERED:	none observed
VISUAL IMPACTS:	none, there are 2 fire hydrants ~50 yards to the east and the west of test pit
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm, piezometer P-53s was not installed due to lack of groundwater
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-7-6**
Project No.:	0071-006-100	Excavation Date:	01/17/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	9:45	Length:	39.0 ft	(approx.)
End:	10:35	Width:	4.0ft	(approx.)
		Depth:	7.0ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -7.0	**Fill:** Black, Dark Brown, Loose, Moist, 90% NPF, 10% Fine Sand w/Brick Debris and Slag and Gravel Back fill	FILL	Y	0.0 -2.0 2.0 -7.0

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 2.0 fbgs 0.0ppm SUB - SURFACE 2.0 - 7.0fbgs 0.0ppm

COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 2.0 FOR SVOC's AND METALS

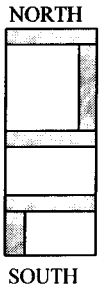
COLLECTED SOIL SAMPLE FROM 2.0 - 7.0 FOR VOC's

COLLECTED COMPOSITE SOIL SAMPLE FROM 2.0 - 7.0 FOR SVOC's AND METALS

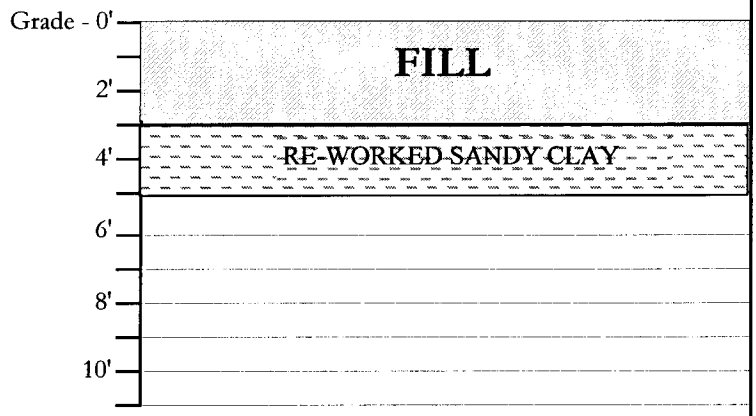
GROUNDWATER ENCOUNTERED:	6.0 fbgs
VISUAL IMPACTS:	None
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm, piezometer P-52s was installed @ ~10.0 fbgs
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-7-7**
Project No.:	0071-006-100	Excavation Date:	01/17/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	11:00	Length:	37.0 ft	(approx.)
End:	11:35	Width:	4.0ft	(approx.)
		Depth:	5.0ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -3.0	**Fill:** Black, Dark Brown, Loose, Moist, 90% NPF, 10% Fine Sand	FILL	Y	0.0 -1.0 1.0 -3.0
3.0 - 5.0	**REWORKED SANDY CLAY:** Med. Grey, Stiff, 60%MPF,40% Fine Sand	CL		

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 1.0 fbgs 0.0ppm SUB - SURFACE 1.0 - 3.0fbgs 0.0ppm

COMMENTS: COMPOSITED SOIL SAMPLE FROM 0.0 - 1.0 FOR SVOC's AND METALS FOR TP-7-(4-7)

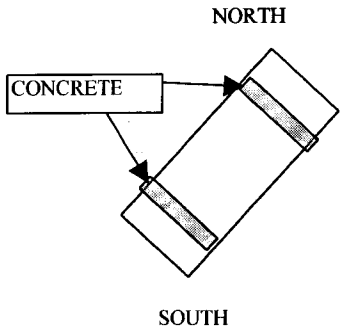
COLLECTED SOIL SAMPLE FROM 1.0 - 3.0 FOR VOC's

COMPOSITED SOIL SAMPLE FROM 2.0 - 7.0 FOR SVOC's AND METALS FOR TP-7-(4-7)

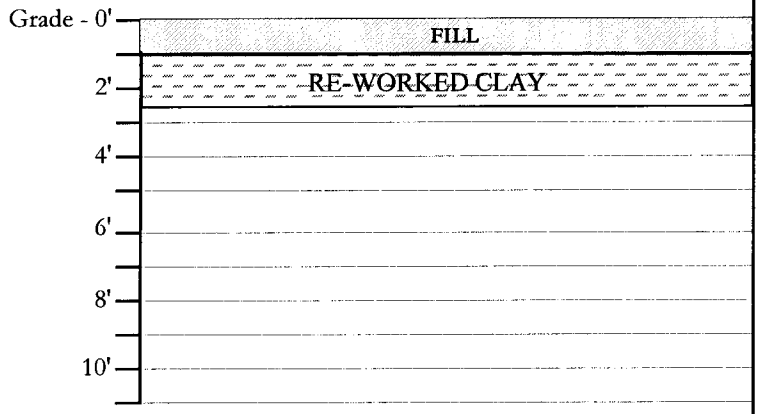
GROUNDWATER ENCOUNTERED:	3.5 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-7-8**
Project No.:	0071-006-100	Excavation Date:	01/17/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	13:00:(	Length:	64.0 ft	(approx.)
End:	14:00:(	Width:	4.0ft	(approx.)
		Depth:	5.0ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -1.0	**Fill:** Black, Dark Brown, Loose, Moist, 90% NPF, 10% Fine Sand w/Backfilled Slag or Gravel Between the Two Concrete Footers	FILL	Y	
1.0 - 2.5	**REWORKED SANDY CLAY:** Med. Grey, Stiff, 60%MPF,40% Fine Sand	CL	Y	

FIELD MEASUREMENTS:

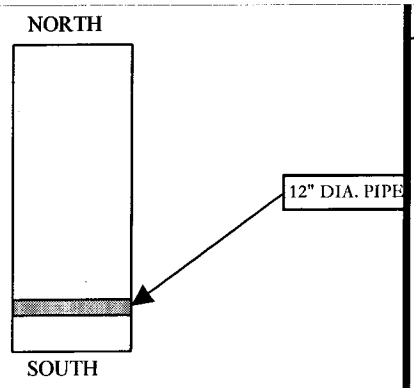
PID (ppm): NO FIELD SCAN TAKEN

COMMENTS: NO SAMPLE COLLECTED

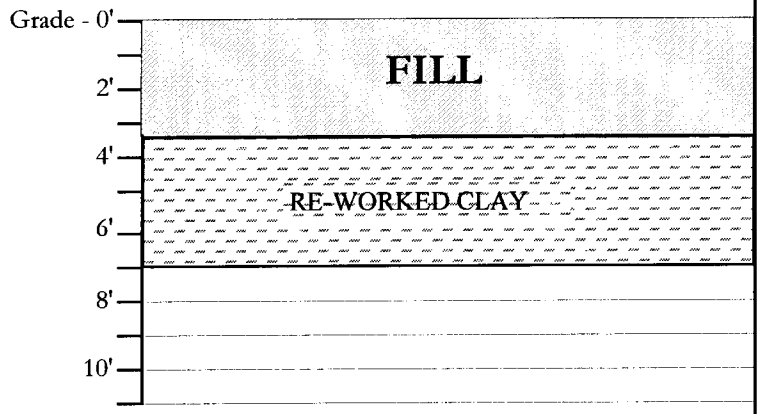
GROUNDWATER ENCOUNTERED:	2.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	no headspace taken
SAMPLES COLLECTED:	no

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-8-1**
Project No.:	0071-006-100	Excavation Date:	01/17/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	14:15:(	Length:	31' & 32'	(approx.)
End:	14:45:(	Width:	9.0ft	(approx.)
		Depth:	7.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -3.5	**Fill:** Med. Brown to Dark Brown w/ Lenses of Black, Loose, Moist, 80% NPF, 10% Fine Sand, 10% Broken Down Orange Brick w/Some Coke Fines and Iron Staining	FILL	Y	0.0 -2.5 2.5 - 7.0
3.5 - 7.0	**REWORKED SANDY CLAY:** Med. Grey, Stiff, 60%MPF,40% Fine Sand	CL	Y	

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 2.5 fbgs 0.0ppm SUB - SURFACE 2.5 - 7.0fbgs 0.0ppm

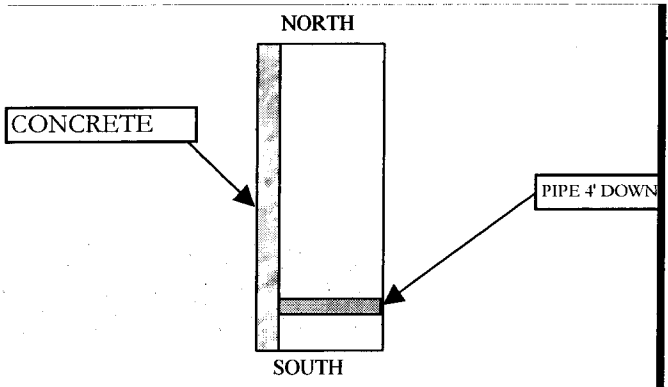
COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 2.5 FOR SVOC's AND METALS

COLLECTED SOIL SAMPLE FROM 2.5 - 7.0FOR VOC's, COMPOSITE FOR SVOC's AND METALS

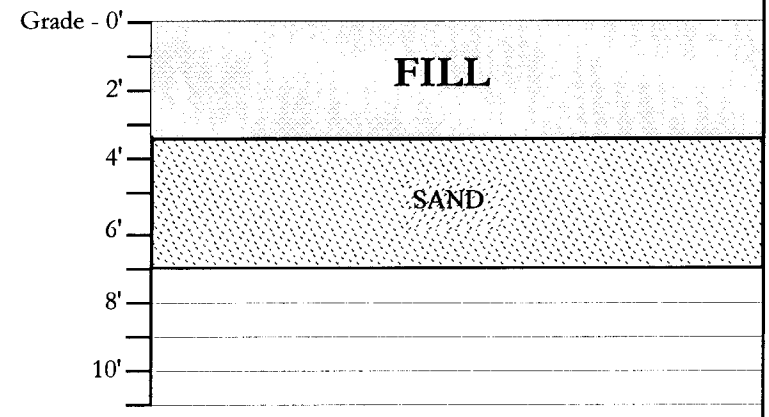
GROUNDWATER ENCOUNTERED:	3.5 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-8-2**
Project No.:	0071-006-100	Excavation Date:	01/17/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	14:55:0	Length:	38.0 ft	(approx.)
End:	15:30:0	Width:	4.0ft	(approx.)
		Depth:	7.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -1.5	**Fill:** Med. Brown to Dark Brown w/ Lenses of Black, Loose, Moist, 80% NPF, 20% Fine Sand	FILL	Y	0.0 -1.5 1.5 - 7.0
1.5 - 7.0	**SAND:** Med. Brown, Moist to Wet, 90% Fine Sand 10% Pebbles and Cobbles	SAND	Y	

FIELD MEASUREMENTS:

PID (ppm): NO PID SCAN TAKEN DUE TO RAIN

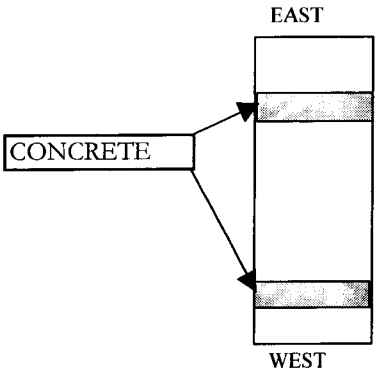
COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 1.5 FOR SVOC's AND METALS

COLLECTED SOIL SAMPLE FROM 1.5 - 7.0FOR VOC's, COMPOSITE FOR SVOC's AND METALS

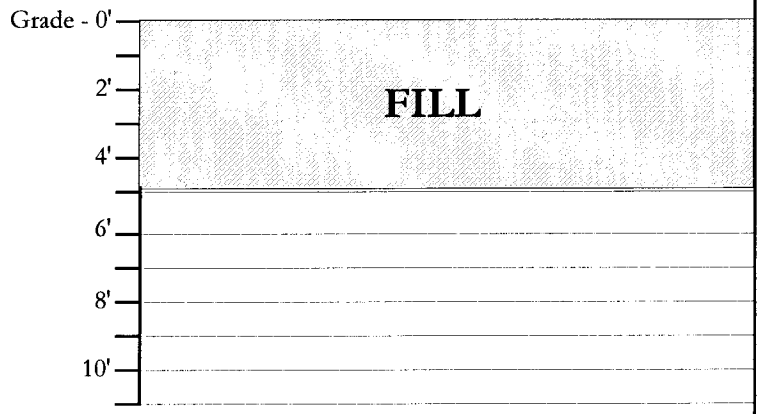
GROUNDWATER ENCOUNTERED:	6.5 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-8-3**
Project No.:	0071-006-100	Excavation Date:	01/17/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	15:45:(	Length:	83.0 ft	(approx.)
End:	16:20:(	Width:	4.0ft	(approx.)
		Depth:	7.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -4.5	**Fill:** Dark Brown to Black, Loose, Moist, 80% NPF, 20% Fine Sand w/ some piping	FILL	Y	0.0 -1.5 1.5 - 4.0

FIELD MEASUREMENTS:

PID (ppm): NO PID SCAN TAKEN DUE TO RAIN

COMMENTS: COMPOSITED SOIL SAMPLE FROM 0.0 - 1.0 FOR SVOC's AND METALS FOR TP-8-(1-3)

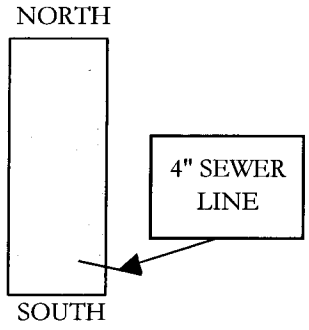
COLLECTED SOIL SAMPLE FROM 1.5 - 7.0FOR VOC's,

COMPOSITED SOIL SAMPLE FROM 1.0 - 7.0 FOR SVOC's AND METALS FOR TP-8-(1-3)

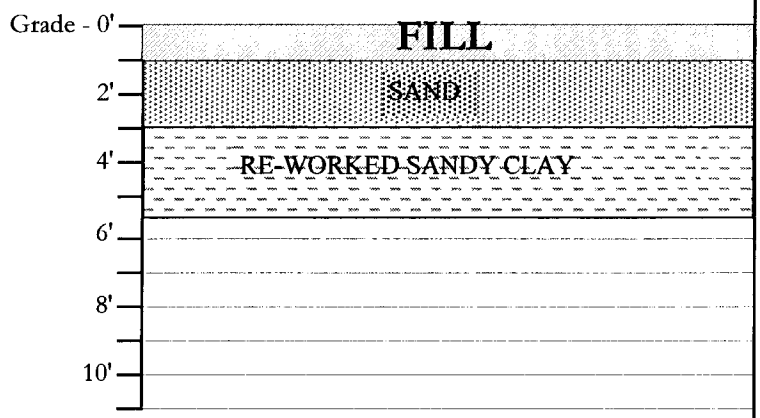
GROUNDWATER ENCOUNTERED:	4.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-8-4**
Project No.:	0071-006-100	Excavation Date:	01/13/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	15:00:(	Length:	49.0 ft	(approx.)
End:	15:30:(	Width:	4.0ft	(approx.)
		Depth:	5.5ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -3.0	**Fill:** Black, Loose, 80% NPF, 20% Fine Sand w/Brick Debris	FILL	Y	
1.0 - 3.0	**SAND:** Med. Brown, Loose, Moist 70%Fine Sand, 30% NPF w/with some pebbles	SAND	Y	0.0 -1.0 1.0 -5.5
3.0 - 5.5	**REWORKED SANDY CLAY:** Med. Grey, Stiff, 60%MPF,40% Fine Sand	CL	Y	

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 1.0 fbgs 0.0ppm SUB - SURFACE 1.0 - 5.5fbgs 0.0ppm

COMMENTS: COMPOSITED SOIL SAMPLE FROM 0.0 - 1.5 FOR SVOC's AND METALS FROM TP-7-(1,2,3) & TP-8-4

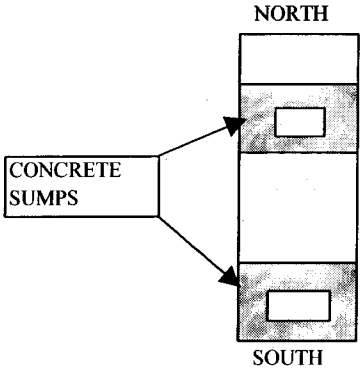
COLLECTED SOIL SAMPLE FROM 1.0 - 5.5 FOR VOC's

COMPOSITED SOIL SAMPLE FROM 1.5 - 5.5 FOR SVOC's AND METALS FROM TP-7-(1,2,3) & TP-8-4

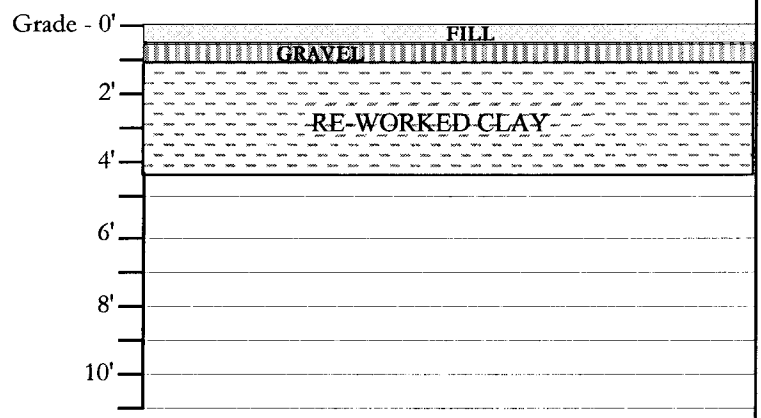
GROUNDWATER ENCOUNTERED:	5.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-8-5**
Project No.:	0071-006-100	Excavation Date:	01/17/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	8:00	Length:	39.0 ft	(approx.)
End:	8:30	Width:	4.0ft	(approx.)
		Depth:	7.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -0.5	**Fill:** Dark Brown to Black, Loose, Moist, 80% NPF, 20% Fine Sand w/ Brick and Slag Debris	FILL	Y	0.0 -1.0
0.5 - 1.0	**Gravel/Slag:** Dark Grey, Loose, Moist	FILL	Y	
1.0 - 4.5	**REWORKED SANDY CLAY:** Med. Grey, Stiff, 60%MPF,40% Fine Sand w/ Pipe at Bottom of Test Pit	CL	Y	1.0 - 4.5

FIELD MEASUREMENTS:

PID (ppm): NO PID SCAN TAKEN DUE TO RAIN

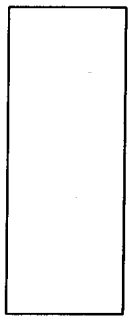
COMMENTS: COLLECTED SOIL SAMPLE FROM 1.0 - 4.5ft FOR VOC's,

GROUNDWATER ENCOUNTERED:	4.5 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

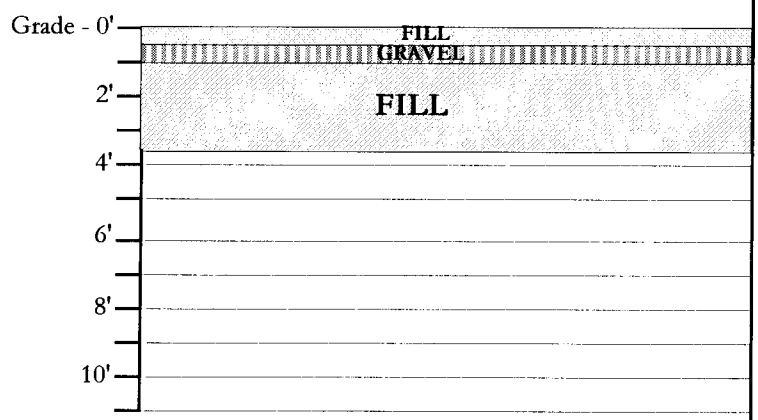
Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-8-6**
Project No.:	0071-006-100	Excavation Date:	01/18/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB

NORTH



SOUTH

Test Pit Cross Section:



TIME				
Start:	8:00	Length:	28.0 ft	(approx.)
End:	8:30	Width:	4.0ft	(approx.)
		Depth:	7.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -0.5	**Fill:** Dark Brown to Black, Loose, Moist, 80% NPF, 20% Fine Sand w/ Brick and Slag Debris	FILL	Y	0.0 -1.0 1.0 - 3.0
0.5 - 1.0	**Gravel/Slag:** Dark Grey, Loose, Moist	FILL	Y	
1.0 - 3.5	**Fill:** Dark Brown to Black, Loose, Moist, 80% NPF, 20% Fine Sand w/ Brick and Slag Debris	FILL	Y	

FIELD MEASUREMENTS:

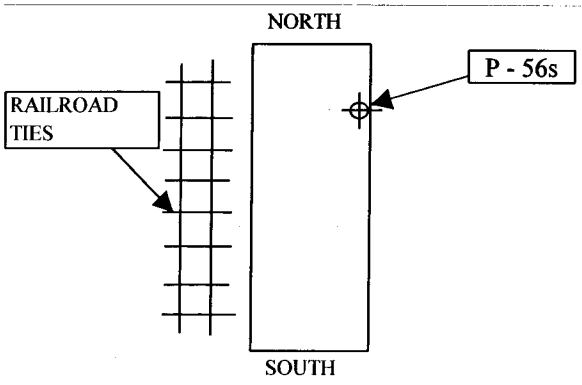
PID (ppm): SURFACE 0.0 - 1.0 fbgs 0.0ppm SUB - SURFACE 1.0 - 7.0fbgs 3.0ppm

COMMENTS: COLLECTED SOIL SAMPLE FROM 1.0 - 4.5ft FOR VOC's & METALS

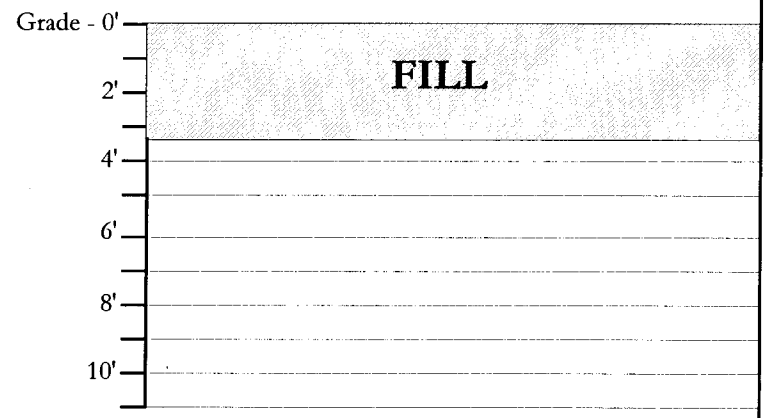
GROUNDWATER ENCOUNTERED:	3.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-9-1**
Project No.:	0071-006-100	Excavation Date:	01/17/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	13:10:(	Length:	31' & 32'	(approx.)
End:	13:40:(	Width:	9.0ft	(approx.)
		Depth:	7.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -3.5	**Fill:** Black/ Dark Brown Fill 90% NPF, 10% Fine Sand, w/ Railraod Ties on West Side of Test Pit	FILL	Y	0.0 -1.0 1.0 - 3.5

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 1.0 fbgs 0.0ppm SUB - SURFACE 1.0 - 3.5 fbgs 0.0ppm

COMMENTS: COLLECTED COMPOSITE SOIL SAMPLE FROM 0.0 - 1.0 FOR SVOC's AND METALS

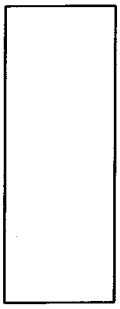
COLLECTED SOIL SAMPLE FROM 1.0 - 3.5 FOR VOC's, COMPOSITE FOR SVOC's AND METALS

GROUNDWATER ENCOUNTERED:	3.5 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm, installed piezometer P-56s
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

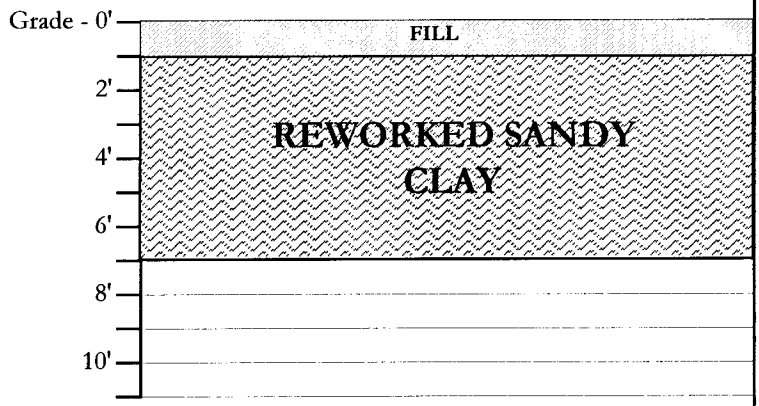
Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-9-2**
Project No.:	0071-006-100	Excavation Date:	01/20/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB

NORTH



SOUTH

Test Pit Cross Section:



TIME				
Start:	9:25	Length:	63.0.0 ft	(approx.)
End:	9:45	Width:	4.0 ft	(approx.)
		Depth:	7.5 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -1.0	**FILL:** Medium Brown to Redish Brown, Loose, Moist, 90% NPF 10% Fine Slag	FILL	Y	0.0 -1.0
1.0 - 7.5	**REWORKED SANDY CLAY:** Medium Grey, Stiff, Moist - Wet, 70% MPF, 30% Fine Sand w/ Large pieces of gravel.	CL	Y	1.0 - 7.0

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 1.0 fbgs 0.0ppm SUB - SURFACE 1.0 - 7.0 fbgs 0.0ppm

COMMENTS: COMPOSITE SOIL SAMPLE FROM 0.0 - 1.0 FOR SVOC's AND METALS

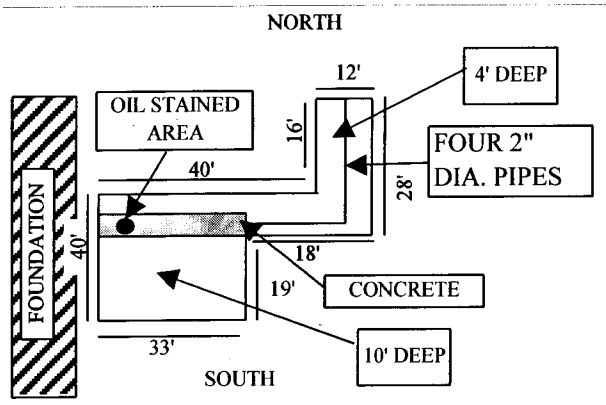
COLLECTED SOIL SAMPLE FROM 1.0 - 4.5 FOR VOC's,

COMPOSITE SOIL SAMPLE FROM 1.0 - 7.0FOR SVOC's & METALS

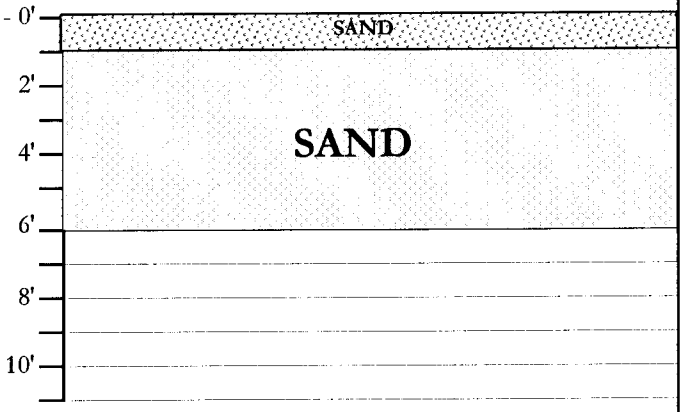
GROUNDWATER ENCOUNTERED:	7.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-9-3**
Project No.:	0071-006-100	Excavation Date:	01/20/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



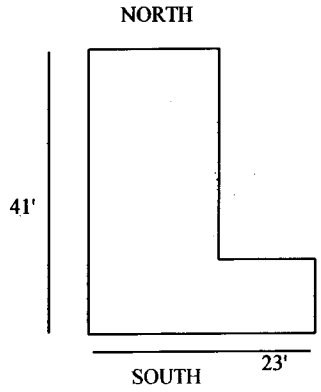
TIME				
Start:	13:10:(	Length:	51.0 ft	(approx.)
End:	13:40:(	Width:	56.0 ft	(approx.)
		Depth:	6.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -1.0	**SAND:** Medium Brown, Loose, Moist, 90% Fine Sand, 10% Brick and Slag Debris w/Slight Organic Odor	SAND	Y	0.0 -1.0
1.0 - 6.0	**SAND:** Medium Grey, Loose, Moist - Wet, 90% Fine Sand, 10% Brick and Slag Debris w/Strong Organic Odor	SAND	Y	1.0 - 4.5

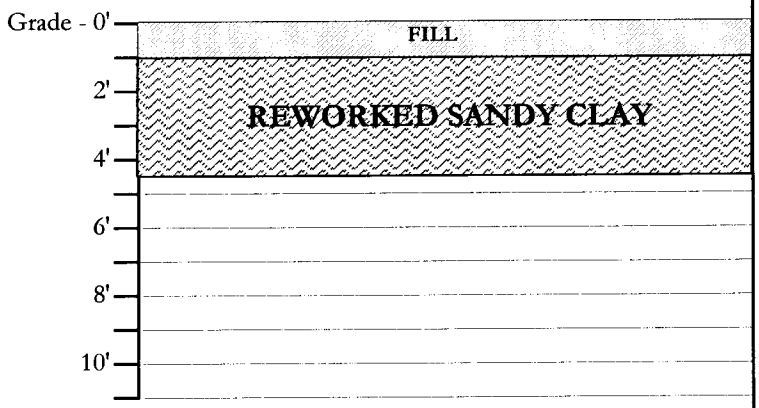
FIELD MEASUREMENTS:	
PID (ppm):	SURFACE 0.0 - 1.0 fbgs 0.0ppm SUB - SURFACE 1.0 - 4.5 fbgs 25.8ppm
COMMENTS:	COLLECTED DISCRETE SOIL SAMPLE FROM 0.0 - 1.0 FOR VOC's, SVOC's & METALS
	COLLECTED DISCRETE SOIL SAMPLE FROM 1.0 - 4.5 FOR VOC's, SVOC's & METALS
	EXCAVETED TO ~10.0fbgs TO SEARCH FOR UST NONE OBSERVED
GROUNDWATER ENCOUNTERED:	4.5 fbgs
VISUAL IMPACTS:	Sheening on ground water, on 1/23/06 product was observed on groundwater
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace: Surface 0.0 - 1.0 fbgs 0.0ppm, Sub- Surface 1.0 - 4.5 328ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-9-5**
Project No.:	0071-006-100	Excavation Date:	01/20/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	8:20	Length:	41.0 ft	(approx.)
End:	8:50	Width:	23.0 ft	(approx.)
		Depth:	6.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -1.0	**FILL:** Medium Brown to Redish Brown, Loose, Moist, 80% Slag/Gravel 20% NPF	FILL	Y	0.0 -1.0
1.0 - 4.5	**REWORKED SANDY CLAY:** Medium Tan, Stiff, Moist - Wet, 60% MPF, 40% Fine Sand w/ large pieces of gravel. On East Side of Test Pit Railroad Ties ~2.5 fbgs to 3.0 fbgs.	CL	Y	1.0 - 4.5

FIELD MEASUREMENTS:

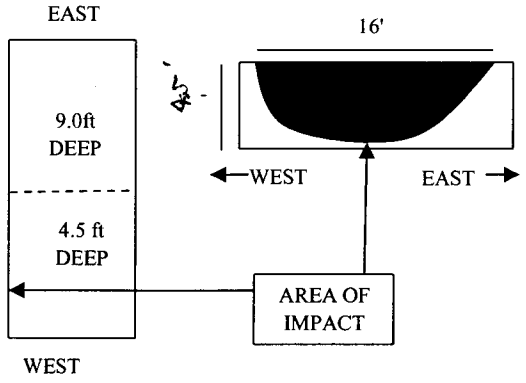
PID (ppm): SURFACE 0.0 - 1.0 fbgs 0.0ppm SUB - SURFACE 1.0 - 4.5 fbgs 0.0ppm

COMMENTS: COMPOSITED SOIL SAMPLE FROM 0.0 - 1.0 FOR SVOC's AND METALS FOR TP - 9 - (1,2,5)
COLLECTED SOIL SAMPLE FROM 1.0 - 4.5 FOR VOC's,
COMPOSITED SOIL SAMPLE FROM 1.0 - 7.0 FOR SVOC's & METALS FOR TP - 9 - (1,2,5)

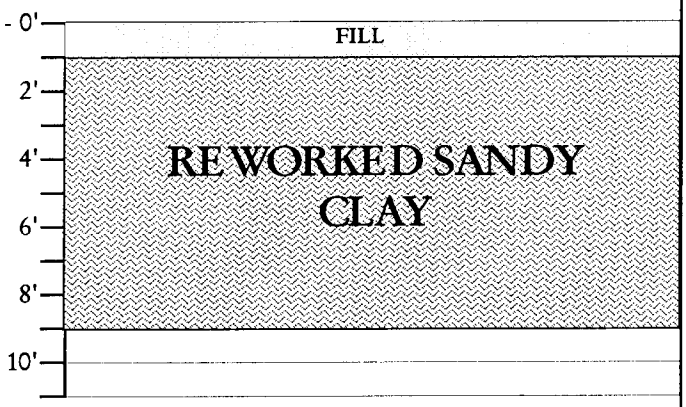
GROUNDWATER ENCOUNTERED:	4.5 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-10-1**
Project No.:	0071-006-100	Excavation Date:	01/23/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	10:20	Length:	46.0 ft	(approx.)
End:	10:50	Width:	4.0 ft	(approx.)
		Depth:	7.5 - 9.0ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 - 1.0	**FILL:** Dark Brown to Light Brown 70%NPF 30% Fine Sand	FILL	Y	0.0 - 1.0
1.0 - 9.0	**REWORKED SANDY CLAY:** Medium Grey, Stiff, Moist - Wet, 70% MPF, 30% Fine Sand w/ Large pieces of gravel, Slight Organic Odor, From West to East Clay goes from Medium Grey to Medium Brown.	CL	Y	1.0 - 4.5

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 1.0 fbgs 0.0ppm SUB - SURFACE 1.0 - 9.0 fbgs 10.2ppm

COMMENTS: COMPOSITE SOIL SAMPLE FROM 0.0 - 1.0 FOR SVOC's AND METALS

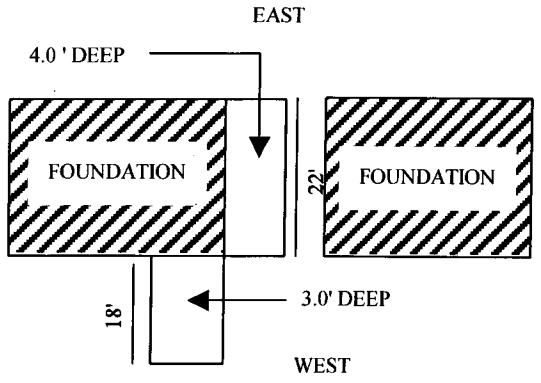
COLLECTED DISCRETE SOIL SAMPLE FROM 1.0 - 4.5 FOR VOC's, SVOC's & METALS

COMPOSITE SOIL SAMPLE FROM 1.0 - 7.0 FOR SVOC's & METALS

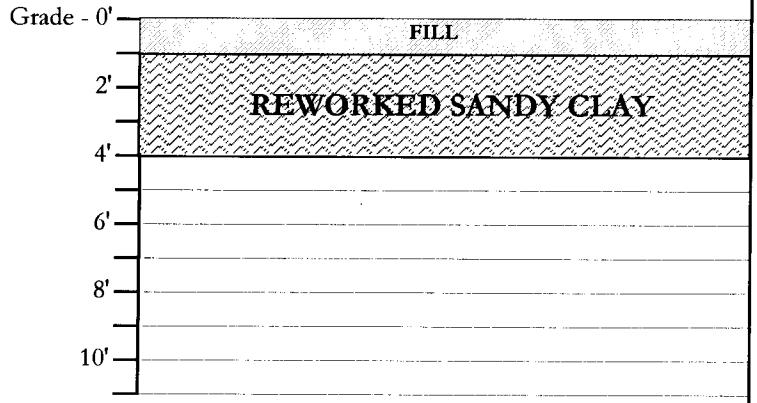
GROUNDWATER ENCOUNTERED:	none observed
VISUAL IMPACTS:	Northwest corner of test pit had a 16.5' by 4.5' area of black, oily- impacted material
OLFACTORY OBSERVATIONS:	Slight organic odor
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 216ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-10-2**
Project No.:	0071-006-100	Excavation Date:	01/23/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	11:15	Length:	40.0 ft	(approx.)
End:	11:50	Width:	4.0 ft	(approx.)
		Depth:	7.5 - 9.0ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -1.0	**FILL:** Dark Brown to Black 80% NPF, 20% Fine Sand w/slag & Gravel	FILL	Y	0.0 -1.0
1.0 - 4.0	**REWORKED SANDY CLAY:** Medium Brown/Tan, Stiff, Moist - Wet, 70% MPF, 30% Fine Sand	CL	Y	1.0 - 4.0

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 1.0 fbgs 0.0ppm SUB - SURFACE 1.0 - 4.0 fbgs 0.0ppm

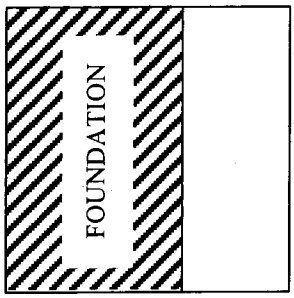
COMMENTS: COMPOSITE SOIL SAMPLE FROM 0.0 - 1.0 FOR SVOC's AND METALS.
COLLECTED SOIL SAMPLE FROM 1.0 - 4.0 FOR VOC's.
COMPOSITE SOIL SAMPLE FROM 1.0 - 4.0 FOR SVOC's AND METALS.

GROUNDWATER ENCOUNTERED:	2.5 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

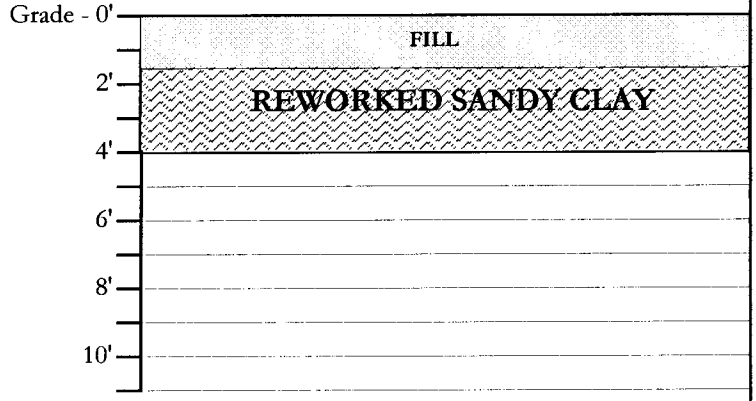
Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-10-3**
Project No.:	0071-006-100	Excavation Date:	01/23/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB

NORTH



SOUTH

Test Pit Cross Section:



TIME				
Start:	13:05:(	Length:	40.0 ft	(approx.)
End:	13:20:(	Width:	4.0 ft	(approx.)
		Depth:	4.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -1.5	**FILL:** Dark Brown to Black 80% NPF, 20% Fine Sand w/slag, Gravel & Brick Bebris	FILL	Y	0.0 -1.5
1.5 - 4.0	**REWORKED SANDY CLAY:** Medium Brown/Tan, Stiff, Moist - Wet, 70% MPF, 30% Fine Sand	CL	Y	1.5 - 4.0

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 1.5 fbgs 0.0ppm SUB - SURFACE 1.5 - 4.0 fbgs 0.0ppm

COMMENTS: COMPOSITED SOIL SAMPLE FROM 0.0 - 1.0 FOR SVOC's AND METALS FOR TP - 10 - (1-3).

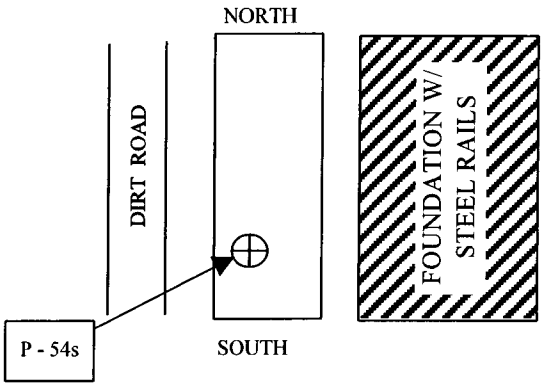
COLLECTED SOIL SAMPLE FROM 1.5 - 4.0 FOR VOC's.

COMPOSITED SOIL SAMPLE FROM 1.0 - 4.0 FOR SVOC's AND METALS FOR TP - 10 - (2-3).

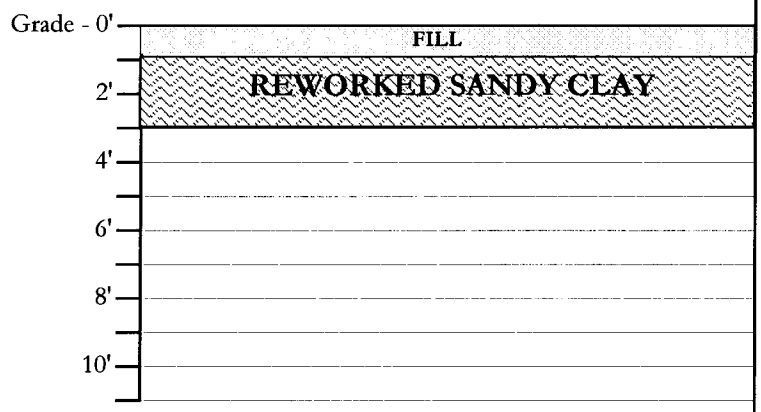
GROUNDWATER ENCOUNTERED:	None observed
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-10-4**
Project No.:	0071-006-100	Excavation Date:	01/23/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	13:30:0	Length:	49.0 ft	(approx.)
End:	13:20:0	Width:	4.0 ft	(approx.)
		Depth:	4.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -1.0	**FILL:** Dark Brown to Black 80% NPF, 20% Fine Sand w/slag, Gravel & Brick Bebris	FILL	Y	0.0 -1.0
1.0 - 3.0	**REWORKED SANDY CLAY:** Medium Brown/Tan, Stiff, Moist - Wet, 70% MPF, 30% Fine Sand	CL	Y	1.0 - 2.5

FIELD MEASUREMENTS:

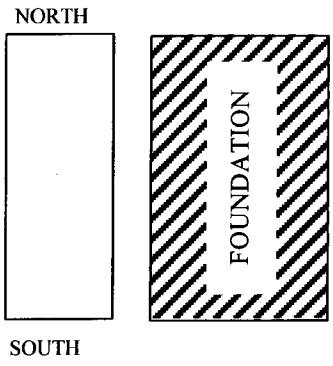
PID (ppm): SURFACE 0.0 - 1.5 fbgs 0.0ppm SUB - SURFACE 1.5 - 4.0 fbgs 0.0ppm

COMMENTS: COMPOSITE SOIL SAMPLE FROM 0.0 - 1.0 FOR SVOC's AND METALS.
COLLECTED SOIL SAMPLE FROM 1.5 - 4.0 FOR VOC's, SVOC's & METALS.

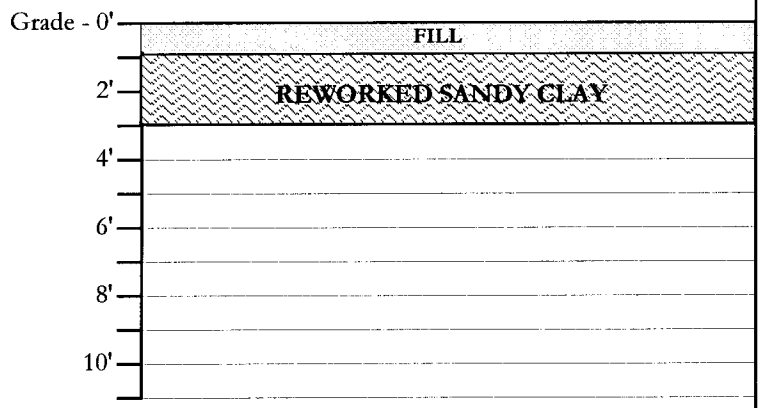
GROUNDWATER ENCOUNTERED:	None observed
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm. Installed piezometer P - 54s.
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-10-5**
Project No.:	0071-006-100	Excavation Date:	01/23/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	14:00:0	Length:	39.0 ft	(approx.)
End:	14:15:0	Width:	4.0 ft	(approx.)
		Depth:	3.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -1.0	**FILL:** Dark Brown to Black 80% NPF, 20% Fine Sand	FILL	Y	0.0 -1.0
1.0 - 3.0	**REWORKED SANDY CLAY:** Medium Brown/Tan, Stiff, Moist - Wet, 70% MPF, 30% Fine Sand w/ Large Cobbles	CL	Y	1.0 - 2.0

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 1.0 fbgs 0.0ppm SUB - SURFACE 1.0 - 2.0 fbgs 0.0ppm

COMMENTS: COMPOSITED SOIL SAMPLE FROM 0.0 - 1.0 FOR SVOC's AND METALS FOR TP - 10 - (4 & 5)

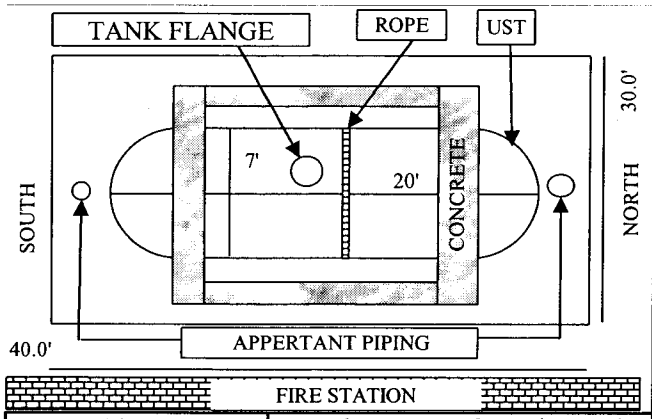
COLLECTED SOIL SAMPLE FROM 1.5 - 4.0 FOR VOC's

COMPOSITED SOIL SAMPLE FROM 1.0 - 2.5 FOR SVOC's & METALS FOR TP - 10 - (4 & 5).

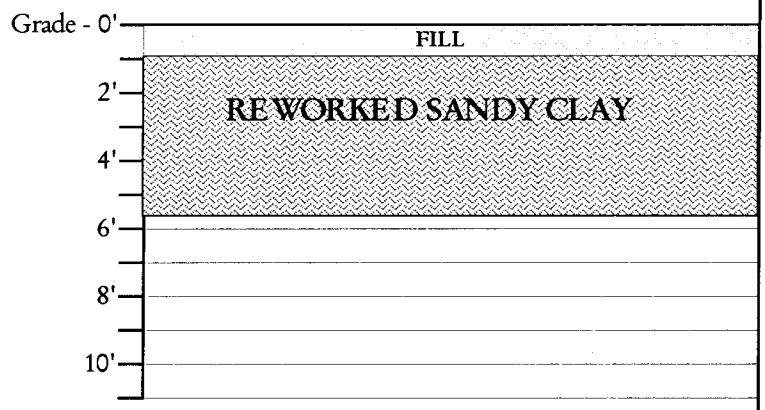
GROUNDWATER ENCOUNTERED:	2.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm.
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-10-6**
Project No.:	0071-006-100	Excavation Date:	01/24/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	15:20:0	Length:	40.0 ft	(approx.)
End:	15:35:0	Width:	30.0 ft	(approx.)
		Depth:	10.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 - 1.0	**FILL:** Dark Brown to Black 80% NPF, 20% Fine Sand w/Slight Organic Odor	FILL	Y	0.0 - 1.0
1.0 - 5.5	**REWORKED SANDY CLAY:** Medium Grey to Black, Stiff, Moist - Wet, 70% MPF, 30% Fine Sand. w/ Strong Organic Odor, No Visable Evidence but Stong Ofactory and PID evidence.	CL	Y	1.0 - 5.5

FIELD MEASUREMENTS:

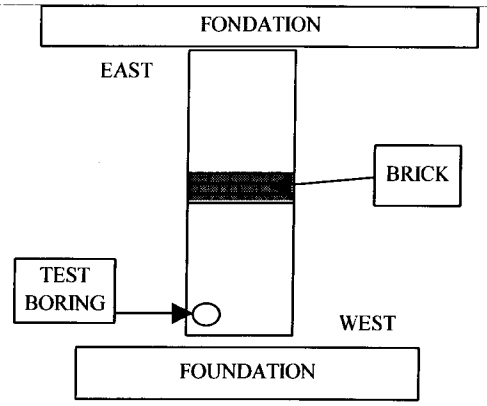
PID (ppm): SURFACE 0.0 - 1.0 fbgs 0.5ppm SUB - SURFACE 1.0 - 5.5 fbgs 410ppm

COMMENTS: COLLECTED SOIL SAMPLE FROM 0.0 - 1.0 FOR STAR's VOC's, TCLP VOC's, TCLP LEAD, IGNITABILTY & CORROSITIVY. TANK WAS LOCATED ~15.0 ft TO THE SW OF THE NW CORNER OF FIRE STATION AND ~2.0ft WEST FROM ORIGINAL TEST PIT LOCATION.

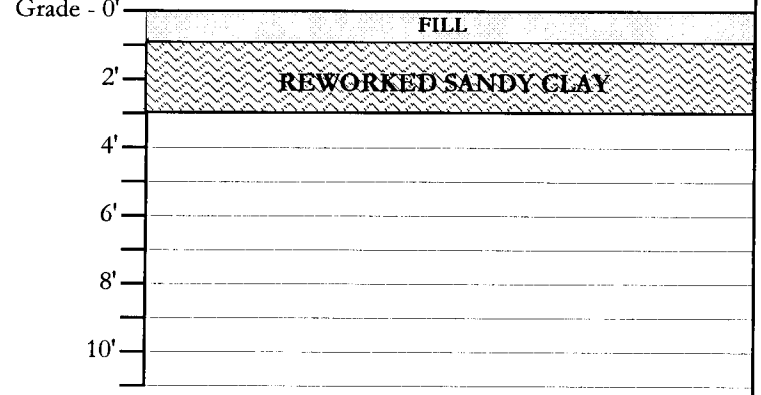
GROUNDWATER ENCOUNTERED:	5.5.
VISUAL IMPACTS:	Clay was blackish in color. UST encountered; est. 5,000 gal. capacity
OLFACTORY OBSERVATIONS:	Ambient air PID hits from 35ppm -80.1ppm.
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace: Surface 0.0 - 1.0ft 25.3ppm, Sub-Surface 1.0 - 5.5ft 3002ppm.
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-10-7**
Project No.:	0071-006-100	Excavation Date:	01/23/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	14:20:(	Length:	45.0 ft	(approx.)
End:	14:45:(	Width:	4.0 ft	(approx.)
		Depth:	3.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -1.0	**FILL:** Dark Brown to Black 80% NPF, 20% Fine Sand	FILL	Y	0.0 -1.0
1.0 - 3.0	**REWORKED SANDY CLAY:** Medium Brown/Tan, Stiff, Moist - Wet, 70% MPF, 30% Fine Sand	CL	Y	1.0 - 2.5

FIELD MEASUREMENTS:

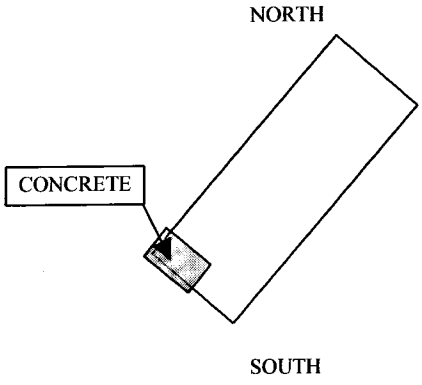
PID (ppm): SURFACE 0.0 - 1.0 fbgs 0.0ppm SUB - SURFACE 1.0 - 2.5 fbgs 0.0ppm

COMMENTS: COLLECTED SOIL SAMPLE FROM 1.0 - 2.5 FOR VOC's & METALS

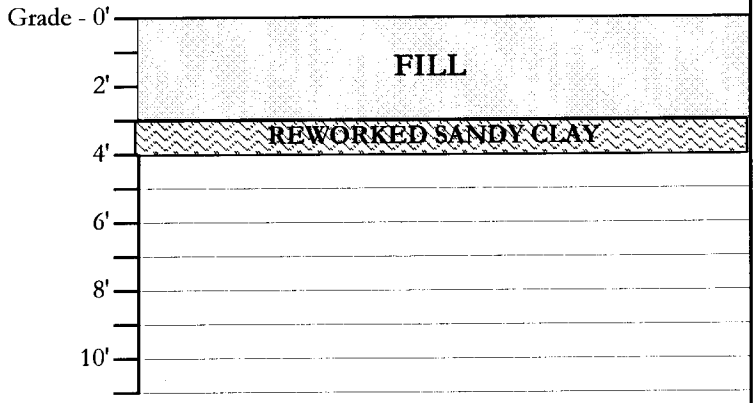
GROUNDWATER ENCOUNTERED:	2.5 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm.
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-10-8**
Project No.:	0071-006-100	Excavation Date:	01/23/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	14:55:(	Length:	53.0 ft	(approx.)
End:	15:05:(	Width:	4.0 ft	(approx.)
		Depth:	4.0 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -1.0	**FILL:** Dark Brown to Black 80% NPF, 20% Fine Sand w/Large Pieces of gravel & Salg	FILL	Y	0.0 -1.0 1.0 -3.0
1.0 - 4.0	**REWORKED SANDY CLAY:** Medium Brown/Tan, Stiff, Moist - Wet, 70% MPF, 30% Fine Sand. Clay gets Sandier to the Northeast.	CL	Y	

FIELD MEASUREMENTS:

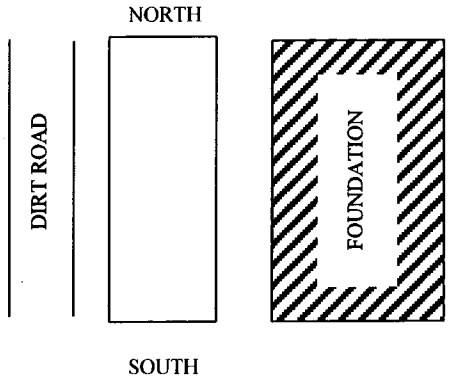
PID (ppm): SURFACE 0.0 - 1.0 fbgs 0.0ppm SUB - SURFACE 1.0 - 3.0 fbgs 0.0ppm

COMMENTS: COLLECTED SOIL SAMPLE FROM 1.0 - 3.0 FOR VOC's

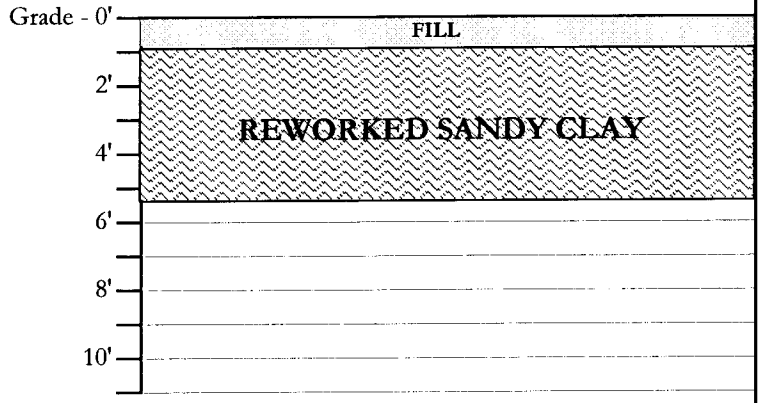
GROUNDWATER ENCOUNTERED:	3.0 fbgs
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm.
SAMPLES COLLECTED:	yes

TEST PIT EXCAVATION LOG

Project:	Phase 1 BPA	TEST PIT I.D.:	**TP-10-9**
Project No.:	0071 006-100	Excavation Date:	01/23/06
Client:	Tecumseh	Excavation Method:	Johndeere 892ELC
Location:	1951 Hamburg Turnpike	Logged / Checked By:	TAB



Test Pit Cross Section:



TIME				
Start:	15:20:(	Length:	53.0 ft	(approx.)
End:	15:35:(	Width:	4.0 ft	(approx.)
		Depth:	5.5 ft	(approx.)

Depth (fbgs)	USCS Soil Description	USCS Symbol	Photos Y / N	Samples Collected (fbgs)
0.0 -1.0	**FILL:** Dark Brown to Black 80% NPF, 20% Fine Sand w/Large Pieces of gravel & Salg	FILL	Y	0.0 -1.0
1.0 - 5.5	**REWORKED SANDY CLAY:** Medium Brown/Tan, Stiff, Moist - Wet, 70% MPF, 30% Fine Sand. Clay Has More Brick Debris to the North	CL	Y	1.0 - 5.5

FIELD MEASUREMENTS:

PID (ppm): SURFACE 0.0 - 1.0 fbgs 0.0ppm SUB - SURFACE 1.0 - 3.0 fbgs 0.0ppm

COMMENTS: COLLECTED SOIL SAMPLE FROM 1.0 - 5.5 FOR VOC's

GROUNDWATER ENCOUNTERED:	None observed.
VISUAL IMPACTS:	none
OLFACTORY OBSERVATIONS:	none
NON-NATIVE FILL ENCOUNTERED:	yes
OTHER OBSERVATIONS:	Headspace 0.0ppm.
SAMPLES COLLECTED:	yes

LOW-FLOW METHOD GROUNDWATER PURGE & SAMPLE COLLECTION LOG

TurnKey Environmental Restoration, LLC

Project Name:	Phase 1 BPA	WELL LOCATION	MW~~01~~ - 8A
Project Number:	0071-006-102	Sample Matrix:	groundwater
Client:	Tecumseh	Weather:	Partly cloudy upper 30's 0-5 mph w

WELL DATA:

DATE: 3/16/06 TIME: 1105

Casing Diameter (inches): 4.0"	Casing Material: sch 40 PVC
Screened interval (fbTOR): 15.0 - 5.0 fbgs	Screen Material: sch 40 PVC
Static Water Level (fbTOR): 2.45	Bottom Depth (fbTOR): 16.07
Elevation Top of Well Riser (fm	Ground Surface Elevation (fmsl):
Elevation Top of Screen (fmsl)	Stick-up (feet):
Standing volume in gallons: 5.59	
[(bottom depth - static water level) x vol calculation in table per well diameter]:	

Volume Calculation

Well Diameter	Volume gal/ft
1"	0.041
2"	0.163
3"	0.367
4"	0.653
5"	1.020
6"	1.469

PURGING DATA:

Pump Type: peristaltic

Is equipment dedicated to location? yes (no) | Is tubing dedicated to location? (yes) no

Depth of Sample (i.e. Level of Intake) (fbTOR): 15.07 | Approximate Purge Rate (gal/min): ~.25

Time	Water Level (fbTOR)	Accumulated Volume (gallons)	pH (units)	Temperature (degrees C)	Specific Conductance (mS/cm)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
1110	Initial	0.0	7.42	8.1	2436	63.2	—	88	clear no od.
1112	3.05	~~2.25~~	7.42	8.9	2453	106	—	87	"
1115	3.52	1.50	7.44	9.0	2455	65.5	—	88	"
1116	4.00	.50	7.44	9.1	2452	33.8	—	88	"
1118	4.47	.75	7.45	9.0	2452	25.9	—	85	"
1120	4.92	1.25	7.45	9.1	2443	21.0	—	85	"
1121	5.30	1.75	7.47	9.1	2447	19.2	—	85	"
1134	7.28	~~7.28~~	7.73	7.6	2410	19.2		84	
		3.0							

SL

SAMPLING DATA:

DATE: ~~03/16/06~~ 3/16/06 START TIME: 1122 END TIME: 1140

Method: low-flow with dedicated tubing	Was well sampled to dryness? yes (no)
Initial Water Level (fbTOR): 5.30	Was well sampled below top of sand pack? (yes) no
Final Water Level (fbTOR): 7.28	Field Personnel:

PHYSICAL & CHEMICAL DATA:

Appearance:	
Color: clear	
Odor: no odor	
Sediment Present? No	

WATER QUALITY MEASUREMENTS

pH (units)	TEMP. (°C)	SC (uS)	TURB. (NTU)	DO (ppm)	ORP (mV)
7.47	9.1	2447	19.2	—	85
7.73	7.6	2410	19.2	—	84

REMARKS:

PREPARED BY:

LOW-FLOW METHOD GROUNDWATER PURGE & SAMPLE COLLECTION LOG

Project Name:	Phase 1 BPA	WELL LOCATION:	MW12
Project Number:	0071-006-102	Sample Matrix:	groundwater
Client:	Tecumseh	Weather:	Sunny upper 30's wind 0-5 mph

WELL DATA:

DATE: 3/7/06 TIME: 1143

Casing Diameter (inches): 2"	Casing Material: sch 40 PVC
Screened interval (fbTOR): 16.0 - 6.0	Screen Material: sch 40 PVC .010" slot
Static Water Level (fbTOR): 7.26	Bottom Depth (fbTOR): 15.91
Elevation Top of Well Riser (fm	Ground Surface Elevation (fmsl):
Elevation Top of Screen (fmsl)	Stick-up (feet): 2.47
Standing volume in gallons: 1.87	
[(bottom depth - static water level) x vol calculation in table per well diameter]:	

Volume Calculation

Well Diameter	Volume gal/ft
1"	0.041
2"	0.163
3"	0.367
4"	0.653
5"	1.020
6"	1.469

PURGING DATA:

Pump Type: peristaltic

Is equipment dedicated to location? yes (no)	Is tubing dedicated to location? (yes) no
Depth of Sample (i.e. Level of Intake) (fbTOR): ~12.9	Approximate Purge Rate (gal/min): ~ .50

Time	Water Level (fbTOR)	Accumulated Volume (gallons)	pH (units)	Temperature (degrees C)	Specific Conductance (mS/cm)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
1148	Initial	0.0	8.49	5.8	509.1	215	—	-85	Blue clear musty odor
1150	7.28	.5	9.04	8.8	505.4	375	—	-93	↓
1151	7.30	1.0	9.16	8.5	504.2	298	—	-79	↓
1153	7.30	1.0	9.25	8.2	500.1	104	—	-63	↓
1155	7.30	2.0	9.95	8.1	492.4	421	—	-78	clear musty odor
1157	7.30	2.5	9.55	8.0	499.8	263	—	-83	↓
1159	7.30	3.0	9.61	7.9	500.0	17.4	—	-75	↓
1201	7.30	3.5	9.62	7.7	587.2	15.7	—	-79	↓
1225	7.30	5.0	9.46	5.6	492.7	21.4	—	-79	

SAMPLING DATA:

DATE: 3/7/06	START TIME: 1201	END TIME:
Method: low-flow with dedicated tubing	Was well sampled to dryness? yes (no)	
Initial Water Level (fbTOR): 7.30	Was well sampled below top of sand pack? (yes) no	
Final Water Level (fbTOR):	Field Personnel: TAB / NTM	

PHYSICAL & CHEMICAL DATA:

Appearance:	clear
Color:	clear
Odor:	musty odor
Sediment Present?	none

WATER QUALITY MEASUREMENTS					
pH (units)	TEMP. (°C)	SC (uS)	TURB. (NTU)	DO (ppm)	ORP (mV)
9.64	7.7	501.2	15.7	-	-79
9.46	5.6	492.7	21.4	-	-79

REMARKS: MS / MSP TAKEN

PREPARED BY: [signature]

TurnKey Environmental Restoration, LLC

LOW-FLOW METHOD GROUNDWATER PURGE & SAMPLE COLLECTION LOG

Project Name:	Phase 1 BPA	WELL LOCATION	MWN - 13A
Project Number:	0071-006-102	Sample Matrix:	groundwater
Client:	Tecumseh	Weather:	Partly cloudy low 40's 0-5mphs

WELL DATA:

DATE: 3/6/06 TIME: 1245

Casing Diameter (inches):	2.0"	Casing Material:	sch 40 PVC
Screened interval (fbTOR):	14.0 - 4.0 fbgs	Screen Material:	sch 40 PVC .010" slot
Static Water Level (fbTOR):	4.41	Bottom Depth (fbTOR):	16.23
Elevation Top of Well Riser (fm		Ground Surface Elevation (fmsl):	
Elevation Top of Screen (fmsl)		Stick-up (feet):	2.5'
Standing volume in gallons:	1.92		

[(bottom depth - static water level) x vol calculation in table per well diameter]:

Volume Calculation

Well Diameter	Volume gal/ft
1"	0.041
2"	0.163
3"	0.367
4"	0.653
5"	1.020
6"	1.469

PURGING DATA:

Pump Type: peristaltic

Is equipment dedicated to location? yes (no) — Is tubing dedicated to location? (yes) no

Depth of Sample (i.e. Level of Intake) (fbTOR): ~15.23 — Approximate Purge Rate (gal/min): ~.50

Time	Water Level (fbTOR)	Accumulated Volume (gallons)	pH (units)	Temperature (degrees C)	Specific Conductance (mS/cm)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
1254	Initial	0.0	7.21	8.4	848.1	16.6	—	-37	clear No odor
1255	7.22	.5	7.18	8.3	836.7	11.7	—	-35	↓
1256	7.65	.75	7.17	8.4	833.0	28.8	—	-35	
1258	8.07	.75	7.15	8.0	822.0	32.2	—	-30	
1259	8.36	1.00	7.14	7.8	826.6	27.3	—	-30	
S[1301	8.77	1.25	7.07	8.0	843.1	21.1	—	-28	
1313	10.40	2.00	7.28	7.1	1037	13.4	—	-15	↓

SAMPLING DATA:

DATE: 3/6/06 START TIME: 1301 END TIME: 1313

Method:	low-flow with dedicated tubing	Was well sampled to dryness?	yes (no)
Initial Water Level (fbTOR):	8.77	Was well sampled below top of sand pack?	(yes) no
Final Water Level (fbTOR):	10.40	Field Personnel:	TAB / NTM

PHYSICAL & CHEMICAL DATA:

Appearance:

Color: Clear

Odor: No odor

Sediment Present? None

WATER QUALITY MEASUREMENTS

pH (units)	TEMP. (°C)	SC (uS)	TURB. (NTU)	DO (ppm)	ORP (mV)
7.07	8.0	843.1	21.1	—	-28
7.28	7.1	1037	13.4	—	-15

REMARKS:

PREPARED BY: Thomas A. [signature]

LOW-FLOW METHOD GROUNDWATER PURGE & SAMPLE COLLECTION LOG

Project Name:	Phase 1 BPA	WELL LOCATION	MW-14A
Project Number:	0071-006-102	Sample Matrix:	groundwater
Client:	Tecumseh	Weather:	Partly cloudy, low 40's, 0-5mph SW

WELL DATA:

DATE: 3/6/06 TIME: 1323

Casing Diameter (inches): 2.0"	Casing Material: sch 40 PVC
Screened interval (fbTOR): 14.0 - 4.0 fbgs	Screen Material: sch 40 PVC .010" slot
Static Water Level (fbTOR): 6.33	Bottom Depth (fbTOR): 16.29
Elevation Top of Well Riser (fm	Ground Surface Elevation (fmsl):
Elevation Top of Screen (fmsl)	Stick-up (feet): 2.55
Standing volume in gallons: 1.62	
[(bottom depth - static water level) x vol calculation in table per well diameter]:	

Volume Calculation

Well Diameter	Volume gal/ft
1"	0.041
2"	0.163
3"	0.367
4"	0.653
5"	1.020
6"	1.469

PURGING DATA:

Pump Type: peristaltic

Is equipment dedicated to location? yes no	Is tubing dedicated to location? ~~yes~~ no
Depth of Sample (i.e. Level of Intake) (fbTOR): ~15.29	Approximate Purge Rate (gal/min): ~.150

Time	Water Level (fbTOR)	Accumulated Volume (gallons)	pH (units)	Temperature (degrees C)	Specific Conductance (mS/cm)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
1324	Initial	0.0	7.25	8.1	894.4	>1000	—	-25	Brown and no odor
1326	7.46	.25	7.19	8.5	921.0	>1000	-	11	"
1328	7.48	.50	7.17	5.4	917.4	871	-	17	"
1330	7.48	1.00	7.19	7.8	876.2	506	-	14	"
1332	7.50	1.5	7.18	7.6	875.0	370	—	12	"
1333	7.50	2.0	7.18	7.4	846.1	233	-	531	"
1334	7.50	2.5	7.26	7.0	812.9	139	-	-0	"
1335	7.50	3.0	7.27	6.8	801.5	87.9	-	-18	"
1336	7.50	3.5	7.28	6.8	794.0	65.0	-	-28	"

SAMPLING DATA:

DATE:	START TIME:	END TIME:

Method: low-flow with dedicated tubing	Was well sampled to dryness? yes no
Initial Water Level (fbTOR):	Was well sampled below top of sand pack? yes no
Final Water Level (fbTOR):	Field Personnel:

PHYSICAL & CHEMICAL DATA:

	WATER QUALITY MEASUREMENTS					
Appearance:	pH (units)	TEMP. (°C)	SC (uS)	TURB. (NTU)	DO (ppm)	ORP (mV)
Color:						
Odor:						
Sediment Present?						

REMARKS: Continued on next page

PREPARED BY:

LOW-FLOW METHOD GROUNDWATER PURGE & SAMPLE COLLECTION LOG

Project Name:	Phase 1 BPA	WELL LOCATION:	MW -14A cont
Project Number:	0071-006-102	Sample Matrix:	groundwater
Client:	Tecumseh	Weather:	

WELL DATA:

DATE:	TIME:

Casing Diameter (inches):	Casing Material: sch 40 PVC
Screened interval (fbTOR):	Screen Material: sch 40 PVC .010" slot
Static Water Level (fbTOR):	Bottom Depth (fbTOR):
Elevation Top of Well Riser (fm	Ground Surface Elevation (fmsl):
Elevation Top of Screen (fmsl)	Stick-up (feet):
Standing volume in gallons: [(bottom depth - static water level) x vol calculation in table per well diameter]:	

Volume Calculation

Well Diameter	Volume gal/ft
1"	0.041
2"	0.163
3"	0.367
4"	0.653
5"	1.020
6"	1.469

PURGING DATA:

Pump Type: peristaltic

Is equipment dedicated to location? yes no	Is tubing dedicated to location? yes no
Depth of Sample (i.e. Level of Intake) (fbTOR) :	Approximate Purge Rate (gal/min) :

Time	Water Level (fbTOR)	Accumulated Volume (gallons)	pH (units)	Temperature (degrees C)	Specific Conductance (mS/cm)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
	~~initial~~	~~0.0~~							
1339	7.50	4.0	7.28	7.0	792.3	41.8	—	-29	
1340	7.50	4.5	7.29	7.0	788.0	33.4	—	-36	
1342	7.50	5.0	7.30	6.9	787.0	55.5	—	-41	
1344	7.50	5.5	7.31	6.9	787.1	26.9	—	-43	
1345	7.50	6.0	7.30	6.8	787.2	23.4	—	-43	
1346	7.50	6.5	7.30	6.8	781.7	20.4	—	-49	
1348	7.50	7.0	7.31	6.9	783.2	19.0	—	-51	
1409	7.50	8.0	7.80	6.2	782.8	12.3	—	-67	

SAMPLING DATA:

DATE: 3/6/06 | START TIME: 1348 | END TIME: 1409

Method: low-flow with dedicated tubing	Was well sampled to dryness? ~~yes~~ no
Initial Water Level (fbTOR): 7.50	Was well sampled below top of sand pack? (yes) no
Final Water Level (fbTOR): 7.50	Field Personnel:

PHYSICAL & CHEMICAL DATA:

Appearance:	
Color: clear	
Odor: None	
Sediment Present? None	

WATER QUALITY MEASUREMENTS

pH (units)	TEMP. (°C)	SC (uS)	TURB. (NTU)	DO (ppm)	ORP (mV)
7.31	6.9	783.2	19.0	—	-51
7.50	6.2	782.8	12.3	-	-67

REMARKS: Blind Dup taken

PREPARED BY:

TurnKey Environmental Restoration, LLC

LOW-FLOW METHOD GROUNDWATER PURGE & SAMPLE COLLECTION LOG

Project Name:	Phase 1 BPA	WELL LOCATION	MW? - 15A
Project Number:	0071-006-102	Sample Matrix:	groundwater
Client:	Tecumseh	Weather:	Sunny Upper 30's NE 5-10mph

WELL DATA:

DATE: 3/7/06 TIME: 925

Casing Diameter (inches):	2.0"	Casing Material:	sch 40 PVC
Screened interval (fbTOR):	14.0 - 4.0 fbgs	Screen Material:	sch 40 PVC .010" slot
Static Water Level (fbTOR):	6.77	Bottom Depth (fbTOR):	16.90
Elevation Top of Well Riser (fm	~~7.77~~	Ground Surface Elevation (fmsl):	
Elevation Top of Screen (fmsl)	~~[illegible]~~	Stick-up (feet):	2.53
Standing volume in gallons: [(bottom depth - static water level) x vol calculation in table per well diameter]:	~~[illegible]~~ 1.65		

Volume Calculation

Well Diameter	Volume gal/ft
1"	0.041
2"	0.163
3"	0.367
4"	0.653
5"	1.020
6"	1.469

PURGING DATA:

Pump Type: peristaltic

Is equipment dedicated to location? yes (no) — Is tubing dedicated to location? (yes) no

Depth of Sample (i.e. Level of Intake) (fbTOR): 15.90 — Approximate Purge Rate (gal/min): .50

Time	Water Level (fbTOR)	Accumulated Volume (gallons)	pH (units)	Temperature (degrees C)	Specific Conductance (mS/cm)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
930	Initial	0.0	7.61	6.1	1331	665	—	-161	Cloudy no odor
933	7.31	0.25	7.65	7.2	1334	96.4	—	-113	"
935	7.60	.25	7.65	7.2	1330	66.2	—	-119	"
937	7.86	.50	7.66	7.4	1330	51.3	—	-123	"
939	8.02	.75	7.67	7.2	1329	42.2	—	-127	Clear no odor
940	8.25	1.0	7.64	7.2	1332	56.6	—	-116	"
941	8.40	1.5	7.60	7.1	1332	77.8	—	-108	"
942	8.61	2.0	7.56	7.1	1335	86.8	—	-101	"
SC 944	8.83	2.5	7.51	7.2	1331	82.1	—	-107	"
958	8.89	3.5	7.41	6.2	1251	40.3		-87	

SAMPLING DATA:

DATE: 3/7/06 START TIME: 945 END TIME: 958

Method:	low-flow with dedicated tubing	Was well sampled to dryness?	yes (no)
Initial Water Level (fbTOR):	8.83	Was well sampled below top of sand pack?	(yes) no
Final Water Level (fbTOR):	8.89	Field Personnel:	TAB / NTM

PHYSICAL & CHEMICAL DATA:

Appearance:	
Color:	SL Cloudy
Odor:	None
Sediment Present?	yes

WATER QUALITY MEASUREMENTS

pH (units)	TEMP. (°C)	SC (uS)	TURB. (NTU)	DO (ppm)	ORP (mV)
7.51	7.2	1331	82.1	—	-107
7.41	6.2	1251	40.3	—	-87

REMARKS: S. Metals Take

PREPARED BY: Thomas Bert

TurnKey Environmental Restoration, LLC

LOW-FLOW METHOD GROUNDWATER PURGE & SAMPLE COLLECTION LOG

Project Name:	Phase 1 BPA	WELL LOCATION	**MW~~N~~ - 16A**
Project Number:	0071-006-102	Sample Matrix:	groundwater
Client:	Tecumseh	Weather:	Sunny ~~upper~~ mid 30's 5-10 mph East ~~wind~~

WELL DATA:

DATE: 3/7/06 TIME: 840

Casing Diameter (inches):	2.0"	Casing Material:	sch 40 PVC
Screened interval (fbTOR):	14.0 - 4.0 fbgs	Screen Material:	sch 40 PVC .010" slot
Static Water Level (fbTOR):	7.75	Bottom Depth (fbTOR):	16.78
Elevation Top of Well Riser (fm		Ground Surface Elevation (fmsl):	
Elevation Top of Screen (fmsl)		Stick-up (feet):	2.55
Standing volume in gallons:	1.50		

[(bottom depth - static water level) x vol calculation in table per well diameter]:

Volume Calculation

Well Diameter	Volume gal/ft
1"	0.041
2"	0.163
3"	0.367
4"	0.653
5"	1.020
6"	1.469

PURGING DATA:

Pump Type: peristaltic

Is equipment dedicated to location? yes (no) — Is tubing dedicated to location? (yes) no

Depth of Sample (i.e. Level of Intake) (fbTOR): 15.78 — Approximate Purge Rate (gal/min): .50

Time	Water Level (fbTOR)	Accumulated Volume (gallons)	pH (units)	Temperature (degrees C)	Specific Conductance (mS/cm)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
846	Initial	0.0	6.64	7.3	787.1	1000	–	94	Ex-gertoudy Sl odor
849	7.98	.25	6.86	7.1	792.9	276	–	44	Slow in cloud Sl odor
851	7.98	.50	6.95	7.3	790.8	144	–	25	"
853	8.03	.75	7.00	6.9	789.7	59.2	–	23	clear Sl odor
855	8.05	1.25	7.02	7.1	788.1	60.1	–	10	"
857	8.07	2.0	7.06	7.0	787.2	40.7	–	9	"
859	8.00	2.5	7.09	7.0	788.4	18.9	–	7	"
~~859~~ 901	8.11	3.0	7.13	6.8	790.8	18.7	–	6	"
904	8.11	3.5	7.14	6.9	793.9	12.3	–	-4	"
915	7.83	4.0	7.27	4.7	791.5	8.30	–	8	"

SAMPLING DATA:

DATE: 3/7/06 START TIME: 904 END TIME: 915

Method: low-flow with dedicated tubing	Was well sampled to dryness? yes (no)
Initial Water Level (fbTOR): 8.11	Was well sampled below top of sand pack? (yes) no
Final Water Level (fbTOR):	Field Personnel: TAB / NTM

PHYSICAL & CHEMICAL DATA:

Appearance:	
Color:	Clear
Odor:	~~none~~ SL odor
Sediment Present?	none

WATER QUALITY MEASUREMENTS

pH (units)	TEMP. (°C)	SC (uS)	TURB. (NTU)	DO (ppm)	ORP (mV)
7.14	6.9	793.9	12.3	–	-4
7.27	4.7	791.5	8.30	–	8

REMARKS:

PREPARED BY: Thomas A B[illegible]

LOW-FLOW METHOD GROUNDWATER PURGE & SAMPLE COLLECTION LOG

Project Name:	Phase 1 BPA	WELL LOCATION	MW-17A
Project Number:	0071-006-102	Sample Matrix:	groundwater
Client:	Tecumseh	Weather:	Partly cloudy, low 40's, 0-5 mph SW

WELL DATA:

DATE: 3/6/06 TIME: 1420

Casing Diameter (inches): 2.0"	Casing Material: sch 40 PVC
Screened interval (fbTOR): 14.0 - 4.0 fbgs	Screen Material: sch 40 PVC .010" slot
Static Water Level (fbTOR): 6.82	Bottom Depth (fbTOR): 16.37
Elevation Top of Well Riser (fm	Ground Surface Elevation (fmsl):
Elevation Top of Screen (fmsl)	Stick-up (feet): 2.33
Standing volume in gallons: 1.61	
[(bottom depth - static water level) x vol calculation in table per well diameter]:	

Volume Calculation

Well Diameter	Volume gal/ft
1"	0.041
2"	0.163
3"	0.367
4"	0.653
5"	1.020
6"	1.469

PURGING DATA:

Pump Type: peristaltic

Is equipment dedicated to location? yes (no)	Is tubing dedicated to location? (yes) no
Depth of Sample (i.e. Level of Intake) (fbTOR): ~15.37	Approximate Purge Rate (gal/min): .50

Time	Water Level (fbTOR)	Accumulated Volume (gallons)	pH (units)	Temperature (degrees C)	Specific Conductance (mS/cm)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
1423	Initial	0.0	7.41	8.2	871.8	>1000	~~700~~	-57	Brown cloudy No odor
1425	7.05	.5	7.44	8.6	857.5	93.5	—	-26	"
1427	7.05	~~1.0~~ .75	7.45	7.9	856.2	28.6	—	-18	" clear
1429	7.10	1.0	7.45	7.6	854.7	23.5	—	-17	clear
1450	7.12	1.5	7.47	7.4	852.3	13.8	—	-7	clear
1432	7.12	2.0	7.47	7.1	851.0	14.9	—	-18	clear No odor
1434	6.90	3.5	7.72	6.5	846.3	4.52	—	14	"

S

SAMPLING DATA:

DATE: 3/6/06 START TIME: 1432 END TIME: 1434

Method: low-flow with dedicated tubing	Was well sampled to dryness? yes (no)
Initial Water Level (fbTOR): 7.12	Was well sampled below top of sand pack? (yes) no
Final Water Level (fbTOR): 6.90	Field Personnel: TAD / NTM

PHYSICAL & CHEMICAL DATA:

	WATER QUALITY MEASUREMENTS					
	pH (units)	TEMP. (°C)	SC (uS)	TURB. (NTU)	DO (ppm)	ORP (mV)
Appearance:						
Color: clear	2.47	7.1	851.0	14.9	—	-18
Odor: None	7.72	6.5	846.3	4.52	—	14
Sediment Present? None						

REMARKS:

PREPARED BY:

TurnKey Environmental Restoration, LLC

LOW-FLOW METHOD GROUNDWATER PURGE & SAMPLE COLLECTION LOG

Project Name:	Phase 1 BPA	WELL LOCATION	MW~~#~~- 18A
Project Number:	0071-006-102	Sample Matrix:	groundwater
Client:	Tecumseh	Weather:	partly cloudy, mid 30's, winds 0-5 mph

WELL DATA:

DATE: 3/1/06 TIME: 1025

Casing Diameter (inches):	2.0"	Casing Material:	sch 40 PVC
Screened interval (fbTOR):	14.0 - 4.0 fbgs	Screen Material:	sch 40 PVC .010" slot
Static Water Level (fbTOR):	4.98	Bottom Depth (fbTOR):	16.86
Elevation Top of Well Riser (fm		Ground Surface Elevation (fmsl):	
Elevation Top of Screen (fmsl)		Stick-up (feet):	2.75
Standing volume in gallons:	1.93		

[(bottom depth - static water level) x vol calculation in table per well diameter]:

Volume Calculation

Well Diameter	Volume gal/ft
1"	0.041
2"	0.163
3"	0.367
4"	0.653
5"	1.020
6"	1.469

PURGING DATA:

Pump Type: peristaltic

Is equipment dedicated to location? yes (no) — Is tubing dedicated to location? (yes) no

Depth of Sample (i.e. Level of Intake) (fbTOR): ~15.86 — Approximate Purge Rate (gal/min): ~.50

Time	Water Level (fbTOR)	Accumulated Volume (gallons)	pH (units)	Temperature (degrees C)	Specific Conductance (mS/cm)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
1030	Initial	0.0	8.27	7.5	1169	1000	–	20	Tan cloudy No odor
1034	6.90	.25	7.87	8.5	1170	136	–	43	cloudy no odor
1036	7.50	.75	7.75	8.0	1166	54.8	–	53	no odor
1038	8.10	1.0	7.71	7.6	1165	37.8	–	57	"
1040	8.65	1.25	7.67	7.5	1149	30.2	–	64	"
S [1042	9.30	1.50	7.64	7.4	1129	33.0	–	67	"
1055	12.88	3.0	7.81	8.8	1209	~~32.0~~ 58.3	–	86	"

SAMPLING DATA:

DATE: 3/1/06 START TIME: 1043 END TIME: 1055

Method:	low-flow with dedicated tubing	Was well sampled to dryness?	yes (no)
Initial Water Level (fbTOR):	9.30	Was well sampled below top of sand pack?	(yes) no
Final Water Level (fbTOR):	12.88	Field Personnel:	TAB/NTB

PHYSICAL & CHEMICAL DATA:

Appearance:

Color: clear

Odor: no odor

Sediment Present? NO

WATER QUALITY MEASUREMENTS

pH (units)	TEMP. (°C)	SC (uS)	TURB. (NTU)	DO (ppm)	ORP (mV)
7.64	7.4	1129	33.0	–	67
7.81	8.8	1209	~~33.0~~ 58.3	–	86

REMARKS:

PREPARED BY: Thomas [signature]

APPENDIX C

VARIANCE LOGS

TurnKey Environmental Restoration, LLC

Variance No.: 01
Date of Issue: 01/10/06
Page: 1 of 1

Project Name: Phase I Business Park Area
Project Number: 0071-006-202
Project Location: Tecumseh Lackawanna Site Date: 01/10/06

- Variance Log -

I. Summary of Nonconformance or Change: (completed by field team leader (FTL))

Stained surface soil initially identified at the site was not field confirmed during the RI.

II. Variance Requested: (completed by FTL)

TK field team leader proposed to the on-site NYSDEC rep (Maurice Moore) to eliminate the stained surface soil samples intended for collection in those areas.

III. Justification for Variance: (completed by FTL)

Lack of visual evidence of surface staining.

IV. Applicable Document / Work Plan: (completed by FTL)

Work Plan (Table 3)

Requested By:	Bryan C. Hann (FTL)	Date:	01/10/06
Approved By:	M. Moore (NYSDEC) - verbal	Date:	01/10/06
Project Manager Approval:	Tom Forbes	Date:	01/10/06
Quality Assurance Approval:	NA	Date:	

TurnKey Environmental Restoration, LLC

Variance No.: 02
Date of Issue: 01/12/06
Page: 1 of 1

Project Name: Phase I Business Park Area
Project Number: 0071-006-202
Project Location: Tecumseh Lackawanna Site Date: 01/12/06

- Variance Log -

I. Summary of Nonconformance or Change: (completed by field team leader (FTL))

Visual/olfactory evidence of petroleum impact identified within test pit TP-6-6
PID scan and headspace determination did not indicate VOC impact.

II. Variance Requested: (completed by FTL)

TK field team leader proposed to the on-site NYSDEC rep (Maurice Moore) to collect an additional sample to be analyzed for SVOCs (BN only).

III. Justification for Variance: (completed by FTL)

PID scan and headspace determination did not indicate a VOC impact, however visual/olfactory evidence of impact was observed. SVOCs were not initially to be analyzed for at this location.

IV. Applicable Document / Work Plan: (completed by FTL)

Work Plan (Table 3)

Requested By:	Bryan C. Hann (FTL)	Date:	01/12/06
Approved By:	M. Moore (NYSDEC) - verbal	Date:	01/12/06
Project Manager Approval:	Tom Forbes	Date:	01/12/06
Quality Assurance Approval:	NA	Date:	

TurnKey Environmental Restoration, LLC

Variance No.: 03
Date of Issue: 01/13/06
Page: 1 of 1

Project Name: Phase I Business Park Area
Project Number: 0071-006-202
Project Location: Tecumseh Lackawanna Site Date: 01/13/06

- Variance Log -

I. Summary of Nonconformance or Change: (completed by field team leader (FTL))

Visual/olfactory evidence of petroleum impact identified within test pit TP-7-2.

II. Variance Requested: (completed by FTL)

TK field team leader proposed to the on-site NYSDEC rep (Maurice Moore) rather than composite the sample, a discrete grab subsurface soil/fill sample should be collected and analyzed for STARS VOCs, SVOCs (BN only), and site-specific metals plus cyanide.

III. Justification for Variance: (completed by FTL)

Sample location appeared to impacted and if it were to be composited with other non- or less impacted samples, the data would not be represetative of subsurface soil/fill conditions at that location.

IV. Applicable Document / Work Plan: (completed by FTL)

Work Plan (Table 3)

Requested By:	Bryan C. Hann (FTL)	Date:	01/13/06
Approved By:	M. Moore (NYSDEC) - verbal	Date:	01/13/06
Project Manager Approval:	Tom Forbes	Date:	01/13/06
Quality Assurance Approval:	NA	Date:	

TurnKey Environmental Restoration, LLC

Variance No.: 04
Date of Issue: 01/17/06
Page: 1 of 1

Project Name: Phase I Business Park Area
Project Number: 0071-006-202
Project Location: Tecumseh Lackawanna Site Date: 01/17/06

- Variance Log -

I. Summary of Nonconformance or Change: (completed by field team leader (FTL))

Insufficient shallow groundwater within intended test pit/piezometer location.

II. Variance Requested: (completed by FTL)

TK field team leader proposed to the on-site NYSDEC rep (Maurice Moore) to not install piezometer P-53S.

III. Justification for Variance: (completed by FTL)

Due to insufficient shallow groundwater at designated test pit location TP-7-5 as well as surrounding test pit locations within that AOA (I.e., TP-7-2, TP-7-4, TP-7-7, and TP-7-8). Sufficient shallow groundwater can still be obtained from monitoring well network for that AOA.

IV. Applicable Document / Work Plan: (completed by FTL)

Work Plan (Table 3)

Requested By:	Bryan C. Hann (FTL)	Date:	01/17/06
Approved By:	M. Moore (NYSDEC) - verbal	Date:	01/17/06
Project Manager Approval:	Tom Forbes	Date:	01/17/06
Quality Assurance Approval:	NA	Date:	

TurnKey Environmental Restoration, LLC

Variance No.: 05
Date of Issue: 01/19/06
Page: 1 of 1

Project Name: Phase I Business Park Area
Project Number: 0071-006-202
Project Location: Tecumseh Lackawanna Site Date: 01/19/06

- Variance Log -

I. Summary of Nonconformance or Change: (completed by field team leader (FTL))

Insufficient shallow groundwater within intended test pit/piezometer location.

II. Variance Requested: (completed by FTL)

TK field team leader proposed to the on-site NYSDEC rep (Maurice Moore) to install piezometer P-57S within test pit TP-3-1 rather than the intended test pit TP-3-2.

III. Justification for Variance: (completed by FTL)

Due to insufficient shallow groundwater at designated test pit location TP-3-2, relocating the piezometer to nearby test pit TP-3-1 would provide sufficient groundwater elevation data within that AOA.

IV. Applicable Document / Work Plan: (completed by FTL)

Work Plan (Table 3)

Requested By:	Bryan C. Hann (FTL)	Date:	01/19/06
Approved By:	M. Moore (NYSDEC) - verbal	Date:	01/19/06
Project Manager Approval:	Tom Forbes	Date:	01/19/06
Quality Assurance Approval:	NA	Date:	

TurnKey Environmental Restoration, LLC

Variance No.: 06
Date of Issue: 01/19/06
Page: 1 of 1

Project Name: Phase I Business Park Area
Project Number: 0071-006-202
Project Location: Tecumseh Lackawanna Site Date: 01/19/06

- Variance Log -

I. Summary of Nonconformance or Change: (completed by field team leader (FTL))

Visual/olfactory evidence of petroleum impact identified within test pit TP-5-3.

II. Variance Requested: (completed by FTL)

TK field team leader proposed to the on-site NYSDEC rep (Maurice Moore) rather than composite the sample, a discrete grab subsurface soil/fill sample should be collected and analyzed for STARS VOCs, SVOCs (BN only), and site-specific metals plus cyanide.

III. Justification for Variance: (completed by FTL)

Sample location appeared to impacted and if it were to be composited with other non- or less impacted samples, the data would not be represetative of subsurface soil/fill conditions at that location.

IV. Applicable Document / Work Plan: (completed by FTL)

Work Plan (Table 3)

Requested By:	Bryan C. Hann (FTL)	Date:	01/19/06
Approved By:	M. Moore (NYSDEC) - verbal	Date:	01/19/06
Project Manager Approval:	Tom Forbes	Date:	01/19/06
Quality Assurance Approval:	NA	Date:	

TurnKey Environmental Restoration, LLC

Variance No.: 07
Date of Issue: 01/20/06
Page: 1 of 1

Project Name: Phase I Business Park Area
Project Number: 0071-006-202
Project Location: Tecumseh Lackawanna Site Date: 01/20/06

- Variance Log -

I. Summary of Nonconformance or Change: (completed by field team leader (FTL))

Elminate test pit TP-9-4 from the program.

II. Variance Requested: (completed by FTL)

TK field team leader proposed to the on-site NYSDEC rep (Maurice Moore) to eliminate test pit TP-9-4. During the excavation and lateral determination of petroleum impacts of nearby test pit TP-9-3, the area intended to be investigated by TP-9-4 was excavated, eliminating the need for that location.

III. Justification for Variance: (completed by FTL)

Test pit location already investigated.

IV. Applicable Document / Work Plan: (completed by FTL)

Work Plan (Table 3)

Requested By:	Bryan C. Hann (FTL)	Date:	01/20/06
Approved By:	M. Moore (NYSDEC) - verbal	Date:	01/20/06
Project Manager Approval:	Tom Forbes	Date:	01/20/06
Quality Assurance Approval:	NA	Date:	

TurnKey Environmental Restoration, LLC

Variance No.: 08
Date of Issue: 01/20/06
Page: 1 of 1

Project Name: Phase I Business Park Area
Project Number: 0071-006-202
Project Location: Tecumseh Lackawanna Site Date: 01/20/06

- Variance Log -

I. Summary of Nonconformance or Change: (completed by field team leader (FTL))

Visual/olfactory evidence of petroleum impact identified within test pit TP-9-3.

II. Variance Requested: (completed by FTL)

TK field team leader proposed to the on-site NYSDEC rep (Maurice Moore) rather than composite the sample, a discrete grab surface and subsurface soil/fill sample should be collected and analyzed for STARS VOCs (subsurface only), SVOCs (BN only), and site-specific metals plus cyanide.

III. Justification for Variance: (completed by FTL)

Sample location appeared to impacted and if it were to be composited with other non- or less impacted samples, the data would not be represetative of subsurface soil/fill conditions at that location.

IV. Applicable Document / Work Plan: (completed by FTL)

Work Plan (Table 3)

Requested By:	Bryan C. Hann (FTL)	Date:	01/20/06
Approved By:	M. Moore (NYSDEC) - verbal	Date:	01/20/06
Project Manager Approval:	Tom Forbes	Date:	01/20/06
Quality Assurance Approval:	NA	Date:	

TurnKey Environmental Restoration, LLC

Variance No.: 09
Date of Issue: 01/23/06
Page: 1 of 1

Project Name: Phase I Business Park Area
Project Number: 0071-006-202
Project Location: Tecumseh Lackawanna Site Date: 01/23/06

- Variance Log -

I. Summary of Nonconformance or Change: (completed by field team leader (FTL))

Visual/olfactory evidence of petroleum impact identified within test pit TP-10-1.

II. Variance Requested: (completed by FTL)

TK field team leader proposed to the on-site NYSDEC rep (Maurice Moore) rather than composite the sample, a discrete grab subsurface soil/fill sample should be collected and analyzed for STARS VOCs, SVOCs (BN only), and site-specific metals plus cyanide.

III. Justification for Variance: (completed by FTL)

Sample location appeared to impacted and if it were to be composited with other non- or less impacted samples, the data would not be represetative of subsurface soil/fill conditions at that location.

IV. Applicable Document / Work Plan: (completed by FTL)

Work Plan (Table 3)

Requested By:	Bryan C. Hann (FTL)	Date:	01/23/06
Approved By:	M. Moore (NYSDEC) - verbal	Date:	01/23/06
Project Manager Approval:	Tom Forbes	Date:	01/23/06
Quality Assurance Approval:	NA	Date:	

TurnKey Environmental Restoration, LLC

Variance No.: 10
Date of Issue: 01/24/06
Page: 1 of 1

Project Name: Phase I Business Park Area
Project Number: 0071-006-202
Project Location: Tecumseh Lackawanna Site Date: 01/24/06

- Variance Log -

I. Summary of Nonconformance or Change: (completed by field team leader (FTL))

Visual/olfactory and PID evidence of petroleum impact identified within test pit TP-10-6. Visual confirmation of at least two underground storage tanks, suspected of containing gasoline. NYSDEC Spills (John Otto) was notified. Mr. Otto stated that the spill will be documented as reported, however cleanup will be handled under the BCP.

II. Variance Requested: (completed by FTL)

TK field team leader proposed to the on-site NYSDEC rep (Maurice Moore) to collect a surface and subsurface soil/fill sample for STARS VOCs, TCLP VOCs, TCLP Lead, Ignitability, Reactivity, and Corrosivity.

III. Justification for Variance: (completed by FTL)

Visual/olfactory, PID scan, and PID headspace determination indicated a significant VOC impact, plus visual confirmation of at least two USTs.

IV. Applicable Document / Work Plan: (completed by FTL)

Work Plan (Table 3)

Requested By:	Bryan C. Hann (FTL)	Date:	01/24/06
Approved By:	M. Moore (NYSDEC) - verbal	Date:	01/24/06
Project Manager Approval:	Tom Forbes	Date:	01/24/06
Quality Assurance Approval:	NA	Date:	

TurnKey Environmental Restoration, LLC

Variance No.: 01
Date of Issue: 01/10/06
Page: 1 of 1

Project Name: Phase I Business Park Area
Project Number: 0071-006-202
Project Location: Tecumseh Lackawanna Site Date: 01/10/06

- Variance Log -

I. Summary of Nonconformance or Change: (completed by field team leader (FTL))

Stained surface soil initially identified at the site was not field confirmed during the RI.

II. Variance Requested: (completed by FTL)

TK field team leader proposed to the on-site NYSDEC rep (Maurice Moore) to eliminate the stained surface soil samples intended for collection in those areas.

III. Justification for Variance: (completed by FTL)

Lack of visual evidence of surface staining.

IV. Applicable Document / Work Plan: (completed by FTL)

Work Plan (Table 3)

Requested By:	Bryan C. Hann (FTL)	Date:	01/10/06
Approved By:	M. Moore (NYSDEC) - verbal	Date:	01/10/06
Project Manager Approval:	Tom Forbes	Date:	01/10/06
Quality Assurance Approval:	NA	Date:	

APPENDIX D

DATA USABILITY SUMMARY REPORT (DUSR)

Data Validation Services

120 Cobble Creek Road P. O. Box 208
North Creek, N. Y. 12853
Phone 518-251-4429
Facsimile 518-251-4428

March 15, 2006

Bryan Hann
Benchmark Env. Engineers
726 Exchange St. Suite 624
Buffalo, NY 14210

RE: Data Usability Summary Report for the Tecumseh Phase I BPA site-soil samples
STL-Buffalo SDG No. A06-0418, A06-O652, A06-0714, A06-0821, A06-0824, A06-0923, A06-0936, and A06-0953/1077

Dear Mr. Hann:

Review has been completed for the data package generated by Severn Trent Laboratories that pertains to soil samples collected 1/10/06 and 1/24/06 at the Tecumseh site. Samples were processed for various combinations of analytical fractions of TCL Base/neutrals, 5 metals and cyanide, STARS volatiles, TCL volatiles, TCL PCBs, TCL semivolatiles, and/or TAL metals/CN. Two samples were submitted for STARS volatiles, TCLP volatiles, TCLP lead, ignitability, corrosivity, and reactivity. Two soil samples were processed for TCL pesticides, TCL herbicides, and 2,3,7,8-TCDD. Field duplicates and sample matrix spikes/duplicates were also processed at proper frequency. The laboratory methodologies utilized are those of the USEPA SW846.

The data packages submitted contain full deliverables for validation, but this usability report is generated from review of the summary form information, with review of sample raw data, and limited review of associated QC raw data. Full validation has not been performed. However, the reported summary forms have been reviewed for application of validation qualifiers, using guidance from the USEPA Region 2 validation SOPs, the USEPA National Functional Guidelines for Data Review, the specific laboratory methodologies, and professional judgment, as affects the usability of the data. The following items were reviewed:

* Laboratory Narrative Discussion
* Custody Documentation
* Holding Times
* Surrogate and Internal Standard Recoveries
* Matrix Spike Recoveries/Duplicate Correlations
* Field Duplicate Correlations
* Preparation/Calibration Blanks
* Control Spike/Laboratory Control Samples
* Instrumental Tunes
* Calibration Standards
* ICP Serial Dilution
* CRI/CRA Standards
* Instrument IDLs

Those items listed above which show deficiencies are discussed within the text of this narrative. All of the other items were determined to be acceptable for the DUSR level review.

In summary, most of the sample analyte values/reporting limits are usable as reported, or usable with minor qualification as estimated ("J" qualifier) due to typical processing or matrix effects. Some sample values have been edited to correct laboratory results. No data are rejected.

Copies of the laboratory case narratives and the sample identification summary forms are attached to this text, and should be reviewed in conjunction with this report. Included with this submission are red-ink edited results forms, reflecting final sample results with edits and qualifications recommended within this report.

The following text discusses quality issues of concern.

General

Blind field duplicate evaluations were performed for various parameters on samples TP-6-7(2.0-4.0), TP-2-(1-3)(2.0-5.5), TP-5(1-5)(0.0-1.0), TP-5(6-10)(0.0-1.0), TP-9-1(1.0-3.5), TP-9-(125)(1.0-7.0), SS-23, and SS-03. Although many variances of about twofold were observed, most correlations were within validation guidelines, with the following exceptions, results for which are qualified as estimated in the parent sample and its duplicate:

- anthracene, fluoranthene, and phenathrene in TP-2-(1-3)(2.0-5.5)
- potassium and sodium in TP-5(1-5)(0.0-1.0)

STARS Volatiles by EPA 8021 and TCL Volatiles by EPA 8260B

The STARS volatile analysis of TP-10-6(1.0-5.5) exhibited elevated surrogate standard recovery (141%, >127%). Detected values are already qualified as estimated due to values below the adjusted CRDL. No additional qualification is required.

STARS matrix spikes of TP-5-3(1.0-4.5) show all recoveries and duplicate correlations within recommended ranges.

Matrix spikes for STARS volatiles on TP-1-9(1-4.8) show low recoveries for n-butylbenzene, sec-butylbenzene, and p-cymene (60% to 75%), and for naphthalene (negative recoveries and 148%RPD duplicate correlation). Results for those four compounds in that parent sample are qualified as estimated.

Matrix spikes for TCL volatiles on TP-1-22(2-6.5) shows low recoveries for trichlorobenzene and chlorobenzene (59% to 71%). Results for those two compounds in that parent sample are qualified as estimated.

Results for m-xylene and p-xylene are to be considered as a combined result (i.e. m,p-xylene) due to lack of analytical resolution between the two responses.

Holding times for project samples were met, internal standard responses meet protocol requirements, and blanks show no contamination. Calibrations standards showed acceptable responses.

The confirmation analyses for the EPA 8021 STARS volatile detections were not provided in the data package, although the detections reported in the primary analyses were denoted on those raw data as having been confirmed. Full validation would require review of the confirmation detector data.

STARS Base/Neutrals and TCL Semivolatile Analyses by 8270C

Results for analytes that are initially reported with the "E" qualifier are derived from the dilution analyses of those samples.

TP-5-11(1.0-4.0) shows low recoveries for two internal standards in the initial analysis, but acceptable responses in the dilution analysis. Results for the twenty-two analytes associated with the outlying internal standards utilized from the initial analysis of that sample are qualified as estimated.

Matrix spikes of TP-4-(1-5)(1.0-3.0), TP-3-1-2(0-1.0), TP-4-(1-5)(0-1.0), and TP-10-1-(1.0-4.5) show accuracy and precision within validation guidelines, with the exception of low recoveries for pyrene in the TP-4-(1-5)(0-1.0) and elevated ones in TP-3-1-2(0-1.0). The results for pyrene in those two samples are therefore qualified as estimated.

Matrix spikes of TP-1-22(2-6.5) show accuracy and precision within validation guidelines, although seven of the duplicate correlation values were elevated. No qualification to sample results is indicated.

Due to poor mass spectral quality (interferences), the reported detection of n-nitrosodiphenyl-amine in TP-9-3(1.0-4.5) is edited to reflect non-detection at the previously reported concentration (resulting in an elevated reporting limit).

Holding times were met. Surrogate and internal standard recoveries, and the instrumental tunes were acceptable. Calibrations standards showed acceptable responses with laboratory requirements and validation guidelines.

The detections of bis(2-ethylhexyl)phthalate in the samples reported in SDGs A06-0418, A06-0652, A06-0821, A06-0824, A06-923, A06-0936, and A06-0953/1077, and the detections of naphthalene in samples reporting in A06-0418 are considered external contamination (due to low level detections in the associated method blanks). Those sample detections are edited to reflect non-detection.

The detected values of benzo(b)fluoranthene and benzo(k)fluoranthene in the samples are qualified as estimated due to lack of resolution in response.

Some of the samples were analyzed at dilution due to high concentrations of target analytes. However, several samples were processed at excessive dilution, resulting in unnecessarily high reporting limits for nondetected compounds.

Preparation logs do not show entries for final sample extract volumes.

TCL Pesticides by EPA8081/TCL PCB Analyses by EPA 8082/TCL Herbicides by EPA8151

Three samples exhibit responses that correspond to most of those required for identification as Aroclor 1260. However, because one of the congener peaks was not detected by the instrument software, the detections were not reported as PCBs. It is noted that there are responses corresponding to the "undetected" congeners, but as shoulders on interfering peaks. The laboratory utilizes a very fast oven ramping in the analytical procedure (entire run sequence is less than 6.5'). This has the effect of merging responses, creating shoulders (of probable sample matrix PAH responses), thus prohibiting proper identification and quantitation. For these samples, the reporting limit for Aroclor 1260 has either been raised or qualified as estimated, based on the potential concentration shown in the raw data, in order to reflect the possibility that PCBs may be present at levels greater than the CRDL. The affected samples are SS-14 (qualified existing reporting limit as estimated), SS-03 (raised the reporting limit to 100 ppb), and DUP#8 (raised the reporting limit to120 ppb). These levels are still well below the project action level for surface soils.

Matrix spikes of Aroclors 1016 and 1260 in SS-10-13 show acceptable accuracy and precision.

Matrix spikes of Aroclors 1016 and 1260 in SS-(19-21) show an elevated recovery and duplicate correlation for Aroclor 1260 (165%, 48%RPD), likely due to the presence of Aroclor 1254 in the parent sample. The detected value of that mixture in the parent sample is qualified as estimated.

Matrix spikes of Aroclors 1016 and 1260 in TP-6-10(2-6) show acceptable recoveries in the matrix spike, but about twofold elevated recoveries in the spiked duplicate, and subsequent elevated duplicate correlations. The surrogate recoveries of those spikes do not reflect that variance; a spiking error is suspected.

Detected Aroclor mixtures in SS-(19-21), SS-03, SS-05, SS-06, and SS-22 are qualified as estimated due to elevated surrogate recoveries.

The detection of 2,4-D in SS-35 is qualified as estimated due to elevated recovery in the associated LCS (141%, above 132%).

Results for a-BHC and d-BHC in the samples are qualified as estimated, with a low bias, due to the responses (each at 23%RSD) in the initial calibration standards.

The results for picrolam are qualified as estimated due to slightly low responses (22%D and 21%D) in the continuing calibration standards.

Holding times were met and blanks showed no contamination.

Dioxin by EPA 8290

Holding times were met and blanks showed no contamination.

Surrogate and internal standard responses are within laboratory and validation guidelines. Instrument performance was compliant.

Laboratory duplicate correlation of sample SS-35 is acceptable.

Sample reported results are substantiated by the raw data.

Metals/CN and TCLP Lead by EPA6010B, EPA7470, EPA9012

The blind duplicate of T-5(1-5)(0.0-1.0) was reanalyzed at dilution for iron and manganese due to high initial responses above the instrument calibration range. However, the data for that dilution nalysis was entirely inconsistent with those of the initial analysis of the sample. The reason for that variance is not evident. Dilution analyses for other samples in that sequence seem consistent. The dilution analysis of the blind duplicate was not used. The initial analysis values were used, and qualified as estimated due to response above the linear range.

Two results for mercury were reported for TP-4-(1-5)(1.0-3.0). The (very slightly) higher one is utilized.

Matrix spikes were performed on seven project samples. Duplicate correlation evaluation was performed on the spikes rather than the unspiked parent sample. The following elements produced outlying recoveries, and results are qualified as estimated for these listed analytes in the samples reported in the same SDG as the parent sample:

- Cadmium (70% and 64%) and chromium (46% and 89%) in TP-1(11-12)(0-2), SDG A06-0418
- Arsenic (71% and -26%) and cadmium (79% and 72%) in TP-7-(1-3)/8-4(0-2), SDG A06-0652
- Chromium (63%and 0%) and mercury (161% and 83%) in TP-4-(1-5)(1.0-3.0), SDG A06-0714
- Antimony, arsenic, barium, chromium, copper (41% to 208%) in TP-3-1-2(1.0-3.0), SDG A06-821
- Arsenic, chromium,and mercury (arsenic and mercury with slight outliers at 63% and 73%, chromium with negative recoveries) in TP-9(125)(0.0-1.0), SDG A06-0923
- Arsenic (negative recoveries), cadmium (57% and 53%), chromium (179% and –43%), mercury (36% and 34%), and cyanide (127% and 125%) in SS-10-13, SDG A06-0936.

The matrix spikes (MS/MSD) of TP-4-(1-5)(0-1.0) show similar detected values for the ICP spikes as for the unspiked sample, indicating either a potentially very strong matrix effect, or lack of spiking of the MS/MSD. Mercury also produced outlying recovery. All metals are affected, and are qualified as estimated in that parent sample.

The post-digest spikes of TP-5(6-10)(0.0-1.0), TP-10-6(0.0-1.0) (for total metals and TCLP lead), and SS-(19-21) show acceptable recoveries.

The ICP serial dilution evaluations of SS(19-21), TP-10-6(0.0-1.0) (TCLP lead only), TP-7-(1-3)/8-4(0-2) and TP-4-(1-5)(1.0-3.0) show acceptable correlations. The following elements produced outlying correlations in the other serial dilutions, and results are qualified as estimated for these listed analytes in the samples reported in the same SDG as the parent sample:

- Lead (11%D) in TP-1(11-12)(0-2), SDG A06-0418
- Chromium and lead (both 13%D) in TP-4-(1-5)(0-1.0), SDG A06-0714
- Calcium, lead, and iron (11%D and 12%D) in TP-3-1-2(1.0-3.0), SDG A06-0821
- Cadmium, chromium and lead (11%D to 13%D) in TP-5-(6-10)(0-1.0), SDG A06-0824
- Chromium and lead (both 16%D) in TP-9-(125)(0-1.0), SDG A06-0923
- Chromium and lead (28%D and 29%D) in SS-10-13, A06-0936

Detected results for mercury in TP-4-(1-5)(0-1.0) and TP-4-(1-5)(1.0-3.0) are qualified as estimated due to elevated recovery in the associated LCSs (174% and 161%).

Detected results for cyanide in samples reported in SDG A06-0923, A06-0936, and A06-953/1077 are qualified as estimated due to non-compliant elevated recovery in the associated LCSs (123% to 140%, above 118%).

Holding times were met. Blanks associated with sample analyses show no contamination above reporting limit.

Please do not hesitate to contact me if you have comments or questions regarding this report.

Very truly yours,

Judy Harry

VALIDATION QUALIFIER DEFINITIONS

DATA QUALIFIER DEFINITIONS

The following definitions provide brief explanations of the national qualifiers assigned to results in the data review process. If the Regions choose to use additional qualifiers, a complete explanation of those qualifiers should accompany the data review.

U - **The analyte was analyzed for, but was not detected above the reported sample quantitation limit.**

J - **The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.**

N - **The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."**

NJ - **The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.**

UJ - **The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.**

R - **The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.**

LABORATORY SAMPLE IDs AND CASE NARRATIVES

SAMPLE SUMMARY

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	SAMPLED DATE	SAMPLED TIME	RECEIVED DATE	RECEIVED TIME
A6041819	TP-1-(1-5)(0-2)	SOIL	01/10/2006	12:00	01/12/2006	14:45
A6041820	TP-1-(1-5)(2-5)	SOIL	01/10/2006	12:00	01/12/2006	14:45
A6041803	TP-1-(11-12)(0-2)	SOIL	01/11/2006	09:45	01/12/2006	14:45
A6041804	TP-1-(11-12)(2-4.5)	SOIL	01/11/2006	09:45	01/12/2006	14:45
A6041810	TP-1-(13-17)(0-2)	SOIL	01/11/2006	14:00	01/12/2006	14:45
A6041811	TP-1-(13-17)(2-5)	SOIL	01/11/2006	14:00	01/12/2006	14:45
A6041825	TP-1-(678910)(0-2)	SOIL	01/10/2006	16:15	01/12/2006	14:45
A6041826	TP-1-(678910)(2-5)	SOIL	01/10/2006	16:15	01/12/2006	14:45
A6041812	TP-1-18(2-5)	SOIL	01/11/2006	14:20	01/12/2006	14:45
A6041813	TP-1-19(2-7)	SOIL	01/11/2006	15:00	01/12/2006	14:45
A6041827	TP-1-9(1-4.8)	SOIL	01/10/2006	15:15	01/12/2006	14:45

SAMPLE SUMMARY

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	SAMPLED DATE	SAMPLED TIME	RECEIVED DATE	RECEIVED TIME
A6065205	BLIND DUPLICATE	SOIL	01/13/2006	12:00	01/18/2006	10:40
A6065209	TP-1-22(2-6.5)	SOIL	01/12/2006	10:00	01/18/2006	10:40
A6065209MS	TP-1-22(2-6.5)	SOIL	01/12/2006	10:00	01/18/2006	10:40
A6065209SD	TP-1-22(2-6.5)	SOIL	01/12/2006	10:00	01/18/2006	10:40
A6065207	TP-6-(1-5)(0-2)	SOIL	01/12/2006	15:00	01/18/2006	10:40
A6065208	TP-6-(1-5)(2-6)	SOIL	01/12/2006	15:00	01/18/2006	10:40
A6065202	TP-6-10(2-6)	SOIL	01/13/2006	11:55	01/18/2006	10:40
A6065210	TP-6-6(2-6)	SOIL	01/12/2006	15:48	01/18/2006	10:40
A6065201	TP-6-7(2-4)	SOIL	01/13/2006	08:35	01/18/2006	10:40
A6065203	TP-7-(1-3)/8-4(0-2)	SOIL	01/13/2006	16:30	01/18/2006	10:40
A6065203MS	TP-7-(1-3)/8-4(0-2)	SOIL	01/13/2006	16:30	01/18/2006	10:40
A6065203SD	TP-7-(1-3)/8-4(0-2)	SOIL	01/13/2006	16:30	01/18/2006	10:40
A6065204	TP-7-(1-3)/8-4(1.5-	SOIL	01/13/2006	16:40	01/18/2006	10:40
A6065211	TP-7-(4-7)(0-1.0)	SOIL	01/17/2006	11:35	01/18/2006	10:40
A6065212	TP-7-(4-7)(2.0-7.0)	SOIL	01/17/2006	11:35	01/18/2006	10:40
A6065215	TP-7-2(2-5)	SOIL	01/13/2006	13:22	01/18/2006	10:40
A6065213	TP-8-(1-3)(0-1.0)	SOIL	01/17/2006	17:08	01/18/2006	10:40
A6065214	TP-8-(1-3)(1.0-7.0)	SOIL	01/17/2006	17:08	01/18/2006	10:40

SAMPLE SUMMARY

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	SAMPLED DATE	SAMPLED TIME	RECEIVED DATE	RECEIVED TIME
A6071406	BLIND DUPLICATE #2	SOIL	01/18/2006	12:00	01/19/2006	13:00
A6071404	TP-2-(1-3)(0-2.0)	SOIL	01/18/2006	15:25	01/19/2006	13:00
A6071405	TP-2-(1-3)(2.0-5.5)	SOIL	01/18/2006	15:25	01/19/2006	13:00
A6071402	TP-4-(1-5)(0-1.0)	SOIL	01/18/2006	12:45	01/19/2006	13:00
A6071402MS	TP-4-(1-5)(0-1.0)	SOIL	01/18/2006	12:45	01/19/2006	13:00
A6071402SD	TP-4-(1-5)(0-1.0)	SOIL	01/18/2006	12:45	01/19/2006	13:00
A6071403	TP-4-(1-5)(1.0-3.0)	SOIL	01/18/2006	12:45	01/19/2006	13:00
A6071403MS	TP-4-(1-5)(1.0-3.0)	SOIL	01/18/2006	12:45	01/19/2006	13:00
A6071403SD	TP-4-(1-5)(1.0-3.0)	SOIL	01/18/2006	12:45	01/19/2006	13:00
A6071401	TP-8-6 (1.0-3.0)	SOIL	01/18/2006	08:52	01/19/2006	13:00

SAMPLE SUMMARY

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	SAMPLED DATE	SAMPLED TIME	RECEIVED DATE	RECEIVED TIME
A6082114	BLIND DUPLICATE#3	SOIL	01/19/2006	12:00	01/23/2006	11:15
A6082103	TP-3-1-2 (0.0-1.0)	SOIL	01/19/2006	08:35	01/23/2006	11:15
A6082104	TP-3-1-2 (1.0-3.0)	SOIL	01/19/2006	08:35	01/23/2006	11:15
A6082104MS	TP-3-1-2 (1.0-3.0)MS	SOIL	01/19/2006	08:35	01/23/2006	11:15
A6082104SD	TP-3-1-2 (1.0-3.0)SD	SOIL	01/19/2006	08:35	01/23/2006	11:15
A6082110	TP-5-(1-5)(0.0-1.0)	SOIL	01/19/2006	14:05	01/23/2006	11:15
A6082111	TP-5-(1245(1.0-4.5)	SOIL	01/19/2006	14:05	01/23/2006	11:15
A6082107	TP-5-3 (1.0-4.5)	SOIL	01/19/2006	11:20	01/23/2006	11:15

SAMPLE SUMMARY

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	SAMPLED DATE	SAMPLED TIME	RECEIVED DATE	RECEIVED TIME
A6082412	BLIND DUPLICATE #4	SOIL	01/20/2006	12:00	01/23/2006	11:15
A6082413	BLIND DUPLICATE #5	SOIL	01/20/2006	12:00	01/23/2006	11:15
A6082404	TP-5-(6-10)(0.0-1.0)	SOIL	01/20/2006	10:25	01/23/2006	11:15
A6082405	TP-5-(6-10)(1.0-4.0)	SOIL	01/20/2006	10:25	01/23/2006	11:15
A6082406	TP-5-11(0.0-1.0)	SOIL	01/20/2006	11:25	01/23/2006	11:15
A6082407	TP-5-11(1.0-4.0)	SOIL	01/20/2006	11:25	01/23/2006	11:15
A6082408	TP-5-12(1.0-3.5)	SOIL	01/20/2006	10:55	01/23/2006	11:15
A6082409	TP-9-1(1.0-3.5)	SOIL	01/20/2006	13:25	01/23/2006	11:15
A6082410	TP-9-3(0.0-1.0)	SOIL	01/20/2006	14:40	01/23/2006	11:15
A6082411	TP-9-3(1.0-4.5)	SOIL	01/20/2006	14:40	01/23/2006	11:15

SAMPLE SUMMARY

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	SAMPLED DATE	SAMPLED TIME	RECEIVED DATE	RECEIVED TIME
A6092311	BLIND DUPLICATE #6	SOIL	01/23/2006	12:00	01/25/2006	13:30
A6092305	TP-10-1(1.0-4.5)	SOIL	01/23/2006	10:45	01/25/2006	13:30
A6092306	TP-10-1-3.0.0-1.0	SOIL	01/23/2006	13:30	01/25/2006	13:30
A6092307	TP-10-2-3.1.0-4.0	SOIL	01/23/2006	13:30	01/25/2006	13:30
A6092308	TP-10-4-5.0.0-1.0	SOIL	01/23/2006	14:20	01/25/2006	13:30
A6092309	TP-10-4-5.1.0-2.5	SOIL	01/23/2006	14:20	01/25/2006	13:30
A6092303	TP-9-(125)0.0-1.0	SOIL	01/23/2006	10:05	01/25/2006	13:30
A6092304	TP-9-(125)1.0-7.0	SOIL	01/23/2006	10:05	01/25/2006	13:30
A6092301	TP-9-2(1.0-7.0)	SOIL	01/23/2006	09:40	01/25/2006	13:30
A6092302	TP-9-5(1.0-4.5)	SOIL	01/23/2006	08:45	01/25/2006	13:30
A6092310	TP-10-7-(1.0-2.5)	Soil	01/23/2006	14:30	01/25/2006	13:30

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION
AND
ANALYTICAL REQUEST SUMMARY

LAB NAME: SEVERN TRENT LABORATORIES, INC.

CUSTOMER SAMPLE ID	LABORATORY SAMPLE ID	ANALYTICAL REQUIREMENTS						
		VOA GC/MS	BNA GC/MS	VOA GC	PEST PCB	METALS	TCLP HERB	WATER QUALITY
SS-09	A6093601	-	-	-	SW8463	-	-	-
SS-10-13	A6093602	-	SW8463	-	SW8463	SW8463	-	SW8463
SS-15	A6093603	-	-	-	SW8463	-	-	-
SS-16	A6093604	-	-	-	SW8463	-	-	-
SS-17	A6093605	-	-	-	SW8463	-	-	-
SS-31	A6093606	-	SW8463	-	-	-	-	-
SS-32-33	A6093607	-	SW8463	-	-	SW8463	-	SW8463

SAMPLE SUMMARY

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	SAMPLED DATE	SAMPLED TIME	RECEIVED DATE	RECEIVED TIME
A6095326	BLIND DUPLICATE #7	SOIL	01/24/2006	12:00	01/25/2006	13:30
A6095327	BLIND DUPLICATE #8	SOIL	01/24/2006	12:00	01/25/2006	13:30
A6095313	MW-13A 0.0-1.0	SOIL	01/24/2006	13:30	01/25/2006	13:30
A6107702	MW-13A(0.0-1.0)	SOIL	01/24/2006	13:30	01/25/2006	13:30
A6095304	SS-(19-21)	SOIL	01/24/2006	13:00	01/25/2006	13:30
A6095304MS	SS-(19-21)MS	SOIL	01/24/2006	13:00	01/25/2006	13:30
A6095304SD	SS-(19-21)SD	SOIL	01/24/2006	13:00	01/25/2006	13:30
A6095314	SS-03	SOIL	01/24/2006	13:40	01/25/2006	13:30
A6095323	SS-04	SOIL	01/24/2006	14:45	01/25/2006	13:30
A6095322	SS-05	SOIL	01/24/2006	14:48	01/25/2006	13:30
A6095306	SS-06	SOIL	01/24/2006	14:55	01/25/2006	13:30
A6095311	SS-07	SOIL	01/24/2006	15:18	01/25/2006	13:30
A6095309	SS-08	SOIL	01/24/2006	15:10	01/25/2006	13:30
A6095316	SS-1-2	SOIL	01/24/2006	13:45	01/25/2006	13:30
A6095318	SS-14	SOIL	01/24/2006	14:15	01/25/2006	13:30
A6095319	SS-18	SOIL	01/24/2006	14:30	01/25/2006	13:30
A6095325	SS-22	SOIL	01/24/2006	14:52	01/25/2006	13:30
A6095305	SS-23	SOIL	01/24/2006	13:20	01/25/2006	13:30
A6095312	SS-24	SOIL	01/24/2006	13:25	01/25/2006	13:30
A6095324	SS-25	SOIL	01/24/2006	14:50	01/25/2006	13:30
A6095321	SS-26	SOIL	01/24/2006	14:45	01/25/2006	13:30
A6095315	SS-27	SOIL	01/24/2006	13:40	01/25/2006	13:30
A6095307	SS-28	SOIL	01/24/2006	15:02	01/25/2006	13:30
A6095308	SS-29	SOIL	01/24/2006	15:05	01/25/2006	13:30
A6095310	SS-30	SOIL	01/24/2006	15:15	01/25/2006	13:30
A6095320	SS-34	SOIL	01/24/2006	14:40	01/25/2006	13:30
A6095303	SS-35	SOIL	01/24/2006	13:40	01/25/2006	13:30
A6107701	SS-35	SOIL	01/24/2006	13:40	01/25/2006	13:30
A6095317	SS-36	SOIL	01/24/2006	14:10	01/25/2006	13:30
A6095301	TP-10-6 0.0-1.0	SOIL	01/24/2006	08:20	01/25/2006	13:30
A6095302	TP-10-6 1.0-5.5	SOIL	01/24/2006	08:20	01/25/2006	13:30

NON-CONFORMANCE SUMMARY

Job#: A06-0418

STL Project#: NY3A9073
Site Name: TURNKEY - TECUMSEH REDEVELOPMENT SITE

General Comments

The enclosed data may or may not have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

According to 40CFR Part 136.3, pH, Chlorine Residual, Dissolved Oxygen, Sulfite, and Temperature analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

Sample Receipt Comments

A06-0418
Sample Cooler(s) were received at the following temperature(s); 4.0 °C
All samples were received in good condition.

GC Volatile Data

For method 8021, the recoveries of several compounds in sample TP-1-9(1-4.8) Matrix Spike and Matrix Spike Duplicate exceeded QC limits. The Matrix Spike Blank recoveries are compliant.

The relative percent difference between the Matrix Spike and the Matrix Spike Duplicate exceed quality control limits for Naphthalene.

GC/MS Semivolatile Data

Linear regression was used to calibrate analytes that were greater than 15% RSD in the initial calibration A6I0001087.

The analytes Bis(2-ethylhexyl) phthalate and Naphthalate were detected in the Method Blank SBLK90 (A6B1207903) at a level below the project established reporting limit. No corrective action is necessary for any values in Method Blanks that are below the requested reporting limits.

The surrogate recovery for p-Terphenyl-d14 was below the laboratory quality control limits for sample TP-1-(11-12)(0-2). Based on US EPA CLP National Functional Guidelines for Data Review, one surrogate in either fraction (base/neutral or acid fraction) may have a recovery outside of the control limit. All analytes associated with that surrogate should be considered biased low.

Metals Data

The recovery of sample TP-1-(11-12)(0-2) Matrix Spike exhibited a result below the quality control limit for Cadmium. The recoveries of sample TP-1-(11-12)(0-2) Matrix Spike Duplicate exhibited results below the quality control limits for Cadmium and Chromium. Sample matrix is suspect. The RPD of sample TP-1-(11-12)(0-2) Matrix Spike and Matrix Spike Duplicate exceeded quality control limits for Cadmium. However, the LCS was acceptable.

The recoveries of sample TP-1-(11-12)(0-2) Matrix Spike and Matrix Spike Duplicate exhibited results above the quality control limits for Lead. The sample result is more than four times greater than the spike added. The LCS is acceptable.

The recoveries of sample TP-1-(11-12)(0-2) Post Spike exhibited results below the quality control limits for Cadmium and Chromium. However, the LCS is acceptable.

The Serial Dilution of sample TP-1-(11-12)(0-2) exceeded the quality control limit for Lead. However, the LCS is acceptable.

Wet Chemistry Data

No deviations from protocol were encountered during the analytical procedures.

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NON-CONFORMANCE SUMMARY

Job#: A06-0652

STL Project#: NY3A9073
Site Name: TURNKEY - TECUMSEH REDEVELOPMENT SITE

General Comments

The enclosed data may or may not have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

According to 40CFR Part 136.3, pH, Chlorine Residual, Dissolved Oxygen, Sulfite, and Temperature analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

Sample Receipt Comments

A06-0652
Sample Cooler(s) were received at the following temperature(s); 3.0 °C
All samples were received in good condition.

GC/MS Volatile Data

For method 8260, the recoveries of Trichloroethene and Chlorobenzene in sample TP-1-22(2-6.5) Matrix Spike and Matrix Spike Duplicate exceeded QC limits. The Matrix Spike Blank recoveries are compliant.

Initial calibration standard curve A5I0001098-1 exhibited the %RSD of the compounds Bromomethane, Methylene Chloride, Acetone, and n-Butylbenzene as greater than 15%. However, the mean RSD of all compounds is 8.75%.

GC Volatile Data

For method 8021, sample TP-7-2(2-5) was analyzed using medium level techniques due to high concentrations of target analytes.

GC/MS Semivolatile Data

Samples TP-6-(1-5)(0-2), TP-6-(1-5)(2-6), and TP-7-(4-7)(0-1.0), 8270 soils, had adjusted final volumes during extraction due to extract matrix and viscosity.

Linear regression was used to calibrate all analytes that were greater than 15% RSD in the initial calibration A6I0001075.

The spike recoveries for Acenaphthene and Pyrene were above the laboratory quality control limits in the Matrix Spike Duplicate TP-1-22(2-6.5). Since the Matrix Spike Blank A6B1237001 recoveries were compliant, no corrective action was required.

The relative percent difference between the Matrix Spike TP-1-22(2-6.5) and the Matrix Spike Duplicate TP-1-22(2-6.5) exceeded quality control criteria for most spiking analytes.

The analyte Bis(2-ethylhexyl) phthalate was detected in the Method Blank SBLK90 (A6B1237002) at a level below the project established reporting limit. No corrective action is necessary for any values in Method Blanks that are below the requested reporting limits.

GC Extractable Data

For method 8082, the recoveries and the relative percent difference for sample TP-6-10(2-6) the Matrix Spike duplicate are outside quality control limits for AR1260/1016 though the Matrix Spike Blank recoveries are compliant, no action necessary.

For method 8082, AR1260 exhibited a percent difference greater than 15% from the expected amount in the associated continuing calibrations. The average of all analytes is within 15% and the associated laboratory quality control recoveries are compliant. No corrective action was required.

For method 8082, the associated calibration verifications demonstrated a decreased instrument response, >15% difference, for the surrogate Decachlorobiphenyl. The theoretical consequence of these would be a low bias in the calculated surrogate recoveries. The associated sample surrogate recoveries are well within the quality control limits. In the technical judgement of the laboratory, the sample data has not been impacted and no corrective action is required.

Metals Data

The recovery of sample TP-7-(1-3)/8-4(0-2) Matrix Spike exhibited a result below the quality control limits for Arsenic. The recovery of sample TP-7-(1-3)/8-4(0-2) Matrix Spike Duplicate exhibited results below the quality control limits for Arsenic and Cadmium. The RPD of sample TP-7-(1-3)/8-4(0-2) Matrix Spike and Matrix Spike Duplicate exceeded quality control limits for Arsenic. Sample matrix is suspect. However, the LCS was acceptable.

The recovery of sample TP-7-(1-3)/8-4(0-2) Matrix Spike and Matrix Spike Duplicate exhibited results below the quality control limits for Chromium, Lead and Mercury. The sample result is more than four times greater than the spike added. The RPD of sample TP-7-(1-3)/8-4(0-2) Matrix Spike and Matrix Spike Duplicate exceeded quality control limits for Lead. The LCS was acceptable.

The recoveries of sample TP-7-(1-3)/8-4(0-2) Post Spike exhibited results below the quality control limits for Chromium and Lead. However, the LCS was acceptable.

Wet Chemistry Data

No deviations from protocol were encountered during the analytical procedures.

NON-CONFORMANCE SUMMARY

Job#: A06-0821

STL Project#: NY3A9073
Site Name: TURNKEY - TECUMSEH REDEVELOPMENT SITE

General Comments

The enclosed data may or may not have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

According to 40CFR Part 136.3, pH, Chlorine Residual, Dissolved Oxygen, Sulfite, and Temperature analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

Sample Receipt Comments

A06-0821
Sample Cooler(s) were received at the following temperature(s); 2.0 °C
All samples were received in good condition.

GC Volatile Data

For method 8021, several compounds exhibited a percent difference greater than 15% from the expected amount in the associated continuing calibrations. The average of all analytes is within 15% and the associated laboratory quality control recoveries are compliant. No corrective action was required.

For method 8021, the recoveries and RPDs of Naphthalene in sample TP-5-3 (1.0-4.5) Matrix Spike and Matrix Spike Duplicate exceeded QC limits. The Matrix Spike Blank recoveries are compliant.

GC/MS Semivolatile Data

The analyte Bis(2-ethylhexyl) phthalate was detected in the Method Blank SMBLK02 (A6B1265702) at a level below the project established reporting limit. No corrective action is necessary for any values in Method Blanks that are below the requested reporting limits.

The spike recoveries for 2,4-Dinitrotoluene and N-Nitroso-Di-n-propylamine were below the laboratory quality control limits in the Matrix Spike TP-3-1-2 (0.0-1.0). Since the Matrix Spike Blank A6B1265701 recoveries were compliant, no corrective action was required.

Linear regression was used to calibrate analytes that were greater than 15% RSD in the initial calibration A6I0001087.

The spike recoveries for Pyrene were above the laboratory quality control limits in the Matrix Spike TP-3-1-2 (0.0-1.0) and Matrix Spike Duplicate TP-3-1-2 (0.0-1.0). Since the Matrix Spike Blank A6B1265701 recoveries were compliant, no corrective action was required.

The relative percent difference between the Matrix Spike TP-3-1-2 (0.0-1.0) and the Matrix Spike Duplicate TP-3-1-2 (0.0-1.0) exceeded quality control criteria for 1,2,4-Trichlorobenzene, 1,4-Dichlorobenzene 2,4-Dinitrotoluene, N-Nitroso-Di-n-propylamine and Pyrene. No further action was required.

Metals Data

The recoveries of sample TP-3-1-2 (1.0-3.0) Matrix Spike exhibited results above the quality control limits for Iron and Manganese, and below the quality control limits for Calcium, Magnesium and Zinc. The recoveries of sample TP-3-1-2 (1.0-3.0) Matrix Spike Duplicate exhibited results above the quality control limits for Iron and Manganese, and below the quality control limits for Aluminum, Calcium, Lead, Magnesium, and Zinc. The sample results are more than four times greater than the spike added. The RPD between sample TP-3-1-2 (1.0-3.0) Matrix Spike and Matrix Spike Duplicate exceeded the quality control criteria for Aluminum. The LCS was acceptable.

The recoveries of sample TP-3-1-2 (1.0-3.0) Matrix Spike exhibited results above the quality control limit for Barium, and below the quality control limits for Antimony and Arsenic. The recoveries of sample TP-3-1-2 (1.0-3.0) Matrix Spike Duplicate exhibited results above the quality control limit for Chromium, and below the quality control limit for Antimony and Copper. Sample matrix is suspect. The RPD between sample TP-3-1-2 (1.0-3.0) Matrix Spike and Matrix Spike Duplicate exceeded the quality control criteria for Chromium. The LCS was acceptable.

The recovery of sample TP-3-1-2 (1.0-3.0) Post Spike exhibited results below the quality control limits for Aluminum, Calcium, Chromium, Iron, Lead, Magnesium, Manganese, Silver, and Zinc. However, the LCS was acceptable.

The Serial Dilution of sample TP-3-1-2 (1.0-3.0) exceeded quality control limits for Calcium, Iron, Lead, and Zinc. However, the LCS was acceptable.

Wet Chemistry Data

The relative percent difference between the Matrix Spike and Matrix Spike duplicate exceed quality control limits for Total Cyanide on sample TP-3-1-2 1.0-3.0), though all individual analyte recoveries are compliant.

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NON-CONFORMANCE SUMMARY

Job#: A06-0824

STL Project#: NY3A9073
Site Name: TURNKEY - TECUMSEH REDEVELOPMENT SITE

General Comments

The enclosed data may or may not have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

According to 40CFR Part 136.3, pH, Chlorine Residual, Dissolved Oxygen, Sulfite, and Temperature analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

Sample Receipt Comments

A06-0824
Sample Cooler(s) were received at the following temperature(s); 2.0 °C
All samples were received in good condition.

GC/MS Volatile Data

All samples were preserved to a pH less than 2.

Initial calibration standard curve A5I0001098-1 exhibited the %RSD of the compounds Bromomethane, Methylene Chloride, Acetone, and n-Butylbenzene as greater than 15%. However, the mean RSD of all compounds is 8.75%.

GC Volatile Data

For method 8021, several compounds exhibited a percent difference greater than 15% from the expected amount in the associated continuing calibrations. The average of all analytes is within 15% and the associated laboratory quality control recoveries are compliant. No corrective action was required.

GC/MS Semivolatile Data

Linear regression was used to calibrate all analytes that were greater than 15% RSD in the initial calibration A6I0001087.

The internal standard recoveries for 1,4-Dichlorobenzene-D4 and Chrysene-D12 was below the method defined quality control limit in sample TP-5-11(1.0-4.0). The sample was re-analyzed at a higher dilution with compliant results. Both analyses were included in the results. No further corrective action was required.

The analyte Bis(2-ethylhexyl) phthalate was detected in the Method Blank SBLK02 (A6B1265702) at a level below the project established reporting limit. No corrective action is necessary for any values in Method Blanks that are below the requested reporting limits.

Metals Data

The recovery of sample TP-5-(6-10)(0.0-1.0) Post Spike exhibited results below the quality control limits for Lead. However, the LCS was acceptable.

The Serial Dilution of sample TP-5-(6-10)(0.0-1.0) exceeded quality control limits for Cadmium, Chromium, and Lead. However, the LCS was acceptable.

Wet Chemistry Data

No deviations from protocol were encountered during the analytical procedures.

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NON-CONFORMANCE SUMMARY

Job#: A06-0923

STL Project#: NY3A9073
Site Name: TURNKEY - TECUMSEH REDEVELOPMENT SITE

General Comments

The enclosed data may or may not have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

According to 40CFR Part 136.3, pH, Chlorine Residual, Dissolved Oxygen, Sulfite, and Temperature analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

Sample Receipt Comments

A06-0923
Sample Cooler(s) were received at the following temperature(s); 2.0 °C
All samples were received in good condition.

GC Volatile Data

For method 8021 STARS, the closing continuing calibration verification is elevated and slightly above 15% difference for Napthalene. The associated samples do not show any detections above the CRQL for these compounds, therefore the original data is submitted as run.

GC/MS Semivolatile Data

Linear regression was used to calibrate analytes that were greater than 15% RSD in the initial calibration A6I0001087.

The analyte Bis(2-ethylhexyl) phthalate was detected in the Method Blank SBLK06 (A6B1278302) at a level below the project established reporting limit. No corrective action is necessary for any values in Method Blanks that are below the requested reporting limits.

The spike recovery for Acenaphthene was above the laboratory quality control limits in the Matrix Spike TP-10-1(1.0-4.5). Since the Matrix Spike Blank recoveries were compliant, no corrective action was required.

The spike recovery for N-Nitroso-Di-proplamine was above the laboratory quality control limits in the Matrix Spike Duplicate TP-10-1(1.0-4.5). Since the Matrix Spike Blank recoveries were compliant, no corrective action was required.

The relative percent difference between the Matrix Spike TP-10-1(1.0-4.5) and the Matrix Spike Duplicate TP-10-1(1.0-4.5) exceeded quality control criteria for Acenaphthene and N-Nitroso-Di-n-propylamine. No action required.

Metals Data

The recovery of sample TP-9-(125)0.0-1.0 Matrix Spike and Matrix Spike Duplicate exhibited results below the quality control limits for Arsenic(MS), Chromium(MSD), and Mercury(MSD). Sample matrix is suspect. However, the LCS was acceptable.

The recovery of sample TP-9-(125)0.0-1.0 Matrix Spike exhibited results below the quality control limits for Chromium(MS) and Lead. The sample result is more than four times greater than the spike added. The RPD of sample TP-9-(125)0.0-1.0 Matrix Spike and Matrix Spike Duplicate exceeded quality control limits for Lead. The LCS was acceptable.

The recoveries of sample TP-9-(125) 0.0-1.0 Post Spike exhibited results below the quality control limits for Chromium and Lead. However, the LCS was acceptable.

Wet Chemistry Data

The LCS, ERA Lot D037-541, recovery for Total Cyanide fell outside of the quality control limits, however, the value was within the manufacturer's recommended acceptance limits. No corrective action was taken.

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NON-CONFORMANCE SUMMARY

Job#: A06-0936

STL Project#: NY3A9073
Site Name: TURNKEY - TECUMSEH REDEVELOPMENT SITE

General Comments

The enclosed data may or may not have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

According to 40CFR Part 136.3, pH, Chlorine Residual, Dissolved Oxygen, Sulfite, and Temperature analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

Sample Receipt Comments

A06-0936
Sample Cooler(s) were received at the following temperature(s); 2.0 °C
All samples were received in good condition.

GC/MS Semivolatile Data

Linear regression was used to calibrate analytes that were greater than 15% RSD in the initial calibration A6I001087.

The analyte Bis(2-ethylhexyl) phthalate was detected in the Method Blank S Blank (A6B1278302) at a level below the project established reporting limit. No corrective action is necessary for any values in Method Blanks that are below the requested reporting limits.

GC Extractable Data

No deviations from protocol were encountered during the analytical procedures.

Metals Data

The recoveries of sample SS-10-13 Matrix Spike and Matrix Spike Duplicate exhibited results above the quality control limits for Chromium(MS) and below the quality control limits for Arsenic, Cadmium, Chromium(MSD),and Mercury. Sample matrix is suspect. The RPD of sample SS-10-13 Matrix Spike and Matrix Spike Duplicate exceeded quality control limits for Chromium. However, the LCS was acceptable.

The recovery of sample SS-10-13 Matrix Spike and Matrix Spike Duplicate exhibited results below the quality control limits for Lead. The sample result is more than four times greater than the spike added. The RPD of sample SS-10-13 Matrix Spike and Matrix Spike Duplicate exceeded quality control limits for Lead. The LCS was acceptable.

The Serial Dilution of sample SS-10-13 exceeded quality control limits for Chromium and Lead. However, the LCS was acceptable.

Wet Chemistry Data

No deviations from protocol were encountered during the analytical procedures.

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The results presented in this report relate only to the analytical testing and condition of the sample at receipt. This report pertains to only those samples actually tested. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

NON-CONFORMANCE SUMMARY

Job#: A06-0953,A06-1077

STL Project#: NY3A9073
SDG#: 0953
Site Name: TURNKEY - TECUMSEH REDEVELOPMENT SITE

General Comments

The enclosed data may or may not have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

According to 40CFR Part 136.3, pH, Chlorine Residual, Dissolved Oxygen, Sulfite, and Temperature analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

Sample Receipt Comments

A06-0953
Sample Cooler(s) were received at the following temperature(s); 2@2.0 °C
All samples were received in good condition.
A06-1077
Sample Cooler(s) were received at the following temperature(s); 2@2.0 °C
All samples were received in good condition.

GC/MS Volatile Data

No deviations from protocol were encountered during the analytical procedures.

GC Volatile Data

For method 8021,the recovery of surrogate aaa-Trifluorotoluene was outside quality control limits for sample TP-10-6 1.0-5.5. However, the chromatogram shows clear evidence of matrix interference and all other quality control samples met acceptance criteria. Therefore, no further corrective action was performed and the data is accepted.

For method 8021, Methyl tert-Butyl Ether exhibited a percent difference greater than 15% from the expected amount in the ending continuing calibration. The average of all analytes is within 15% and the associated laboratory quality control recoveries are compliant. No corrective action was required.

GC/MS Semivolatile Data

The surrogate recovery for 2,4,6-Tribromophenol was below the laboratory quality control limits for sample SS-23. Based on US EPA CLP National Functional Guidelines for Data Review, one surrogate in either fraction (base/neutral or acid fraction) may have a recovery outside of the control limit. All analytes associated with that surrogate should be considered biased low.

2,3,7,8,-TCDD was subcontracted to STL Sacramento. The complete subcontract report is included in this report as Appendix A. Comments pertaining to 2,3,7,8,-TCDD may be found within the comment summary of the subcontract report.

GC Extractable Data

For method 8082, the recovery of surrogate Decachlorobiphenyl in several sample is outside of established quality control limits due to the sample matrix. The recovery of surrogate Tetrachloro-m-xylene is within quality control limits; no corrective action is required.

For method 8082, samples SS-18 and SS-04 required dilution prior to analysis due to the high concentration of target analytes. The surrogate and spike recoveries are diluted out of all sample extracts with a dilution factor of 10X or greater.

For method 8082, the recovery and the relative percent difference for sample SS-(19-21) Matrix Spike are outside quality control limits for Aroclor 1260, though the Matrix Spike Blank recoveries are compliant, no corrective action necessary.

All 8081 samples required dilution prior to analysis due to high concentrations of target analytes. The surrogates were diluted out of extracted samples with a dilution of 10X or greater.

For method 8081, several compounds exhibited a percent difference greater than 15% from the expected amount in the associated continuing calibrations. The average of all analytes is within 15% and the associated laboratory quality control recoveries are compliant. No corrective action was required.

For method 8082, several compounds exhibited a percent difference greater than 15% from the expected amount in the associated continuing calibrations. The average of all analytes is within 15% and the associated laboratory quality control recoveries are compliant. No corrective action was required.

For method 8151, the Matrix Spike Blank Duplicate recovery for 2,4-D is slightly above quality control limits. The Matrix Spike Blank recoveries as well as the associated RPDs are compliant, no further corrective action was necessary.

For method 8151, several compounds exhibited a percent difference greater than 15% from the expected amount in the associated continuing calibrations. The average of all analytes is within 15% and the associated laboratory quality control recoveries are compliant. No corrective action was required.

Metals Data

No deviations from protocol were encountered during the analytical procedures.

Wet Chemistry Data

The LCS, ERA D037-541, recovery for Total Cyanide fell outside of the quality control limits, however, the value was within the manufacturer's recommended acceptance limits. No corrective action was taken.

The U.S. EPA has determined the applicability of the Reactive Cyanide and Sulfide tests to be limited in part due to the poor recoveries obtainable with their procedures. The April 1998 memorandum entitled 'Withdrawal of Cyanide and Sulfide Reactivity Guidance' details the justification for this determination. Therefore, in conjunction with these test results, the U.S. EPA recommends the data user apply process or waste knowledge to determine if their waste exhibits the characteristic of reactivity.

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Date: 02/16/2006
Time: 13:04:42

Dilution Log w/Code Information
For Project NY3A9073, SDG 0953

Client Sample ID	Lab Sample ID	Parameter (Inorganic)/Method (Organic)	Dilution	Code
TP-10-6 0.0-1.0	A6095301	8260	10.00	007
TP-10-6 1.0-5.5	A6095302	8021	40.00	008
TP-10-6 1.0-5.5	A6095302	8260	10.00	007
SS-35	A6095303	8081	10.00	002
SS-(19-21)	A6095304	8270	20.00	008
SS-23	A6095305	8270	20.00	012
SS-23	A6095305	Mercury - Total	5.00	
SS-29	A6095308	8270	10.00	008
SS-08	A6095309	8082	4.00	008
SS-30	A6095310	Mercury - Total	10.00	
SS-07	A6095311	8082	5.00	008
SS-24	A6095312	8270	20.00	008
MW-13A 0.0-1.0	A6095313	8081	50.00	002
SS-27	A6095315	8270	20.00	008
SS-1-2	A6095316	8270	10.00	012
SS-1-2	A6095316	Mercury - Total	5.00	
SS-36	A6095317	8270	5.00	008
SS-18	A6095319	8082	10.00	008
SS-34	A6095320	8270	20.00	008
SS-34	A6095320	Mercury - Total	10.00	
SS-26	A6095321	Mercury - Total	10.00	
SS-04	A6095323	8082	10.00	008
BLIND DUPLICATE #7	A6095326	8270	10.00	012

Dilution Code Definition:

002 - sample matrix effects
003 - excessive foaming
004 - high levels of non-target compounds
005 - sample matrix resulted in method non-compliance for an Internal Standard
006 - sample matrix resulted in method non-compliance for Surrogate
007 - nature of the TCLP matrix
008 - high concentration of target analyte(s)
009 - sample turbidity
010 - sample color
011 - insufficient volume for lower dilution
012 - sample viscosity
013 - other

Data Validation Services

120 Cobble Creek Road P. O. Box 208
North Creek, N. Y. 12853
Phone 518-251-4429
Facsimile 518-251-4428

May 24, 2006

Bryan Hann
Benchmark Env. Engineers
726 Exchange St. Suite 624
Buffalo, NY 14210

RE: Data Usability Summary Report for the Tecumseh Phase I BPA site-soil samples
STL-Buffalo SDG No. A06-2431 and A06-2432

Dear Mr. Hann:

Review has been completed for the data package generated by Severn Trent Laboratories that pertains to water samples collected 3/06/06 and 3/07/06 at the Tecumseh site. Seven samples and a field duplicate were processed for TCL Base/neutrals by USEPA SW846 method EPA 8270C, TCL PCBs by EPA 8082, 5 metals and cyanide by EPA 6010B/7470/9012, and STARS volatiles by EPA 8021. One of these was also analyzed for dissolved metals. One additional sample was processed for a full list of volatiles (including STARS) by EPA 8260B, TCL semivolatiles by EPA 8270C, TCL PCBs by EPA 8082, and TAL metals/CN by EPA 6010B/7470/9012. Trip blanks were also processed.

The data packages submitted contain full deliverables for validation, but this usability report is generated from review of the summary form information, with review of sample raw data, and limited review of associated QC raw data. Full validation has not been performed. However, the reported summary forms have been reviewed for application of validation qualifiers, using guidance from the USEPA Region 2 validation SOPs, the USEPA National Functional Guidelines for Data Review, the specific laboratory methodologies, and professional judgment, as affects the usability of the data. The following items were reviewed:

* Laboratory Narrative Discussion
* Custody Documentation
* Holding Times
* Surrogate and Internal Standard Recoveries
* Matrix Spike Recoveries/Duplicate Correlations
* Field Duplicate Correlations
* Preparation/Calibration Blanks
* Control Spike/Laboratory Control Samples
* Instrumental Tunes
* Calibration Standards
* ICP Serial Dilution
* CRI/CRA Standards
* Instrument IDLs

Those items listed above which show deficiencies are discussed within the text of this narrative. All of the other items were determined to be acceptable for the DUSR level review.

In summary, sample analyte values/reporting limits are usable as reported, or usable with minor qualification as estimated ("J" qualifier) due to typical processing or matrix effects. No data are rejected.

Copies of the laboratory case narratives and the sample identification summary forms are attached to this text, and should be reviewed in conjunction with this report. Included with this submission are red-ink edited results forms, reflecting final sample results with edits and qualifications recommended within this report.

The following text discusses quality issues of concern.

General

Blind field duplicate evaluations were performed on MW-14A, and show good correlations for all analytes.

Laboratory raw data should include the client ID.

STARS Volatiles by EPA 8021 and TCL Volatiles by EPA 8260B

Matrix spikes for TCL volatiles by EPA 8260B on MWN-12A show acceptable accuracy and precision.

Holding time requirements were met, surrogate and internal standard responses meet protocol requirements, and blanks show no contamination.

Calibrations standards showed acceptable responses, with the exception of that for 1,2-dibromo-3-chloropropane (32%D) in the continuing calibration associated with MWN-12A. The result for that compound in the sample is therefore qualified as estimated, with a possible low bias.

The confirmation analyses for the EPA 8021 STARS volatile detections were not provided in the data package, although the detections reported in the primary analyses were denoted on those raw data as having been confirmed. Full validation would require review of the confirmation detector data.

TCL and B/N Semivolatile Analyses by 8270C

Matrix spikes of TCL analytes on MWN-12A show accuracy and precision within validation guidelines.

Holding times were met. Surrogate and internal standard recoveries, and the instrumental tunes were acceptable. Calibrations standards showed acceptable responses with laboratory requirements and validation guidelines.

One of the method blanks shows a low level of naphthalene. The associated samples show no detection of that compound, and reported results are therefore not affected.

No qualifications to the data are indicated.

TCL PCB Analyses by EPA 8082

Matrix spikes of Aroclors 1016 and 1260 in MWN-12A show acceptable accuracy and precision.

Surrogate standard recoveries are acceptable. Holding times were met and blanks showed no contamination. Calibration standards meet protocol requirements.

No qualifications to the data are indicated.

Metals/CN by EPA6010B, EPA7470, EPA9012

Matrix spikes were performed for the TAL analytes on MWN-12A, and show acceptable recoveries and duplicate correlations, with the exception of those for cyanide (118% and 116%, above 115%). Cyanide also produced elevated recoveries in the matrix spike of Blind Duplicate (123%). Detected results for cyanide in the samples are qualified as estimated, and may have a high bias.

Matrix spikes of the 5 metals on MWN-15A show acceptable accuracy and precision.

Arsenic results for the samples processed for 5 elements are qualified as estimated, with a possible low bias, due to low recoveries (77% and 76%) in the low-level CRI standard.

The ICP serial dilution evaluation of MWN-12A shows acceptable correlations.

Holding times were met. Blanks associated with sample analyses show no contamination above the reporting limit.

Please do not hesitate to contact me if you have comments or questions regarding this report.

Very truly yours,

Judy Harry

VALIDATION QUALIFIER DEFINITIONS

DATA QUALIFIER DEFINITIONS

The following definitions provide brief explanations of the national qualifiers assigned to results in the data review process. If the Regions choose to use additional qualifiers, a complete explanation of those qualifiers should accompany the data review.

U - **The analyte was analyzed for, but was not detected above the reported sample quantitation limit.**

J - **The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.**

N - **The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."**

NJ - **The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.**

UJ - **The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.**

R - **The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.**

LABORATORY SAMPLE IDs AND CASE NARRATIVES

SAMPLE SUMMARY

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	SAMPLED DATE	SAMPLED TIME	RECEIVED DATE	RECEIVED TIME
A6243105	BLIND DUP	WATER	03/06/2006	12:00	03/07/2006	11:20
A6243102	MW-13A	WATER	03/06/2006	13:01	03/07/2006	11:20
A6243103	MW-14A	WATER	03/06/2006	13:48	03/07/2006	11:20
A6243104	MW-17A	WATER	03/06/2006	14:32	03/07/2006	11:20
A6243106	MW-18A	WATER	03/06/2006	10:43	03/07/2006	11:20
A6243101	MW-8A	WATER	03/06/2006	11:22	03/07/2006	11:20
A6243201	MWN 12A	WATER	03/07/2006	12:01	03/07/2006	14:32
A6243201MS	MWN 12A	WATER	03/07/2006	12:01	03/07/2006	14:32
A6243201SD	MWN 12A	WATER	03/07/2006	12:01	03/07/2006	14:32
A6243108	MWN 15A	WATER	03/07/2006	09:44	03/07/2006	11:20
A6243107	MWN 16A	WATER	03/07/2006	09:04	03/07/2006	11:20
A6243109	TRIP BLANK	WATER	03/07/2006		03/07/2006	11:20
A6243202	TRIP BLANK	WATER	03/07/2006		03/07/2006	14:32

METHODS SUMMARY

Job#: A06-2431,A06-2432

STL Project#: NY3A9073
SDG#: 2431
Site Name: TURNKEY - TECUMSEH REDEVELOPMENT SITE

PARAMETER	ANALYTICAL METHOD
STEELFIELDS - 8260 - TCL VOLATILES + STARS - W	SW8463 8260
BETHLEHEM - 8021 STARS - W	SW8463 8021
METHOD 8270 - TCL BASE NEUTRALS COMPOUNDS	SW8463 8270
METHOD 8270 - TCL SEMI-VOLATILE ORGANICS	SW8463 8270
METHOD 8082 - POLYCHLORINATED BIPHENYLS	SW8463 8082
Aluminum - Total	SW8463 6010
Antimony - Total	SW8463 6010
Arsenic - Soluble	SW8463 6010
Arsenic - Total	SW8463 6010
Barium - Total	SW8463 6010
Beryllium - Total	SW8463 6010
Cadmium - Soluble	SW8463 6010
Cadmium - Total	SW8463 6010
Calcium - Total	SW8463 6010
Chromium - Soluble	SW8463 6010
Chromium - Total	SW8463 6010
Cobalt - Total	SW8463 6010
Copper - Total	SW8463 6010
Iron - Total	SW8463 6010
Lead - Soluble	SW8463 6010
Lead - Total	SW8463 6010
Magnesium - Total	SW8463 6010
Manganese - Total	SW8463 6010
Mercury - Soluble	SW8463 7470
Mercury - Total	SW8463 7470
Nickel - Total	SW8463 6010
Potassium - Total	SW8463 6010
Selenium - Total	SW8463 6010
Silver - Total	SW8463 6010
Sodium - Total	SW8463 6010
Thallium - Total	SW8463 6010
Vanadium - Total	SW8463 6010
Zinc - Total	SW8463 6010
Cyanide - Total	SW8463 9012

SW8463 "Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW846), Third Edition, 9/86; Update I, 7/92; Update IIA, 8/93; Update II, 9/94; Update IIB, 1/95; Update III, 12/96.

NON-CONFORMANCE SUMMARY

Job#: A06-2431,A06-2432

STL Project#: NY3A9073
SDG#: 2431
Site Name: TURNKEY - TECUMSEH REDEVELOPMENT SITE

General Comments

The enclosed data may or may not have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

According to 40CFR Part 136.3, pH, Chlorine Residual, Dissolved Oxygen, Sulfite, and Temperature analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

Sample Receipt Comments

A06-2431
Sample Cooler(s) were received at the following temperature(s); 2 @ 2.0 °C
All samples were received in good condition.
A06-2432
Sample Cooler(s) were received at the following temperature(s); 2 @ 2.0 °C
All samples were received in good condition.

GC/MS Volatile Data

All samples were preserved to a PH less than 2.

Initial calibration standard curve A6I0001206-1 exhibited the %RSD of several compounds as greater than 15%. However, the mean RSD of all compounds is 8.22%.

GC Volatile Data

No deviations from protocol were encountered during the analytical procedures.

GC/MS Semivolatile Data

Initial calibration standard curve A6I0001186 exhibited the %RSD of the compound 1,1'-Biphenyl as greater than 15%. However, the mean RSD of all compounds is 9.90%.

Linear regression was used to calibrate analytes that were greater than 15% RSD in the initial calibration A6I0001229.

The analyte Naphthalene was detected in Method Blank SBLK58 (A6B1493103) at a level below the project established reporting limit. No corrective action is necessary for any values in Method Blanks that are below the requested reporting limits.

GC Extractable Data

For method 8082, the Method Blank and Matrix Spike Blank extracts were treated with Copper prior to analysis.

Metals Data

The recovery of sample MWN 12A Post Spike exhibited a result below the quality control limits for Silver. However, the LFB was acceptable.

Wet Chemistry Data

The recovery of sample BLIND DUP Matrix Spike exhibited results above the quality control limits for Total Cyanide. However, the LCS was acceptable.

The recoveries of sample MWN 12A Matrix Spike and Matrix Spike Duplicate exhibited results above the quality control limits for Total Cyanide. However, the LCS was acceptable.

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APPENDIX E

FISH AND WILDLIFE RESOURCE IMPACT ANALYSIS CHECKLIST

APPENDIX 3C

Fish and Wildlife Resources Impact Analysis Decision Key

		If YES Go to:	If NO Go to:
1.	Is the site or area of concern a discharge or spill event?	13.	2.
2.	Is the site or area of concern a point source of contamination to the groundwater which will be prevented from discharging to surface water? Soil contamination is not widespread, or if widespread, is confined under buildings and paved areas.	13.	3
3.	Is the site and all adjacent property a developed area with buildings, paved surfaces and little or no vegetation? fnds	4.	9.
4.	Does the site contain habitat of an endangered, threatened or special concern species?	Section 3.10.1	5.
5.	Has the contamination gone off site?	6.	14.
6.	Is there any discharge or erosion of contamination to surface water or the potential for discharge or erosion of contamination?	7.	14.
7.	Are the site contaminants PCBs, pesticides or other persistent, bioaccumulable substances?	Section 3.10.1	8.
8.	Does contamination exist at concentrations that could exceed SCGs or be toxic to aquatic life if discharged to surface water?	Section 3.10.1	14.
9.	Does the site or any adjacent or downgradient property contain any of the following resources? a. Any endangered, threatened or special concern species or rare plants or their habitat b. Any NYSDEC designated significant habitats or rare NYS Ecological Communities c. Tidal or freshwater wetlands d. Stream, creek or river e. Pond, lake, lagoon f. Drainage ditch or channel g. Other surface water feature h. Other marine or freshwater habitat i. Forest j. Grassland or grassy field k. Parkland or woodland l. Shrubby area m. Urban wildlife habitat n. Other terrestrial habitat	11.	10.
10.	Is the lack of resources due to the contamination?	Section 3.10.1	14.
11.	Is the contamination a localized source which has not migrated and will not migrate from the source to impact any on-site or off-site resources?	14.	12.
12.	Does the site have widespread soil contamination that is not confined under and around buildings or paved areas?	Section 3.10.1	13.
13.	Does the contamination at the site or area of concern have the potential to migrate to, erode into or otherwise impact any on-site or off-site habitat of endangered, threatened or special concern species or other fish and wildlife resource? (See #9 for list of potential resources. Contact NYSDEC for information regarding endangered species.)	Section 3.10.1	14.
14.	No Fish and Wildlife Resources Impact Analysis needed.		