939707

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333 West Everett St., A231
Milwaukee, WI 53203

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September 22, 2017

Ms. Viral Patel
On-Scene Coordinator/Remedial Project Manager
USEPA Region 5 – SR6J
77 W. Jackson Boulevard
Chicago, Illinois 60604-3590

RE: EE/CA Support Sampling Plan and QAPP. Milwaukee Solvay Coke and Gas Site - Wisconsin Gas LLC (d/b/a We Energies), U.S. EPA Docket No.: V-W-17-C-010

Dear Ms. Patel:

Per Section VII Paragraph 30(b) of the Administrative Settlement Agreement and Order on Consent (AOC) for the above-mentioned project, We Energies is submitting the enclosed draft EE/CA Support Sampling Plan and QAPP for US EPA review and approval. This Plan and QAPP follows our previous discussions and site visit since the Effective Date of the AOC.

We look forward to a prompt and positive review of the documents in order to mobilize and complete the field sampling toward the goal of submitting a draft EE/CA before the end of 2017. We stand at the ready to address comments, questions or concerns you and WDNR have to gain approval and proceed. Should you have any questions, please don't hesitate to contact me at (414) 221-3948 or robert.paulson@we-energies.com.

Sincerely,

Robert Paulson
Principal Environmental Consultant

cc: Mr. Owen Thompson, USEPA (email)
Ms. Margaret Brunette, WDNR (email)

September 22, 2017

Mr. Robert Paulson
WEC Business Services, LLC
333 W. Everett Street, A231
Milwaukee, WI 53203

Subject: Engineering Evaluation and Cost Analysis Support Sampling Plan
Milwaukee Solvay Coke and Gas Site
Wisconsin Gas LLC (d/b/a We Energies)
CERCLA Docket No. V-W-17-C-010, CERCLIS ID – WIN0005099498215
NRT Project No. 2133

Dear Mr. Paulson:

Natural Resource Technology, Inc. (NRT), an OBG Company, is providing the Engineering Evaluation and Cost Analysis (EE/CA) Support Sampling Plan for Wisconsin Gas LLC's (d/b/a We Energies) Milwaukee Solvay Coke and Gas Site. The document has been prepared in accordance with Paragraph 30, EE/CA Support Sampling Plan and QAPP, of the Administrative Settlement Agreement and Order on Consent for Site Fencing/Security, Engineering Evaluation/Cost Analysis and Non-Time Critical Removal Action at the Uplands (AOC) and Task 2, EE/CA Support Sampling Plan and QAPP, of the Statement of Work (SOW) attached to the AOC.

Please contact the undersigned if you should have any questions regarding the attached document.

Sincerely,
NRT | An OBG Company

Jay F. Karls, PhD, PE
Principal Engineer

Jennifer M. Hagen, PE
Principal Engineer/Project Manager

Enclosures: EE/CA Support Sampling Plan

For distribution to: Ms. Viral Patel, USEPA (hard copy and electronic copy)
Mr. Owen Thompson, USEPA (hard copy and electronic copy)
Ms. Margaret Brunette, WDNR (hardcopy and electronic copy)

OBG

Engineering Evaluation/Cost Analysis Support Sampling Plan

Milwaukee Solvay Coke and Gas Plant Site
Milwaukee, Wisconsin

Wisconsin Gas, LLC (d/b/a We Energies)

September 22, 2017

Natural Resource Technology
AN OBG COMPANY

SEPTEMBER 22, 2017 | PROJECT #2133

Engineering Evaluation/Cost Analysis Support Sampling Plan

Milwaukee Solvay Coke and Gas Plant Site
Milwaukee, Wisconsin

Prepared for:

Wisconsin Gas, LLC (d/b/a We Energies)
333 Everett Street
Milwaukee, WI 53203

JENNIFER M. HAGEN, PE
Principal Engineer

JAY F. KARLS, PHD, PE
Principal Engineer

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ACRONYMS AND ABBREVIATIONS

ACM	Asbestos containing material
AOC	Administrative Settlement Agreement and Order on Consent
AST	aboveground storage tank
ATSDR	Agency for Toxic Substances and Disease Registry
bgs	below ground surface
BHHRA	Baseline Human Health Risk Assessment
COC	Contaminant of Concern
EE/CA	Engineering Estimate/Cost Analysis
ESI	Expanded Site Investigation
GPS	global positioning system
IC	Institutional controls
ISCO	In-situ chemical oxidation
NAPL	non-aqueous phase liquid
NRT	Natural Resource Technology, Inc.
NTCRA	Non-Time Critical Removal Action
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyls
PID	photoionization detector
PRG	Preliminary Remediation Goals
QAPP	Quality Assurance Project Plan
RAO	remedial action objective
RI/FS	Remedial Investigation / Feasibility Study
RTK	Real time kinematic
Site	Milwaukee Solvay Coke and Gas Plant Site
SLERA	Screening Level Ecological Risk Assessment
SOP	Standard Operating Procedures
SOW	Statement of Work
SVOC	semi-volatile organic compound
UFP	Uniform Federal Policy
USEPA	United States Environmental Protection Agency
WDPH	Wisconsin Department of Public Health
WDNR	Wisconsin Department of Natural Resources
WPSC	Wisconsin Public Service Corporation
VOC	volatile organic compound
We Energies	Wisconsin Gas, LLC
XRF	x-ray fluorescence

1 INTRODUCTION

This Engineering Evaluation/Cost Analysis (EE/CA) Support Sampling Plan has been prepared to further determine the nature and extent of source material and address any remaining data gaps at the Former Milwaukee Solvay Coke and Gas Plant Site (Site) located in Milwaukee, Wisconsin (Figure 1), owned by Wisconsin Gas LLC (d/b/a We Energies), a subsidiary of WEC Energy Group. Specifically, this EE/CA Support Sampling Plan addresses data acquisition activities necessary to evaluate upland area removal alternatives in the EE/CA and to support a Non-Time Critical Removal Action (NTCRA) at the Site.

This EE/CA Support Sampling Plan has been prepared pursuant to the requirements of an Administrative Settlement Agreement and Order on Consent (AOC) and attached Statement of Work (SOW) for Site Fencing/Security, EE/CA and NTCRA at the Uplands, Docket No. V-W-17-C-010 issued by the United States Environmental Protection Agency (USEPA), effective August 31, 2017.

A pre-scoping meeting to discuss the EE/CA Support Sampling Plan with USEPA and Wisconsin Department of Natural Resources (WDNR) was conducted on September 14, 2017. In the meeting, it was agreed that the Quality Assurance Project Plan (QAPP) would reference to the Multi-Site QAPP prepared for WEC Energy Group's Wisconsin Public Service Corporation's (WPSC) former MGP sites being addressed in an AOC for Remedial Investigations and Feasibility Studies (RI/FS), CERCLA Docket No. V-W-06-C-847, effective May 5, 2006. Site-specific aspects of the Milwaukee Solvay Coke and Gas Site, relevant to the QAPP, are provided in Appendix A. The Health and Safety Plan has been provided in a separate transmittal.

The EE/CA Support Sampling Plan is organized as follows:

- Section 2 Site Background
- Section 3 Site Characterization and Assessment Activities
- Section 4 Schedule
- References

2 SITE BACKGROUND AND SETTING

This section summarizes general background information the Site. General owner, contact, and location information is provided below, with additional Site information in the following sections.

Owner: Wisconsin Gas, LLC (d/b/a We Energies)
333 Everett Street
Milwaukee, WI 53203

We Energies Contact: Mr. Robert Paulson
Principal Environmental Consultant
333 Everett Street – A231
Milwaukee, WI 53203
414.221.3948
Robert.Paulson@we-energies.com

Facility Location: T6N, R22E, Sections 4, NW ¼ (Lots 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and 17)
311 Greenfield Avenue
Milwaukee County
Milwaukee, WI

Facility Size: Approximately 45 acres

CERCLIS ID: WIN000508215

2.1 SITE DESCRIPTION AND CURRENT CONDITIONS

The Site is approximately 45 acres, located at 311 East Greenfield Avenue in Milwaukee, Wisconsin, adjacent to the Milwaukee Harbor in the Harbor View Neighborhood. This neighborhood is predominantly an industrial area and has been historically been zoned industrial-light to industrial-heavy. The Site is bordered to the west by Kinnickinnic Avenue and the SOO Line Railroad Company railroad tracks, Greenfield Avenue to the north, Chicago & Northwestern Transportation Co. railroad tracks to the northeast, and the Kinnickinnic River to the southeast. The Site location is provided on Figure 1. Historical Site features are provided on Figure 2 and the locations of borings and monitoring wells previously installed on the Site are provided in Figure 3.

A high security metal fabric mesh fence borders along the entire western, northern, and northeast borders. There are access gates located on Greenfield Avenue and Kinnickinnic Avenue and a man-gate located on the western boundary adjacent to the railroad (Figures 4A and 4B). There is no fencing along the Kinnickinnic River. Additional discussion about Site security, maintenance, and preparation outlined in the AOC is provided in Section 2.9.

There are currently thirty-seven groundwater monitoring wells present on the Site. Twenty-seven groundwater monitoring wells monitor shallow groundwater and ten monitoring wells monitor deep groundwater, as shown on Figure 3. There are no industrial or drinking water wells on the Site. The local drinking water source for the City of Milwaukee is predominantly from Lake Michigan.

Historical operations have resulted in subsurface impacts at the Site, including non-aqueous phase liquid (NAPL), is present in the subsurface at the Site, based on previous investigations performed. Figures showing NAPL observations and the areal extent of NAPL (based on modeling) is provided on Figures 5A and 5B. Further discussion of previous investigations conducted in provided in Section 2.6.

2.2 SITE HISTORY

The Site was used for many industrial purposes over the 100 years of its industrial history. The main industrial operation consisted of coke and manufactured gas production and coal and coke storage from approximately

1904 to 1983. Additional operations included rail car ferrying operations, electric railroad operations, blast furnace operations for iron production, and hide tanning from approximately 1883 to 1950. Figure 2 shows the location of the former operations. Following the conclusion of historical industrial site operations in 1983, the property was owned by Wisconsin Wrecking Company to manage recyclable materials (e.g., bricks, steel, asphalt, and concrete).

The Site was acquired by We Energies on May 11, 2017 through the bankruptcy proceedings of Golden Marina Causeway, LLC.

2.3 SITE UTILITIES

The sewer and other utilities (with the exception of a single overhead electrical feed) associated with the former buildings and operations at the Site have been abandoned historically. The scope of work provided in this EE/CA Support Sampling Plan includes an evaluation of sewer and water intake structures and manholes on Site to confirm that the sewers have been properly abandoned (see Section 3.7).

2.4 GEOLOGY

The surficial geology at the Site includes soil from the filling operations that occurred prior to Site operations overlying a sequence of low-energy marsh deposits. The marsh deposits consist of peat and silt/clay with occasional lenses of generally fine to medium sands. A coarse sand is found below the marsh deposits, followed by very dense clay and sand/gravel (till) layer. The till layer then finally transitions to the bedrock at approximately 450 bgs. The depth of the peat and clay layers, based on previous site investigations, are provided in Figure 6 and 7, respectively.

The regional bedrock geology of the area consists of middle to late Paleozoic Era (Cambrian, Ordovician, Silurian, Devonian, Carboniferous, and Permian) southeasterly dipping sedimentary rocks. Overlying the bedrock is unconsolidated glacial, alluvial, and fill deposits. These unconsolidated materials range in thickness from 50 to 150 feet thick. In many areas, there is a layer of sand and gravel directly above the bedrock.

2.5 HYDROGEOLOGY

Wisconsin has aquifers that range from near surface sand and gravel aquifers of unconsolidated materials to deep sandstone aquifers. The Silurian bedrock present beneath the site is considered a moderate to large-yield aquifer. Confined to semi-confined shale, dolomite, and sandstone aquifers exists below the bedrock that have low to high anticipated yields.

There are shallow and deep groundwater zones present at the Site. The shallow groundwater system at the Site ranges from 3.5 to 15.5 feet below ground surface (bgs) due to numerous subsurface foundations and other support structures associated with former operations and buildings on Site, and the unconsolidated nature of the upper fill layer that is very transmissive. The hydraulic conductivity of the shallow soils encountered during previous investigation range from 1.5×10^{-4} cm/sec to 10^{-3} cm/sec. The Kinnickinnic River is considered the base level of the groundwater flow system within the Kinnickinnic River watershed.

The deep groundwater system ranges from 26-50 feet bgs and is comprised primarily of sand lenses in the silt/clay unit. This sand lenses are similar transmissivity, with estimated hydraulic conductivities ranging from 6.0×10^{-4} cm/sec to 2.29×10^{-3} cm/s. The low permeability slits and clays, at depths ranging from less than 10 to greater than 40 feet bgs and average 20 to 25 feet bgs (Figure 7) act as a physical barrier to the vertical migration of contaminants. A layer of peat up to 8 feet thick is also present at the Site (Figure 6), which has the capacity to sorb and filter organic contaminants, reducing the migration of contaminants.

2.6 PREVIOUS INVESTIGATIONS

There have been numerous investigation and assessments performed in the uplands and sediment at the Site. The locations of previous upland investigation locations are provided on Figure 3. The focus and a brief overview of the upland investigations is provided below. Sediment will be addressed in a future effort.

- Site Assessment (2001)
  - A Site Assessment was coordinated by the USEPA and implemented between October and November 2001. The assessment included both the upland and river portions of the Site, and included analysis for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyl (PCBs), pesticides, metals, and cyanide. Upland data from this assessment for soils still present on site is provided in Table 1 Groundwater data were also collected and not presented in the Site Assessment Report because they were not properly collected and did not meet sampling guidance procedures (Arcadis, 2016). Conclusions from the assessment determined that impacts to the soil and sediment posed a threat to human health and the environment. The 2002 SA Report (Tetra Tech, 2002) summarized the following activities, performed during the 2001 Site Assessment:
    - Completion of 34 exploratory test pit excavations
    - Collection of two surface soil samples for laboratory analysis
    - Collection of 25 subsurface soil samples for laboratory analysis
    - Collection of four groundwater samples for laboratory analysis
    - Sampling of electrical transformers
    - Inventory of aboveground storage tanks (AST)
    - Sampling of waste material contained in the ASTs
    - Inspection of the interiors of former coke and gas manufacturing buildings
    - Preliminary screening of suspected asbestos-containing material (ACM)
    - Preliminary inventory of suspected ACM
    - Land survey of site assessment sampling locations and other pertinent Site features
- Site Health Consultation (2003)
  - In 2003, the Wisconsin Department of Health Services (DHS), in cooperation with the Agency for Toxic Substances and Disease Registry (ATSDR), issued that a health consultation be completed for the Site. Existing data and Site observations were used for the consultation in addition to selective field testing of potentially friable ACM. A summary of potential hazards were provided in the 2003 ATSDR Report, which concluded that the Site posed both chemical and physical hazards due to the impacts in soil, ACM, poor condition of buildings, and impacted sediments in the Kinnickinnic River. The results were provided in the 2003 ATSDR Report.
- Expanded Site Inspection (ESI, 2004)
  - In 2004, WDNR conducted an ESI to further characterize Site impacts from a release of approximately 73,000 gallons of rainwater that had collected in a former holder during the 2003/2004 removal action (refer to Section 2.7 and the Removal Action Report (Earth Tech, 2005)). The ESI concluded polycyclic aromatic hydrocarbons (PAHs) in surface and subsurface soil samples exceeded federal Preliminary Remediation Goals (PRGs) and site background conditions and elevated concentrations of metals and PAHs are present in the sediment. The results of the ESI are provided in the 2006 ESI Report (WDNR, 2006) and soil results, compared to applicable screening levels, is provided on Table 1 The following activities were conducted during the ESI:
    - Completion of 28 push-probe soil borings
    - Collection of 36 soil samples for laboratory analysis, including duplicate samples and samples collected to establish Site background conditions
    - Collection of two waste pile samples for laboratory analysis

- Habitat Survey (2007)
  - In June 2007, a Habitat Survey was completed as part of the SOW for the 2007 AOC. The entire upland and adjacent area of the Kinnickinnic River were evaluated to assess the Site ecological landscape and surrounding land uses. The survey concluded that a majority of the Site lacked significant ecological habitat, and that there was no specific need to address ecological concerns at the Site and a quantitative ecological risk assessment was not recommended. The results of the Habitat Survey are presented in the Habitat Survey report dated June 2008 (Habitat Survey Report, RETEC/ENSR 2007).
- Asbestos Survey (2007)
  - In August 2007, Natural Resource Technology, Inc. (NRT) conducted an asbestos survey with WDNR oversight. The results concluded that most of the building materials and debris piles contained non-friable asbestos with a few areas of friable asbestos. The stockpiles generally did not contain ACM. Upon review of the results, USEPA requested Wisconsin Department of Public Health (WDPH) perform an independent evaluation (discussed below).
- Stockpile Assessment (2007)
  - In August 2007, WDPH performed a preliminary stockpile assessment. No analytical testing was performed. There were sixty-two stockpiles identified on the Site consisting of the following:
    - 27 piles consisted of brick and concrete rubble
    - 17 piles of miscellaneous materials (e.g., wood, gravel, and scrap metal)
    - 12 piles of coal
    - 6 piles of soil/debris
- Site Health Consultation (2008)
  - A second health consultation was issued in August 2008 regarding potential asbestos exposure at the Site. Existing data and Site observations were used for the consultation in addition to selective field testing materials for potentially friable ACM. It was concluded that ACM was present on Site in various building materials, but that only one area had visibly friable ACM, which was subsequently removed prior to remedial activities, as requested by the WDPH. The results were provided in the 2008 ATSDR Report (USDOH, 2008).
- Direct Sense Boring Investigation (2008-2009)
  - Fifty-six direct-sense borings were completed throughout the Site. The goals of the direct sensing investigation were to assess and refine the distribution of contaminants at the Site and to further evaluate the subsurface features.
  - The results indicated the likely presence of contaminants at some locations, but the results were qualitative in nature. Additionally, at many locations the concentration of impacts in the subsurface were too low to be effectively measured via direct sensing.
  - The direct sensing results confirmed the presence of peat in the subsurface on the southern portion of the Site. Interferences on the northern portion of the Site limited the effectiveness of direct sensing for assessment of the subsurface geology.
- Push Probe Borings (2008-2009)
  - A total of ninety-seven direct push borings were advanced at eighty-nine locations for geological evaluation and laboratory analysis at select locations. The soil borings were completed to depths ranging from approximately 2 to 48 feet bgs. The locations of the soil boring are shown on Figure 3, and are denoted with either a CG (Former Coke and Gas Production Area), CS (Former Coal Storage Area), or FT (Former Furnace and Tannery Area).

Samples were collected from seventy-three of the ninety-seven soil borings. The samples were analyzed for VOCs, SVOCs, target analyte list (TAL) metals, and total cyanide. Select samples located adjacent to former electrical transformers were also analyzed for PCBs. The analytical data from this investigation, compared to applicable screening levels, are provided in Table 1 The soil boring logs for the investigation are provided in Appendix B. A subset of the samples was also analyzed for geotechnical parameters. The results from the investigation are presented in the USEPA-approved Milwaukee Solvay Coke and Gas Site Remedial Investigation/Feasibility Study Group (RI/FS Group) RI Report (Arcadis, 2016).

- Groundwater Monitoring Well Installation Borings (2008-2009)
  - A total of twenty-nine borings were advanced to install 27 shallow and deep groundwater monitoring wells at the Site and evaluate groundwater quality as well as obtain additional subsurface information. The monitoring wells were installed per state regulations and samples were collected from 25 of the 29 borings. Samples were collected from 0-0.5 feet bgs and from one interval located between 0.5 feet bgs and the water table (with some exceptions). The samples were analyzed for VOCs, SVOCs, TAL metals, and total cyanide. Select samples located adjacent to former electrical transformers were also analyzed for PCBs. The analytical data from this investigation, compared to applicable screening levels, are provided on Table 1. The soil boring logs for the investigation are provided in Appendix B. The results from the investigation are presented in the USEPA-approved RI/FS Group RI Report (Arcadis, 2016).
- Deep Boring Installation (2012-2013)
  - Seventeen deep borings were advanced at the Site in December 2012 to provide additional stratigraphic information about the Site. Ten of these borings were converted into deep monitoring wells (piezometers). The soil analytical data from this investigation, compared to applicable screening levels, are provided in Table 1 The soil boring logs for the investigation are provided in Appendix C. The results from the investigation are presented in the USEPA-approved RI/FS Group RI Report (Arcadis, 2016).
  - The investigation identified the presence and configuration of the fill, clay/silt units, and peat/sand lenses. Interpolations of peat and clay layers are shown on Figures 6 and 7.

2.7 CONSTITUENTS OF CONCERN

The USEPA-approved RI/FS Group RI Report presents the soil and groundwater data, along with observations associated with subsurface borings and test pits (i.e., fill, NAPL, etc.) from Site investigation activities conducted from 2002 to 2014. The RI/FS Group RI Report provides an evaluation of the data, including development of a conceptual site model and potential risks in the Baseline Human Health Risk Assessment (BHHRA) and Screening Level Ecological Risk Assessment (SLERA).

The BHHRA concluded benzo(a)pyrene, carcinogenic PAHs (represented as benzo(a)pyrene toxic equivalents), and arsenic are the primary contributors to potential risks above the USEPA and WDNR target risk ranges for potential future non-residential exposure scenarios. The SLERA concluded upland ecological risks were not significant.

Based on the results of the BHHRA and SLERA, the constituents of concern (COCs) in soil include carcinogenic PAHs and arsenic.

Based on the BHHRA and previous use, COCs in groundwater include benzene, PAH, arsenic, cyanide and lead.

The presence of NAPL and cyanide affected (blue-stained) soil and building materials are also considered COCs to be addressed as part of a removal action.

2.8 PREVIOUS REMEDIATIONS

- Removal Order (2003-2004)
  - Following the Site Assessment completed in 2001, Wisconsin Wrecking, LLP and Water Street Holdings, LLC entered into a Removal Order with the USEPA pursuant to Sections 106(a), 107, and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, a.k.a. "Superfund"). Removal activities included the removal of: friable and non-friable ACM, material in aboveground storage tanks (ASTs), surface residues, loose materials, hazardous and non-hazardous wastes, and sewer repairs, and demolition of buildings in poor structural condition. A Notice of Completion was issued by the USEPA on September 6, 2005 and the Removal Order was closed. Material quantities presented in the Removal Action Report (Earth Tech, 2005) are provided below:
    - Construction and Demolition Debris - 402.96 tons
    - Coal Tar - 1,432.205 tons
    - Asbestos Containing Material - 4,823.22 tons
    - Other Waste Materials - various drummed or packed containers, not all of which was accounted by weight
    - Rubber Tires and Belts - 51.92 tons
    - Recycled Steel and Other Metals - 5,821.45 tons
- Asbestos Abatement (2008)
  - As mentioned in the previous Section, an asbestos survey was completed by NRT in 2007 (NRT, 2007). The results indicated that most of the building materials and debris piles contained non-friable asbestos with only a few areas of readily friable asbestos. Approximately four cubic yards of readily friable asbestos was identified in July 2008 and removed in September.
- 2015 Raze Action
  - In September 2015, the City of Milwaukee filed a petition with the Circuit Court for Milwaukee, requesting a raze order for the remaining structures at the Site, which included three former administration/laboratory structures on the northern portion of the Site, as well as two former chimneys and a former garage building located on the central portion of the Site. The circuit court granted the raze order (Case No. 15 CV 007603).
  - The former Site owner demolished the three administration/laboratory buildings in 2016. The debris from these demolition activities were left on Site, and ACM (roofing material) was identified within the debris. The debris was hauled off-site and disposed as non-friable ACM as part of the 2017 activities conducted at the Site (see Section 2.9).
  - The raze order was rescinded in May 2017, when We Energies acquired the Site. The remaining structures (chimneys and garage building) were demolished in June 2017 (see Section 2.9).

2.9 2017 SITE SECURITY, MAINTENANCE, AND PREPARATION

We Energies acquired the Site in May 2017and initiated site security, maintenance and site preparation elements discussed in Section VIII, Work To Be Performed, Paragraph 28, Secure, Maintain, and Prepare the Site, of the AOC and Task 5, Site Security, Maintenance, and Preparation, of the SOW. The following activities have been performed:

- Site security fencing
- Silt fence installation
- Clearing vegetation

- General housekeeping (trash removal)
- Pile inventory and removal for off-site disposal
- Abatement of remaining ACM
- Demolition of remaining structures to foundations
- Crushing clean brick and concrete for beneficial re-use
- Groundwater monitoring well inspections and water level measurements
- Abandonment of groundwater monitoring well MW-16
- Bulkhead stability visual inspection

Figures 4a and 4B provides the location of the security fence and the former location of abandoned groundwater monitoring well MW-16 (see Appendix D for abandonment log). Groundwater levels and contours are also in Appendix E. As part of the above-mentioned activities, cyanide affected (blue-stained) soil and foundations, NAPL material in a former tar tank (northeast portion of Site) and surficial NAPL (southwest portion of Site) affected soil have been encountered and are also shown on Figures 5a and 5b.

The bulkhead stability inspection summary is also provided in Appendix F. The bulkhead wall consists of wood with a concrete pile cap on the eastern side of the Site, north of the car ferry, sheet piles transitioning to earthen bank within the car ferry and extending south. In general, the shoreline is stable.

Analytical analysis has been performed as summarized below:

- 4 samples to characterize cyanide affected (blue-stained) soil and concrete for cyanide concentrations
- 360 samples to characterize potential ACM in building materials (bricks, roofing, pipe flanges, etc.)
- 104 locations of x-ray fluorescence (XRF) screening to evaluate presence of lead on building materials (brick, concrete, etc.)
- 8 samples to characterize PCB in soil and concrete.
- 3 samples to support disposal of the former tar tank bottom and surficial NAPL observations
- 13 samples to characterize and support proper disposal (as applicable) of soil piles

Analytical data packages and a summary table of results are provided in Appendix G. Stockpile inventory and locations in May of 2017 versus current stockpiles on the Site piles Appendix H highlights the stockpiles present in May 2017 versus Figure present day, respectively. The waste profile numbers, pile volumes/quantities, and quantities disposed associated with pile removal are summarized in Appendix I.

3 SITE CHARACTERIZATION AND ASSESSMENT ACTIVITIES

3.1 OBJECTIVES

Previously performed site activities have generated a significant amount of existing data for characterizing site conditions. The activities proposed in this EE/CA Support Sampling Plan will focus on confirming previously collected data and refining the extent of source material to support an EE/CA and ultimately a NTCRA in a dynamic sampling approach.

Representatives from USEPA, WDNR, We Energies and We Energies' consultants will participate in technical meetings to mutually resolve problems, as necessary.

Per Section 27 of the AOC, the Removal Action is anticipated to cover the following:

- Address unacceptable risk pathways through:
  - Remediating source areas as necessary and as appropriate (excavate, in-situ soil solidification/stabilization (ISS), in-situ chemical oxidation (ISCO)) to address direct contact, surface and groundwater migration pathways, and soil vapor pathway
  - Install where appropriate a surface barrier on Uplands to prevent risks associated with groundwater, surface water migration, and direct contact
  - Identify and establish necessary institutional controls ((IC) zoning, non-residential), engineering controls (vapor intrusion, groundwater) and continuing obligations (WDNR database, soil management plan) consistent with land use/zoning and state law (292.12 and NR 700 rule series)
  - Undertake Work to prevent new Uplands discharges from exceeding site-specific, risk-based criteria for sediment and water quality criteria for surface waters through:
    - Engineering controls or other shoreline barriers
    - Identification and removal of utilities, pipes, and other migrations pathways to surface water

Per Section 32 of the AOC, the removal action objectives (RAO) for the upland area EE/CA and NTCRA include:

- Prevention or abatement of actual or potential exposure to on-site and nearby human populations, animals, or the food chain from hazardous substances
- Prevention or abatement of actual or potential contamination of drinking water supplies or sensitive ecosystems
- Stabilization or elimination of hazardous substances that may pose a threat or release to surface or groundwater, air, soil, and sediment
- Treatment or elimination of hazardous substances in soil to prevent or abate migration to groundwater and air pathways
- A human health risk-based clean-up level for an industrial land use classification, as defined in NR 700.03
- Mitigation or abatement of other situations or factors that may pose threats to public health, welfare, or the environment
- Evaluation of alternatives for shoreline stabilization to prevent or abate migration of surface and subsurface contaminants

3.2 APPROACH

Conditions that require further assessment to support an EE/CA with the above-mentioned RAOs include:

- Further delineate the lateral and vertical extent of visual NAPL characterized as sheen, oil-wetted or oil-coated material
- Further delineate the lateral and vertical extent of cyanide impacted sediment based on the visual presence of cyanide affected (blue-stained) soil or material
- Identify peat layers, if present, and top of clay elevations to support remedial design
- Characterize direct contact soil (0-4 feet bgs) based on laboratory analysis
- Characterize current groundwater quality using existing site groundwater monitoring wells and laboratory analysis
- Evaluate the presence and condition of sewer and water intakes that traverse the Site

The scope of site characterization and assessment activities addressed by this EE/CA Support Sampling Plan includes:

- Soil borings and test pits for visual inspection of presence/absence of NAPL and cyanide and depth to peat and clay layers
- Soil sampling to support direct contact (0-4 feet bgs) evaluations
- Groundwater sampling to document pre-removal conditions
- Sewer and water intake inspections to document current conditions

Soil vapor will not be evaluated at this time because NAPL is present and will be addressed in a NTCRA. The need for and scope of soil vapor assessment will be developed either post source removal action or in conjunction with site development.

Prior to conducting invasive investigation activities, utilities will be notified and located through Wisconsin Diggers Hotline and, if necessary, a private Contractor.

Initial soil boring and test pit locations are provided on Figures 8a and 8b. Additional soil borings or test pits may be added based on site observations. For instance, if a soil boring is advanced in an area where NAPL is not expected and it is encountered, an additional boring may be advanced to assess the lateral or vertical extent compared to previous borings in the vicinity. All soil boring and test pit locations will be recorded with a hand held real time kinematic (RTK) global positioning survey (GPS) and shown on figures presented in the Data Report.

Site activities associated with the 2017 Site Maintenance and this EE/CA Support Sampling Plan may generate odors when NAPL is encountered. Odor suppressant is available and will be applied, as necessary.

Table 2 provides a summary of the initial sample locations and rationale. Table 3 provides frequencies, analytical parameters, and methods to be used for direct contact soil samples, groundwater samples, and IDW profiling. All field activities will be completed in accordance with the methods and techniques described in the Multi-site QAPP (with relevant updates, Appendix A) and Health and Safety Plan (HASP). Relevant USEPA-approved Standard Operating Procedures (SOPs) from the Multi-Site Field Sampling Plan prepared for WEC Energy Group's Wisconsin Public Service Corporation's (WPSC) Multi-Site Program are included in Appendix J. Field activities will be conducted in accordance with the SOPs.

3.3 NAPL CHARACTERIZATION

Existing data were used to develop the NAPL observations depicted in Figures 5a and 5b. The methods used to estimate area and extent of visually-observed NAPL in soil is based on identifying visual observations of NAPL in soil boring logs and classifying those depth intervals with a numeric value. A gINT database export of soil

boring geology was used as the framework for modeling the NAPL and was supplemented with data found in Table 4-2, Visual Field Observations of Potential Impacts (from the RI/FS Group RI Report, Arcadis, 2016).

Any visual observation of NAPL-related material was assigned a value of one (1). This includes observations in the following categories: Sheen, Staining, NAPL blebs, Partially Saturated or Saturated NAPL, and Hard Tar. All other intervals where NAPL was not observed were assigned a value of zero (0). This category includes observations of elevated photo ionization detector (PID) readings.

The binary dataset was then processed in Earth Volumetric Studio through a 3-dimensional geostatistical kriging algorithm to produce an interpolated "NAPL Probability Plume". The section of borings where the NAPL value equals one, is where the "plume" value equals 100 percent. The section of borings where the NAPL value equals zero, is where the "plume" value equals zero percent. The "plume" in between borings is interpolated by the software (or is extrapolated in areas where the plume extends beyond the bounds of the soil boring geometry). The 3-dimensional "plume" was then screened to a value of 50 percent. The lateral and vertical extent of the "plume" is understood to represent a volumetric probability model of areas where NAPL may occur, based solely on visual observations.

Although the RI/FS Group's RI Report, (Arcadis, 2016) had established a Field Observation hierarchy (see footnotes on Table 4-2), all categories of observations were assigned equal values in this analysis. Future analyses may regenerate the plume using a tiered value system, where lesser grades of visual observation would receive a decimal value between zero and one. The plume may also be screened to values other than 50 percent.

Lack of soil boring recovery (i.e. less than 100 percent core recovery on any attempted interval) was not accounted for in this analysis. Similarly, there were multiple sections of the logs that were recorded as "No Recovery", ranging from 2.0 – 7.3 feet in thickness. In the instances of no recovery, the entire section was assigned a NAPL value of zero. Therefore, actual NAPL-related material may have occurred at a higher or lower elevations, but the data was used as recorded. Some sections of boring log intervals contain subsections of NAPL observations. In these instances, the logged section was manually subdivided and the classified with appropriate values.

A GIS-generated topography-bathymetry (topo-bathy) surface was used as the base elevation for the model. The surface is a combination of 2015 upland Light Detection and Ranging (LiDAR) data, provided by the Milwaukee County Land Information Office, and a bathymetric survey of river sediment elevation conducted by Freshwater Engineering in 2017. The surface was chosen as the reference elevation because top of boring elevation was not reported for all soil boring logs. The logged elevation values were compared to the reference topo-bathy surface with variations between 17.9 and -4.5 feet.

Observations of NAPL, identified during the 2017 Site Preparation activities are shown on Figures 4, 4a, and 4b. The RI/FS Group RI Report (Arcadis 2016) NAPL observations are shown in magenta and the revised NAPL observations, based on the above discussed method, shown in yellow on Figures 5a and 5b. Together, these visual observations form the basis for where additional soil borings or test pits will be located to visually characterize the presence of NAPL as part of the EE/CA Support Sampling.

Figures 8a and 8b provide the initial soil boring and test pit locations. Table 2 provides the rationale and target depths for each location. Soil boring and test pit locations may be adjusted in the field if subsurface obstructions are encountered. Target depths may also be adjusted in the field based on field observations. Test pits have been located where surficial observations or NAPL in piping/shallow soil has been observed as part of the 2017 activities. If a test pit is not effective to observe subsurface conditions due to groundwater infiltration, a soil boring may also be advanced.

Rationale includes:

- Evaluate previous NAPL observations to correlate characterization
- Lateral and vertical extent of NAPL observations at depth with respect to magenta and yellow, particularly, evaluate if the estimates smaller, larger, or spatially connected

- Lateral and vertical extent of NAPL observations in surficial soil
- Evaluate NAPL observations on the perimeter of former structure foundations and assess the likelihood of extending under former structure foundations that are too thick to reasonably penetrate, without significant effort
- Evaluate NAPL observations under former structure foundations that can be penetrated
- Evaluate the potential NAPL from former operation piping

Gestra Engineering, Inc. will advance direct push soil borings with dedicated and disposal sleeves. Soil borings will be abandoned with bentonite chips.

Edgerton will excavate test pits. Test pits will be backfilled with the removed material in the opposite order it was removed or, if impacts are visually observed and the material has been removed, as described in Section 3.9, crushed brick or crushed concrete may be used for backfill or the test pit may be left slightly lower than the original grade.

Analytical samples will not be collected unless an unexpected condition is observed. Visual observations will be recorded on soil boring and test pit logs to inform the removal action footprint and update the three-dimensional model to generate volume estimates for use in the EE/CA and removal action design.

Laboratory analysis of 34 PAHs will be performed on four soil samples at the border of the property boundary to assess if the previous NAPL observations (Figures 5a and 5b) are principal threat waste and connected to the former coke and gas production area.

3.4 CYANIDE CHARACTERIZATION

Observations of cyanide affected (blue-stained) soil or building materials identified during the 2017 Site Preparation activities are shown on Figures 4a and 4b. The RI/FS Group RI Report (Arcadis, 2016) cyanide affected (blue-stained) soil observations are also shown on Figures 4a and 4b. Together, these visual observations form the basis for where additional soil borings or test pits will be located to visually characterize the presence of cyanide affected soil as part of the EE/CA Support Sampling. No analytical samples will be collected.

Figures 8a and 8b provide the initial soil boring and test pit locations. Table 2 provides the rationale and target depths for each location. Target depths may be revised in the field based on field observations. Test pits have been located where surficial observations have been observed. If a test pit is not effective to observe subsurface conditions due to groundwater infiltration, a soil boring may also be advanced. During EE/CA support sampling activities, if additional cyanide affected (blue-stained) materials are observed, additional soil borings or test pits may also be added. Visual observations will be recorded on soil boring and test pit logs.

3.5 SUBSURFACE GEOLOGIC INVESTIGATION

Existing data were used to develop the peat layer surface and native clay layer surface as shown on Figures 7 and 8, respectively. Each soil boring advanced to assess the presence of NAPL (as described in Section 3.3.) will record the presence, depth, and thickness of peat and the depth to the top of native clay.

Peat and clay have both been defined as confining layers in Section 3.4.2 of the RI/FS Group RI Report. In addition, significant thicknesses of peat may complicate potential in-situ treatment remedial options. The top of native clay surface may further indicate where NAPL may be encountered, as NAPL, if present, may migrate on the top of clay surface and may accumulate in lower elevations. The top of native clay may also provide a key-in elevation for potential sheet piling or potential target depth for in-situ treatment remedial options.

The additional soil borings will be used to further refine the continuity of the peat layer and the top of clay, updating Figures 7 and 8, to support the EE/CA and removal action design.

3.6 SOIL CHARACTERIZATION

Existing soil analytical data are summarized on Table 1 compared to industrial and protection of groundwater screening levels. Additional soil samples will be collected for laboratory analysis of PAHs, arsenic and cyanide to document existing soil quality and support the EE/CA and removal action design, specifically, evaluation of the direct contact zone and surface barrier design.

Proposed soil boring locations for laboratory analysis are presented on Figure 9. At each location a four foot boring will be advanced. The boring will be subdivided into a 0-2 foot and 2-4 foot bgs sample interval for analysis of PAH, arsenic and cyanide using dedicated and disposable sampling tools. Samples will be shipped under chain of custody procedures to Pace Analytical Services.

Figures 8a and 8b provide the initial soil boring locations. Table 2 provides the rationale for each location. Soil boring locations may be adjusted in the field if subsurface obstructions are encountered.

Rationale includes:

- Characterize soil where stockpiled materials existed prior to the 2017 site preparation activities (Section 2.9)
- Characterize soil adjacent to Kinnickinnic River to evaluate potential impact to sediment quality in the event of potential soil erosion
- Distributed across the Site to support assessment of the direct contact zone (0-4 feet bgs)- assuming a 2-foot clean fill surface barrier

Gestra Engineering, Inc. will advance direct push soil borings with dedicated and disposal sleeves. Visual observations will be recorded on soil boring logs.

3.4 GROUNDWATER CHARACTERIZATION

The RI/FS Group RI Report (Arcadis, 2016) summarized analytical results from eight previous groundwater events between 2009 to 2013. Although groundwater remediation is not included in the NTCRA, a pre-removal action groundwater sampling event will be conducted to document pre-NTCRA groundwater quality and improvements post-NTCRA.

The location of 35 groundwater monitoring wells to be sampled is provided on Figure 8. Groundwater levels will be measured to assess the elevation and direction of groundwater flow prior to the monitoring wells and piezometers being sampled. Water levels in wells without product will be measured with an electronic water level indicator. If NAPL is present in a well, an electronic water level indicator will be used first for water level measurement followed by a clear, bottom-filling bailer to measure NAPL thickness. Observations and measurements regarding the presence of NAPL within a well will be recorded on the appropriate forms on which the water level measurements will be recorded.

Groundwater samples will be collected via low-flow sampling methods for laboratory analysis (Pace Analytical Services) of benzene, PAHs, arsenic and cyanide. Field parameters will also be recorded groundwater sample including pH, temperature, dissolved oxygen, oxidation/reduction potential, and conductivity.

Samples will be labeled and packaged then shipped using chain-of-custody procedures. Non-dedicated equipment will be decontaminated after use.

3.5 GROUNDWATER MONITORING WELL ABANDONMENT

Groundwater monitoring wells MW-7 and MW-27 will be abandoned in accordance with Wisconsin Administrative Code Chapter NR 141 At this time, no additional well abandonment activities are planned. If it is determined that any of the wells or piezometers in the monitoring network require abandonment, USEPA will be notified in advance. Replacement wells will not be installed until after the Removal Action and/or site development is completed.

3.7 SEWER AND WATER INTAKE EVALUATION

The RI/FS Group RI indicates that several sewers and underground conveyances exist at the Site, including the 36-inch Orchard Street sewer and a 30-inch sanitary sewer line. The east portion of the Orchard Street Sewer was reportedly abandoned for municipal use in 1908 at the western Site boundary. However, the Orchard Street sewer was reportedly used by the Former Milwaukee Coke and Gas Company during the years of their operation at the Site (1904 to 1983) for stormwater conveyance.

The 30-inch sanitary sewer received process wastewater discharges from the Site historically. Earth Tech sealed the outfall to this sewer in 2003 as part of the 2003-2004 removal action.

Several water intake conveyances were identified in the RI/FS Group RI. These conveyances are visible along the Kinnickinnic River bulkhead, and include three 12-inch pipes identified as fire boat connections and a former water intake structure, apparent former outfalls, bulkhead drains, etc.

An evaluation of ten pipes visible along the Kinnickinnic River bulkhead at the Site was conducted in December 2012 and November 2013. The evaluation included a visual inspection, an assessment of the interior of the pipes (to the extent practical) using cameras or fiber optics, and mapping of the pipe alignments and sewer invert elevations to the extent possible. Pipe 4, a 42-inch diameter sewer that trends to the northwest from the bulkhead, is reported as abandoned with concrete in 2005. Abandonment information is not provided for other pipes. Further details related to the pipe evaluation is provided in Appendix M of the RI/FS Group RI.

NRT observed several manholes, grates and other entrances into what appears to be multiple subsurface conveyances at the Site. While many of these entrances appear to align with former water intake infrastructure, further evaluation of the alignment and disposition of the conveyances will be conducted.

On-Site conveyances will be assessed with the goal of confirming the alignments and disposition (i.e., abandoned) of the conveyances. A camera will be used to aide in the visual assessment of the interior of on-site manholes/grates/entrances, as well as outfalls along the Kinnickinnic River. The alignment of the conveyances will also be assessed. If debris is encountered that prevents the camera from continuing the assessment, test pits may be excavated along the assumed conveyance alignment to further assess the conveyance/blockage.

3.8 POTENTIAL SURFACE BARRIER MATERIAL ANALYSIS

We Energies has access to several onsite and offsite clean fill stockpiles that may be suitable for constructing the site surface barrier. For example, between 30,000 to 170,000 cubic yards of dredge material and bluff/clay material is staged at the We Energies' Oak Creek Power Plant.

Ten representative samples of the stockpiled material will be collected and analyzed to understand the characteristics of the stockpiled material and assess the potential for use in the site surface barrier. Samples will be submitted under chain-of-custody procedures to Pace Analytical for analysis of VOCs, SVOCs, PCBs, metals, and pesticides.

If the initial analytical results suggest the stockpiled material is favorable for use as site surface barrier material, the need for and frequency of additional sampling during the NTCRA will be discussed with USEPA and WDNR.

3.9 INVESTIGATION-DERIVED WASTE DISPOSAL

Investigation-derived wastes will be containerized during site investigation activities prior to disposal off site. Disposal facilities selected meet the requirements of the "Off-site Rule (OSR)" (USEPA, September 1993) for the disposal of investigation-derived waste. If new facilities are identified, NRT/OBG will ensure the facility meets the OSR and will inform USEPA prior to undertaking any disposal.

Representative samples for disposal purposes will be obtained and provided as required by the disposal authority through which the wastes will be managed and disposed. The landfill will be contacted prior to sending waste characterization samples to the laboratory to verify the required analyses.

Existing waste profile information is provided in Appendix I It is anticipated a waste exemption will be requested to dispose coal tar wastes at Waste Management's Wisconsin facilities (Orchard Ridge in Menomonee Falls or Metro Security Landfill in Franklin). If waste material is to be shipped out-of-state, written notice will be provided to USEPA in advance unless it is less than ten cubic yards, per Paragraph 41.b. of the AOC.

Metal will be recycled at Miller Compressing, Milwaukee, Wisconsin.

Soil boring cuttings will be containerized in IDW drums or roll-offs. If visually impacted material is encountered (i.e., NAPL or cyanide affected/blue-stained) during test pit activities or during other site activities, the material will be removed from the site with IDW.

Purge water and decontamination water from groundwater sampling will be containerized on site and disposed through Covanta, Ripon, Wisconsin.

Although not anticipated, if incidental asbestos, is encountered, it will be stockpiled, removed and disposed consistent with the 2017 ACM removal discussed in Section 2.

3.9 SAMPLE ANALYSIS AND VALIDATION

Pace Analytical Services, Green Bay, Wisconsin will analyze all environmental samples as part of the EE/CA Support Sampling Plan. Alpha Analytical, Westborough, Massachusetts, will analyze potential principal threat waste samples. Both laboratories are included in the Multi-Site QAPP and updates to the method detection limits and reporting limits are included on the Optimized Uniform Federal Policy (UFP) QAPP Worksheet #15 (https://www.epa.gov/fedfac/optimized-uniform-federal-policy-quality-assurance-project-plans-worksheets), included in Appendix A.

Table 3 summarizes the proposed Sampling and Analysis Plan for the investigation to be performed and includes samples to satisfy quality assurance/quality control (QA/QC) requirements in accordance with Section 2 of the Multi-site QAPP. As described above, the dynamic work plan approach will be used and additional samples (including QA/QC samples) may be collected.

Level IV data packages will be requested from each analytical laboratory. Shepherd Technical Services, Austin, Texas, will provide third-party data validation services in accordance with Section 4 of the Multi-site QAPP.

3.10 DATA REPORT

A Data Report will be prepared after the investigation activities are complete. This report will include the following information and documentation, as appropriate, in accordance with Task 3 of the SOW attached to the AOC:

- A brief description of the field procedures and methods used during field activities
- A discussion of the nature and rationale for any significant variances from the scope of work described in this EE/CA Support Sampling Plan
- The data obtained during implementation of the EE/CA Support Sampling Plan and previously collected data to be used in the EE/CA, presented in tabular formats, to the extent practicable. This will include analytical data, field measurements, etc.
- Revised NAPL Observation figures regarding extent
- Supporting materials for data obtained during implementation of the EE/CA Support Sampling Plan. These may include boring logs, groundwater sampling logs, laboratory analytical reports, and similar information.

4 SCHEDULE

The preliminary project schedule is summarized below.

Activity	Target Date
EE/CA Sampling Support Field Activities	Mid-October 2017
Submit Data Report	Early-December 2017
Submit EE/CA Report	Mid-December 2017
Initiate Removal Action	March 2018 – Early 2019

The overall schedule is dependent on USEPA approvals, contractor availability, and seasonal access at the Site.

REFERENCES

Altech Environmental Services, Inc., 2003, Final Report - Sediment Sampling from the Kinnickinnic River, Milwaukee, Wisconsin.

Arcadis U.S., Inc., 2016, Milwaukee Solvay Coke & Gas Site – Remedial Investigation Report. Prepared for the Milwaukee Coke and Gas RI/FS Group.

Arcadis U.S., Inc., 2016, Milwaukee Solvay Coke and Gas Site – RI/FS Alternatives Screening Technical Memorandum.

NRT, 2007a, Asbestos Survey, Former Milwaukee Solvay Coke and Gas Company Site.

NRT, 2007b, Multi-Site Quality Assurance Project Plan, for Former Manufactured Gas Plant Sites – Revision 2, prepared for Integrys.

USDOH, 2008, Health Concerns Related to Asbestos in Stockpiled Demolition Debris – Former Solvay Coke Facility, Milwaukee, Wisconsin.

USEPA and Wisconsin Public Service Corporation, 2006, *Settlement Agreement and Administrative Order on Consent for the conduct of Remedial Investigations and Feasibility Studies at six WPSC MGP Sites in Green Bay, Manitowoc, Marinette, Oshkosh, Stevens Point and Two Rivers, Wisconsin*. U.S. EPA Region 5, CERCLA Docket No. V-W-06-C-847.

Tetra Tech, Inc., 2002, Site Assessment Report – Milwaukee Solvay Coke and Gas Site.

WDNR, 2003, Polychlorinated Biphenyls (PCBs) and Polycyclic Aromatic Hydrocarbons (PAHs) Source Identification, Kinnickinnic River between Becher St. and Kinnickinnic Ave.

WDNR, 2006, Expanded Site Inspection – Milwaukee Solvay Coke and Gas Company.

Tables

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	CG-SB01			CG-SB02			CG-SB03		CG-SB04			CG-SB05		CG-SB06		
Sample / Duplicate:				CG-SB01	CG-SB01	CG-SB01	CG-SB02	CG-SB02	CG-SB02 DUP	CG-SB03	CG-SB03	CG-SB04	CG-SB04	CG-SB04	CG-SB05	CG-SB05	CG-SB06	CG-SB06 DUP	CG-SB06
Field Sample ID:				CG-SB01-SS-121208	CG-SB01-0507-121208	MSS-CG-SB01-0507-121208	CG-SB02-SS-120208	CG-SB02-0565-120208	CG-SBDUP003-120208	CG-SB03-SS-120208	CG-SB03-0809-120208	CG-SB04-SS-121208	CG-SB04-0406-121208	MSS-CG-SB04-0406-121208	CG-SB05-SS-120208	CG-SB05-0506-120208	CG-SB06-SS-120208	CG-SBDUP004-120208	CG-SB06-0405-120208
Sample Depth (feet):				1 - 1.5	5 - 7	5 - 7	0 - 0.5	5 - 6.5	5 - 6.5	0 - 0.5	8 - 9	0.5 - 1	4 - 6	4 - 6	0 - 0.5	5 - 6	0 - 0.5	0 - 0.5	4 - 5
Sample Date:				12/12/2008	12/12/2008	12/12/2008	12/02/2008	12/02/2008	12/02/2008	12/02/2008	12/02/2008	12/12/2008	12/12/2008	12/12/2008	12/02/2008	12/02/2008	12/02/2008	12/02/2008	12/02/2008
VOCs																			
1,1,1-Trichloroethane	mg/kg	0.1402	640	<0.00073 U	<0.00063 U	--	<0.00062 U	<0.00047 U	<0.00047 U	<0.00050 U	<0.00057 U	<0.00088 U	<0.00078 U	--	<0.00054 U	<0.00050 U	<0.00082 U	<0.00090 U	<0.00072 UJ
1,1,2,2-Tetrachloroethane	mg/kg	0.0002	3.6	<0.00086 U	<0.00074 UJ	--	<0.00073 U	<0.00055 U	<0.00055 U	<0.00059 U	<0.00066 U	<0.0010 UJ	<0.00092 UJ	--	<0.00064 UJ	<0.00059 U	<0.00096 UJ	<0.0011 UJ	<0.00085 UJ
1,1,2-Trichloroethane	mg/kg	0.0032	7.01	<0.0012 U	<0.0011 UJ	--	<0.0011 U	<0.00080 U	<0.00080 U	<0.00085 U	<0.00096 U	<0.0015 UJ	<0.0013 UJ	--	<0.00092 UJ	<0.00085 U	<0.0014 UJ	<0.0015 U	<0.0012 UJ
1,1-Dichloroethane	mg/kg	0.4834	22.2	<0.00029 U	<0.00025 U	--	<0.00025 U	<0.00019 U	<0.00019 U	<0.00020 U	<0.00023 U	<0.00036 U	<0.00032 U	--	<0.00022 U	<0.00020 U	<0.00033 U	<0.00036 U	<0.00029 UJ
1,1-Dichloroethene	mg/kg	0.005	1,190	<0.00083 U	<0.00071 U	--	<0.00070 U	<0.00054 U	<0.00054 U	<0.00057 U	<0.00064 U	<0.0010 U	0.0022 J	--	<0.00062 U	<0.00057 U	<0.00093 U	<0.0010 U	<0.00082 UJ
1,2-Dibromo-3-chloropropane	mg/kg	0.0002	0.092	<0.00084 U	<0.00073 UJ	--	<0.00072 U	<0.00054 U	<0.00054 U	<0.00058 U	<0.00065 U	<0.0010 UJ	<0.00090 UJ	--	<0.00063 UJ	<0.00058 U	<0.00095 UJ	<0.0010 UJ	<0.00083 UJ
1,2-Dibromoethane	mg/kg	0.0000282	0.221	<0.00073 U	<0.00063 UJ	--	<0.00062 U	<0.00047 U	<0.00047 U	<0.00050 U	<0.00057 U	<0.00088 UJ	<0.00078 UJ	--	<0.00054 UJ	<0.00050 U	<0.00082 UJ	<0.00090 UJ	<0.00072 UJ
1,2-Dichlorobenzene	mg/kg	1.168	376	<0.00063 U	<0.00054 UJ	--	<0.00054 U	<0.00041 U	<0.00041 U	<0.00044 U	<0.00049 U	<0.00076 UJ	<0.00068 UJ	--	<0.00047 UJ	<0.00043 U	<0.00071 UJ	<0.00078 UJ	<0.00062 UJ
1,2-Dichloroethane	mg/kg	0.0028	2.87	<0.00098 U	<0.00085 U	--	<0.00084 U	<0.00063 U	<0.00063 U	<0.00068 U	<0.00076 U	<0.0012 U	<0.0010 U	--	<0.00073 U	<0.00068 U	<0.0011 U	<0.0012 U	<0.00097 UJ
1,2-Dichloropropane	mg/kg	0.0033	1.78	<0.00077 U	<0.00067 U	--	<0.00066 U	<0.00050 U	<0.00050 U	<0.00053 U	<0.00060 U	<0.00093 U	<0.00082 U	--	<0.00058 U	<0.00053 U	<0.00087 U	<0.00095 U	<0.00076 UJ
1,3-Dichlorobenzene	mg/kg	1.1528	297	<0.00067 U	<0.00058 UJ	--	<0.00057 U	<0.00044 U	<0.00044 U	<0.00047 U	<0.00052 U	<0.00082 UJ	<0.00072 UJ	--	<0.00050 UJ	<0.00046 U	<0.00076 UJ	<0.00083 UJ	<0.00067 UJ
1,4-Dichlorobenzene	mg/kg	0.144	16.4	<0.0011 U	<0.00094 UJ	--	<0.00093 U	<0.00071 U	<0.00071 U	<0.00076 U	<0.00085 U	<0.0013 UJ	<0.0012 UJ	--	<0.00082 UJ	<0.00075 U	<0.0012 UJ	<0.0014 UJ	<0.0011 UJ
2-Butanone (MEK)	mg/kg	1.6661	28,400	<0.0026 U	0.0052 J	--	0.0033 J	<0.0017 U	0.0033 J	<0.0018 U	0.015 J	<0.0031 U	0.018 J	--	0.0039 J	0.006 J	<0.0029 U	<0.0032 U	<0.0025 UJ
2-Hexanone	mg/kg	NS	1,760	<0.0069 U	<0.0059 U	--	<0.0058 U	<0.0044 U	<0.0044 U	<0.0047 U	<0.0053 U	<0.0083 U	<0.0073 U	--	<0.0051 U	<0.0047 U	<0.0077 U	<0.0085 U	<0.0068 UJ
4-Methyl-2-Pentanone (MIBK)	mg/kg	0.2252	3,360	<0.0061 U	<0.0053 UJ	--	<0.0052 U	<0.0040 U	<0.0040 U	<0.0042 U	<0.0047 U	<0.0074 UJ	<0.0065 UJ	--	<0.0046 UJ	<0.0042 U	<0.0069 UJ	<0.0076 U	<0.0060 UJ
Acetone	mg/kg	3.6766	100,000	0.0087 J	0.024	--	<0.0064 UJ	<0.0049 U	0.029 J	<0.0052 U	0.093	0.024 J	0.047	--	0.008 J	0.036	<0.0085 U	<0.0093 U	0.013 J
Benzene	mg/kg	0.0051	7.07	0.0014 J	0.0024 J	--	*0.024*	*0.027*	*0.048*	0.0012 J	0.0035 J	*0.076*	*0.080*	--	0.00069 J	*0.010*	*0.0056 J*	0.005 J	<0.00065 UJ
Bromodichloromethane	mg/kg	0.0003	1.83	<0.00031 U	<0.00027 UJ	--	<0.00026 U	<0.00020 U	<0.00020 U	<0.00021 U	<0.00024 U	<0.00037 UJ	<0.00033 UJ	--	<0.00023 UJ	<0.00021 U	<0.00035 UJ	<0.00038 U	<0.00031 UJ
Bromoform	mg/kg	0.0023	113	<0.00032 U	<0.00028 UJ	--	<0.00027 U	<0.00021 U	<0.00021 U	<0.00022 U	<0.00025 U	<0.00039 UJ	<0.00034 UJ	--	<0.00024 UJ	<0.00022 U	<0.00036 UJ	<0.00040 UJ	<0.00032 UJ
Bromomethane	mg/kg	0.0051	43	<0.00070 U	<0.00061 U	--	<0.00060 U	<0.00045 U	<0.00045 U	<0.00048 U	<0.00054 U	<0.00085 U	<0.00075 U	--	<0.00052 U	<0.00048 U	<0.00079 U	<0.00087 U	<0.00069 UJ
Carbon Disulfide	mg/kg	0.5919	738	<0.00059 U	0.00087 J	--	<0.00050 U	<0.00038 U	<0.00038 U	0.00063 J	0.002 J	<0.00071 U	0.0087	--	<0.00044 U	0.0037 J	<0.00066 U	<0.00073 U	<0.00058 UJ
Carbon Tetrachloride	mg/kg	0.0039	4.03	<0.00088 U	<0.00076 U	--	<0.00075 U	<0.00057 U	<0.00057 U	<0.00061 U	<0.00069 U	<0.0011 U	<0.00094 U	--	<0.00066 U	<0.00061 U	<0.0010 U	<0.0011 U	<0.00087 UJ
Chlorobenzene	mg/kg	0.1358	761	<0.00076 U	<0.00065 UJ	--	<0.00064 U	<0.00049 U	<0.00049 U	<0.00052 U	<0.00059 U	<0.00092 UJ	<0.00081 UJ	--	<0.00057 UJ	<0.00052 U	<0.00085 UJ	<0.00094 UJ	<0.00075 UJ
Chloroethane	mg/kg	0.2266	2,120	<0.0012 U	<0.0011 U	--	<0.0011 U	<0.00081 U	<0.00081 U	<0.00086 U	<0.00097 U	<0.0015 U	<0.0013 U	--	<0.00093 U	<0.00086 U	<0.0014 U	<0.0015 U	<0.0012 UJ
Chloroform	mg/kg	0.0033	1.98	<0.00041 U	<0.00035 U	--	<0.00035 U	<0.00026 U	<0.00026 U	<0.00028 U	<0.00032 U	<0.00049 U	<0.00044 U	--	<0.00030 U	<0.00028 U	<0.00046 U	<0.00050 U	<0.00040 UJ
Chloromethane	mg/kg	0.0155	669	<0.0011 U	<0.00093 U	--	<0.00092 U	<0.00070 U	<0.00070 U	<0.00075 U	<0.00084 U	<0.0013 U	<0.0012 U	--	<0.00081 U	<0.00074 U	<0.0012 U	<0.0013 U	<0.0011 UJ
cis-1,2-Dichloroethene	mg/kg	0.0412	2,340	<0.00079 U	<0.00068 U	--	<0.00067 U	<0.00051 U	<0.00051 U	<0.00054 U	<0.00061 U	<0.00095 U	<0.00084 U	--	<0.00059 U	<0.00054 U	<0.00089 U	<0.00097 U	<0.00078 UJ
cis-1,3-Dichloropropene	mg/kg	NS	1,210	<0.0018 U	<0.0016 UJ	--	<0.0015 U	<0.0012 U	<0.0012 U	<0.0012 U	<0.0014 U	<0.0022 UJ	<0.0019 UJ	--	<0.0014 UJ	<0.0012 U	<0.0020 UJ	<0.0022 U	<0.0018 UJ
Cyclohexane	mg/kg	NS	117	<0.00056 U	0.0023 J	--	<0.00048 U	<0.00036 U	<0.00036 U	<0.00039 U	<0.00044 U	0.013	<0.00060 U	--	0.0006 J	<0.00039 U	0.0023 J	0.0026 J	0.0012 J
Dibromochloromethane	mg/kg	0.032	38.9	<0.00080 U	<0.00069 UJ	--	<0.00068 U	<0.00052 U	<0.00052 U	<0.00055 U	<0.00062 U	<0.00097 UJ	<0.00086 UJ	--	<0.00060 UJ	<0.00055 U	<0.00090 UJ	<0.00099 UJ	<0.00079 UJ
Dichloromethane	mg/kg	0.0026	1,150	<0.0011 U	<0.00091 U	--	<0.00090 U	<0.00068 U	<0.00068 U	<0.00073 U	<0.00082 UJB	<0.0013 U	<0.0011 U	--	<0.00079 U	<0.00072 U	<0.0012 U	<0.0013 U	<0.0010 UJ
Ethylbenzene	mg/kg	1.57	35.4	<0.00094 U	<0.00081 UJ	--	<0.00080 U	<0.00061 U	0.0017 J	<0.00065 U	<0.00073 U	<0.0011 UJ	0.0027 J	--	<0.00070 UJ	<0.00065 U	<0.0011 UJ	<0.0012 UJ	<0.00093 UJ
Freon 113	mg/kg	NS	910	<0.00063 U	<0.00054 U	--	<0.00054 U	<0.00041 U	<0.00041 U	<0.00044 U	<0.00049 U	<0.00076 U	<0.00068 U	--	<0.00047 U	<0.00043 U	<0.00071 U	<0.00078 U	<0.00062 UJ
Freon 12	mg/kg	3.0863	530	<0.00073 U	<0.00063 U	--	<0.00062 U	<0.00047 U	<0.00047 U	<0.00050 U	<0.00057 U	<0.00088 U	<0.00078 U	--	<0.00054 U	<0.00050 U	<0.00082 U	<0.00090 U	<0.00072 UJ
Isopropylbenzene	mg/kg	NS	268	<0.00083 U	0.0083 J	--	<0.00070 U	<0.00054 U	0.0027 J	<0.00057 U	<0.00064 U	<0.0010 UJ	<0.00088 UJ	--	<0.00062 UJ	0.058	<0.00093 UJ	<0.0010 UJ	<0.00082 UJ
Methyl acetate	mg/kg	NS	29,000	<0.0039 U	<0.0033 U	--	<0.0033 U	<0.0025 U	<0.0025 U	<0.0027 U	<0.0030 U	<0.0047 U	<0.0041 U	--	<0.0029 U	<0.0027 U	<0.0043 U	<0.0048 U	<0.0038 UJ
Methylcyclohexane	mg/kg	NS	67.6	<0.00059 U	0.0029 J	--	0.00099 J	0.0007 J	0.0017 J	<0.00041 U	<0.00046 U	<0.00071 U	<0.00063 U	--	0.00072 J	0.0015 J	0.0027 J	0.0027 J	0.0016 J
Methyl-tert-butyl-ether	mg/kg	0.027	282	<0.00048 U	<0.00041 U	--	<0.00041 U	<0.00031 U	<0.00031 U	<0.00033 U	<0.00037 U	<0.00058 U	<0.00051 U	--	<0.00036 U	<0.00033 U	<0.00054 U	<0.00059 U	<0.00047 UJ
Styrene	mg/kg	0.22	867	<0.00088 U	<0.00076 UJ	--	<0.00075 U	<0.00057 U	<0.00057 U	<0.00061 U	<0.00069 U	<0.0011 UJ	<0.00094 UJ	--	<0.00066 UJ	<0.00061 U	<0.0010 UJ	<0.0011 UJ	<0.00087 UJ
Tetrachloroethene	mg/kg	0.0045	145	<0.00083 U	<0.00071 UJ	--	<0.00070 U	<0.00054 U	<0.00054 U	<0.00057 U	<0.00064 U	<0.0010 UJ	<0.00088 UJ	--	<0.00062 UJ	<0.00057 U	<0.00093 UJ	<0.0010 UJ	<0.00082 UJ
Toluene	mg/kg	1.1072	818	<0.00097 U	0.0019 J	--	0.004 J	0.0058	0.015	<0.00067 U	0.0011 J	0.0032 J	0.029 J	--	0.0049 J	<0.00067 U	0.0086 J	0.0087 J	<0.00096 UJ
trans-1,2-Dichloroethene	mg/kg	0.0626	1,850	<0.00055 U	<0.00047 U	--	<0.00047 U	<0.00035 U	<0.00035 U	<0.00038 U	<0.00042 U	<0.00066 U	<0.00058 U	--	<0.00041 U	<0.00038 U	<0.00062 U	<0.00068 U	<0.00054 UJ
trans-1,3-Dichloropropene	mg/kg	NS	1,510	<0.00094 U	<0.00081 UJ	--	<0.00080 U	<0.00061 U	<0.00061 U	<0.00065 U	<0.00073 U	<0.0011 UJ	<0.0010 UJ	--	<0.00070 UJ	<0.00065 U	<0.0011 UJ	<0.0012 U	<0.00093 UJ
Trichloroethene	mg/kg	0.0036	8.41	<0.00032 U	<0.00028 U	--	<0.00027 U	<0.00021 U	<0.00021 U	<0.00022 U	<0.00025 U	<0.00039 U	<0.00034 U	--	<0.00024 U	<0.00022 U	<0.00036 U	<0.00040 U	<0.00032 UJ
Trichlorofluoromethane	mg/kg	4.4775	1,230	<0.0015 U	<0.0013 U	--	<0.0012 U	<0.00094 U	<0.00094 U	<0.0010 U	<0.0011 U	<0.0018 U	<0.0016 U	--	<0.0011 U	<0.0010 U	<0.0016 U	<0.0018 U	<0.0014 UJ
Vinyl Chloride	mg/kg	0.0001	2.08	<0.0019 U	<0.0016 U	--	<0.0016 U	<0.0012 U	<0.0012 U	<0.0013 U	<0.0015 U	<0.0023 U	<0.0020 U	--	<0.0014 U	<0.0013 U	<0.0021 U	<0.0023 U	<0.0019 UJ
Xylenes, Total	mg/kg	3.96	260	<0.00086 U	0.0014 J	--	0.0013 J	0.0022 J	0.0064	<0.00059 U	<0.00066 U	0.0091 J	0.012 J	--	<0.00064 UJ	0.0022 J	0.0027 J	0.0019 J	<0.00085 UJ
PCBs																			
PCB, Total [4]	mg/kg	0.0094	0.967	--	--	--	--	--	--	***1.600***	<0.0033 U	--	--	--	<0.0028 UJ	<0.0032 UJ	--	--	--
PCB-1016	mg/kg	NS	28	--	--	--	--	--	--	<0.0059 UJ	<0.0063 U	--	--	--	<0.0053 UJ	<0.0062 UJ	--	--	--
PCB-1221	mg/kg	NS	0.883	--	--	--	--	--	--	<0.018 UJ	<0.019 U	--	--	--	<0.016 UJ	<0.019 UJ	--	--	--
PCB-1232	mg/kg	NS	0.792	--	--	--	--	--	--	<0.0059 UJ	<0.0063 U	--	--	--	<0.0054 UJ	<0.0063 UJ	--	--	--
PCB-1242	mg/kg	NS	0.972	--	--	--	--	--	--	<0.011 UJ	<0.011 U	--	--	--	<0.0096 UJ	<0.011 UJ	--	--	--
PCB-1248	mg/kg	NS	0.975	--	--	--	--	--	--	<0.0065 UJ	<0.0069 U	--	--	--	<0.0059 UJ	<0.0069 UJ	--	--	--
PCB-1254	mg/kg	NS	0.988	--	--	--	--	--	--	<0.0064 UJ	<0.0068 U	--	--	--	<0.0058 UJ	<0.0067 UJ	--	--	--
PCB-1260	mg/kg	NS	1	--	--	--	--	--	--	**1.600**	<0.0033 U	--	--	--	<0.0028 UJ	<0.0032 UJ	--	--	--

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	CG-SB01			CG-SB02			CG-SB03		CG-SB04			CG-SB05		CG-SB06		
Sample / Duplicate:				CG-SB01	CG-SB01	CG-SB01	CG-SB02	CG-SB02	CG-SB02 DUP	CG-SB03	CG-SB03	CG-SB04	CG-SB04	CG-SB04	CG-SB05	CG-SB05	CG-SB06	CG-SB06 DUP	CG-SB06
Field Sample ID:				CG-SB01-SS-121208	CG-SB01-0507-121208	MSS-CG-SB01-0507-121208	CG-SB02-SS-120208	CG-SB02-0565-120208	CG-SBDUP003-120208	CG-SB03-SS-120208	CG-SB03-0809-120208	CG-SB04-SS-121208	CG-SB04-0406-121208	MSS-CG-SB04-0406-121208	CG-SB05-SS-120208	CG-SB05-0506-120208	CG-SB06-SS-120208	CG-SBDUP004-120208	CG-SB06-0405-120208
Sample Depth (feet):				1 - 1.5	5 - 7	5 - 7	0 - 0.5	5 - 6.5	5 - 6.5	0 - 0.5	8 - 9	0.5 - 1	4 - 6	4 - 6	0 - 0.5	5 - 6	0 - 0.5	0 - 0.5	4 - 5
Sample Date:				12/12/2008	12/12/2008	12/12/2008	12/02/2008	12/02/2008	12/02/2008	12/02/2008	12/02/2008	12/12/2008	12/12/2008	12/12/2008	12/02/2008	12/02/2008	12/02/2008	12/02/2008	12/02/2008
PAHs																			
2-Methylnaphthalene	mg/kg	NS	3,010	0.370 J	0.470	--	0.170 J	1.100	0.150 J	0.098 J	<0.024 U	3.000 J	10.000	--	0.069 J	<0.120 U	3.200 J	3.900 J	0.140 J
Acenaphthene	mg/kg	NS	45,200	0.350 J	0.440	--	0.056 J	8.000	0.760	0.450 J	<0.013 U	2.900 J	18.000	--	<0.022 U	22.000	1.600 J	1.700 J	0.080 J
Acenaphthylene	mg/kg	NS	NS	0.120 J	<0.021 U	--	0.038 J	0.320 J	0.021 J	0.095 J	<0.021 U	1.200 J	2.600 J	--	<0.036 U	0.280 J	16.000 J	15.000 J	0.160 J
Anthracene	mg/kg	196.9492	100,000	0.240 J	0.160 J	--	0.240 J	1.700	0.160 J	2.700	<0.021 U	1.600 J	14.000	--	0.099 J	3.600	50.000	54.000 J	2.500
Benzo(a)anthracene	mg/kg	NS	20.8	1.400	0.150 J	--	1.300	2.000	0.310 J	10.000	0.027 J	18.000	**42.000**	--	0.170 J	1.500 J	**200.000**	**190.000**	18.000
Benzo(a)pyrene	mg/kg	0.47	2.11	*1.200*	0.120 J	--	*1.500*	*1.200*	0.250 J	***8.300***	<0.025 U	***21.000***	***41.000***	--	0.100 J	*1.100 J*	***150.000***	***120.000 J***	***14.000***
Benzo(b)fluoranthene	mg/kg	0.4793	21.1	*2.600 JK*	0.210 JK	--	*2.200 JK*	*1.900 JK*	0.370 JK	*13.000 JK*	0.038 JK	***41.000 JK***	***55.000 JK***	--	0.200 JK	*1.600 JK*	***250.000 JK***	***220.000 JK***	***25.000 JK***
Benzo(g,h,i)perylene	mg/kg	NS	NS	0.960	0.071 J	--	1.300	0.770	0.170 J	6.000	<0.020 U	16.000	25.000	--	0.140 J	0.680 J	84.000	72.000 J	9.100
Benzo(k)fluoranthene	mg/kg	NS	211	<0.046 UKJ	<0.050 UKJ	--	<0.047 UKJ	<0.049 UKJ	<0.048 UKJ	<0.180 UKJ	<0.050 UKJ	<0.390 UKJ	<1.200 UKJ	--	<0.084 UKJ	<0.240 UKJ	<4.000 UKJ	<4.000 UKR	<0.190 UKJ
Chrysene	mg/kg	0.1446	2,110	*1.800*	*0.160 J*	--	*1.400*	*1.800*	*0.350 J*	*9.400*	<0.033 U	*20.000*	*37.000*	--	*0.230 J*	*1.500 J*	*220.000*	*190.000*	*18.000*
Dibenz(a,h)anthracene	mg/kg	NS	2.11	0.400	<0.024 U	--	0.430	0.340 J	0.049 J	**2.700**	<0.024 U	**7.500**	**6.000 J**	--	0.058 J	0.160 J	**41.000**	**36.000 J**	**4.400**
Fluoranthene	mg/kg	88.8778	30,100	2.600 J	0.320 J	--	2.000	5.800	0.850	15.000	<0.045 U	17.000	*100.000*	--	0.380 J	6.000	*310.000*	*280.000*	20.000
Fluorene	mg/kg	14.8299	30,100	0.160 J	0.210 J	--	0.054 J	2.200	0.180 J	0.630 J	<0.022 U	1.000 J	6.500 J	--	<0.038 U	1.600 J	*15.000 J*	*20.000 J*	0.270 J
Indeno(1,2,3-cd)pyrene	mg/kg	NS	21.1	0.840	0.057 J	--	1.100	0.690	0.130 J	5.200	<0.027 U	15.000	21.000	--	0.110 J	0.610 J	**85.000**	**71.000 J**	8.700
Naphthalene	mg/kg	0.6582	24.1	0.110 J	0.320 J	--	0.310 J	*2.000*	*1.100*	<0.140 U	<0.038 U	0.460 J	*15.000*	--	0.076 J	*1.100 J*	*8.800 J*	*12.000 J*	0.210 J
Phenanthrene	mg/kg	NS	NS	1.100 J	0.360 J	--	0.920	1.100	0.310 J	7.400	<0.021 U	4.700	36.000	--	0.430 J	1.600 J	130.000	170.000 J	6.700
Pyrene	mg/kg	54.5455	22,600	1.800 B	<0.015 UJB	--	2.000	3.500	0.610	13.000	0.039 J	16.000 B	*91.000 B*	--	0.240 J	4.000	*240.000*	*220.000*	17.000
SVOCs																			
1,2,4-Trichlorobenzene	mg/kg	0.408	113	<0.0010 U	<0.00088 UJ	--	<0.00087 U	<0.00066 U	<0.00066 U	<0.00071 U	<0.00080 U	<0.0012 UJ	<0.0011 UJ	--	<0.00076 UJ	<0.00071 U	<0.0012 UJ	<0.0013 UJ	<0.0010 UJ
2,2-Oxybis(1-chloropropane)	mg/kg	NS	1,020	<0.026 U	<0.029 U	--	<0.027 U	<0.028 U	<0.028 U	<0.110 U	<0.028 U	<0.220 U	<0.680 U	--	<0.048 U	<0.140 U	<2.300 U	<2.300 U	<0.028 U
2,4-Dinitrotoluene	mg/kg	0.0001	7.37	<0.075 U	<0.082 U	--	<0.077 U	<0.081 U	<0.080 U	<0.300 U	<0.082 U	<0.650 U	<1.900 U	--	<0.140 U	<0.400 U	<6.600 U	<6.500 U	<0.320 U
2,6-Dinitrotoluene	mg/kg	0.0001	1.54	<0.032 U	<0.035 U	--	<0.033 U	<0.034 U	<0.034 U	<0.130 U	<0.035 U	<0.270 U	<0.820 U	--	<0.059 U	<0.170 U	<2.800 U	<2.800 U	<0.140 U
2-Chloronaphthalene	mg/kg	NS	60,300	<0.011 U	<0.012 U	--	<0.012 U	<0.012 U	<0.012 U	<0.046 U	<0.012 U	<0.098 U	<0.290 U	--	<0.021 U	<0.061 U	<1.000 U	<0.990 U	<0.049 U
2-Nitroaniline	mg/kg	NS	8,010	<0.057 U	<0.062 U	--	<0.059 U	<0.061 U	<0.060 U	<0.230 U	<0.062 U	<0.490 U	<1.500 U	--	<0.100 U	<0.310 U	<5.000 U	<5.000 U	<0.240 U
3,3-Dichlorobenzidine	mg/kg	NS	5.11	<0.100 U	<0.110 U	--	<0.110 U	<0.110 U	<0.110 U	<0.420 U	<0.110 U	<0.880 U	<2.600 U	--	<0.190 U	<0.550 U	<9.000 U	<8.900 U	<0.440 U
3-Nitroaniline	mg/kg	NS	NS	<0.083 U	<0.091 U	--	<0.085 U	<0.089 U	<0.088 U	<0.340 U	<0.090 U	<0.710 U	<2.100 U	--	<0.150 U	<0.450 U	<7.300 U	<7.200 U	<0.360 U
4-Bromodiphenyl ether	mg/kg	NS	26.9	<0.022 U	<0.024 U	--	<0.022 U	<0.023 U	<0.023 U	<0.088 U	<0.024 U	<0.190 U	<0.560 U	--	<0.040 U	<0.120 U	<1.900 U	<1.900 U	<0.092 U
4-Chloroaniline	mg/kg	NS	11.5	<0.093 U	<0.100 U	--	<0.096 U	<0.100 U	<0.099 U	<0.380 U	<0.100 U	<0.800 U	<2.400 U	--	<0.170 U	<0.500 U	<8.200 U	<8.100 U	<0.400 U
4-Chlorodiphenyl ether	mg/kg	NS	NS	<0.024 U	<0.026 U	--	<0.025 U	<0.026 U	<0.025 U	<0.097 U	<0.026 U	<0.210 U	<0.620 U	--	<0.044 U	<0.130 U	<2.100 U	<2.100 U	<0.100 U
4-Nitroaniline	mg/kg	NS	115	<0.083 U	<0.091 U	--	<0.085 U	<0.089 U	<0.088 U	<0.330 U	<0.090 U	<0.710 U	<2.100 U	--	<0.150 U	<0.440 U	<7.200 U	<7.200 U	<0.350 U
Acetophenone	mg/kg	NS	2,520	<0.023 U	<0.025 U	--	0.036 J	<0.025 U	<0.024 U	<0.092 U	<0.025 U	<0.200 U	<0.590 U	--	<0.042 U	<0.120 U	<2.000 U	<2.000 U	<0.097 U
Benzaldehyde	mg/kg	NS	818	<0.076 U	<0.084 U	--	<0.078 U	<0.082 U	<0.081 U	<0.310 U	<0.083 U	<0.660 U	<2.000 U	--	<0.140 U	<0.410 U	<6.700 U	<6.600 U	<0.330 U
Biphenyl	mg/kg	NS	288	<0.057 U	<0.062 U	--	<0.059 U	0.750	0.075 J	<0.230 U	<0.062 U	<0.490 U	<1.500 U	--	<0.100 U	<0.310 U	<5.000 U	<5.000 U	<0.240 U
Bis(2-Chloroethoxy)methane	mg/kg	NS	2,460	<0.026 U	<0.029 U	--	<0.027 U	<0.028 U	<0.028 U	<0.110 U	<0.028 U	<0.220 U	<0.680 U	--	<0.048 U	<0.140 U	<2.300 U	<2.300 U	<0.110 U
Bis(2-Chloroethyl)ether	mg/kg	NS	1.29	<0.019 U	<0.021 U	--	<0.019 U	<0.020 U	<0.020 U	<0.077 U	<0.021 U	<0.160 U	<0.490 U	--	<0.035 U	<0.100 U	<1.700 U	<1.600 U	<0.081 U
Bis(2-Ethylhexyl)phthalate	mg/kg	2.88	164	<0.052 U	<0.057 U	--	<0.054 U	<0.056 U	<0.056 U	0.570 J	0.095 J	<0.450 U	<1.400 U	--	<0.096 U	<0.280 U	<4.600 U	<4.600 U	<0.220 U
Butyl benzyl phthalate	mg/kg	NS	1,210	<0.049 U	<0.054 U	--	<0.050 U	<0.053 U	<0.052 U	<0.200 U	<0.053 U	<0.420 U	<1.300 U	--	<0.090 U	<0.260 U	<4.300 U	<4.300 U	<0.210 U
Caprolactam	mg/kg	NS	100,000	<0.120 U	<0.130 U	--	<0.120 U	<0.130 U	<0.130 U	<0.490 U	<0.130 U	<1.000 U	<3.100 U	--	<0.220 U	<0.650 U	<11.000 U	<10.000 U	<0.520 U
Carbazole	mg/kg	NS	NS	<0.041 UJB	<0.045 UJB	--	<0.042 U	0.150 J	<0.044 U	0.470 J	<0.045 U	1.000 JB	3.000 JB	--	<0.075 U	0.680 J	8.200 J	15.000 J	0.830 J
Dibenzofuran	mg/kg	NS	1,040	0.350 J	0.390 J	--	0.097 J	1.600	0.150 J	0.270 J	<0.025 U	3.100 J	11.000	--	<0.042 U	7.500	7.000 J	9.800 J	0.200 J
Diethyl phthalate	mg/kg	NS	100,000	<0.030 U	<0.032 U	--	<0.030 U	<0.032 U	<0.031 U	<0.120 U	<0.032 U	<0.250 U	<0.760 U	--	<0.054 U	<0.160 U	<2.600 U	<2.600 U	<0.130 U
Dimethyl phthalate	mg/kg	NS	7,390	<0.026 U	<0.029 U	--	<0.027 U	<0.028 U	<0.028 U	<0.110 U	<0.028 U	<0.220 U	<0.680 U	--	<0.048 U	<0.140 U	<2.300 U	<2.300 U	<0.110 U
Di-n-butyl phthalate	mg/kg	5.0333	82,100	<0.033 U	<0.036 U	--	<0.034 U	<0.036 U	<0.035 U	<0.130 U	<0.036 U	<0.280 U	<0.850 U	--	<0.061 U	<0.180 U	<2.900 U	<2.900 U	<0.140 U
Di-n-octyl phthalate	mg/kg	NS	8,210	<0.016 U	<0.018 U	--	<0.017 U	<0.018 U	<0.017 U	<0.066 U	<0.018 U	<0.140 U	<0.420 U	--	<0.030 U	<0.088 U	<1.400 U	<1.400 U	<0.070 U
Hexachlorobenzene	mg/kg	0.0252	1.15	<0.033 U	<0.036 U	--	<0.034 U	<0.036 U	<0.035 U	<0.130 U	<0.036 U	<0.280 U	<0.850 U	--	<0.061 U	<0.180 U	<2.900 U	<2.900 U	<0.140 U
Hexachlorobutadiene	mg/kg	NS	7.19	<0.00077 U	<0.00067 UJ	--	<0.00066 U	<0.00050 U	<0.00050 U	<0.00053 U	<0.00060 U	<0.00093 UJ	<0.00082 UJ	--	<0.00058 UJ	<0.00053 U	<0.00087 UJ	<0.00095 UJ	<0.00076 UJ
Hexachlorocyclopentadiene	mg/kg	NS	10.8	<0.057 U	<0.062 U	--	<0.059 U	<0.061 U	<0.060 U	<0.230 U	<0.062 U	<0.490 U	<1.500 U	--	<0.100 U	<0.310 U	<5.000 U	<5.000 U	<0.240 U
Hexachloroethane	mg/kg	NS	11.1	<0.024 U	<0.027 U	--	<0.025 U	<0.026 U	<0.026 U	<0.098 U	<0.026 U	<0.210 U	<0.630 U	--	<0.045 U	<0.130 U	<2.100 U	<2.100 U	<0.100 U
Isophorone	mg/kg	NS	2,420	<0.019 U	<0.021 U	--	<0.020 U	<0.021 U	<0.021 U	<0.078 U	<0.021 U	<0.170 U	<0.500 U	--	<0.036 U	<0.100 U	<1.700 U	<1.700 U	<0.083 U
Nitrobenzene	mg/kg	NS	32.4	<0.025 U	<0.027 U	--	<0.026 U	<0.027 U	<0.027 U	<0.100 U	<0.027 U	<0.220 U	<0.650 U	--	<0.046 U	<0.130 U	<2.200 U	<2.200 U	<0.110 U
N-nitrosodi-n-propylamine	mg/kg	NS	0.328	<0.035 U	<0.039 U	--	<0.036 U	<0.038 U	<0.037 U	<0.140 U	<0.038 U	<0.300 U	<0.910 U	--	<0.065 U	<0.190 U	<3.100 U	<3.100 U	<0.150 U
N-Nitrosodiphenylamine	mg/kg	0.0764	469	<0.024 U	<0.026 U	--	<0.025 U	<0.026 U	<0.025 U	<0.097 U	<0.026 U	<0.210 U	<0.620 U	--	<0.044 U	<0.130 U	<2.100 U	<2.100 U	<0.100 U
Pyridine	mg/kg	0.0069	1,170	<0.150 U	<0.160 U	--	<0.150 U	<0.160 U	<0.160 U	<0.600 U	<0.160 U	<1.300 U	<3.800 U	--	<0.270 U	<0.790 U	<13.000 U	<13.000 U	<0.630 U

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	CG-SB01			CG-SB02			CG-SB03		CG-SB04			CG-SB05		CG-SB06		
Sample / Duplicate:				CG-SB01	CG-SB01	CG-SB01	CG-SB02	CG-SB02	CG-SB02 DUP	CG-SB03	CG-SB03	CG-SB04	CG-SB04	CG-SB04	CG-SB05	CG-SB05	CG-SB06	CG-SB06 DUP	CG-SB06
Field Sample ID:				CG-SB01-SS-121208	CG-SB01-0507-121208	MSS-CG-SB01-0507-121208	CG-SB02-SS-120208	CG-SB02-0565-120208	CG-SBDUP003-120208	CG-SB03-SS-120208	CG-SB03-0809-120208	CG-SB04-SS-121208	CG-SB04-0406-121208	MSS-CG-SB04-0406-121208	CG-SB05-SS-120208	CG-SB05-0506-120208	CG-SB06-SS-120208	CG-SBDUP004-120208	CG-SB06-0405-120208
Sample Depth (feet):				1 - 1.5	5 - 7	5 - 7	0 - 0.5	5 - 6.5	5 - 6.5	0 - 0.5	8 - 9	0.5 - 1	4 - 6	4 - 6	0 - 0.5	5 - 6	0 - 0.5	0 - 0.5	4 - 5
Sample Date:				12/12/2008	12/12/2008	12/12/2008	12/02/2008	12/02/2008	12/02/2008	12/02/2008	12/02/2008	12/12/2008	12/12/2008	12/12/2008	12/02/2008	12/02/2008	12/02/2008	12/02/2008	12/02/2008
Phenols																			
2,4,5-Trichlorophenol	mg/kg	NS	82,100	<0.011 U	<0.012 U	--	<0.012 U	<0.012 U	<0.012 U	<0.046 U	<0.012 U	<0.098 U	<0.290 U	--	<0.021 U	<0.061 U	<1.000 U	<0.990 U	<0.049 U
2,4,6-Trichlorophenol	mg/kg	NS	209	<0.011 U	<0.012 U	--	<0.012 U	<0.012 U	<0.012 U	<0.046 U	<0.012 U	<0.098 U	<0.290 U	--	<0.021 U	<0.061 U	<1.000 U	<0.990 U	<0.049 U
2,4-Dichlorophenol	mg/kg	NS	2,460	<0.011 U	<0.012 U	--	<0.012 U	<0.012 U	<0.012 U	<0.046 U	<0.012 U	<0.098 U	<0.290 U	--	<0.021 U	<0.061 U	<1.000 U	<0.990 U	<0.049 U
2,4-Dimethylphenol	mg/kg	NS	16,400	<0.075 U	<0.082 U	--	<0.077 U	<0.081 U	<0.080 U	<0.300 U	<0.082 U	<0.650 U	<1.900 U	--	<0.140 U	<0.400 U	<6.600 U	<6.500 U	<0.320 U
2,4-Dinitrophenol	mg/kg	NS	1,640	<0.380 U	<0.420 U	--	<0.390 U	<0.410 U	<0.400 U	<1.500 U	<0.410 U	<3.300 U	<9.800 U	--	<0.700 U	<2.000 U	<33.000 U	<33.000 U	<1.600 U
2-Chlorophenol	mg/kg	NS	5,840	<0.024 U	<0.026 U	--	<0.025 U	<0.026 U	<0.025 U	<0.097 U	<0.026 U	<0.210 U	<0.620 U	--	<0.044 U	<0.130 U	<2.100 U	<2.100 U	<0.100 U
2-Methylphenol	mg/kg	NS	41,000	<0.015 U	<0.016 U	--	<0.015 U	<0.016 U	<0.016 U	<0.060 U	<0.016 U	<0.130 U	<0.380 U	--	<0.027 U	<0.079 U	<1.300 U	<1.300 U	<0.063 U
2-Nitrophenol	mg/kg	NS	NS	<0.011 U	<0.012 U	--	<0.012 U	<0.012 U	<0.012 U	<0.046 U	<0.012 U	<0.098 U	<0.290 U	--	<0.021 U	<0.061 U	<1.000 U	<0.990 U	<0.049 U
4-Chloro-3-methylphenol	mg/kg	NS	82,100	<0.075 U	<0.082 U	--	<0.077 U	<0.081 U	<0.080 U	<0.300 U	<0.082 U	<0.650 U	<1.900 U	--	<0.140 U	<0.400 U	<6.600 U	<6.500 U	<0.320 U
4-Methylphenol	mg/kg	NS	82,100	<0.038 U	<0.041 U	--	<0.039 U	<0.040 U	<0.040 U	<0.150 U	<0.041 U	<0.320 U	<0.970 U	--	<0.069 U	<0.200 U	<3.300 U	<3.300 U	<0.160 U
4-Nitrophenol	mg/kg	NS	NS	<0.110 U	<0.120 U	--	<0.110 U	<0.120 U	<0.120 U	<0.450 U	<0.120 U	<0.950 U	<2.900 U	--	<0.200 U	<0.590 U	<9.700 U	<9.600 U	<0.470 U
4,6-Dinitro-2-methylphenol	mg/kg	NS	65.7	<0.380 U	<0.410 U	--	<0.390 U	<0.400 U	<0.400 U	<1.500 U	<0.410 U	<3.200 U	<9.700 U	--	<0.690 U	<2.000 U	<33.000 U	<33.000 UJ	<1.600 U
Pentachlorophenol	mg/kg	0.0028	3.97	<0.380 U	<0.410 U	--	<0.390 U	<0.400 U	<0.400 U	<1.500 U	<0.410 U	<3.200 U	<9.700 U	--	<0.690 U	<2.000 U	<33.000 U	33.000 UR	<1.600 U
Phenol	mg/kg	2.2946	100,000	<0.021 U	<0.022 U	--	<0.021 U	<0.022 U	<0.022 U	<0.083 U	<0.022 U	<0.180 U	<0.530 U	--	<0.038 U	<0.110 U	<1.800 U	<1.800 U	<0.088 U
Metals																			
Aluminum, Total	mg/kg	600	100,000	*12,000*	*3,400*	--	*9,100*	*7,500*	*3,200*	*4,200*	*9,000*	*14,000*	*6,900*	--	*2,800*	*8,600*	*3,900*	*2,900*	*4,900*
Antimony, Total	mg/kg	0.542	467	0.090 JB	0.110 BJ-	--	*0.990 J-*	0.025 BJ-	*0.690 J-*	0.072 BJ-	0.078 BJ-	0.220 BJ-	0.470 J-	--	0.030 BJ-	0.027 BJ-	0.300 J-	0.410 J-	0.110 BJ-
Arsenic, Total [1]	mg/kg	0.584	8.3	***14.000 J-***	*5.200*	--	***9.600***	*5.200*	*4.800*	*3.500*	***8.700***	*4.700*	***9.600***	--	*1.300*	*4.500*	***11.000***	***14.000***	***12.000***
Barium, Total	mg/kg	164.8	100,000	*200.000*	39.000	--	*1,600 J*	51.000 J	45.000 J	72.000 J	110.000 J	100.000	*230.000*	--	27.000 J	67.000 J	82.000 J	72.000 J	89.000 J
Beryllium, Total	mg/kg	6.32	2,300	3.300	0.390	--	2.200	0.510	0.300	0.720	0.610	1.500	2.700	--	0.340	0.550	1.100	0.660	0.580
Cadmium, Total	mg/kg	0.752	985	*1.100*	0.330	--	*7.800*	0.440	0.420	*0.780*	0.570	0.700	*1.500*	--	0.200	0.450	*1.500*	*1.700*	0.380
Calcium, Total	mg/kg	NS	NS	54,000	92,000	--	58,000	24,000	120,000	82,000	20,000	66,000	27,000	--	120,000	70,000	18,000	14,000	35,000
Chromium, Hexavalent	mg/kg	NS	6.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium, Total [3]	mg/kg	360,000	NS	14.000 J-	9.100	--	100.000	17.000	10.000	16.000	11.000	7.000	11.000	--	5.000	18.000	18.000	17.000	7.500
Chromium, Trivalent	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt, Total	mg/kg	3.6073	347	*4.100 J-*	*4.000*	--	3.300	*7.400*	*5.000*	3.100	*5.900*	2.400	*6.900*	--	1.300	*7.200*	*4.600*	*4.400*	*4.200*
Copper, Total	mg/kg	91.6	46,700	37.000 J	25.000	--	*120.000*	21.000	33.000	58.000	33.000	69.000	*760.000*	--	54.000	21.000	55.000	56.000	28.000 J+
Iron, Total	mg/kg	NS	100,000	42,000	16,000	--	18,000	13,000	9,200	17,000	12,000	9,800	34,000	--	3,900	13,000	20,000	8,700	9,600
Lead, Total	mg/kg	27	800	*43.000*	*40.000*	--	***2,500***	*66.000*	*70.000*	*75.000*	*210.000*	*66.000*	*510.000*	--	10.000	*43.000*	*170.000*	*210.000*	*33.000 J+*
Magnesium, Total	mg/kg	NS	NS	13,000 J-	46,000	--	24,000	12,000	66,000	36,000	5,500	29,000	6,800	--	70,000	36,000	8,100	6,900	14,000 J-
Manganese, Total	mg/kg	39.1244	25,900	*860.000*	*500.000*	--	*790.000*	*410.000*	*600.000*	*590.000*	*170.000*	*470.000*	*210.000*	--	*370.000*	*460.000*	*230.000*	*190.000*	*180.000*
Mercury, Total	mg/kg	0.208	3.13	*0.650*	0.180	--	***3.800***	0.150	0.070	0.064	0.066	*1.600*	*0.370*	--	0.087	0.069	*2.100*	***3.400***	0.100 J
Nickel, Total	mg/kg	13.0612	22,500	11.000 J-	11.000	--	8.100	*19.000*	12.000	*14.000*	13.000	6.900	*29.000*	--	7.300	*19.000*	*22.000*	*18.000*	10.000
Potassium, Total	mg/kg	NS	NS	990 B	710	--	970	1,200	860	670	1,400	1,700	720	--	470	2,100	620	530	1,000
Selenium, Total	mg/kg	0.52	5,840	*2.200*	0.480 B	--	*1.700*	*0.700*	*0.570 B*	*0.760*	*2.300*	*1.300*	*3.500*	--	0.290 B	*0.600 B*	*2.600*	*3.500*	*1.700*
Silver, Total	mg/kg	0.8491	5,840	0.110	0.068 B	--	0.190	0.055 B	0.060 B	0.079 B	0.270	0.086 B	0.300	--	0.034 B	0.070 B	0.080 B	0.087 B	0.054 B
Sodium, Total	mg/kg	NS	NS	430 B	300 B	--	390 B	130 B	310 B	200 B	440 B	580 B	510 B	--	210 B	250 B	230 B	150 B	260 B
Thallium, Total	mg/kg	0.284	11.7	0.085 B	0.095 B	--	0.110 B	0.230	0.130	0.081 B	0.160	0.074 B	0.170	--	0.043 B	0.200	*0.720*	*1.000*	*0.930*
Vanadium, Total	mg/kg	60	5,840	30.000 J-	19.000	--	13.000	26.000	23.000	12.000	21.000	12.000	25.000	--	11.000	26.000	13.000	11.000	14.000
Zinc, Total	mg/kg	NS	100,000	66.000 J-	59.000	--	2,300	98.000	73.000	100.000	180.000	54.000	770.000	--	13.000	95.000	110.000	120.000	49.000
Inorganic - Cyanide																			
Cyanide, Amenable	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Reactive	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Total	mg/kg	4.04	195	0.55 B	*21*	--	*39 q*	0.98	0.61	1.5	0.13 B	*22*	*9*	--	0.69	*8.5*	*18*	*14*	1.1 J+
Other																			
Sulfide, Reactive	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organic Matter	%	NS	NS	--	--	9.2	--	--	--	--	--	--	--	4	--	--	--	--	--
Percent Moisture	%	NS	NS	12	20	17.6	15	18	17	13	19	18	32	23.2	4.6	18	20	19	18

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	CG-SB07			CG-SB08		CG-SB09A	CG-SB09B	CG-SB10		CG-SB11		CG-SB12		CG-SB13			CG-SB14	
Sample / Duplicate:				CG-SB07	CG-SB07	CG-SB07	CG-SB08	CG-SB08	CG-SB09A	CG-SB09B	CG-SB10	CG-SB10	CG-SB11	CG-SB11	CG-SB12	CG-SB12	CG-SB13	CG-SB13 DUP	CG-SB13	CG-SB14	CG-SB14
Field Sample ID:				CG-SB07-SS-121108	CG-SB07-0405-121108	MSS-CG-SB07-0405-121108	CG-SB08-SS-120208	CG-SB08-0405-120208	CG-SB09A-SS-101408	CG-SB09B-1213-101408	CG-SB10-SS-112008	CG-SB10-0809-112008	CG-SB11-SS-112008	CG-SB11-0506-112008	CG-SB12-SS-112008	CG-SB12-0405-112008	CG-SB13-SS-120208	CG-SBDUP002-120208	CG-SB13-0405-120208	CG-SB14-SS-120108	CG-SB14-0506-120108
Sample Depth (feet):				1 - 1.5	4 - 5	4 - 5	0 - 0.5	4 - 5	0 - 0.5	12 - 13	0 - 0.5	8 - 9	0 - 0.5	5 - 6	0 - 0.5	4 - 5	0 - 0.5	0 - 0.5	4 - 5	0 - 0.5	5 - 6
Sample Date:				12/11/2008	12/11/2008	12/11/2008	12/02/2008	12/02/2008	10/14/2008	10/14/2008	11/20/2008	11/20/2008	11/20/2008	11/20/2008	11/20/2008	11/20/2008	12/02/2008	12/02/2008	12/02/2008	12/01/2008	12/01/2008
VOCs																					
1,1,1-Trichloroethane	mg/kg	0.1402	640	<0.00057 U	<3.700 U	--	<0.0010 U	<0.0011 U	<0.0011 U	<0.110 U	<0.00067 U	<0.00059 U	<0.00060 U	<0.00086 U	<0.00058 U	<0.00055 U	<0.0012 U	<0.00058 U	<0.0010 UJ	<0.00096 U	<0.00075 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0002	3.6	<0.00075 U	<5.400 U	--	<0.0012 UJ	<0.0013 U	<0.0013 U	<0.160 U	<0.00079 UJ	<0.00069 U	<0.00070 U	<0.0010 U	<0.00068 U	<0.00065 U	<0.0014 UJ	<0.00068 UJ	<0.0012 UJ	<0.0011 U	<0.00088 U
1,1,2-Trichloroethane	mg/kg	0.0032	7.01	<0.00097 U	<5.000 U	--	<0.0017 UJ	<0.0018 U	<0.0019 U	<0.150 U	<0.0011 U	<0.0010 U	<0.0010 U	<0.0015 U	<0.00098 U	<0.00093 U	<0.0020 U	<0.00097 UJ	<0.0017 UJ	<0.0016 U	<0.0013 U
1,1-Dichloroethane	mg/kg	0.4834	22.2	<0.00023 U	<9.300 U	--	<0.00041 U	<0.00044 U	<0.00045 U	<0.280 U	<0.00027 U	<0.00024 U	<0.00024 U	<0.00035 U	<0.00023 U	<0.00022 U	<0.00047 U	<0.00023 U	<0.00041 UJ	<0.00039 U	<0.00030 U
1,1-Dichloroethene	mg/kg	0.005	1,190	<0.00065 U	<9.300 U	--	<0.0012 U	<0.0012 U	<0.0013 U	<0.280 U	<0.00076 U	<0.00067 U	<0.00068 U	<0.00098 U	<0.00066 U	<0.00062 U	<0.0013 U	<0.00065 U	<0.0011 UJ	<0.0011 U	0.0017 J
1,2-Dibromo-3-chloropropane	mg/kg	0.0002	0.092	<0.00066 U	<16.000 U	--	<0.0012 UJ	<0.0013 U	<0.0013 U	<0.480 U	<0.00077 UJ	<0.00068 U	<0.00069 U	<0.00099 U	<0.00067 U	<0.00063 U	<0.0013 UJ	<0.00066 UJ	<0.0012 UJ	<0.0011 U	<0.00086 U
1,2-Dibromoethane	mg/kg	0.0000282	0.221	<0.00057 U	<4.600 U	--	<0.0010 UJ	<0.0011 U	<0.0011 U	<0.140 U	<0.00067 U	<0.00059 U	<0.00060 U	<0.00086 U	<0.00058 U	<0.00055 U	<0.0012 UJ	<0.00058 UJ	<0.0010 UJ	<0.00096 U	<0.00075 U
1,2-Dichlorobenzene	mg/kg	1.168	376	<0.00050 U	<17.000 U	--	<0.00088 UJ	<0.00094 U	<0.00096 U	<0.530 U	<0.00058 UJ	<0.00051 U	<0.00052 U	<0.00075 U	<0.00050 U	<0.00048 U	<0.0010 UJ	<0.00050 UJ	<0.00088 UJ	<0.00083 U	<0.00065 U
1,2-Dichloroethane	mg/kg	0.0028	2.87	<0.00077 U	<4.600 U	--	<0.0014 U	<0.0015 U	<0.0015 U	<0.140 U	<0.00090 U	<0.00080 U	<0.00081 U	<0.0012 U	<0.00078 U	<0.00074 U	<0.0016 U	<0.00077 U	<0.0014 UJ	<0.0013 U	<0.0010 U
1,2-Dichloropropane	mg/kg	0.0033	1.78	<0.00061 U	<8.600 U	--	<0.0011 U	<0.0012 U	<0.0012 U	<0.260 U	<0.00071 U	<0.00063 U	<0.00063 U	<0.00091 U	<0.00062 U	<0.00058 U	<0.0012 U	<0.00061 U	<0.0011 UJ	<0.0010 U	<0.00079 U
1,3-Dichlorobenzene	mg/kg	1.1528	297	<0.00053 U	<7.500 U	--	<0.00094 UJ	<0.0010 U	<0.0010 U	<0.230 U	<0.00062 UJ	<0.00055 U	<0.00055 U	<0.00080 U	<0.00054 U	<0.00051 U	<0.0011 UJ	<0.00053 UJ	<0.00093 UJ	<0.00089 U	<0.00069 U
1,4-Dichlorobenzene	mg/kg	0.144	16.4	<0.00086 U	<4.600 U	--	<0.0015 UJ	<0.0016 U	<0.0017 U	<0.140 U	<0.0010 UJ	<0.00089 U	<0.00090 U	<0.0013 U	<0.00087 U	<0.00082 U	<0.0017 UJ	<0.00086 UJ	<0.0015 UJ	<0.0014 U	<0.0011 U
2-Butanone (MEK)	mg/kg	1.6661	28,400	<0.0020 U	<55.000 U	--	<0.0036 U	<0.0038 U	<0.0039 U	<1.700 U	<0.0024 U	0.0023 J	<0.0021 U	<0.0030 U	<0.0020 U	0.0054 J	<0.0041 U	<0.0020 U	<0.0036 UJ	<0.0034 U	<0.0026 U
2-Hexanone	mg/kg	NS	1,760	<0.0054 U	<40.000 U	--	<0.0096 U	<0.010 U	<0.010 U	<1.200 U	<0.0063 U	<0.0056 U	<0.0056 U	<0.0081 U	<0.0055 U	<0.0052 U	<0.011 U	<0.0054 U	<0.0095 UJ	<0.0091 U	<0.0070 U
4-Methyl-2-Pentanone (MIBK)	mg/kg	0.2252	3,360	<0.0048 U	<42.000 U	--	<0.0085 UJ	<0.0091 U	<0.0093 U	<1.300 U	<0.0056 U	<0.0050 U	<0.0050 U	<0.0072 U	<0.0049 U	<0.0046 U	<0.0097 U	<0.0048 UJ	<0.0085 UJ	<0.0081 U	<0.0063 U
Acetone	mg/kg	3.6766	100,000	<0.0059 U	<74.000 U	--	<0.011 U	<0.011 U	<0.012 U	<2.300 U	<0.0069 U	0.015 J	<0.0062 U	0.026 J	<0.0060 U	0.029	<0.012 U	<0.0060 U	<0.010 UJ	<0.010 U	<0.0077 U
Benzene	mg/kg	0.0051	7.07	0.0017 J	<8.300 U	--	<0.00092 U	<0.00099 U	<0.0010 U	*2.100*	0.00066 J	0.0016 J	<0.00054 U	*0.060*	<0.00053 U	*0.017*	0.0012 J	0.001 J	*0.0069 J*	<0.00087 U	<0.00067 U
Bromodichloromethane	mg/kg	0.0003	1.83	<0.00024 U	<7.300 U	--	<0.00043 UJ	<0.00046 U	<0.00047 U	<0.220 U	<0.00028 U	<0.00025 U	<0.00025 U	<0.00036 U	<0.00025 U	<0.00023 U	<0.00049 U	<0.00024 UJ	<0.00043 UJ	<0.00041 U	<0.00032 U
Bromoform	mg/kg	0.0023	113	<0.00025 U	<5.400 U	--	<0.00045 UJ	<0.00048 U	<0.00049 U	<0.160 U	<0.00030 U	<0.00026 U	<0.00026 U	<0.00038 U	<0.00026 U	<0.00024 U	<0.00051 UJ	<0.00025 UJ	<0.00045 UJ	<0.00043 U	<0.00033 U
Bromomethane	mg/kg	0.0051	43	<0.00055 U	<8.100 U	--	<0.00098 U	<0.0010 U	<0.0011 U	<0.250 U	<0.00065 U	<0.00057 U	<0.00058 U	<0.00083 U	<0.00056 U	<0.00053 U	<0.0011 U	<0.00055 U	<0.00097 UJ	<0.00093 U	<0.00072 U
Carbon Disulfide	mg/kg	0.5919	738	<0.00046 U	<12.000 U	--	<0.00082 U	<0.00088 U	<0.00090 U	<0.360 U	<0.00054 U	0.0013 J	<0.00048 U	0.0019 J	<0.00047 U	0.0032 J	<0.00094 U	<0.00046 U	<0.00082 UJ	<0.00078 U	0.00078 J
Carbon Tetrachloride	mg/kg	0.0039	4.03	<0.00070 U	<3.100 U	--	<0.0012 U	<0.0013 U	<0.0013 U	<0.096 U	<0.00081 U	<0.00072 U	<0.00073 U	<0.0010 U	<0.00070 U	<0.00067 U	<0.0014 U	<0.00070 U	<0.0012 UJ	<0.0012 U	<0.00090 U
Chlorobenzene	mg/kg	0.1358	761	<0.00060 U	<5.600 U	--	<0.0011 UJ	<0.0011 U	<0.0012 U	<0.170 U	<0.00070 U	<0.00061 U	<0.00062 U	<0.00090 U	<0.00060 U	<0.00057 U	<0.0012 UJ	<0.00060 UJ	<0.0011 UJ	<0.0010 U	<0.00077 U
Chloroethane	mg/kg	0.2266	2,120	<0.00098 U	<8.100 U	--	<0.0017 U	<0.0019 U	<0.0019 U	<0.250 U	<0.0011 U	<0.0010 U	<0.0010 U	<0.0015 U	<0.0010 U	<0.00094 U	<0.0020 U	<0.00099 U	<0.0017 UJ	<0.0017 U	<0.0013 U
Chloroform	mg/kg	0.0033	1.98	<0.00032 U	<8.500 U	--	<0.00057 U	<0.00061 U	<0.00062 U	<0.260 U	<0.00037 U	<0.00033 U	<0.00033 U	<0.00048 U	<0.00032 U	<0.00031 U	<0.00065 U	<0.00032 U	<0.00056 UJ	<0.00054 U	<0.00042 U
Chloromethane	mg/kg	0.0155	669	<0.00085 U	*11.000 J*	--	<0.0015 U	<0.0016 U	<0.0016 U	<0.280 U	<0.00099 U	<0.00088 U	<0.00089 U	<0.0013 U	<0.00086 U	<0.00081 U	<0.0017 U	<0.00085 U	<0.0015 UJ	<0.0014 U	<0.0011 U
cis-1,2-Dichloroethene	mg/kg	0.0412	2,340	<0.00062 U	<4.100 U	--	<0.0011 U	<0.0012 U	<0.0012 U	<0.120 U	<0.00072 U	<0.00064 U	<0.00064 U	<0.00093 U	<0.00063 U	<0.00059 U	<0.0012 U	<0.00062 U	<0.0011 UJ	<0.0010 U	<0.00080 U
cis-1,3-Dichloropropene	mg/kg	NS	1,210	<0.0014 U	<5.000 U	--	<0.0025 UJ	<0.0027 U	<0.0028 U	<0.150 U	<0.0017 U	<0.0015 U	<0.0015 U	<0.0021 U	<0.0014 U	<0.0014 U	<0.0029 U	<0.0014 UJ	<0.0025 UJ	<0.0024 U	<0.0019 U
Cyclohexane	mg/kg	NS	117	<0.00044 U	<5.200 U	--	<0.00078 U	<0.00084 U	0.0013 J	<0.160 U	0.0011 J	<0.00045 U	0.00047 J	0.0036 J	<0.00045 U	<0.00042 U	0.0041 J	0.0014 J	0.015 J	<0.00074 U	<0.00057 U
Dibromochloromethane	mg/kg	0.032	38.9	<0.00063 U	<6.100 U	--	<0.0011 UJ	<0.0012 U	<0.0012 U	<0.190 U	<0.00074 U	<0.00065 U	<0.00066 U	<0.00095 U	<0.00064 U	<0.00060 U	<0.0013 UJ	<0.00063 UJ	<0.0011 UJ	<0.0011 U	<0.00082 U
Dichloromethane	mg/kg	0.0026	1,150	<0.00083 U	*74.000*	--	<0.0015 U	<0.0016 U	<0.0016 U	<0.390 U	<0.00097 U	<0.00085 U	<0.00086 U	<0.0012 U	<0.00084 U	<0.00079 U	<0.0017 U	<0.00083 U	<0.0015 UJ	<0.0014 U	<0.0011 U
Ethylbenzene	mg/kg	1.57	35.4	<0.00074 U	*7.600 J*	--	<0.0013 UJ	<0.0014 U	<0.0014 U	1.200 J	<0.00087 U	<0.00076 U	<0.00077 U	0.0068 J	<0.00075 U	0.047	<0.0015 UJ	<0.00074 UJ	<0.0013 UJ	<0.0012 U	<0.00096 U
Freon 113	mg/kg	NS	910	<0.00050 U	<12.000 U	--	<0.00088 U	<0.00094 U	<0.00096 U	<0.370 U	<0.00058 U	<0.00051 U	<0.00052 U	<0.00075 U	<0.00050 U	<0.00048 U	<0.0010 U	<0.00050 U	<0.00088 UJ	<0.00083 U	<0.00065 U
Freon 12	mg/kg	3.0863	530	<0.00057 U	<4.100 U	--	<0.0010 U	<0.0011 U	<0.0011 U	<0.120 U	<0.00067 U	<0.00059 U	<0.00060 U	<0.00086 U	<0.00058 U	<0.00055 U	<0.0012 U	<0.00058 U	<0.0010 UJ	<0.00096 U	<0.00075 U
Isopropylbenzene	mg/kg	NS	268	<0.00065 U	<5.400 U	--	<0.0012 UJ	<0.0012 U	<0.0013 U	0.220 J	<0.00076 UJ	<0.00067 U	<0.00068 U	0.0067 J	<0.00066 U	<0.00062 U	<0.0013 UJ	<0.00065 UJ	<0.0011 UJ	<0.0011 U	<0.00085 U
Methyl acetate	mg/kg	NS	29,000	<0.0030 U	<44.000 U	--	<0.0054 U	<0.0058 U	<0.0059 U	<1.400 U	<0.0036 U	<0.0031 U	<0.0032 U	<0.0046 U	<0.0031 U	<0.0029 U	<0.0061 U	<0.0030 U	<0.0054 UJ	<0.0051 U	<0.0039 U
Methylcyclohexane	mg/kg	NS	67.6	<0.00046 U	<7.800 U	--	<0.00082 U	<0.00088 U	0.00099 J	<0.240 U	0.0012 J	<0.00048 U	0.0005 J	0.011	<0.00047 U	<0.00044 U	0.0049 J	0.0021 J	0.014 J	<0.00078 U	<0.00060 U
Methyl-tert-butyl-ether	mg/kg	0.027	282	<0.00038 U	<9.300 U	--	<0.00067 U	<0.00071 U	<0.00073 U	<0.280 U	<0.00044 U	<0.00039 U	<0.00039 U	<0.00056 U	<0.00038 U	<0.00036 U	<0.00076 U	<0.00038 U	<0.00066 UJ	<0.00063 U	<0.00049 U
Styrene	mg/kg	0.22	867	<0.00070 U	<4.800 U	--	<0.0012 UJ	<0.0013 U	<0.0013 U	*4.300*	<0.00081 U	<0.00072 U	<0.00073 U	<0.0010 U	<0.00070 U	<0.00067 U	<0.0014 UJ	<0.00070 UJ	<0.0012 UJ	<0.0012 U	<0.00090 U
Tetrachloroethene	mg/kg	0.0045	145	<0.00065 U	<5.000 U	--	<0.0012 UJ	<0.0012 U	<0.0013 U	<0.150 U	<0.00076 U	<0.00067 U	<0.00068 U	<0.00098 U	<0.00066 U	<0.00062 U	<0.0013 UJ	<0.00065 UJ	<0.0011 UJ	<0.0011 U	<0.00085 U
Toluene	mg/kg	1.1072	818	0.0014 J	*8.900 J*	--	0.0015 J	<0.0014 U	<0.0015 U	*6.800*	0.0014 J	<0.00078 U	<0.00079 U	0.0045 J	0.001 J	0.074	0.0064 J	0.003 J	0.034 J	<0.0013 U	<0.00099 U
trans-1,2-Dichloroethene	mg/kg	0.0626	1,850	<0.00043 U	<8.300 U	--	<0.00076 U	<0.00082 U	<0.00084 U	<0.250 U	<0.00050 U	<0.00044 U	<0.00045 U	<0.00065 U	<0.00044 U	<0.00041 U	<0.00087 U	<0.00043 U	<0.00076 UJ	<0.00072 U	<0.00056 U
trans-1,3-Dichloropropene	mg/kg	NS	1,510	<0.00074 U	<7.700 U	--	<0.0013 UJ	<0.0014 U	<0.0014 U	<0.230 U	<0.00087 U	<0.00076 U	<0.00077 U	<0.0011 U	<0.00075 U	<0.00071 U	<0.0015 U	<0.00074 UJ	<0.0013 UJ	<0.0012 U	<0.00096 U
Trichloroethene	mg/kg	0.0036	8.41	<0.00025 U	<4.300 U	--	<0.00045 U	<0.00048 U	<0.00049 U	<0.130 U	<0.00030 U	<0.00026 U	<0.00026 U	<0.00038 U	<0.00026 U	<0.00024 U	<0.00051 U	<0.00025 U	<0.00045 UJ	<0.00043 U	<0.00033 U
Trichlorofluoromethane	mg/kg	4.4775	1,230	<0.0011 U	<9.300 U	--	<0.0020 U	<0.0022 U	<0.0022 U	<0.280 U	<0.0013 U	<0.0012 U	<0.0012 U	<0.0017 U	<0.0012 U	<0.0011 U	<0.0023 U	<0.0012 U	<0.0020 UJ	<0.0019 U	<0.0015 U
Vinyl Chloride	mg/kg	0.0001	2.08	<0.0015 U	<5.000 U	--	<0.0026 U	<0.0028 U	<0.0029 U	<0.150 U	<0.0017 U	<0.0015 U	<0.0015 U	<0.0022 U	<0.0015 U	<0.0014 U	<0.0030 U	<0.0015 U	<0.0026 UJ	<0.0025 U	<0.0019 U
Xylenes, Total	mg/kg	3.96	260	0.0012 J	*17.000 J*	--	<0.0012 UJ	<0.0013 U	<0.0013 U	*40.000*	<0.00079 U	<0.00069 U	<0.00070 U	0.0083	<0.00068 U	0.330	<0.0014 UJ	0.0011 J	0.010 J	<0.0011 U	<0.00088 U
PCBs																					
PCB, Total [4]	mg/kg	0.0094	0.967	--	--	--	*0.098 J*	<0.0037 U	--	--	--	--	--	--	--	--	*0.091 J*	<0.0034 UJ	<0.0033 UJ	*0.043*	<0.0037 U
PCB-1016	mg/kg	NS	28	--	--	--	<0.0064 UJ	<0.0072 U	--	--	--	--	--	--	--	--	<0.0071 UJ	<0.0065 UJ	<0.0063 UJ	<0.0063 U	<0.0072 U
PCB-1221	mg/kg	NS	0.883	--	--	--	<0.020 UJ	<0.022 U	--	--	--	--	--	--	--	--	<0.022 UJ	<0.020 UJ	<0.019 UJ	<0.019 U	<0.022 U
PCB-1232	mg/kg	NS	0.792	--	--	--	<0.0064 UJ	<0.0072 U	--	--	--	--	--	--	--	--	<0.0071 UJ	<0.0065 UJ	<0.0063 UJ	<0.0063 U	<0.0072 U
PCB-1242	mg/kg	NS	0.972	--	--	--	<0.011 UJ	<0.013 U	--	--	--	--	--	--	--	--	<0.013 UJ	<0.012 UJ	<0.011 UJ	<0.011 U	<0.013 U
PCB-1248	mg/kg	NS	0.975	--	--	--	<0.0070 UJ	<0.0079 U	--	--	--	--	--	--	--	--	<0.0078 UJ	<0.0071 UJ	<0.0070 UJ	<0.0069 U	<0.0079 U
PCB-1254	mg/kg	NS	0.988	--	--	--	<0.0069 UJ	<0.0078 U	--	--	--	--	--	--	--	--	<0.0077 UJ	<0.0070 UJ	<0.0068 UJ	<0.0068 U	<0.0078 U
PCB-1260	mg/kg	NS	1	--	--	--	0.098 J	<0.0037 U	--	--	--	--	--	--	--	--	0.091 J	<0.0034 UJ	<0.0033 UJ	0.043	<0.0037 U

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	CG-SB07			CG-SB08		CG-SB09A	CG-SB09B	CG-SB10		CG-SB11		CG-SB12		CG-SB13			CG-SB14	
Sample / Duplicate:				CG-SB07	CG-SB07	CG-SB07	CG-SB08	CG-SB08	CG-SB09A	CG-SB09B	CG-SB10	CG-SB10	CG-SB11	CG-SB11	CG-SB12	CG-SB12	CG-SB13	CG-SB13 DUP	CG-SB13	CG-SB14	CG-SB14
Field Sample ID:				CG-SB07-SS-121108	CG-SB07-0405-121108	MSS-CG-SB07-0405-121108	CG-SB08-SS-120208	CG-SB08-0405-120208	CG-SB09A-SS-101408	CG-SB09B-1213-101408	CG-SB10-SS-112008	CG-SB10-0809-112008	CG-SB11-SS-112008	CG-SB11-0506-112008	CG-SB12-SS-112008	CG-SB12-0405-112008	CG-SB13-SS-120208	CG-SBDUP002-120208	CG-SB13-0405-120208	CG-SB14-SS-120108	CG-SB14-0506-120108
Sample Depth (feet):				1 - 1.5	4 - 5	4 - 5	0 - 0.5	4 - 5	0 - 0.5	12 - 13	0 - 0.5	8 - 9	0 - 0.5	5 - 6	0 - 0.5	4 - 5	0 - 0.5	0 - 0.5	4 - 5	0 - 0.5	5 - 6
Sample Date:				12/11/2008	12/11/2008	12/11/2008	12/02/2008	12/02/2008	10/14/2008	10/14/2008	11/20/2008	11/20/2008	11/20/2008	11/20/2008	11/20/2008	11/20/2008	12/02/2008	12/02/2008	12/02/2008	12/01/2008	12/01/2008
PAHs																					
2-Methylnaphthalene	mg/kg	NS	3,010	24.000 J	330.000	--	0.160 J	0.032 J	19.000 J	510.000	1.800 J	<0.022 U	0.470 J	2.200 J	0.740 J	63.000 J	<3.200 U	<2.900 U	0.060 J	0.170 J	0.060 J
Acenaphthene	mg/kg	NS	45,200	4.400 J	330.000	--	0.025 J	0.015 J	3.100 J	23.000 J	0.210 J	<0.012 U	0.058 J	13.000	0.230 J	110.000	58.000	62.000	0.290 J	0.055 J	0.018 J
Acenaphthylene	mg/kg	NS	NS	29.000 J	44.000 J	--	0.100 J	<0.024 U	40.000 J	240.000	2.000 J	<0.020 U	0.580 J	<0.440 U	1.500	97.000	<2.800 U	4.400 J	<0.042 U	0.045 J	<0.024 U
Anthracene	mg/kg	196.9492	100,000	44.000	*340.000*	--	0.260 J	0.150 J	94.000	*280.000*	3.700	<0.020 U	1.500	3.600 J	3.900	*340.000*	88.000	120.000	0.970	0.220 J	0.035 J
Benzo(a)anthracene	mg/kg	NS	20.8	**79.000**	**270.000**	--	1.200	1.300	**230.000**	**190.000**	14.000	0.036 J	6.900	1.500 J	11.000	**280.000**	**88.000**	**96.000**	5.300	0.690	0.190 J
Benzo(a)pyrene	mg/kg	0.47	2.11	***55.000***	***200.000***	--	*0.910*	*1.300*	***190.000***	***130.000 J***	***11.000***	0.028 J	***5.300***	*1.100 J*	***10.000***	***200.000***	***43.000 J***	***56.000***	***4.600***	*0.530*	0.190 J
Benzo(b)fluoranthene	mg/kg	0.4793	21.1	***90.000 JK***	***300.000 JK***	--	*2.500 JK*	*2.300 JK*	***340.000 JK***	***200.000 JK***	*21.000 JK*	0.049 JK	*9.400 JK*	*1.700 JK*	*16.000 JK*	***300.000 JK***	***99.000 JK***	***120.000 JK***	*8.600 JK*	*1.100 JK*	0.380 JK
Benzo(g,h,i)perylene	mg/kg	NS	NS	30.000 J	110.000 J	--	0.820	1.100	130.000	67.000 J	11.000	0.019 J	4.000	0.870 J	7.100	120.000	24.000 J	29.000 J	3.000	0.510	0.160 J
Benzo(k)fluoranthene	mg/kg	NS	211	<3.900 UKJ	<19.000 UKJ	--	<0.050 UKJ	<0.056 UKJ	<5.000 UKJ	<20.000 UKJ	<0.390 UKJ	<0.046 UKJ	<0.086 UKJ	<1.000 UKJ	<0.170 UKJ	<9.400 UKJ	<6.700 UKJ	<6.100 UKJ	<0.099 UKJ	<0.049 UKJ	<0.056 UKJ
Chrysene	mg/kg	0.1446	2,110	*59.000*	*220.000*	--	*1.700*	*1.300*	*250.000*	*190.000*	*18.000*	0.037 J	*8.000*	*1.700 J*	*12.000*	*250.000*	*84.000*	*110.000*	*5.800*	*0.940*	*0.240 J*
Dibenz(a,h)anthracene	mg/kg	NS	2.11	**9.400 J**	**31.000 J**	--	0.350 J	0.480	**46.000**	**18.000 J**	**3.900**	<0.022 U	1.700	<0.490 U	**2.700**	**43.000 J**	**13.000 J**	**14.000 J**	1.500	0.200 J	0.110 J
Fluoranthene	mg/kg	88.8778	30,100	*210.000*	*760.000*	--	1.500	1.100	*390.000*	*480.000*	21.000	0.048 J	9.000	7.300 J	15.000	*750.000*	*230.000*	*260.000*	9.300	1.300	0.260 J
Fluorene	mg/kg	14.8299	30,100	*61.000*	*390.000*	--	0.059 J	0.027 J	*25.000 J*	*280.000*	0.980 J	<0.021 U	0.260 J	7.400 J	1.200 J	*320.000*	*44.000 J*	*49.000 J*	0.250 J	0.076 J	<0.025 U
Indeno(1,2,3-cd)pyrene	mg/kg	NS	21.1	**29.000 J**	**99.000 J**	--	0.800	0.980	**120.000**	**62.000 J**	9.600	<0.026 U	3.900	0.640 J	6.700	**100.000**	**26.000 J**	**33.000 J**	2.900	0.410	0.130 J
Naphthalene	mg/kg	0.6582	24.1	***46.000***	***1,500***	--	0.200 J	*0.930*	***30.000 J***	***2,600***	*3.200*	0.047 J	0.640 J	***99.000***	*2.100*	***940.000***	<5.200 U	<4.700 U	<0.077 U	0.220 J	<0.044 U
Phenanthrene	mg/kg	NS	NS	270.000	1,200	--	0.770	0.610	180.000	770.000	10.000	0.026 J	4.000	18.000	7.500	1,100	360.000	370.000	4.200	0.870	0.240 J
Pyrene	mg/kg	54.5455	22,600	*150.000*	*560.000*	--	0.930	0.930	*320.000*	*370.000*	15.000	0.050 J	6.800	5.400 J	13.000	*510.000*	*150.000*	*170.000*	7.200	0.870	0.240 J
SVOCs																					
1,2,4-Trichlorobenzene	mg/kg	0.408	113	0.0009 J	<8.700 U	--	<0.0014 UJ	<0.0015 U	<0.0016 U	0.270 J	<0.00094 UJ	<0.00083 U	<0.00084 U	<0.0012 U	<0.00082 U	<0.00077 U	<0.0016 UJ	<0.00081 UJ	<0.0014 UJ	<0.0014 U	<0.0010 U
2,2-Oxybis(1-chloropropane)	mg/kg	NS	1,020	<2.300 U	<11.000 U	--	<0.029 U	<0.032 U	<2.800 U	<11.000 U	<0.220 U	<0.027 U	<0.049 U	<0.600 U	<0.099 U	<5.400 U	<3.800 U	<3.500 U	<0.057 U	<0.028 U	<0.032 U
2,4-Dinitrotoluene	mg/kg	0.0001	7.37	<6.500 U	<31.000 U	--	<0.083 U	<0.093 U	<8.200 U	<33.000 U	<0.640 U	<0.077 U	<0.140 U	<1.700 U	<0.280 U	<16.000 U	<11.000 U	<10.000 U	<0.160 U	<0.082 U	<0.093 U
2,6-Dinitrotoluene	mg/kg	0.0001	1.54	<2.700 U	<13.000 U	--	<0.035 U	<0.039 U	<3.500 U	<14.000 U	<0.270 U	<0.032 U	<0.060 U	<0.730 U	<0.120 U	<6.600 U	<4.700 U	<4.300 U	<0.069 U	<0.035 U	<0.039 U
2-Chloronaphthalene	mg/kg	NS	60,300	<0.980 U	<4.700 U	--	<0.013 U	<0.014 U	<1.200 U	<5.000 U	<0.097 U	<0.012 U	<0.022 U	<0.260 U	<0.043 U	<2.400 U	<1.700 U	<1.500 U	<0.025 U	<0.012 U	<0.014 U
2-Nitroaniline	mg/kg	NS	8,010	<4.900 U	<23.000 U	--	<0.063 U	<0.070 U	<6.200 U	<25.000 U	<0.490 U	<0.058 U	<0.110 U	<1.300 U	<0.220 U	<12.000 U	<8.400 U	<7.600 U	<0.120 U	<0.062 U	<0.070 U
3,3-Dichlorobenzidine	mg/kg	NS	5.11	<8.800 U	<42.000 U	--	<0.110 U	<0.130 U	<11.000 U	<45.000 U	<0.880 U	<0.100 U	<0.190 U	<2.300 U	<0.390 U	<21.000 U	<15.000 U	<14.000 U	<0.220 U	<0.110 U	<0.130 U
3-Nitroaniline	mg/kg	NS	NS	<7.200 U	<34.000 U	--	<0.092 U	<0.100 U	<9.000 U	<36.000 U	<0.710 U	<0.085 U	<0.160 U	<1.900 U	<0.310 U	<17.000 U	<12.000 U	<11.000 U	<0.180 U	<0.090 U	<0.100 U
4-Bromodiphenyl ether	mg/kg	NS	26.9	<1.900 U	<8.800 U	--	<0.024 U	<0.027 U	<2.400 U	<9.500 U	<0.190 U	<0.022 U	<0.041 U	<0.490 U	<0.082 U	<4.500 U	<3.200 U	<2.900 U	<0.047 U	<0.023 U	<0.027 U
4-Chloroaniline	mg/kg	NS	11.5	<8.000 U	<38.000 U	--	<0.100 U	<0.120 U	<10.000 U	<41.000 U	<0.800 U	<0.095 U	<0.180 U	<2.100 U	<0.350 U	<19.000 U	<14.000 U	<13.000 U	<0.200 U	<0.100 U	<0.120 U
4-Chlorodiphenyl ether	mg/kg	NS	NS	<2.100 U	<9.800 U	--	<0.026 U	<0.030 U	<2.600 U	<10.000 U	<0.200 U	<0.024 U	<0.045 U	<0.540 U	<0.090 U	<4.900 U	<3.500 U	<3.200 U	<0.052 U	<0.026 U	<0.030 U
4-Nitroaniline	mg/kg	NS	115	<7.100 U	<34.000 U	--	<0.091 U	<0.100 U	<9.000 U	<36.000 U	<0.710 U	<0.084 U	<0.160 U	<1.900 U	<0.310 U	<17.000 U	<12.000 U	<11.000 U	<0.180 U	<0.090 U	<0.100 U
Acetophenone	mg/kg	NS	2,520	<2.000 U	<9.300 U	--	<0.025 U	<0.028 U	<2.500 U	<10.000 U	0.300 J	<0.023 U	<0.043 U	<0.520 U	<0.086 U	<4.700 U	<3.300 U	<3.100 U	<0.050 U	<0.025 U	<0.028 U
Benzaldehyde	mg/kg	NS	818	<6.600 U	<31.000 U	--	<0.084 U	<0.094 U	<8.300 U	<33.000 U	<0.650 U	<0.078 U	<0.140 U	<1.700 U	<0.290 U	<16.000 U	<11.000 U	<10.000 U	<0.170 U	<0.083 U	<0.094 U
Biphenyl	mg/kg	NS	288	6.500 J	68.000 J	--	<0.063 U	<0.070 U	<6.200 U	82.000 J	0.520 J	<0.058 U	0.130 J	<1.300 U	0.240 J	61.000 J	11.000 J	12.000 J	<0.120 U	<0.062 U	<0.070 U
Bis(2-Chloroethoxy)methane	mg/kg	NS	2,460	<2.300 U	<11.000 U	--	<0.029 U	<0.032 U	<2.800 U	<11.000 U	<0.220 U	<0.027 U	<0.049 U	<0.600 U	<0.099 U	<5.400 U	<3.800 U	<3.500 U	<0.057 U	<0.028 U	<0.032 U
Bis(2-Chloroethyl)ether	mg/kg	NS	1.29	<1.600 U	<7.700 U	--	<0.021 U	<0.023 U	<2.100 U	<8.300 U	<0.160 U	<0.019 U	<0.036 U	<0.430 U	<0.071 U	<3.900 U	<2.800 U	<2.500 U	<0.041 U	<0.021 U	<0.023 U
Bis(2-Ethylhexyl)phthalate	mg/kg	2.88	164	*7.400 J*	<21.000 U	--	0.360 J	0.120 J	<5.700 U	<23.000 U	1.400 J	0.092 J	0.420 J	<1.200 U	0.410 J	<11.000 U	<7.700 U	<7.000 U	<0.110 U	0.530 JB	<0.065 UJB
Butyl benzyl phthalate	mg/kg	NS	1,210	<4.200 U	<20.000 U	--	<0.054 U	<0.061 U	<5.300 U	<21.000 U	<0.420 U	<0.050 U	0.140 J	<1.100 U	<0.180 U	<10.000 U	<7.200 U	<6.600 U	<0.110 U	0.066 J	<0.060 U
Caprolactam	mg/kg	NS	100,000	<10.000 U	<49.000 U	--	<0.130 U	<0.150 U	<13.000 U	<53.000 U	<1.000 U	<0.120 U	<0.230 U	<2.700 U	<0.460 U	<25.000 U	<18.000 U	<16.000 U	<0.260 U	<0.130 U	<0.150 U
Carbazole	mg/kg	NS	NS	29.000 J	200.000	--	0.093 J	0.062 J	15.000 J	89.000 J	1.300 J	<0.042 U	0.470 J	5.800 J	0.960 J	120.000	7.500 J	9.200 J	0.230 J	0.080 J	<0.051 U
Dibenzofuran	mg/kg	NS	1,040	40.000	300.000	--	0.092 J	0.041 J	23.000 J	220.000	1.400 J	<0.023 U	0.360 J	3.600 J	1.100 J	240.000	31.000 J	32.000 J	0.140 J	0.081 J	0.030 J
Diethyl phthalate	mg/kg	NS	100,000	<2.600 U	<12.000 U	--	<0.033 U	<0.037 U	<3.200 U	<13.000 U	<0.250 U	<0.030 U	<0.056 U	<0.670 U	<0.110 U	<6.100 U	<4.300 U	<4.000 U	<0.064 U	<0.032 U	<0.037 U
Dimethyl phthalate	mg/kg	NS	7,390	<2.300 U	<11.000 U	--	<0.029 U	<0.032 U	<2.800 U	<11.000 U	1.000 J	<0.027 U	<0.049 U	<0.600 U	<0.099 U	<5.400 U	<3.800 U	<3.500 U	<0.057 U	<0.028 U	<0.032 U
Di-n-butyl phthalate	mg/kg	5.0333	82,100	<2.800 U	<13.000 U	--	0.130 J	<0.041 U	<3.600 U	<14.000 U	<0.280 U	<0.034 U	<0.062 U	<0.750 U	<0.120 U	<6.800 U	<4.800 U	<4.400 U	<0.072 U	<0.036 U	<0.041 U
Di-n-octyl phthalate	mg/kg	NS	8,210	<1.400 U	<6.700 U	--	<0.018 U	<0.020 U	<1.800 U	<7.200 U	<0.140 U	<0.017 U	<0.031 U	<0.370 U	<0.062 U	<3.400 U	<2.400 U	<2.200 U	<0.036 U	<0.018 U	<0.020 U
Hexachlorobenzene	mg/kg	0.0252	1.15	<2.800 U	<13.000 U	--	<0.036 U	<0.041 U	<3.600 U	<14.000 U	<0.280 U	<0.034 U	<0.062 U	<0.750 U	<0.120 U	<6.800 U	<4.800 U	<4.400 U	<0.072 U	<0.036 U	<0.041 U
Hexachlorobutadiene	mg/kg	NS	7.19	<0.00061 U	<9.100 U	--	<0.0011 UJ	<0.0012 U	<0.0012 U	0.350 JB	<0.00071 UJ	0.00063 UR	0.00063 UR	0.00091 UR	0.00062 UR	0.00058 UR	<0.0012 UJ	<0.00061 UJ	<0.0011 UJ	<0.0010 U	<0.00079 U
Hexachlorocyclopentadiene	mg/kg	NS	10.8	<4.900 U	<23.000 U	--	<0.063 U	<0.070 U	<6.200 U	<25.000 U	<0.490 U	<0.058 U	<0.110 U	<1.300 U	<0.220 U	<12.000 U	<8.400 U	<7.600 U	<0.120 U	<0.062 U	<0.070 U
Hexachloroethane	mg/kg	NS	11.1	<2.100 U	<9.900 U	--	<0.027 U	<0.030 U	<2.600 U	<11.000 U	<0.210 U	<0.025 U	<0.046 U	<0.550 U	<0.092 U	<5.000 U	<3.600 U	<3.300 U	<0.053 U	<0.026 U	<0.030 U
Isophorone	mg/kg	NS	2,420	<1.700 U	<7.900 U	--	<0.021 U	<0.024 U	<2.100 U	<8.500 U	<0.170 U	<0.020 U	<0.037 U	<0.440 U	<0.073 U	<4.000 U	<2.800 U	<2.600 U	<0.042 U	<0.021 U	<0.024 U
Nitrobenzene	mg/kg	NS	32.4	<2.200 U	<10.000 U	--	<0.028 U	<0.031 U	<2.700 U	<11.000 U	<0.210 U	<0.026 U	<0.047 U	<0.570 U	<0.095 U	<5.200 U	<3.700 U	<3.400 U	<0.055 U	<0.027 U	<0.031 U
N-nitrosodi-n-propylamine	mg/kg	NS	0.328	<3.000 U	<14.000 U	--	<0.039 U	<0.044 U	<3.800 U	<15.000 U	<0.300 U	<0.036 U	<0.067 U	<0.800 U	<0.130 U	<7.300 U	<5.200 U	<4.700 U	<0.077 U	<0.038 U	<0.044 U
N-Nitrosodiphenylamine	mg/kg	0.0764	469	<2.100 U	<9.800 U	--	<0.026 U	<0.030 U	<2.600 U	<10.000 U	<0.200 U	<0.024 U	<0.045 U	<0.540 U	<0.090 U	<4.900 U	<3.500 U	<3.200 U	<0.052 U	<0.026 U	<0.030 U
Pyridine	mg/kg	0.0069	1,170	<13.000 U	<60.000 U	--	<0.160 U	<0.180 U	<16.000 U	<65.000 U	<1.300 U	<0.150 U	<0.280 U	<3.400 U	<0.560 U	<31.000 U	<22.000 U	<20.000 U	<0.320 U	<0.160 U	<0.180 U

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	CG-SB07			CG-SB08		CG-SB09A	CG-SB09B	CG-SB10		CG-SB11		CG-SB12		CG-SB13			CG-SB14	
Sample / Duplicate:				CG-SB07	CG-SB07	CG-SB07	CG-SB08	CG-SB08	CG-SB09A	CG-SB09B	CG-SB10	CG-SB10	CG-SB11	CG-SB11	CG-SB12	CG-SB12	CG-SB13	CG-SB13 DUP	CG-SB13	CG-SB14	CG-SB14
Field Sample ID:				CG-SB07-SS-121108	CG-SB07-0405-121108	MSS-CG-SB07-0405-121108	CG-SB08-SS-120208	CG-SB08-0405-120208	CG-SB09A-SS-101408	CG-SB09B-1213-101408	CG-SB10-SS-112008	CG-SB10-0809-112008	CG-SB11-SS-112008	CG-SB11-0506-112008	CG-SB12-SS-112008	CG-SB12-0405-112008	CG-SB13-SS-120208	CG-SBDUP002-120208	CG-SB13-0405-120208	CG-SB14-SS-120108	CG-SB14-0506-120108
Sample Depth (feet):				1 - 1.5	4 - 5	4 - 5	0 - 0.5	4 - 5	0 - 0.5	12 - 13	0 - 0.5	8 - 9	0 - 0.5	5 - 6	0 - 0.5	4 - 5	0 - 0.5	0 - 0.5	4 - 5	0 - 0.5	5 - 6
Sample Date:				12/11/2008	12/11/2008	12/11/2008	12/02/2008	12/02/2008	10/14/2008	10/14/2008	11/20/2008	11/20/2008	11/20/2008	11/20/2008	11/20/2008	11/20/2008	12/02/2008	12/02/2008	12/02/2008	12/01/2008	12/01/2008
Phenols																					
2,4,5-Trichlorophenol	mg/kg	NS	82,100	<0.980 U	<4.700 U	--	<0.013 U	<0.014 U	<1.200 U	<5.000 U	<0.097 U	<0.012 U	<0.022 U	<0.260 U	<0.043 U	<2.400 U	<1.700 U	<1.500 U	<0.025 U	<0.012 U	<0.014 U
2,4,6-Trichlorophenol	mg/kg	NS	209	<0.980 U	<4.700 U	--	<0.013 U	<0.014 U	<1.200 U	<5.000 U	<0.097 U	<0.012 U	<0.022 U	<0.260 U	<0.043 U	<2.400 U	<1.700 U	<1.500 U	<0.025 U	<0.012 U	<0.014 U
2,4-Dichlorophenol	mg/kg	NS	2,460	<0.980 U	<4.700 U	--	<0.013 U	<0.014 U	<1.200 U	<5.000 U	<0.097 U	<0.012 U	<0.022 U	<0.260 U	<0.043 U	<2.400 U	<1.700 U	<1.500 U	<0.025 U	<0.012 U	<0.014 U
2,4-Dimethylphenol	mg/kg	NS	16,400	<6.500 U	<31.000 U	--	<0.083 U	<0.093 U	<8.200 U	<33.000 U	<0.640 U	<0.077 U	<0.140 U	<1.700 U	<0.280 U	<16.000 U	<11.000 U	<10.000 U	<0.160 U	<0.082 U	<0.093 U
2,4-Dinitrophenol	mg/kg	NS	1,640	<33.000 U	<150.000 U	--	<0.420 U	<0.470 U	<41.000 U	<170.000 U	<3.200 U	<0.390 U	<0.720 U	<8.600 U	<1.400 U	<78.000 U	<56.000 U	<51.000 U	<0.830 U	<0.410 U	<0.470 U
2-Chlorophenol	mg/kg	NS	5,840	<2.100 U	<9.800 U	--	<0.026 U	<0.030 U	<2.600 U	<10.000 U	<0.200 U	<0.024 U	<0.045 U	<0.540 U	<0.090 U	<4.900 U	<3.500 U	<3.200 U	<0.052 U	<0.026 U	<0.030 U
2-Methylphenol	mg/kg	NS	41,000	<1.300 U	<6.000 U	--	<0.016 U	<0.018 U	<1.600 U	11.000 J	0.170 J	<0.015 U	<0.028 U	<0.340 U	<0.056 U	<3.100 U	<2.200 U	<2.000 U	<0.032 U	<0.016 U	<0.018 U
2-Nitrophenol	mg/kg	NS	NS	<0.980 U	<4.700 U	--	<0.013 U	<0.014 U	<1.200 U	<5.000 U	<0.097 U	<0.012 U	<0.022 U	<0.260 U	<0.043 U	<2.400 U	<1.700 U	<1.500 U	<0.025 U	<0.012 U	<0.014 U
4-Chloro-3-methylphenol	mg/kg	NS	82,100	<6.500 U	<31.000 U	--	<0.083 U	<0.093 U	<8.200 U	<33.000 U	<0.640 U	<0.077 U	<0.140 U	<1.700 U	<0.280 U	<16.000 U	<11.000 U	<10.000 U	<0.160 U	<0.082 U	<0.093 U
4-Methylphenol	mg/kg	NS	82,100	<3.200 U	<15.000 U	--	<0.041 U	<0.046 U	<4.100 U	20.000 J	<0.320 U	<0.038 U	<0.071 U	<0.850 U	<0.140 U	<7.800 U	<5.500 U	<5.000 U	<0.082 U	<0.041 U	<0.046 U
4-Nitrophenol	mg/kg	NS	NS	<9.500 U	<45.000 U	--	<0.120 U	<0.140 U	<12.000 U	<48.000 U	<0.950 U	<0.110 U	<0.210 U	<2.500 U	<0.420 U	<23.000 U	<16.000 U	<15.000 U	<0.240 U	<0.120 U	<0.140 U
4,6-Dinitro-2-methylphenol	mg/kg	NS	65.7	<32.000 U	<150.000 U	--	<0.410 U	<0.460 U	<41.000 U	<160.000 U	<3.200 U	<0.380 U	<0.710 U	<8.500 U	<1.400 U	<78.000 U	<55.000 U	<50.000 U	<0.820 U	<0.410 U	<0.460 U
Pentachlorophenol	mg/kg	0.0028	3.97	<32.000 U	<150.000 U	--	<0.410 U	<0.460 U	<41.000 U	<160.000 U	<3.200 U	<0.380 U	<0.710 U	<8.500 U	<1.400 U	<78.000 U	<55.000 U	<50.000 U	<0.820 U	<0.410 U	<0.460 U
Phenol	mg/kg	2.2946	100,000	<1.800 U	<8.400 U	--	<0.023 U	<0.025 U	<2.200 U	*30.000 J*	<0.180 U	<0.021 U	<0.039 U	<0.470 U	0.082 J	<4.200 U	<3.000 U	<2.700 U	<0.045 U	0.025 J	<0.025 U
Metals																					
Aluminum, Total	mg/kg	600	100,000	*11.000*	*6.300*	--	*1.900*	*40.000*	*11.000*	*14.000*	*3.300*	*6.100*	*960*	*3.400*	*5.400*	*5.800*	*1.700*	*1.700*	*9.700*	*3.800*	*17.000*
Antimony, Total	mg/kg	0.542	467	0.052 BJ-	0.150 BJ-	--	0.350 J-	<0.020 UJ	0.340 J-	0.041 BJ-	*0.600 J-*	0.038 BJ-	0.120 BJ-	0.270 J-	0.063 BJ-	0.044 BJ-	*2.000 J-*	*1.300 J-*	0.065 BJ-	*1.500 J*	*35.000 J*
Arsenic, Total [1]	mg/kg	0.584	8.3	*5.200*	*5.700*	--	*6.900*	*5.200*	***37.000***	*3.500*	***9.600***	*2.500*	*2.200*	*5.700*	***39.000***	*5.200*	***12.000***	*8.200*	*5.100*	***10.000 JL***	***190.000 L***
Barium, Total	mg/kg	164.8	100,000	120.000	75.000	--	42.000 J	*460.000 J*	150.000	*170.000*	63.000	37.000	15.000	33.000	67.000	35.000	80.000 J	68.000 J	130.000 J	81.000 J	*170.000 J*
Beryllium, Total	mg/kg	6.32	2,300	0.830	0.710	--	0.220	*7.700*	0.780	3.300	0.650	0.400	0.110	0.540	0.600	0.370	0.690	0.660	2.400	0.320	2.700
Cadmium, Total	mg/kg	0.752	985	*0.850*	0.730	--	*0.910*	*1.600*	*4.400*	*1.500*	*1.100*	0.380	0.590	0.530	0.470	0.410	*0.870*	*0.870*	*0.980*	*4.400*	*0.950*
Calcium, Total	mg/kg	NS	NS	52,000	56,000	--	5,400	130,000	36,000	110,000	47,000	94,000	140,000	13,000	120,000	59,000	4,500	3,900	74,000	9,700	57,000
Chromium, Hexavalent	mg/kg	NS	6.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium, Total [3]	mg/kg	360,000	NS	21.000	13.000	--	38.000	4.900	25.000	9.800	14.000	13.000	6.800	5.600	7.400	13.000	13.000	15.000	11.000	45.000	8.900
Chromium, Trivalent	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt, Total	mg/kg	3.6073	347	*7.400*	*5.300*	--	*3.900*	1.200	*5.500*	2.500	*4.000*	*5.900*	1.900	3.000	1.800	*5.500*	*9.800*	*5.700*	*5.400*	*10.000 JL*	*4.600 L*
Copper, Total	mg/kg	91.6	46,700	61.000	61.000	--	44.000	8.600	*100.000*	9.000	49.000	18.000	53.000	*130.000*	12.000	21.000	66.000	63.000	26.000	*100.000 JL*	*940.000 JL*
Iron, Total	mg/kg	NS	100,000	21,000	12,000	--	31,000	21,000	36,000	7,200	24,000	12,000	15,000	49,000	8,200	12,000	17,000	29,000	9,100	84,000	45,000
Lead, Total	mg/kg	27	800	*130.000*	*320.000*	--	*240.000*	10.000	***1,900***	21.000	*200.000*	17.000	*170.000*	*56.000*	*54.000*	25.000	*110.000*	*160.000*	*48.000*	*560.000*	*160.000*
Magnesium, Total	mg/kg	NS	NS	23,000	26,000	--	2,000	58,000	13,000	43,000	12,000	43,000	92,000	4,500	42,000	31,000	1,300	1,100	32,000	3,200	27,000
Manganese, Total	mg/kg	39.1244	25,900	*470.000*	*510.000*	--	*230.000*	*920.000*	*460.000*	*1,200*	*150.000*	*400.000*	*180.000*	*170.000*	*690.000*	*310.000*	*770.000*	*400.000*	*1,100*	*430.000 JL*	*710.000 L*
Mercury, Total	mg/kg	0.208	3.13	*0.310*	*0.260*	--	0.049	0.160	***3.500***	*0.260*	***4.200***	0.031	0.100	*0.970*	*0.350*	<0.650 U	0.056	0.069	0.160	0.078	0.100
Nickel, Total	mg/kg	13.0612	22,500	*20.000*	*15.000*	--	*21.000*	4.300	*22.000*	7.400	*14.000*	*16.000*	11.000	8.200	8.500	*16.000*	*28.000*	*19.000*	13.000	*42.000 JL*	*15.000 L*
Potassium, Total	mg/kg	NS	NS	2,400	1,200	--	280 B	2,800	1,500	1,000	630	1,600	450	380 B	540	1,400	340 B	270 B	1,300	750	1,600
Selenium, Total	mg/kg	0.52	5,840	*0.720*	*0.670*	--	*1.000*	*4.900*	*4.500*	*3.100*	*2.000*	0.390 B	0.510 B	*1.700*	*0.600*	*2.000*	*2.000*	*1.700*	*1.800*	*0.970*	*2.600*
Silver, Total	mg/kg	0.8491	5,840	0.190	0.120	--	0.058 B	0.190	0.059 B	0.092 B	0.078 B	0.046 B	0.052 B	0.064 B	0.056 B	0.063 B	0.073 B	0.074 B	0.110 B	0.190	0.250
Sodium, Total	mg/kg	NS	NS	<72 UB	<69 UB	--	110 B	830 B	740	440 B	190 B	210 B	160 B	160 B	220 B	200 B	110 B	98 B	340 B	150 B	610 B
Thallium, Total	mg/kg	0.284	11.7	0.250	0.190	--	0.140	0.058 B	*2.000*	*0.570*	0.250	0.130	0.063 B	0.120 B	0.088 B	*0.300*	0.170	0.120 B	0.200	0.062 B	0.200
Vanadium, Total	mg/kg	60	5,840	22.000	18.000	--	5.100	11.000	17.000	15.000	11.000	19.000	4.000	9.700	9.400	17.000	8.700	9.700	17.000	7.600 JL	14.000 L
Zinc, Total	mg/kg	NS	100,000	180.000	150.000	--	160.000	19.000	490.000	330.000	160.000	44.000	50.000	150.000	47.000	57.000	190.000	170.000	91.000	1,000 JL	100.000 L
Inorganic - Cyanide																					
Cyanide, Amenable	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Reactive	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Total	mg/kg	4.04	195	0.59 B	3.7	--	2.8	*13*	*91 Jq*	<0.13 UJB	<0.13 UJ-	0.13 B	3.2 J-	*11*	*32 J-q*	*7.8*	1.9	1.5	0.79	2.4	*6.7 J*
Other																					
Sulfide, Reactive	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organic Matter	%	NS	NS	--	--	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent Moisture	%	NS	NS	18	14	24.5	20	29	19	20	18	14	7.1	23	7	15	28	21	19	19	29

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	CG-SB15		CG-SB16				CG-SB17		CG-SB18			CG-SB19		CG-SB20		CG-SB21	CG-SB22	
Sample / Duplicate:				CG-SB15	CG-SB15	CG-SB16	CG-SB16 DUP	CG-SB16	CG-SB16	CG-SB17	CG-SB17	CG-SB18	CG-SB18	CG-SB18	CG-SB19	CG-SB19	CG-SB20	CG-SB20	CG-SB21	CG-SB22	CG-SB22
Field Sample ID:				CG-SB15-SS-101308	CG-SB15-0608-101308	CG-SB16-SS-121108	CG-SBDUP004-121108	CG-SB16-0406-121108	MSS-CG-SB16-0406-121108	CG-SB17-SS-120108	CG-SB17-0405-120108	CG-SB18-SS-121108	CG-SB18-0406-121108	MSS-CG-SB18-0406-121108	CG-SB19-SS-120108	CG-SB19-0405-120108	CG-SB20-SS-120108	CG-SB20-0506-120108	CG-SB21-SS-101308	CG-SB22-SS-120108	CG-SB22-0507-120108
Sample Depth (feet):				0 - 0.5	6 - 8	0 - 0.5	0 - 0.5	4 - 6	4 - 6	0 - 0.5	4 - 5	0 - 0.5	4 - 6	4 - 6	0 - 0.5	4 - 5	0 - 0.5	5 - 6	0 - 0.5	0 - 0.5	5 - 7
Sample Date:				10/13/2008	10/13/2008	12/11/2008	12/11/2008	12/11/2008	12/11/2008	12/01/2008	12/01/2008	12/11/2008	12/11/2008	12/11/2008	12/01/2008	12/01/2008	12/01/2008	12/01/2008	10/13/2008	12/01/2008	12/01/2008
VOCs																					
1,1,1-Trichloroethane	mg/kg	0.1402	640	<0.00074 U	<0.00059 U	<0.00068 U	<0.00057 U	<0.00081 U	--	<0.00094 U	<0.00095 U	<0.00076 UJ	<0.0011 U	--	<0.00094 U	<0.00089 U	<0.0011 U	<0.0013 U	<0.00071 U	<0.0010 U	<0.00073 UJ
1,1,2,2-Tetrachloroethane	mg/kg	0.0002	3.6	<0.00087 U	<0.00070 UJ	<0.00080 UJ	<0.00066 U	<0.00095 UJ	--	<0.0011 UJ	<0.0011 U	<0.00089 UJ	<0.0013 UJ	--	<0.0011 UJ	<0.0010 UJ	<0.0013 UJ	<0.0015 U	<0.00083 U	<0.0012 UJ	<0.00086 UJ
1,1,2-Trichloroethane	mg/kg	0.0032	7.01	<0.0013 U	<0.0010 U	<0.0012 U	<0.00096 U	<0.0014 UJ	--	<0.0016 U	<0.0016 U	<0.0013 UJ	<0.0018 U	--	<0.0016 U	<0.0015 UJ	<0.0019 UJ	<0.0021 U	<0.0012 U	<0.0018 UJ	<0.0012 UJ
1,1-Dichloroethane	mg/kg	0.4834	22.2	<0.00030 U	<0.00024 U	<0.00028 U	<0.00023 U	<0.00033 U	--	<0.00038 U	<0.00038 U	<0.00031 UJ	<0.00043 U	--	<0.00038 U	<0.00036 U	<0.00045 U	<0.00051 U	<0.00029 U	<0.00042 U	<0.00030 UJ
1,1-Dichloroethene	mg/kg	0.005	1,190	<0.00084 U	<0.00067 U	<0.00077 U	<0.00064 U	<0.00092 U	--	<0.0011 U	<0.0011 U	<0.00086 UJ	<0.0012 U	--	<0.0011 U	<0.0010 U	<0.0013 U	<0.0014 U	<0.00080 U	0.0025 J	<0.00083 UJ
1,2-Dibromo-3-chloropropane	mg/kg	0.0002	0.092	<0.00086 U	<0.00068 UJ	<0.00079 UJ	<0.00065 U	<0.00094 UJ	--	<0.0011 UJ	<0.0011 U	<0.00087 UJ	<0.0012 UJ	--	<0.0011 UJ	<0.0010 UJ	<0.0013 UJ	<0.0015 U	<0.00082 U	<0.0012 UJ	<0.00085 UJ
1,2-Dibromoethane	mg/kg	0.0000282	0.221	<0.00074 U	<0.00059 U	<0.00068 U	<0.00057 U	<0.00081 UJ	--	<0.00094 U	<0.00095 U	<0.00076 UJ	<0.0011 U	--	<0.00094 U	<0.00089 UJ	<0.0011 UJ	<0.0013 U	<0.00071 U	<0.0010 UJ	<0.00073 UJ
1,2-Dichlorobenzene	mg/kg	1.168	376	<0.00064 U	<0.00051 UJ	<0.00059 UJ	<0.00049 U	<0.00070 UJ	--	<0.00081 UJ	<0.00082 U	0.0019 J	<0.00093 UJ	--	<0.00081 UJ	<0.00077 UJ	<0.00097 UJ	<0.0011 U	<0.00061 U	<0.00090 UJ	<0.00063 UJ
1,2-Dichloroethane	mg/kg	0.0028	2.87	<0.0010 U	<0.00080 U	<0.00092 U	<0.00076 U	<0.0011 U	--	<0.0013 U	<0.0013 U	<0.0010 UJ	<0.0014 U	--	<0.0013 U	<0.0012 U	<0.0015 U	<0.0017 U	<0.00095 U	<0.0014 U	<0.00099 UJ
1,2-Dichloropropane	mg/kg	0.0033	1.78	<0.00078 U	<0.00063 U	<0.00072 U	<0.00060 U	<0.00086 U	--	<0.00099 U	<0.0010 U	<0.00080 UJ	<0.0011 U	--	<0.0010 U	<0.00094 U	<0.0012 U	<0.0013 U	<0.00075 U	<0.0011 U	<0.00078 UJ
1,3-Dichlorobenzene	mg/kg	1.1528	297	<0.00068 U	<0.00055 UJ	<0.00063 UJ	<0.00052 U	<0.00075 UJ	--	<0.00087 UJ	<0.00088 U	<0.00070 UJ	<0.00099 UJ	--	<0.00087 UJ	<0.00082 UJ	<0.0010 UJ	<0.0012 U	<0.00065 U	<0.00096 UJ	<0.00068 UJ
1,4-Dichlorobenzene	mg/kg	0.144	16.4	<0.0011 U	<0.00089 UJ	<0.0010 UJ	<0.00085 U	<0.0012 UJ	--	<0.0014 UJ	<0.0014 U	<0.0011 UJ	<0.0016 UJ	--	<0.0014 UJ	<0.0013 UJ	<0.0017 UJ	<0.0019 U	<0.0011 U	<0.0016 UJ	<0.0011 UJ
2-Butanone (MEK)	mg/kg	1.6661	28,400	<0.0026 U	<0.0021 U	<0.0024 U	0.0033 J	0.0087 J	--	<0.0033 U	0.0077 J	<0.0027 UJ	<0.0038 U	--	<0.0033 U	<0.0031 U	<0.0039 U	<0.0044 U	<0.0025 U	<0.0037 U	<0.0026 UJ
2-Hexanone	mg/kg	NS	1,760	<0.0070 U	<0.0056 U	<0.0064 U	<0.0053 U	<0.0076 U	--	<0.0088 U	<0.0089 U	<0.0071 UJ	<0.010 U	--	<0.0089 U	<0.0083 U	<0.011 U	<0.012 U	<0.0067 U	<0.0098 U	<0.0069 UJ
4-Methyl-2-Pentanone (MIBK)	mg/kg	0.2252	3,360	<0.0062 U	<0.0050 U	<0.0057 U	<0.0048 U	<0.0068 UJ	--	<0.0079 U	<0.0080 U	<0.0063 UJ	<0.0090 U	--	<0.0079 U	<0.0074 UJ	<0.0094 UJ	<0.011 U	<0.0059 U	<0.0088 UJ	<0.0061 UJ
Acetone	mg/kg	3.6766	100,000	<0.0077 U	0.027	<0.0071 U	0.012 J	0.035	--	<0.0097 U	0.037	0.014 J	0.011 J	--	<0.0097 U	<0.0092 U	<0.012 U	<0.013 U	<0.0073 U	<0.011 U	0.011 J
Benzene	mg/kg	0.0051	7.07	<0.00067 U	0.0051 J	0.0023 J	0.0026 J	*0.015*	--	0.0022 J	*0.072*	0.0043 J	*0.009 J*	--	<0.00085 U	<0.00080 U	<0.0010 U	<0.0011 U	<0.00064 U	<0.00094 U	*0.008 J*
Bromodichloromethane	mg/kg	0.0003	1.83	<0.00031 U	<0.00025 U	<0.00029 U	<0.00024 U	<0.00034 UJ	--	<0.00040 U	<0.00040 U	<0.00032 UJ	<0.00045 U	--	<0.00040 U	<0.00037 UJ	<0.00047 UJ	<0.00053 U	<0.00030 U	<0.00044 UJ	<0.00031 UJ
Bromoform	mg/kg	0.0023	113	<0.00033 U	<0.00026 U	<0.00030 U	<0.00025 U	<0.00036 UJ	--	<0.00041 U	<0.00042 U	<0.00033 UJ	<0.00047 U	--	<0.00042 U	<0.00039 UJ	<0.00049 UJ	<0.00056 U	<0.00031 U	<0.00046 UJ	<0.00032 UJ
Bromomethane	mg/kg	0.0051	43	<0.00071 UJ	<0.00057 UJ	<0.00066 U	<0.00054 U	<0.00078 U	--	<0.00090 U	<0.00091 U	<0.00073 UJ	<0.0010 U	--	<0.00091 U	<0.00085 U	<0.0011 U	<0.0012 U	<0.00068 UJ	<0.0010 U	<0.00070 UJ
Carbon Disulfide	mg/kg	0.5919	738	<0.00060 U	<0.00048 U	<0.00055 U	0.0024 J	0.0041 J	--	<0.00076 U	<0.00077 U	<0.00061 UJ	<0.00086 U	--	<0.00076 U	<0.00072 U	<0.00090 U	0.014	<0.00057 U	<0.00084 U	<0.00059 UJ
Carbon Tetrachloride	mg/kg	0.0039	4.03	<0.00090 U	<0.00072 U	<0.00083 U	<0.00069 U	<0.00098 U	--	<0.0011 U	<0.0012 U	<0.00092 UJ	<0.0013 U	--	<0.0011 U	<0.0011 U	<0.0014 U	<0.0015 U	<0.00086 U	<0.0013 U	<0.00089 UJ
Chlorobenzene	mg/kg	0.1358	761	<0.00077 U	<0.00062 U	<0.00071 U	<0.00059 U	<0.00084 UJ	--	<0.00097 U	<0.00099 U	<0.00078 UJ	<0.0011 U	--	<0.00098 U	<0.00092 UJ	<0.0012 UJ	<0.0013 U	<0.00073 U	<0.0011 UJ	<0.00076 UJ
Chloroethane	mg/kg	0.2266	2,120	<0.0013 U	<0.0010 U	<0.0012 U	<0.00097 U	<0.0014 U	--	<0.0016 U	<0.0016 U	<0.0013 UJ	<0.0018 U	--	<0.0016 U	<0.0015 U	<0.0019 U	<0.0022 U	<0.0012 U	<0.0018 U	<0.0013 UJ
Chloroform	mg/kg	0.0033	1.98	<0.00041 U	<0.00033 U	<0.00038 U	<0.00032 U	<0.00045 U	--	<0.00052 U	<0.00053 U	<0.00042 UJ	<0.00060 U	--	<0.00053 U	<0.00049 U	<0.00062 U	<0.00070 U	<0.00039 U	<0.00058 U	<0.00041 UJ
Chloromethane	mg/kg	0.0155	669	<0.0011 UJ	<0.00088 UJ	<0.0010 U	<0.00084 U	<0.0012 U	--	<0.0014 U	<0.0014 U	<0.0011 UJ	<0.0016 U	--	<0.0014 U	<0.0013 U	<0.0017 U	<0.0019 U	<0.0010 UJ	<0.0015 U	<0.0011 UJ
cis-1,2-Dichloroethene	mg/kg	0.0412	2,340	<0.00080 U	<0.00064 U	<0.00074 U	<0.00061 U	<0.00087 U	--	<0.0010 U	<0.0010 U	<0.00081 UJ	<0.0012 U	--	<0.0010 U	<0.00095 U	<0.0012 U	<0.0014 U	<0.00076 U	<0.0011 U	<0.00079 UJ
cis-1,3-Dichloropropene	mg/kg	NS	1,210	<0.0018 U	<0.0015 U	<0.0017 U	<0.0014 U	<0.0020 UJ	--	<0.0023 U	<0.0024 U	<0.0019 UJ	<0.0027 U	--	<0.0023 U	<0.0022 UJ	<0.0028 UJ	<0.0031 U	<0.0018 U	<0.0026 UJ	<0.0018 UJ
Cyclohexane	mg/kg	NS	117	<0.00057 U	0.0036 J	0.0014 J	0.0032 J	0.0071 J	--	0.005 J	0.0027 J	0.0026 J	<0.00082 U	--	<0.00072 U	<0.00068 U	0.002 J	<0.00097 U	0.00078 J	<0.00080 U	<0.00056 UJ
Dibromochloromethane	mg/kg	0.032	38.9	<0.00081 U	<0.00065 U	<0.00075 U	<0.00062 U	<0.00089 UJ	--	<0.0010 U	<0.0010 U	<0.00083 UJ	<0.0012 U	--	<0.0010 U	<0.00097 UJ	<0.0012 UJ	<0.0014 U	<0.00078 U	<0.0011 UJ	<0.00080 UJ
Dichloromethane	mg/kg	0.0026	1,150	<0.0011 U	<0.00086 U	<0.00098 U	<0.00082 U	<0.0012 U	--	<0.0014 U	<0.0014 U	<0.0011 UJ	<0.0015 U	--	<0.0014 U	<0.0013 UJB	<0.0016 U	<0.0018 U	<0.0010 U	<0.0015 U	<0.0011 UJ
Ethylbenzene	mg/kg	1.57	35.4	<0.00096 U	<0.00076 U	<0.00088 U	0.00099 J	0.0011 J	--	0.0073 J	0.0096	<0.00097 UJ	0.0024 J	--	<0.0012 U	<0.0011 UJ	<0.0014 UJ	<0.0016 U	<0.00091 U	<0.0013 UJ	<0.00094 UJ
Freon 113	mg/kg	NS	910	<0.00064 U	<0.00051 U	<0.00059 U	<0.00049 U	<0.00070 U	--	<0.00081 U	<0.00082 U	<0.00065 UJ	<0.00093 U	--	<0.00081 U	<0.00077 U	<0.00097 U	<0.0011 U	<0.00061 U	<0.00090 U	<0.00063 UJ
Freon 12	mg/kg	3.0863	530	<0.00074 U	<0.00059 U	<0.00068 U	<0.00057 U	<0.00081 U	--	<0.00094 U	<0.00095 U	<0.00076 UJ	<0.0011 U	--	<0.00094 U	<0.00089 U	<0.0011 U	<0.0013 U	<0.00071 U	<0.0010 U	<0.00073 UJ
Isopropylbenzene	mg/kg	NS	268	<0.00084 U	<0.00067 UJ	<0.00077 UJ	<0.00064 U	<0.00092 UJ	--	0.002 J	0.0096	<0.00086 UJ	<0.0012 UJ	--	<0.0011 UJ	<0.0010 UJ	<0.0013 UJ	<0.0014 U	<0.00080 U	<0.0012 UJ	<0.00083 UJ
Methyl acetate	mg/kg	NS	29,000	<0.0039 U	<0.0031 U	<0.0036 U	<0.0030 U	<0.0043 U	--	<0.0050 U	<0.0050 U	<0.0040 UJ	<0.0057 U	--	<0.0050 U	<0.0047 U	<0.0059 U	<0.0067 U	<0.0037 U	<0.0055 U	<0.0039 UJ
Methylcyclohexane	mg/kg	NS	67.6	<0.00060 U	0.0033 J	0.0018 J	0.0043 J	0.0096	--	0.0063 J	0.0058 J	0.003 J	0.00098 J	--	<0.00076 U	0.0012 J	0.0033 J	<0.0010 U	0.00073 J	0.00093 J	0.0013 J
Methyl-tert-butyl-ether	mg/kg	0.027	282	<0.00049 U	<0.00039 U	<0.00045 U	<0.00037 U	<0.00053 U	--	<0.00061 U	<0.00062 U	<0.00049 UJ	<0.00070 U	--	<0.00062 U	<0.00058 U	<0.00073 U	<0.00082 U	<0.00046 U	<0.00068 U	<0.00048 UJ
Styrene	mg/kg	0.22	867	<0.00090 U	<0.00072 U	<0.00083 U	0.0014 J	<0.00098 UJ	--	<0.0011 U	<0.0012 U	<0.00092 UJ	<0.0013 U	--	<0.0011 U	<0.0011 UJ	<0.0014 UJ	<0.0015 U	<0.00086 U	<0.0013 UJ	<0.00089 UJ
Tetrachloroethene	mg/kg	0.0045	145	<0.00084 U	<0.00067 U	<0.00077 U	<0.00064 U	0.0012 J	--	<0.0011 U	<0.0011 U	<0.00086 UJ	<0.0012 U	--	<0.0011 U	<0.0010 UJ	<0.0013 UJ	<0.0014 U	<0.00080 U	<0.0012 UJ	<0.00083 UJ
Toluene	mg/kg	1.1072	818	<0.00098 U	0.012	0.0029 J	0.0054	0.010 J	--	0.0029 J	0.024	0.0069 J	0.0086 J	--	<0.0012 U	<0.0012 UJ	0.006 J	<0.0017 U	<0.00094 U	<0.0014 UJ	0.0046 J
trans-1,2-Dichloroethene	mg/kg	0.0626	1,850	<0.00056 U	<0.00045 U	<0.00051 U	<0.00043 U	<0.00061 U	--	<0.00070 U	<0.00071 U	<0.00057 UJ	<0.00080 U	--	<0.00071 U	<0.00066 U	<0.00084 U	<0.00094 U	<0.00053 U	<0.00078 U	<0.00055 UJ
trans-1,3-Dichloropropene	mg/kg	NS	1,510	<0.00096 U	<0.00076 U	<0.00088 U	<0.00073 U	<0.0010 UJ	--	<0.0012 U	<0.0012 U	<0.00097 UJ	<0.0014 U	--	<0.0012 U	<0.0011 UJ	<0.0014 UJ	<0.0016 U	<0.00091 U	<0.0013 UJ	<0.00094 UJ
Trichloroethene	mg/kg	0.0036	8.41	<0.00033 U	<0.00026 U	<0.00030 U	<0.00025 U	<0.00036 U	--	<0.00041 U	<0.00042 U	<0.00033 UJ	<0.00047 U	--	<0.00042 U	<0.00039 U	<0.00049 U	<0.00056 U	<0.00031 U	<0.00046 U	<0.00032 UJ
Trichlorofluoromethane	mg/kg	4.4775	1,230	<0.0015 U	<0.0012 U	<0.0014 U	<0.0011 U	<0.0016 U	--	<0.0019 U	<0.0019 U	<0.0015 UJ	<0.0021 U	--	<0.0019 U	<0.0018 U	<0.0022 U	<0.0025 U	<0.0014 U	<0.0021 U	<0.0015 UJ
Vinyl Chloride	mg/kg	0.0001	2.08	<0.0019 U	<0.0015 U	<0.0018 U	<0.0015 U	<0.0021 U	--	<0.0024 U	<0.0024 U	<0.0019 UJ	<0.0028 U	--	<0.0024 U	<0.0023 U	<0.0029 U	<0.0032 U	<0.0018 U	<0.0027 U	<0.0019 UJ
Xylenes, Total	mg/kg	3.96	260	<0.00087 U	0.0033 J	0.003 J	0.019	0.0086 J	--	0.0058 J	0.017	0.010 J	0.0079 J	--	<0.0011 U	<0.0010 UJ	<0.0013 UJ	<0.0015 U	<0.00083 U	<0.0012 UJ	0.003 J
PCBs																					
PCB, Total [4]	mg/kg	0.0094	0.967	--	--	--	--	--	--	--	--	--	--	--	*0.300*	<0.0038 U	*0.110*	<0.0043 UJ	--	*0.200 J*	<0.0035 UJ
PCB-1016	mg/kg	NS	28	--	--	--	--	--	--	--	--	--	--	--	<0.0083 U	<0.0073 U	<0.0076 U	<0.0083 UJ	--	<0.0066 UJ	<0.0066 UJ
PCB-1221	mg/kg	NS	0.883	--	--	--	--	--	--	--	--	--	--	--	<0.025 U	<0.022 U	<0.023 U	<0.025 UJ	--	<0.020 UJ	<0.020 U
PCB-1232	mg/kg	NS	0.792	--	--	--	--	--	--	--	--	--	--	--	<0.0084 U	<0.0073 U	<0.0076 U	<0.0083 UJ	--	<0.0067 UJ	<0.0067 U
PCB-1242	mg/kg	NS	0.972	--	--	--	--	--	--	--	--	--	--	--	<0.015 U	<0.013 U	<0.014 U	<0.015 UJ	--	<0.012 UJ	<0.012 U
PCB-1248	mg/kg	NS	0.975	--	--	--	--	--	--	--	--	--	--	--	<0.0092 U	<0.0080 U	<0.0084 U	<0.0091 UJ	--	<0.0073 UJ	<0.0073 U
PCB-1254	mg/kg	NS	0.988	--	--	--	--	--	--	--	--	--	--	--	<0.0090 U	<0.0079 U	<0.0082 U	<0.0090 UJ	--	<0.0072 UJ	<0.0072 U
PCB-1260	mg/kg	NS	1	--	--	--	--	--	--	--	--	--	--	--	0.300	<0.0038 U	0.110	<0.0043 UJ	--	0.200 J	<0.0035 UJ

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	CG-SB15		CG-SB16				CG-SB17		CG-SB18			CG-SB19		CG-SB20		CG-SB21	CG-SB22	
Sample / Duplicate:				CG-SB15	CG-SB15	CG-SB16	CG-SB16 DUP	CG-SB16	CG-SB16	CG-SB17	CG-SB17	CG-SB18	CG-SB18	CG-SB18	CG-SB19	CG-SB19	CG-SB20	CG-SB20	CG-SB21	CG-SB22	CG-SB22
Field Sample ID:				CG-SB15-SS-101308	CG-SB15-0608-101308	CG-SB16-SS-121108	CG-SBDUP004-121108	CG-SB16-0406-121108	MSS-CG-SB16-0406-121108	CG-SB17-SS-120108	CG-SB17-0405-120108	CG-SB18-SS-121108	CG-SB18-0406-121108	MSS-CG-SB18-0406-121108	CG-SB19-SS-120108	CG-SB19-0405-120108	CG-SB20-SS-120108	CG-SB20-0506-120108	CG-SB21-SS-101308	CG-SB22-SS-120108	CG-SB22-0507-120108
Sample Depth (feet):				0 - 0.5	6 - 8	0 - 0.5	0 - 0.5	4 - 6	4 - 6	0 - 0.5	4 - 5	0 - 0.5	4 - 6	4 - 6	0 - 0.5	4 - 5	0 - 0.5	5 - 6	0 - 0.5	0 - 0.5	5 - 7
Sample Date:				10/13/2008	10/13/2008	12/11/2008	12/11/2008	12/11/2008	12/11/2008	12/01/2008	12/01/2008	12/11/2008	12/11/2008	12/11/2008	12/01/2008	12/01/2008	12/01/2008	12/01/2008	10/13/2008	12/01/2008	12/01/2008
PAHs																					
2-Methylnaphthalene	mg/kg	NS	3,010	0.950 J	7.000	0.310 J	3.300 J	0.400 J	--	0.580	1.200	12.000 J	12.000 J	--	0.440 J	0.038 J	0.200 J	<0.031 U	0.650 J	0.290 J	0.270 J
Acenaphthene	mg/kg	NS	45,200	0.450 J	0.440 J	0.370 J	1.100 J	0.072 J	--	0.082 J	4.600	0.450 J	44.000	--	0.050 J	<0.015 U	0.021 J	<0.017 U	0.180 J	0.086 J	0.017 J
Acenaphthylene	mg/kg	NS	NS	0.160 J	2.700 J	0.370 J	7.100 J	1.100 J	--	0.130 J	<0.046 U	1.000 J	43.000	--	0.140 J	<0.024 U	<0.025 U	0.140 J	1.700	0.150 J	0.044 J
Anthracene	mg/kg	196.9492	100,000	0.900 J	1.400 J	1.400	24.000	2.500	--	0.410	0.530 J	1.000 J	75.000	--	0.310 J	<0.024 U	0.120 J	<0.028 U	2.400	0.570	0.089 J
Benzo(a)anthracene	mg/kg	NS	20.8	2.200 B	2.900 JB	3.400	**33.000**	8.500	--	1.800	0.100 J	2.300 J	**150.000**	--	1.300	0.190 J	0.330 J	0.034 J	6.500 B	3.900	1.100
Benzo(a)pyrene	mg/kg	0.47	2.11	*1.200 J*	***2.400 J***	***2.800***	***23.000***	***8.100***	--	*1.400*	0.077 J	***2.400 J***	***130.000***	--	*1.100*	0.230 J	0.170 J	<0.032 U	***5.100***	***3.200***	*1.500 J*
Benzo(b)fluoranthene	mg/kg	0.4793	21.1	*2.400 JBK*	*5.100 JBK*	*4.900 JK*	***41.000 JK***	*14.000 JK*	--	*2.900 JK*	0.150 JK	*5.600 JK*	***200.000 JK***	--	*2.800 JK*	*0.560 JK*	*0.520 JK*	<0.043 UJ	*9.300 JBK*	*6.800 JK*	*2.100 JK*
Benzo(g,h,i)perylene	mg/kg	NS	NS	0.720 J	1.600 J	1.500	11.000	4.500	--	1.200	0.062 J	2.200 J	68.000	--	1.000	0.280 J	0.210 J	<0.026 U	3.500	2.500	1.300
Benzo(k)fluoranthene	mg/kg	NS	211	<0.190 UKJ	<0.370 UKJ	<0.047 UKJ	<0.900 UKJ	<0.200 UKJ	--	<0.050 UKJ	<0.110 UKJ	<0.990 UKJ	<4.000 UKJ	--	<0.065 UKJ	<0.057 UKJ	<0.060 UKJ	<0.065 UJ	<0.170 UKJ	<0.052 UKJ	<0.052 UKJ
Chrysene	mg/kg	0.1446	2,110	*2.600 B*	*3.900 B*	*3.400*	*30.000*	*9.100*	--	*2.400*	*0.160 J*	*3.000 J*	*120.000*	--	*2.100*	*0.340 J*	*0.620*	<0.044 U	*7.400 B*	*5.200*	*1.100*
Dibenz(a,h)anthracene	mg/kg	NS	2.11	0.260 J	0.650 J	0.560	**4.400 J**	1.600 J	--	0.500	<0.052 U	0.910 J	**27.000 J**	--	0.440 J	0.110 J	0.093 J	<0.031 U	1.200 J	1.200	0.400 J
Fluoranthene	mg/kg	88.8778	30,100	5.200 B	5.300 B	5.500	71.000	14.000	--	3.100	0.300 J	3.300 J	*340.000*	--	1.800	0.230 J	0.610	<0.058 U	11.000 B	4.100	1.300
Fluorene	mg/kg	14.8299	30,100	0.380 J	1.200 J	0.480	*16.000*	0.290 J	--	0.190 J	3.100	0.520 J	*110.000*	--	0.072 J	<0.026 U	0.027 J	<0.029 U	1.200 J	0.081 J	<0.023 U
Indeno(1,2,3-cd)pyrene	mg/kg	NS	21.1	0.670 J	1.500 J	1.500	11.000	4.300	--	1.100	<0.060 U	2.000 J	**66.000**	--	0.930	0.230 J	0.170 J	<0.036 U	3.300	2.400	1.100
Naphthalene	mg/kg	0.6582	24.1	*5.500*	*22.000*	0.530	*4.300 J*	*1.300 J*	--	0.560	*6.200*	***41.000***	***44.000***	--	0.530 J	0.052 J	0.092 J	0.068 J	*1.000 J*	0.360 J	*0.990*
Phenanthrene	mg/kg	NS	NS	4.900 B	4.800 B	3.600	64.000	3.500	--	2.100	3.500	3.600 J	370.000	--	1.300	0.260 J	0.770	0.037 J	8.700 B	2.000	0.440
Pyrene	mg/kg	54.5455	22,600	4.200 B	4.600 B	4.500	47.000	9.900	--	2.200	0.490 J	3.200 J	*220.000*	--	1.500	0.250 J	0.440 J	0.030 J	9.600 B	3.300	1.400
SVOCs																					
1,2,4-Trichlorobenzene	mg/kg	0.408	113	<0.0010 U	<0.00083 UJ	<0.00096 UJ	<0.00080 U	<0.0011 UJ	--	<0.0013 UJ	<0.0013 U	0.002 J	<0.0015 UJ	--	<0.0013 UJ	<0.0012 UJ	<0.0016 UJ	<0.0018 U	<0.00099 U	<0.0015 UJ	0.0016 J
2,2-Oxybis(1-chloropropane)	mg/kg	NS	1,020	<0.110 U	<0.210 U	<0.027 U	<0.520 U	<0.120 U	--	<0.029 U	<0.063 U	<0.570 U	<2.300 U	--	<0.038 U	<0.033 U	<0.034 U	<0.037 U	<0.098 U	<0.030 U	<0.030 U
2,4-Dinitrotoluene	mg/kg	0.0001	7.37	<0.310 U	<0.600 U	<0.077 U	<1.500 U	<0.340 U	--	<0.083 U	<0.180 U	<1.600 U	<6.500 U	--	<0.110 U	<0.094 U	<0.099 U	<0.110 U	<0.280 U	<0.086 U	<0.086 U
2,6-Dinitrotoluene	mg/kg	0.0001	1.54	<0.130 U	<0.260 U	<0.033 U	<0.630 U	<0.140 U	--	<0.035 U	<0.076 U	<0.690 U	<2.800 U	--	<0.046 U	<0.040 U	<0.042 U	<0.045 U	<0.120 U	<0.037 U	<0.037 U
2-Chloronaphthalene	mg/kg	NS	60,300	<0.047 U	<0.091 U	<0.012 U	<0.220 U	<0.051 U	--	<0.013 U	<0.027 U	<0.250 U	<0.990 U	--	<0.016 U	<0.014 U	<0.015 U	<0.016 U	<0.043 U	<0.013 U	<0.013 U
2-Nitroaniline	mg/kg	NS	8,010	<0.240 U	<0.460 U	<0.059 U	<1.100 U	<0.260 U	--	<0.063 U	<0.140 U	<1.200 U	<5.000 U	--	<0.082 U	<0.072 U	<0.075 U	<0.081 U	<0.210 U	<0.065 U	<0.065 U
3,3-Dichlorobenzidine	mg/kg	NS	5.11	<0.420 U	<0.820 U	<0.110 U	<2.000 U	<0.460 U	--	<0.110 U	<0.250 U	2.200 UR	<8.900 U	--	<0.150 U	<0.130 U	<0.130 U	<0.150 U	<0.380 U	<0.120 U	<0.120 UJ
3-Nitroaniline	mg/kg	NS	NS	<0.340 U	<0.670 U	<0.086 U	<1.600 U	<0.370 U	--	<0.091 U	<0.200 U	<1.800 U	<7.200 U	--	<0.120 U	<0.100 U	<0.110 U	<0.120 U	<0.310 U	<0.095 U	<0.095 U
4-Bromodiphenyl ether	mg/kg	NS	26.9	<0.090 U	<0.170 U	<0.022 U	<0.430 U	<0.097 U	--	<0.024 U	<0.052 U	<0.470 U	<1.900 U	--	<0.031 U	<0.027 U	<0.028 U	<0.031 U	<0.081 U	<0.025 U	<0.025 U
4-Chloroaniline	mg/kg	NS	11.5	<0.390 U	<0.750 U	<0.096 U	<1.800 U	<0.420 U	--	<0.100 U	<0.220 U	2.000 UR	<8.100 U	--	<0.130 U	<0.120 U	<0.120 U	<0.130 U	<0.350 U	<0.110 U	<0.110 U
4-Chlorodiphenyl ether	mg/kg	NS	NS	<0.099 U	<0.190 U	<0.025 U	<0.470 U	<0.110 U	--	<0.026 U	<0.057 U	<0.520 U	<2.100 U	--	<0.034 U	<0.030 U	<0.031 U	<0.034 U	<0.089 U	<0.027 U	<0.027 U
4-Nitroaniline	mg/kg	NS	115	<0.340 U	<0.660 U	<0.085 U	<1.600 U	<0.370 U	--	<0.091 U	<0.200 U	<1.800 U	<7.200 U	--	<0.120 U	<0.100 U	<0.110 U	<0.120 U	<0.310 U	<0.095 U	<0.095 U
Acetophenone	mg/kg	NS	2,520	0.200 J	0.370 J	<0.023 U	<0.450 U	<0.100 U	--	<0.025 U	<0.055 U	<0.490 U	<2.000 U	--	<0.033 U	<0.029 U	<0.030 U	0.077 J	<0.085 U	<0.026 U	0.150 J
Benzaldehyde	mg/kg	NS	818	<0.320 U	<0.610 U	<0.079 U	<1.500 U	<0.340 U	--	<0.084 U	<0.180 U	<1.700 U	<6.600 U	--	<0.110 U	<0.096 U	<0.100 U	<0.110 U	<0.280 U	<0.087 U	0.110 J
Biphenyl	mg/kg	NS	288	<0.240 U	1.500 J	0.076 J	<1.100 U	<0.260 U	--	0.140 J	0.250 J	<1.200 U	9.500 J	--	0.110 J	<0.072 U	<0.075 U	<0.081 U	<0.210 U	0.074 J	<0.065 U
Bis(2-Chloroethoxy)methane	mg/kg	NS	2,460	<0.110 U	<0.210 U	<0.027 U	<0.520 U	<0.120 U	--	<0.029 U	<0.063 U	<0.570 U	<2.300 U	--	<0.038 U	<0.033 U	<0.034 U	<0.037 U	<0.098 U	<0.030 U	<0.030 U
Bis(2-Chloroethyl)ether	mg/kg	NS	1.29	<0.078 U	<0.150 U	<0.019 U	<0.370 U	<0.085 U	--	<0.021 U	<0.045 U	<0.410 U	<1.600 U	--	<0.027 U	<0.024 U	<0.025 U	<0.027 U	<0.071 U	<0.022 U	<0.022 U
Bis(2-Ethylhexyl)phthalate	mg/kg	2.88	164	0.470 J	*3.500*	0.110 J	<1.000 U	0.420 J	--	<0.058 UJB	<0.130 U	2.200 J	*7.300 J*	--	<0.075 UJB	<0.066 UJB	<0.069 U	<0.075 U	0.350 J	<0.060 UJB	1.200 JB
Butyl benzyl phthalate	mg/kg	NS	1,210	<0.200 U	<0.390 U	<0.050 U	<0.970 U	<0.220 U	--	0.068 J	<0.120 U	<1.100 U	<4.300 U	--	0.077 J	<0.062 U	<0.064 U	<0.070 U	<0.180 U	<0.056 U	<0.056 U
Caprolactam	mg/kg	NS	100,000	<0.500 U	<0.970 U	<0.120 U	<2.400 U	<0.540 U	--	<0.130 U	<0.290 U	<2.600 U	<11.000 U	--	<0.170 U	<0.150 U	<0.160 U	<0.170 U	<0.450 U	<0.140 U	<0.140 U
Carbazole	mg/kg	NS	NS	0.520 J	0.430 J	0.430	7.000 J	0.510 J	--	0.120 J	<0.098 U	<0.890 U	34.000	--	0.097 J	<0.052 U	<0.054 U	<0.058 U	1.000 J	0.230 J	<0.047 U
Dibenzofuran	mg/kg	NS	1,040	0.520 J	1.500 J	0.420	8.900	0.320 J	--	0.230 J	2.900	1.300 J	67.000	--	0.230 J	0.045 J	0.210 J	<0.032 U	0.850 J	0.230 J	0.067 J
Diethyl phthalate	mg/kg	NS	100,000	<0.120 U	<0.240 U	<0.030 U	<0.580 U	<0.130 U	--	<0.033 U	<0.071 U	<0.640 U	<2.600 U	--	<0.042 U	<0.037 U	<0.039 U	<0.042 U	<0.110 U	<0.034 U	<0.034 U
Dimethyl phthalate	mg/kg	NS	7,390	0.140 J	1.500 J	<0.027 U	<0.520 U	<0.120 U	--	<0.029 U	<0.063 U	<0.570 U	<2.300 U	--	<0.038 U	<0.033 U	<0.034 U	<0.037 U	1.100 J	<0.030 U	<0.030 U
Di-n-butyl phthalate	mg/kg	5.0333	82,100	<0.140 U	<0.260 U	<0.034 U	<0.650 U	<0.150 U	--	<0.036 U	<0.079 U	<0.710 U	<2.900 U	--	<0.047 U	<0.041 U	<0.043 U	<0.047 U	<0.120 U	<0.038 U	<0.038 U
Di-n-octyl phthalate	mg/kg	NS	8,210	<0.068 U	<0.130 U	<0.017 U	<0.320 U	<0.074 U	--	<0.018 U	<0.039 U	<0.350 U	<1.400 U	--	<0.023 U	<0.021 U	<0.021 U	<0.023 U	<0.061 U	<0.019 U	<0.019 U
Hexachlorobenzene	mg/kg	0.0252	1.15	<0.140 U	<0.260 U	<0.034 U	<0.650 U	<0.150 U	--	<0.036 U	<0.079 U	<0.710 U	<2.900 U	--	<0.047 U	<0.041 U	<0.043 U	<0.047 U	<0.120 U	<0.038 U	<0.038 U
Hexachlorobutadiene	mg/kg	NS	7.19	<0.00078 U	<0.00063 UJ	<0.00072 UJ	<0.00060 U	<0.00086 UJ	--	<0.00099 UJ	<0.0010 U	<0.00080 UJ	<0.0011 UJ	--	<0.0010 UJ	<0.00094 UJ	<0.0012 UJ	<0.0013 U	<0.00075 U	<0.0011 UJ	<0.00078 UJ
Hexachlorocyclopentadiene	mg/kg	NS	10.8	<0.240 U	<0.460 U	<0.059 U	<1.100 U	<0.260 U	--	<0.063 U	<0.140 U	<1.200 UJ	<5.000 U	--	<0.082 U	<0.072 U	<0.075 U	<0.081 U	<0.210 U	<0.065 U	<0.065 U
Hexachloroethane	mg/kg	NS	11.1	<0.100 U	<0.190 U	<0.025 U	<0.480 U	<0.110 U	--	<0.027 U	<0.058 U	<0.520 U	<2.100 U	--	<0.035 U	<0.030 U	<0.032 U	<0.035 U	<0.091 U	<0.028 U	<0.028 U
Isophorone	mg/kg	NS	2,420	<0.080 U	<0.160 U	<0.020 U	<0.380 U	<0.087 U	--	<0.021 U	<0.046 U	<0.420 U	<1.700 U	--	<0.028 U	<0.024 U	<0.025 U	<0.028 U	<0.072 U	<0.022 U	<0.022 U
Nitrobenzene	mg/kg	NS	32.4	<0.100 U	<0.200 U	<0.026 U	<0.490 U	<0.110 U	--	<0.028 U	<0.060 U	<0.540 U	<2.200 U	--	<0.036 U	<0.031 U	<0.033 U	<0.036 U	<0.094 U	<0.029 U	<0.029 U
N-nitrosodi-n-propylamine	mg/kg	NS	0.328	<0.150 U	<0.280 U	<0.036 U	<0.700 U	<0.160 U	--	<0.039 U	<0.085 U	<0.760 U	<3.100 U	--	<0.051 U	<0.044 U	<0.046 U	<0.050 U	<0.130 U	<0.040 U	<0.040 U
N-Nitrosodiphenylamine	mg/kg	0.0764	469	<0.099 U	<0.190 U	<0.025 U	<0.470 U	<0.110 U	--	<0.026 U	<0.057 U	<0.520 U	<2.100 U	--	<0.034 U	<0.030 U	<0.031 U	<0.034 U	<0.089 U	<0.027 U	<0.027 U
Pyridine	mg/kg	0.0069	1,170	<0.610 U	<1.200 U	<0.150 U	<2.900 U	<0.660 U	--	<0.160 U	<0.350 U	3.200 UR	<13.000 U	--	<0.210 U	<0.190 U	<0.190 U	<0.210 U	<0.550 U	<0.170 U	<0.170 U

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	CG-SB15		CG-SB16				CG-SB17		CG-SB18			CG-SB19		CG-SB20		CG-SB21	CG-SB22	
Sample / Duplicate:				CG-SB15	CG-SB15	CG-SB16	CG-SB16 DUP	CG-SB16	CG-SB16	CG-SB17	CG-SB17	CG-SB18	CG-SB18	CG-SB18	CG-SB19	CG-SB19	CG-SB20	CG-SB20	CG-SB21	CG-SB22	CG-SB22
Field Sample ID:				CG-SB15-SS-101308	CG-SB15-0608-101308	CG-SB16-SS-121108	CG-SBDUP004-121108	CG-SB16-0406-121108	MSS-CG-SB16-0406-121108	CG-SB17-SS-120108	CG-SB17-0405-120108	CG-SB18-SS-121108	CG-SB18-0406-121108	MSS-CG-SB18-0406-121108	CG-SB19-SS-120108	CG-SB19-0405-120108	CG-SB20-SS-120108	CG-SB20-0506-120108	CG-SB21-SS-101308	CG-SB22-SS-120108	CG-SB22-0507-120108
Sample Depth (feet):				0 - 0.5	6 - 8	0 - 0.5	0 - 0.5	4 - 6	4 - 6	0 - 0.5	4 - 5	0 - 0.5	4 - 6	4 - 6	0 - 0.5	4 - 5	0 - 0.5	5 - 6	0 - 0.5	0 - 0.5	5 - 7
Sample Date:				10/13/2008	10/13/2008	12/11/2008	12/11/2008	12/11/2008	12/11/2008	12/01/2008	12/01/2008	12/11/2008	12/11/2008	12/11/2008	12/01/2008	12/01/2008	12/01/2008	12/01/2008	10/13/2008	12/01/2008	12/01/2008
Phenols																					
2,4,5-Trichlorophenol	mg/kg	NS	82,100	<0.047 U	<0.091 U	<0.012 U	<0.220 U	<0.051 U	--	<0.013 U	<0.027 U	<0.250 U	<0.990 U	--	<0.016 U	<0.014 U	<0.015 U	<0.016 U	<0.043 U	<0.013 U	<0.013 U
2,4,6-Trichlorophenol	mg/kg	NS	209	<0.047 U	<0.091 U	<0.012 U	<0.220 U	<0.051 U	--	<0.013 U	<0.027 U	<0.250 U	<0.990 U	--	<0.016 U	<0.014 U	<0.015 U	<0.016 U	<0.043 U	<0.013 U	<0.013 U
2,4-Dichlorophenol	mg/kg	NS	2,460	<0.047 U	<0.091 U	<0.012 U	<0.220 U	<0.051 U	--	<0.013 U	<0.027 U	<0.250 U	<0.990 U	--	<0.016 U	<0.014 U	<0.015 U	<0.016 U	<0.043 U	<0.013 U	<0.013 U
2,4-Dimethylphenol	mg/kg	NS	16,400	<0.310 U	<0.600 U	<0.077 U	<1.500 U	<0.340 U	--	<0.083 U	<0.180 U	<1.600 U	<6.500 U	--	<0.110 U	<0.094 U	<0.099 U	<0.110 U	<0.280 U	<0.086 U	<0.086 U
2,4-Dinitrophenol	mg/kg	NS	1,640	<1.600 U	<3.000 U	<0.390 U	<7.500 U	<1.700 U	--	<0.420 U	<0.910 U	8.200 UR	<33.000 U	--	<0.540 U	<0.480 U	<0.500 U	<0.540 U	<1.400 U	<0.430 U	<0.430 U
2-Chlorophenol	mg/kg	NS	5,840	<0.099 U	<0.190 U	<0.025 U	<0.470 U	<0.110 U	--	<0.026 U	<0.057 U	<0.520 U	<2.100 U	--	<0.034 U	<0.030 U	<0.031 U	<0.034 U	<0.089 U	<0.027 U	<0.027 U
2-Methylphenol	mg/kg	NS	41,000	<0.061 U	0.210 J	<0.015 U	<0.290 U	<0.066 U	--	<0.016 U	<0.035 U	<0.320 U	<1.300 U	--	<0.021 U	<0.019 U	<0.019 U	<0.021 U	<0.055 U	<0.017 U	<0.017 U
2-Nitrophenol	mg/kg	NS	NS	<0.047 U	<0.091 U	<0.012 U	<0.220 U	<0.051 U	--	<0.013 U	<0.027 U	<0.250 U	<0.990 U	--	<0.016 U	<0.014 U	<0.015 U	<0.016 U	<0.043 U	<0.013 U	<0.013 U
4-Chloro-3-methylphenol	mg/kg	NS	82,100	<0.310 U	<0.600 U	<0.077 U	<1.500 U	<0.340 U	--	<0.083 U	<0.180 U	<1.600 U	<6.500 U	--	<0.110 U	<0.094 U	<0.099 U	<0.110 U	<0.280 U	<0.086 U	<0.086 U
4-Methylphenol	mg/kg	NS	82,100	<0.160 U	<0.300 U	<0.039 U	<0.740 U	<0.170 U	--	<0.041 U	<0.090 U	<0.810 U	<3.300 U	--	<0.054 U	<0.047 U	<0.049 U	<0.054 U	<0.140 U	<0.043 U	<0.043 U
4-Nitrophenol	mg/kg	NS	NS	<0.460 U	<0.890 U	<0.110 U	<2.200 U	<0.500 U	--	<0.120 U	<0.260 U	<2.400 U	<9.600 U	--	<0.160 U	<0.140 U	<0.140 U	<0.160 U	<0.410 U	<0.130 U	<0.130 U
4,6-Dinitro-2-methylphenol	mg/kg	NS	65.7	<1.600 U	<3.000 U	<0.390 U	<7.400 U	<1.700 U	--	<0.410 U	<0.900 U	8.100 UR	<33.000 U	--	<0.540 U	<0.470 U	<0.490 U	<0.540 U	<1.400 U	<0.430 U	<0.430 U
Pentachlorophenol	mg/kg	0.0028	3.97	<1.600 U	<3.000 U	<0.390 U	<7.400 U	<1.700 U	--	<0.410 U	<0.900 U	<8.100 UJ	<33.000 U	--	<0.540 U	<0.470 U	<0.490 U	<0.540 U	<1.400 U	<0.430 U	<0.430 U
Phenol	mg/kg	2.2946	100,000	<0.085 U	<0.160 U	<0.021 U	<0.400 U	<0.092 U	--	<0.023 U	<0.049 U	<0.440 U	<1.800 U	--	<0.029 U	<0.026 U	<0.027 U	<0.029 U	<0.077 U	<0.023 U	0.031 J
Metals																					
Aluminum, Total	mg/kg	600	100,000	3,000	1,700	12,000	8,100	8,800	--	1,500	44,000	2,500	16,000	--	4,700	16,000	2,600	10,000	1,400	2,300	10,000
Antimony, Total	mg/kg	0.542	467	0.260 J-	0.230 J-	0.027 BJ-	0.059 BJ-	0.083 BJ-	--	1,800 J	<0.019 UJ	0.340 J-	0.024 BJ-	--	0.540 JJ	0.210 JB	0,800 J	0.450 J	0.130 BJ-	0,700 J	0.230 JB
Arsenic, Total [1]	mg/kg	0.584	8.3	5.500	**12.000**	5.800	**9.600**	**15.000**	--	4.900 JL	2.800 L	**10.000**	4.500	--	**16.000 JL**	**19.000 L**	**14.000 JL**	**9.700 L**	3.100	**10.000 JL**	8.300 J-L
Barium, Total	mg/kg	164.8	100,000	39.000	63.000	86.000	84.000	98.000	--	130.000 J	450.000 J	81.000	110.000	--	67.000 J	240.000 J	88.000 J	160.000 J	29.000	96.000 J	130.000 J
Beryllium, Total	mg/kg	6.32	2,300	1.400	0.840	0.680	0.580	1.100	--	0.630	11.000	0.510	2.000	--	0.480	2.200	0.600	3.300	0.210	0.560	3.300
Cadmium, Total	mg/kg	0.752	985	0.370	0.420	0.860	1.300	0.920	--	1.300	1.800	1.200	0.770	--	4.900	0.830	1.400	1.600	0.390	1.700	1.100 J-
Calcium, Total	mg/kg	NS	NS	23,000	2,400	68,000	59,000	32,000	--	6,300	150,000	13,000 J	71,000	--	20,000	34,000	22,000 J	17,000	26,000	8,300	29,000
Chromium, Hexavalent	mg/kg	NS	6.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium, Total [3]	mg/kg	360,000	NS	7.800	13.000	27.000	22.000	22.000	--	13.000	3.200	14.000	7.500	--	22.000	12.000	49.000 J-	13.000	12.000	29.000	18.000 J-
Chromium, Trivalent	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt, Total	mg/kg	3.6073	347	2.600	4.800	7.200	4.900	4.600	--	3.700 JL	0.580 L	3.800 J-	1.800	--	9.100 JL	5.600 L	7.000 JL	8.700 L	1.800	4.600 JL	6.400 J-L
Copper, Total	mg/kg	91.6	46,700	12.000	24.000	27.000	39.000	50.000	--	100.000 JL	3.300 JL	42.000	9.100	--	170.000 JL	52.000 JL	240.000 JL	72.000 JL	30.000	62.000 JL	38.000 JLJ-
Iron, Total	mg/kg	NS	100,000	7,800 J	12,000 J	19,000	13,000	12,000	--	8,900	7,600	19,000	9,300	--	41,000	27,000	50,000	95,000	9,000 J	28,000	30,000
Lead, Total	mg/kg	27	800	130.000 J	60.000 J	120.000	290.000	94.000	--	450.000	2.700	160.000	31.000	--	130.000	61.000	110.000 J+	47.000	70.000 J	89.000	79.000 J-
Magnesium, Total	mg/kg	NS	NS	4,600	540	30,000	25,000	14,000	--	2,800	64,000	6,200	39,000	--	10,000	21,000	8,900 J	3,500	13,000	3,500	14,000 J-
Manganese, Total	mg/kg	39.1244	25,900	220.000 J	82.000 J	340.000	400.000	270.000	--	100.000 JL	1.300 L	180.000	610.000	--	380.000 JL	1,600 L	500.000 JL	700.000 L	150.000 J	340.000 JL	740.000 L
Mercury, Total	mg/kg	0.208	3.13	0.110	0.510	1.700	**3.400**	**5.600**	--	0.120	<0.0075 U	0.690 J	0.400	--	0.140	0.200	0.140	0.027 B	0.660	0.150	0.230 J-
Nickel, Total	mg/kg	13.0612	22,500	14.000	12.000	24.000	17.000	15.000	--	11.000 JL	2.900 L	22.000 J-	4.500	--	22.000 JL	8.800 L	29.000 JL	28.000 L	6.500	28.000 JL	18.000 J-L
Potassium, Total	mg/kg	NS	NS	940	290 B	2,600	1,800	1,400	--	280 B	2,800	410	1,600	--	670	1,400	500	660	360	500	1,200
Selenium, Total	mg/kg	0.52	5,840	1.400 J	2.700 J	0.670	0.820	2.200	--	1.500	8.500	1.400	2.800	--	1.900	3.400	1.100	1.200	0.700 J	1.500	1.700
Silver, Total	mg/kg	0.8491	5,840	0.029 B	0.032 B	0.089 B	0.091 B	0.130	--	0.094 B	0.220	0.081 B	0.097 B	--	0.310	0.120 B	0.160	0.098 B	0.040 B	0.150	0.097 BJ-
Sodium, Total	mg/kg	NS	NS	240 B	72 B	220 B	220 B	290 B	--	110 B	700 B	130 B	560 B	--	170 B	410 B	180 B	380 B	81 B	100 B	530 B
Thallium, Total	mg/kg	0.284	11.7	0.100 B	0.130	0.230	0.250	0.880	--	0.089 B	0.021 B	0.200	0.100 B	--	0.400	0.320	0.220	0.650	0.081 B	0.200	0.360
Vanadium, Total	mg/kg	60	5,840	12.000	15.000	26.000	17.000	20.000	--	13.000 JL	14.000 L	7.300	11.000	--	11.000 JL	20.000 L	6.400 JL	25.000 L	5.700	10.000 JL	30.000 J-L
Zinc, Total	mg/kg	NS	100,000	63.000	100.000	110.000	200.000	120.000	--	400.000 JL	10.000 L	140.000	26.000	--	270.000 JL	77.000 L	170.000 JL	130.000 L	48.000	110.000 JL	120.000 L
Inorganic - Cyanide																					
Cyanide, Amenable	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Reactive	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Total	mg/kg	4.04	195	0.48 B	27 g	22	17	3.5	--	1.9	6.9 J	11 J	13	--	2.2	1.2 J	1.2	1 J	6.1	2	1.2 J
Other																					
Sulfide, Reactive	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organic Matter	%	NS	NS	--	--	--	--	--	18.8	--	--	--	--	35.2	--	--	--	--	--	--	--
Percent Moisture	%	NS	NS	15	12	15 J	11	22	36.2	20	27	19	19	32.6	39	30	33	38	5.9	23	23

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Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	CG-SB23				CG-SB24		CG-SB25		CG-SB26		CG-SB27			CG-SB28		CG-SB 53	CG-SB 54	
Sample / Duplicate:				CG-SB23	CG-SB23	CG-SB23	CG-SB23 DUP	CG-SB24	CG-SB24	CG-SB25	CG-SB25	CG-SB26	CG-SB26	CG-SB27	CG-SB27	CG-SB27 DUP	CG-SB28	CG-SB28	CG-SB 53	CG-SB 54	CG-SB 54
Field Sample ID:				CG-SB23-SS-121108	CG-SB23-0507-121108	MSS-CG-SB23-0507-121108	CG-SBDUP005-121108	CG-SB24-SS-120108	CG-SB24-0203-120108	CG-SB25-0204-101308	CG-SB25-0608-101308	CG-SB26-SS-120108	CG-SB26-0809-120108	CG-SB27-SS-112508	CG-SB27-0809-112508	CG-SBDUP001-112508	CG-SB28-SS-120308	CG-SB28-0607-120308	CS-SB53(20130509)	CG-SB 54 (0-0.5) 06092015	CG-SB 54 (4-6) 06092015
Sample Depth (feet):				0 - 0.5	5 - 7	5 - 7	5 - 7	0 - 0.5	2 - 3	2 - 4	6 - 8	0 - 0.5	8 - 9	0 - 0.5	8 - 9	8 - 9	0 - 0.5	6 - 7	0	0 - 0.5	4 - 6
Sample Date:				12/11/2008	12/11/2008	12/11/2008	12/11/2008	12/01/2008	12/01/2008	10/13/2008	10/13/2008	12/01/2008	12/01/2008	11/25/2008	11/25/2008	11/25/2008	12/03/2008	12/03/2008	05/09/2013	06/09/2015	06/09/2015
VOCs																					
1,1,1-Trichloroethane	mg/kg	0.1402	640	<0.00058 U	<6.300 U	--	<6.400 U	<0.00092 UJ	<1.600 U	<0.0010 U	0.0024 J	<0.00066 U	<0.00091 UJ	<0.00046 U	<0.0012 U	<0.00091 UJ	<0.00094 U	<0.00064 U	--	--	--
1,1,2,2-Tetrachloroethane	mg/kg	0.0002	3.6	<0.00068 U	<9.100 U	--	<9.200 U	<0.0011 UJ	<2.300 U	<0.0012 UJ	<0.0013 UJ	<0.00078 UJ	<0.0011 UJ	<0.00053 U	<0.0014 UJ	<0.0011 UJ	<0.0011 UJ	<0.00075 U	--	--	--
1,1,2-Trichloroethane	mg/kg	0.0032	7.01	<0.00098 U	<8.500 U	--	<8.600 U	<0.0016 UJ	<2.100 U	<0.0017 UJ	<0.0019 U	<0.0011 UJ	<0.0015 UJ	<0.00077 U	<0.0021 UJ	<0.0015 UJ	<0.0016 UJ	<0.0011 U	--	--	--
1,1-Dichloroethane	mg/kg	0.4834	22.2	<0.00023 U	<16.000 U	--	<16.000 U	<0.00037 UJ	<4.000 U	<0.00041 U	<0.00046 U	<0.00027 U	<0.00037 UJ	<0.00018 U	<0.00049 U	<0.00037 UJ	<0.00038 U	<0.00026 U	--	--	--
1,1-Dichloroethene	mg/kg	0.005	1,190	<0.00066 U	<16.000 U	--	<16.000 U	<0.0010 UJ	<4.000 U	<0.0011 U	<0.0013 U	<0.00075 U	<0.0010 UJ	<0.00052 U	<0.0014 U	<0.0010 UJ	<0.0011 U	<0.00072 U	--	--	--
1,2-Dibromo-3-chloropropane	mg/kg	0.0002	0.092	<0.00067 U	<27.000 U	--	<27.000 U	<0.0011 UJ	<6.800 U	<0.0012 UJ	<0.0013 UJ	<0.00076 UJ	<0.0011 UJ	<0.00053 U	<0.0014 UJ	<0.0010 UJ	<0.0011 UJ	<0.00074 U	--	--	--
1,2-Dibromoethane	mg/kg	0.0000282	0.221	<0.00058 U	<7.900 U	--	<7.900 U	<0.00092 UJ	<2.000 U	<0.0010 UJ	<0.0011 UJ	<0.00066 UJ	<0.00091 UJ	<0.00046 U	<0.0012 UJ	<0.00091 UJ	<0.00094 UJ	<0.00064 U	--	--	--
1,2-Dichlorobenzene	mg/kg	1.168	376	<0.00050 U	<29.000 U	--	<30.000 U	<0.00080 UJ	<7.400 U	<0.00087 UJ	<0.00098 UJ	<0.00057 UJ	<0.00079 UJ	<0.00039 U	<0.0011 UJ	<0.00079 UJ	<0.00081 UJ	<0.00055 U	--	--	--
1,2-Dichloroethane	mg/kg	0.0028	2.87	<0.00078 U	<7.900 U	--	<7.900 U	<0.0012 UJ	<2.000 U	<0.0014 U	<0.0015 U	<0.00089 U	<0.0012 UJ	<0.00061 U	<0.0016 U	<0.0012 UJ	<0.0013 U	<0.00086 U	--	--	--
1,2-Dichloropropane	mg/kg	0.0033	1.78	<0.00061 U	<15.000 U	--	<15.000 U	<0.00098 UJ	<3.600 U	<0.0011 U	<0.0012 U	<0.00070 U	<0.00096 UJ	<0.00048 U	<0.0013 U	<0.00096 UJ	<0.00099 U	<0.00067 U	--	--	--
1,3-Dichlorobenzene	mg/kg	1.1528	297	<0.00053 U	<13.000 U	--	<13.000 U	<0.00085 UJ	<3.200 U	<0.00093 UJ	<0.0010 UJ	<0.00061 UJ	<0.00084 UJ	<0.00042 U	<0.0011 UJ	<0.00084 UJ	<0.00086 UJ	<0.00059 U	--	--	--
1,4-Dichlorobenzene	mg/kg	0.144	16.4	<0.00087 U	<7.900 U	--	<7.900 U	<0.0014 UJ	<2.000 U	<0.0015 UJB	<0.0017 UJ	<0.00099 UJ	<0.0014 UJ	<0.00068 U	<0.0018 UJ	<0.0014 UJ	<0.0014 UJ	<0.00096 U	--	--	--
2-Butanone (MEK)	mg/kg	1.6661	28,400	<0.0020 U	<93.000 U	--	<94.000 U	<0.0032 UJ	<23.000 U	<0.0035 U	<0.0040 U	<0.0023 U	0.021 J	<0.0016 U	<0.0043 U	0.0075 J	<0.0033 U	<0.0022 U	--	--	--
2-Hexanone	mg/kg	NS	1,760	<0.0054 U	<68.000 U	--	<69.000 U	<0.0087 UJ	<17.000 U	<0.0095 U	<0.011 U	<0.0062 U	<0.0086 UJ	<0.0043 U	<0.011 U	<0.0085 UJ	<0.0088 U	<0.0060 U	--	--	--
4-Methyl-2-Pentanone (MIBK)	mg/kg	0.2252	3,360	<0.0048 U	<71.000 U	--	<72.000 U	<0.0077 UJ	<18.000 U	<0.0084 UJ	<0.0095 U	<0.0055 UJ	<0.0076 UJ	<0.0038 U	<0.010 UJ	<0.0076 UJ	<0.0079 UJ	<0.0053 U	--	--	--
Acetone	mg/kg	3.6766	100,000	<0.0060 U	<130.000 U	--	<130.000 U	<0.0095 UJ	*42.000 J*	<0.010 UJB	<0.012 UJB	0.0071 J	0.110 J	<0.0047 U	0.015 J	0.042 J	<0.0097 U	<0.0066 U	--	--	--
Benzene	mg/kg	0.0051	7.07	<0.00052 U	***20.000 J***	--	***21.000 J***	*0.014 J*	***9.700 J***	*0.0084 J*	<0.0010 U	0.00068 J	0.0017 J	<0.00041 U	0.0041 J	0.0034 J	<0.00085 U	<0.00058 U	--	--	--
Bromodichloromethane	mg/kg	0.0003	1.83	<0.00024 U	<12.000 U	--	<13.000 U	<0.00039 UJ	<3.100 U	<0.00043 UJ	<0.00048 U	<0.00028 UJ	<0.00039 UJ	<0.00019 U	<0.00051 UJ	<0.00038 UJ	<0.00040 UJ	<0.00027 U	--	--	--
Bromoform	mg/kg	0.0023	113	<0.00026 U	<9.100 U	--	<9.200 U	<0.00041 UJ	<2.300 U	<0.00045 UJ	<0.00050 UJ	<0.00029 UJ	<0.00040 UJ	<0.00020 U	<0.00054 UJ	<0.00040 UJ	<0.00041 UJ	<0.00028 U	--	--	--
Bromomethane	mg/kg	0.0051	43	<0.00056 U	<14.000 U	--	<14.000 U	<0.00089 UJ	<3.500 U	<0.00097 U	<0.0011 U	<0.00064 U	<0.00088 UJ	<0.00044 U	<0.0012 U	<0.00087 UJ	<0.00090 U	<0.00061 U	--	--	--
Carbon Disulfide	mg/kg	0.5919	738	<0.00047 U	<20.000 U	--	<20.000 U	<0.00075 UJ	<5.000 U	<0.00081 U	<0.00091 U	<0.00053 U	<0.00074 UJ	<0.00037 U	<0.00098 U	<0.00073 UJ	<0.00076 U	<0.00052 U	--	--	--
Carbon Tetrachloride	mg/kg	0.0039	4.03	<0.00070 U	<5.300 U	--	<5.400 U	<0.0011 UJ	<1.300 U	<0.0012 U	<0.0014 U	<0.00080 U	<0.0011 UJ	<0.00055 U	<0.0015 U	<0.0011 UJ	<0.0011 U	<0.00077 U	--	--	--
Chlorobenzene	mg/kg	0.1358	761	<0.00060 U	<9.400 U	--	<9.500 U	<0.00096 UJ	<2.400 U	<0.0010 UJ	<0.0012 UJ	<0.00069 UJ	<0.00095 UJ	<0.00047 U	<0.0013 UJ	<0.00094 UJ	<0.00097 UJ	<0.00066 U	--	--	--
Chloroethane	mg/kg	0.2266	2,120	<0.00099 U	<14.000 U	--	<14.000 U	<0.0016 UJ	<3.500 U	<0.0017 U	<0.0019 U	<0.0011 U	<0.0016 UJ	<0.00078 U	<0.0021 U	<0.0016 UJ	<0.0016 U	<0.0011 U	--	--	--
Chloroform	mg/kg	0.0033	1.98	<0.00032 U	<14.000 U	--	<15.000 U	<0.00051 UJ	<3.600 U	<0.00056 U	<0.00063 U	<0.00037 U	<0.00051 UJ	<0.00025 U	<0.00068 U	<0.00051 UJ	<0.00052 U	<0.00036 U	--	--	--
Chloromethane	mg/kg	0.0155	669	<0.00086 U	<16.000 U	--	<16.000 U	<0.0014 UJ	<3.900 U	<0.0015 U	<0.0017 U	<0.00098 U	<0.0013 UJ	<0.00067 U	<0.0018 U	<0.0013 UJ	<0.0014 U	<0.00094 U	--	--	--
cis-1,2-Dichloroethene	mg/kg	0.0412	2,340	<0.00062 U	<6.900 U	--	<7.000 U	<0.00099 UJ	<1.700 U	<0.0011 U	<0.0012 U	<0.00071 U	<0.00098 UJ	<0.00049 U	<0.0013 U	<0.00098 UJ	<0.0010 U	<0.00069 U	--	--	--
cis-1,3-Dichloropropene	mg/kg	NS	1,210	<0.0014 U	<8.500 U	--	<8.600 U	<0.0023 UJ	<2.100 U	<0.0025 UJ	<0.0028 U	<0.0016 UJ	<0.0023 UJ	<0.0011 U	<0.0030 UJ	<0.0023 UJ	<0.0023 UJ	<0.0016 U	--	--	--
Cyclohexane	mg/kg	NS	117	<0.00044 U	<8.800 U	--	<8.900 U	0.018 J	<2.200 U	0.002 J	<0.00087 U	0.0023 J	<0.00070 UJ	<0.00035 U	0.0048 J	0.0035 J	0.0023 J	<0.00049 U	--	--	--
Dibromochloromethane	mg/kg	0.032	38.9	<0.00063 U	<10.000 U	--	<10.000 U	<0.0010 UJ	<2.600 U	<0.0011 UJ	<0.0012 UJ	<0.00073 UJ	<0.0010 UJ	<0.00050 U	<0.0013 UJ	<0.0010 UJ	<0.0010 UJ	<0.00070 U	--	--	--
Dichloromethane	mg/kg	0.0026	1,150	<0.00083 U	*110.000*	--	*110.000*	<0.0013 UJ	*19.000 J*	<0.0015 U	<0.0016 U	<0.00095 U	<0.0013 UJ	<0.00066 U	<0.0018 U	0.0017 J	<0.0014 U	<0.00092 U	--	--	--
Ethylbenzene	mg/kg	1.57	35.4	<0.00074 U	*14.000 J*	--	*13.000 J*	<0.0012 UJ	*19.000 J*	<0.0013 UJ	<0.0015 UJ	<0.00085 UJ	<0.0012 UJ	<0.00059 U	<0.0016 UJ	<0.0012 UJ	<0.0012 UJ	<0.00082 U	--	--	--
Freon 113	mg/kg	NS	910	<0.00050 U	<21.000 U	--	<21.000 U	<0.00080 UJ	<5.200 U	<0.00087 U	<0.00098 U	<0.00057 U	<0.00079 UJ	<0.00039 U	<0.0011 U	<0.00079 UJ	<0.00081 U	<0.00055 U	--	--	--
Freon 12	mg/kg	3.0863	530	<0.00058 U	<6.900 U	--	<7.000 U	<0.00092 UJ	<1.700 U	<0.0010 U	<0.0011 U	<0.00066 U	<0.00091 UJ	<0.00046 U	<0.0012 U	<0.00091 UJ	<0.00094 U	<0.00064 U	--	--	--
Isopropylbenzene	mg/kg	NS	268	<0.00066 U	<9.100 U	--	<9.200 U	<0.0010 UJ	5.400 J	<0.0011 UJ	<0.0013 UJ	<0.00075 UJ	<0.0010 UJ	<0.00052 U	<0.0014 UJ	<0.0010 UJ	<0.0011 UJ	<0.00072 U	--	--	--
Methyl acetate	mg/kg	NS	29,000	<0.0031 U	<75.000 U	--	<76.000 U	<0.0049 UJ	<19.000 U	<0.0053 U	<0.0060 U	<0.0035 U	<0.0048 UJ	<0.0024 U	<0.0064 U	<0.0048 UJ	0.020	<0.0034 U	--	--	--
Methylcyclohexane	mg/kg	NS	67.6	<0.00047 U	<13.000 U	--	<13.000 U	0.011 J	3.400 J	0.0023 J	0.0012 J	0.0025 J	0.0012 J	<0.00037 U	0.006 J	0.0042 J	0.0035 J	<0.00052 U	--	--	--
Methyl-tert-butyl-ether	mg/kg	0.027	282	<0.00038 U	<16.000 U	--	<16.000 U	<0.00060 UJ	<3.900 U	<0.00066 U	<0.00074 U	<0.00043 U	<0.00060 UJ	<0.00030 U	<0.00079 U	<0.00059 UJ	<0.00061 U	<0.00042 U	--	--	--
Styrene	mg/kg	0.22	867	<0.00070 U	*53.000 J*	--	*55.000 J*	<0.0011 UJ	<2.000 U	<0.0012 UJ	<0.0014 UJ	<0.00080 UJ	<0.0011 UJ	<0.00055 U	<0.0015 UJ	<0.0011 UJ	<0.0011 UJ	<0.00077 U	--	--	--
Tetrachloroethene	mg/kg	0.0045	145	<0.00066 U	<8.500 U	--	<8.600 U	<0.0010 UJ	<2.100 U	<0.0011 UJ	<0.0013 UJ	<0.00075 UJ	<0.0010 UJ	<0.00052 U	<0.0014 UJ	<0.0010 UJ	<0.0011 UJ	<0.00072 U	--	--	--
Toluene	mg/kg	1.1072	818	<0.00077 U	*100.000*	--	*95.000*	0.095 J	<3.100 U	0.0092 J	0.0017 J	0.0034 J	0.0044 J	<0.00060 U	0.016 J	0.015 J	0.0025 J	<0.00085 U	--	--	--
trans-1,2-Dichloroethene	mg/kg	0.0626	1,850	<0.00043 U	<14.000 U	--	<14.000 U	<0.00069 UJ	<3.500 U	<0.00076 U	<0.00085 U	<0.00050 U	<0.00068 UJ	<0.00034 U	<0.00091 U	<0.00068 UJ	<0.00070 U	<0.00048 U	--	--	--
trans-1,3-Dichloropropene	mg/kg	NS	1,510	<0.00074 U	<13.000 U	--	<13.000 U	<0.0012 UJ	<3.300 U	<0.0013 UJ	<0.0015 U	<0.00085 UJ	<0.0012 UJ	<0.00059 U	<0.0016 UJ	<0.0012 UJ	<0.0012 UJ	<0.00082 U	--	--	--
Trichloroethene	mg/kg	0.0036	8.41	<0.00026 U	<7.200 U	--	<7.300 U	<0.00041 UJ	<1.800 U	<0.00045 U	<0.00050 U	<0.00029 U	<0.00040 UJ	<0.00020 U	<0.00054 U	<0.00040 UJ	<0.00041 U	<0.00028 U	--	--	--
Trichlorofluoromethane	mg/kg	4.4775	1,230	<0.0012 U	<16.000 U	--	<16.000 U	<0.0018 UJ	<3.900 U	<0.0020 U	<0.0023 U	<0.0013 U	<0.0018 UJ	<0.00091 U	<0.0024 U	<0.0018 UJ	<0.0019 U	<0.0013 U	--	--	--
Vinyl Chloride	mg/kg	0.0001	2.08	<0.0015 U	<8.500 U	--	<8.600 U	<0.0024 UJ	<2.100 U	<0.0026 U	<0.0029 U	<0.0017 U	<0.0023 UJ	<0.0012 U	<0.0031 U	<0.0023 UJ	<0.0024 U	<0.0016 U	--	--	--
Xylenes, Total	mg/kg	3.96	260	<0.00068 U	***370.000***	--	***390.000***	0.017 J	*23.000*	0.0065 J	<0.0013 UJ	<0.00078 UJ	<0.0011 UJ	<0.00053 U	0.0051 J	0.0045 J	<0.0011 UJ	<0.00075 U	--	--	--
PCBs																					
PCB, Total [4]	mg/kg	0.0094	0.967	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1016	mg/kg	NS	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1221	mg/kg	NS	0.883	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1232	mg/kg	NS	0.792	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1242	mg/kg	NS	0.972	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1248	mg/kg	NS	0.975	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1254	mg/kg	NS	0.988	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1260	mg/kg	NS	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	CG-SB23				CG-SB24		CG-SB25		CG-SB26		CG-SB27			CG-SB28		CG-SB 53	CG-SB 54	
Sample / Duplicate:				CG-SB23	CG-SB23	CG-SB23	CG-SB23 DUP	CG-SB24	CG-SB24	CG-SB25	CG-SB25	CG-SB26	CG-SB26	CG-SB27	CG-SB27	CG-SB27 DUP	CG-SB28	CG-SB28	CG-SB 53	CG-SB 54	CG-SB 54
Field Sample ID:				CG-SB23-SS-121108	CG-SB23-0507-121108	MSS-CG-SB23-0507-121108	CG-SBDUP005-121108	CG-SB24-SS-120108	CG-SB24-0203-120108	CG-SB25-0204-101308	CG-SB25-0608-101308	CG-SB26-SS-120108	CG-SB26-0809-120108	CG-SB27-SS-112508	CG-SB27-0809-112508	CG-SBDUP001-112508	CG-SB28-SS-120308	CG-SB28-0607-120308	CS-SB53(20130509)	CG-SB 54 (0-0.5) 06092015	CG-SB 54 (4-6) 06092015
Sample Depth (feet):				0 - 0.5	5 - 7	5 - 7	5 - 7	0 - 0.5	2 - 3	2 - 4	6 - 8	0 - 0.5	8 - 9	0 - 0.5	8 - 9	8 - 9	0 - 0.5	6 - 7	0	0 - 0.5	4 - 6
Sample Date:				12/11/2008	12/11/2008	12/11/2008	12/11/2008	12/01/2008	12/01/2008	10/13/2008	10/13/2008	12/01/2008	12/01/2008	11/25/2008	11/25/2008	11/25/2008	12/03/2008	12/03/2008	05/09/2013	06/09/2015	06/09/2015
PAHs																					
2-Methylnaphthalene	mg/kg	NS	3,010	5.700 J	380.000	--	270.000	0.660	370.000	2.000 J	0.970	0.064 J	<0.029 U	0.190 J	1.200	0.880	0.300 J	9.100 J	--	--	--
Acenaphthene	mg/kg	NS	45,200	<0.190 UJ	<5.800 U	--	<5.400 U	0.056 J	120.000 J	<0.240 U	0.063 J	0.014 J	<0.016 U	0.087 J	0.120 J	0.095 J	0.100 J	22.000	--	--	--
Acenaphthylene	mg/kg	NS	NS	1.900 J	50.000 J	--	35.000 J	0.088 J	11.000 J	19.000	0.044 J	0.032 J	<0.026 U	0.660 J	<0.022 U	<0.022 U	0.200 J	<0.530 U	--	--	--
Anthracene	mg/kg	196.9492	100,000	2.100 J	16.000 J	--	15.000 J	0.560	150.000	7.600	0.470	0.100 J	0.065 J	1.600	0.890	0.570	0.640	32.000	--	--	--
Benzo(a)anthracene	mg/kg	NS	20.8	3.200 J	16.000 J	--	11.000 J	1.000	**130.000 J**	**22.000 B**	0.660 B	0.470	0.310 J	4.000	1.400	0.960	3.500	**28.000**	--	--	--
Benzo(a)pyrene	mg/kg	0.47	2.11	***2.500 J***	<11.000 U	--	<11.000 U	*0.680*	***120.000 J***	***27.000***	*0.530*	0.420	0.280 J	*1.800*	*0.950*	*0.740*	***2.800***	***24.000***	--	--	--
Benzo(b)fluoranthene	mg/kg	0.4793	21.1	*5.500 JKJ*	*16.000 JK*	--	<14.000 U	*1.400 JK*	***180.000 JK***	***41.000 JBK***	*1.000 JBK*	*0.870 JK*	0.450 JK	*5.400 JK*	*1.700 JK*	*1.300 JK*	*5.100 JK*	***34.000 JK***	--	--	--
Benzo(g,h,i)perylene	mg/kg	NS	NS	2.000 J	<9.000 U	--	<8.400 U	0.540	76.000 J	27.000	0.390 J	0.360 J	0.230 J	1.600	0.870	0.600	2.300	14.000	--	--	--
Benzo(k)fluoranthene	mg/kg	NS	211	<0.740 UKJ	<23.000 UKJ	--	<21.000 U	<0.049 UKJ	<17.000 UKJ	<0.920 UKJ	<0.049 UKJ	<0.045 UKJ	<0.060 UKJ	<0.096 UKJ	<0.051 UKJ	<0.053 UKJ	<0.051 UKJ	<1.300 UKJ	--	--	--
Chrysene	mg/kg	0.1446	2,110	*4.100 J*	<15.000 U	--	<14.000 U	*1.400*	*170.000*	*22.000 B*	*1.000 B*	*0.610*	*0.300 J*	*4.600*	*1.800*	*1.300*	*3.700*	*26.000*	--	--	--
Dibenz(a,h)anthracene	mg/kg	NS	2.11	0.860 J	<11.000 U	--	<10.000 U	0.220 J	**26.000 J**	**6.800 J**	0.140 J	0.150 J	0.057 J	0.680 J	0.340 J	0.250 J	0.910	**4.000 J**	--	--	--
Fluoranthene	mg/kg	88.8778	30,100	5.300 J	28.000 J	--	22.000 J	2.100	*280.000*	28.000 B	0.950 B	0.650	0.500	7.400	1.900	1.200	5.300	79.000	--	--	--
Fluorene	mg/kg	14.8299	30,100	1.900 J	*31.000 J*	--	*23.000 J*	0.130 J	*100.000 J*	2.400 J	<0.022 U	0.027 J	<0.027 U	1.100	0.180 J	0.140 J	0.140 J	*22.000*	--	--	--
Indeno(1,2,3-cd)pyrene	mg/kg	NS	21.1	1.900 J	<12.000 U	--	<12.000 U	0.490	**64.000 J**	20.000	0.310 J	0.330 J	0.220 J	1.600	0.670	0.480	2.100	13.000	--	--	--
Naphthalene	mg/kg	0.6582	24.1	*0.890 J*	***3,400***	--	***2,600***	*1.200*	***1,900***	*9.000*	0.420	0.086 J	<0.047 U	0.190 J	0.520	0.350 J	*1.100*	***25.000***	--	--	--
Phenanthrene	mg/kg	NS	NS	3.700 J	61.000 J	--	47.000 J	1.700	290.000	18.000 B	2.700 B	0.440	0.300 J	7.900	4.500	2.600	2.600	100.000	--	--	--
Pyrene	mg/kg	54.5455	22,600	4.200 J	25.000 J	--	18.000 J	1.600	*190.000*	27.000 B	0.900 B	0.550	0.450 J	5.400 B	1.500 B	1.100 B	4.400	*63.000*	--	--	--
SVOCs																					
1,2,4-Trichlorobenzene	mg/kg	0.408	113	<0.00081 U	<15.000 U	--	<15.000 U	<0.0013 UJ	<3.700 U	<0.0014 UJ	<0.0016 UJ	<0.00093 UJ	<0.0013 UJ	<0.00064 U	<0.0017 UJ	<0.0013 UJ	<0.0013 UJ	<0.00090 U	--	--	--
2,2-Oxybis(1-chloropropane)	mg/kg	NS	1,020	<0.028 UJ	<13.000 U	--	<12.000 U	<0.028 U	<9.700 U	<0.530 U	<0.028 U	<0.026 U	<0.035 U	<0.055 U	<0.029 U	<0.030 U	<0.029 U	<0.720 U	--	--	--
2,4-Dinitrotoluene	mg/kg	0.0001	7.37	<1.200 UJ	<37.000 U	--	<35.000 U	<0.080 U	<28.000 U	<1.500 U	<0.081 U	<0.075 U	<0.100 U	<0.160 U	<0.084 U	<0.087 U	<0.084 U	<2.100 U	--	--	--
2,6-Dinitrotoluene	mg/kg	0.0001	1.54	<0.520 UJ	<16.000 U	--	<15.000 U	<0.034 U	<12.000 U	<0.640 U	<0.034 U	<0.032 U	<0.042 U	<0.067 U	<0.036 U	<0.037 U	<0.036 U	<0.880 U	--	--	--
2-Chloronaphthalene	mg/kg	NS	60,300	<0.190 UJ	<5.600 U	--	<5.300 U	<0.012 U	<4.200 U	<0.230 U	<0.012 U	<0.011 U	<0.015 U	<0.024 U	<0.013 U	<0.013 U	<0.013 U	<0.310 U	--	--	--
2-Nitroaniline	mg/kg	NS	8,010	<0.930 UJ	<28.000 U	--	<26.000 U	<0.061 U	<21.000 U	<1.100 U	<0.061 U	<0.057 U	<0.076 U	<0.120 U	<0.063 U	<0.066 U	<0.064 U	<1.600 U	--	--	--
3,3-Dichlorobenzidine	mg/kg	NS	5.11	1.700 UR	<51.000 U	--	<47.000 U	<0.110 U	<38.000 U	<2.100 U	<0.110 U	<0.100 U	<0.140 U	<0.220 U	<0.110 U	<0.120 U	<0.110 U	<2.800 U	--	--	--
3-Nitroaniline	mg/kg	NS	NS	<1.400 UJ	<41.000 U	--	<39.000 U	<0.089 U	<31.000 U	<1.700 U	<0.090 U	<0.083 U	<0.110 U	<0.180 U	<0.093 U	<0.096 U	<0.093 U	<2.300 U	--	--	--
4-Bromodiphenyl ether	mg/kg	NS	26.9	<0.350 UJ	<11.000 U	--	<10.000 U	<0.023 U	<8.000 U	<0.440 U	<0.023 U	<0.022 U	<0.029 U	<0.046 U	<0.024 U	<0.025 U	<0.024 U	<0.590 U	--	--	--
4-Chloroaniline	mg/kg	NS	11.5	1.500 UR	<46.000 U	--	<43.000 U	<0.100 U	<34.000 U	<1.900 U	<0.100 U	<0.093 U	<0.120 U	<0.200 U	<0.100 U	<0.110 U	<0.100 U	<2.600 U	--	--	--
4-Chlorodiphenyl ether	mg/kg	NS	NS	<0.390 UJ	<12.000 U	--	<11.000 U	<0.026 U	<8.800 U	<0.480 U	<0.026 U	<0.024 U	<0.032 U	<0.050 U	<0.027 U	<0.028 U	<0.027 U	<0.660 U	--	--	--
4-Nitroaniline	mg/kg	NS	115	<1.300 UJ	<41.000 U	--	<38.000 U	<0.088 U	<30.000 U	<1.700 U	<0.089 U	<0.082 U	<0.110 U	<0.170 U	<0.092 U	<0.095 U	<0.093 U	<2.300 U	--	--	--
Acetophenone	mg/kg	NS	2,520	1.500 J	<11.000 U	--	<11.000 U	<0.024 U	<8.400 U	1.200 J	0.035 J	<0.023 U	<0.030 U	<0.048 U	0.040 J	<0.026 U	<0.026 U	<0.630 U	--	--	--
Benzaldehyde	mg/kg	NS	818	<1.200 UJ	<38.000 U	--	<35.000 U	<0.081 U	<28.000 U	<1.500 U	0.110 J	<0.076 U	<0.100 U	<0.160 U	0.140 J	<0.088 U	<0.086 U	<2.100 U	--	--	--
Biphenyl	mg/kg	NS	288	<0.930 UJ	<28.000 U	--	<26.000 U	0.150 J	30.000 J	<1.100 U	0.094 J	<0.057 U	<0.076 U	<0.120 U	0.120 J	0.081 J	<0.064 U	3.300 J	--	--	--
Bis(2-Chloroethoxy)methane	mg/kg	NS	2,460	<0.430 UJ	<13.000 U	--	<12.000 U	<0.028 U	<9.700 U	<0.530 U	<0.028 U	<0.026 U	<0.035 U	<0.055 U	<0.029 U	<0.030 U	<0.029 U	<0.720 U	--	--	--
Bis(2-Chloroethyl)ether	mg/kg	NS	1.29	<0.310 UJ	<9.400 U	--	<8.800 U	<0.020 U	<7.000 U	<0.380 U	<0.020 U	<0.019 U	<0.025 U	<0.040 U	<0.021 U	<0.022 U	<0.021 U	<0.520 U	--	--	--
Bis(2-Ethylhexyl)phthalate	mg/kg	2.88	164	<0.850 UJ	<26.000 U	--	*42.000 J*	<0.056 UJB	<19.000 U	*9.300*	0.096 J	<0.052 UJB	<0.069 U	<0.110 U	<0.058 U	<0.060 U	0.150 J	<1.400 U	--	--	--
Butyl benzyl phthalate	mg/kg	NS	1,210	<0.800 UJ	<24.000 U	--	<23.000 U	<0.052 U	<18.000 U	<0.990 U	<0.053 U	<0.049 U	<0.065 U	<0.100 U	<0.055 U	<0.057 U	<0.055 U	<1.300 U	--	--	--
Caprolactam	mg/kg	NS	100,000	<2.000 UJ	<60.000 U	--	<56.000 U	<0.130 U	<45.000 U	<2.400 U	<0.130 U	<0.120 U	<0.160 U	<0.250 U	<0.130 U	<0.140 U	<0.140 U	<3.300 U	--	--	--
Carbazole	mg/kg	NS	NS	2.000 J	<20.000 U	--	<19.000 U	0.079 J	19.000 J	7.300 J	0.160 J	0.044 J	<0.054 U	1.100	0.320 J	0.210 J	0.200 J	8.200 J	--	--	--
Dibenzofuran	mg/kg	NS	1,040	5.400 J	27.000 J	--	20.000 J	0.170 J	65.000 J	1.300 J	0.390 J	0.040 J	<0.030 U	0.610 J	0.510	0.330 J	0.190 J	19.000	--	--	--
Diethyl phthalate	mg/kg	NS	100,000	<0.480 UJ	<15.000 U	--	<14.000 U	<0.032 U	<11.000 U	<0.600 U	<0.032 U	<0.030 U	<0.039 U	<0.062 U	<0.033 U	<0.034 U	<0.033 U	<0.810 U	--	--	--
Dimethyl phthalate	mg/kg	NS	7,390	<0.430 UJ	<13.000 U	--	<12.000 U	<0.028 U	<9.700 U	0.750 J	0.130 J	<0.026 U	<0.035 U	<0.055 U	<0.029 U	<0.030 U	<0.029 U	<0.720 U	--	--	--
Di-n-butyl phthalate	mg/kg	5.0333	82,100	<0.540 UJ	<16.000 U	--	<15.000 U	<0.035 U	<12.000 U	<0.670 U	<0.036 U	<0.033 U	<0.044 U	<0.070 U	<0.037 U	<0.038 U	<0.037 U	<0.910 U	--	--	--
Di-n-octyl phthalate	mg/kg	NS	8,210	<0.270 UJ	<8.100 U	--	<7.600 U	<0.017 U	<6.100 U	<0.330 U	<0.018 U	<0.016 U	<0.022 U	<0.035 U	<0.018 U	<0.019 U	<0.018 U	<0.450 U	--	--	--
Hexachlorobenzene	mg/kg	0.0252	1.15	<0.540 UJ	<16.000 U	--	<15.000 U	<0.035 U	<12.000 U	<0.670 U	<0.036 U	<0.033 U	<0.044 U	<0.070 U	<0.037 U	<0.038 U	<0.037 U	<0.910 U	--	--	--
Hexachlorobutadiene	mg/kg	NS	7.19	<0.00061 U	<15.000 U	--	<16.000 U	<0.00098 UJ	<3.900 U	<0.0011 UJ	<0.0012 UJ	<0.00070 UJ	<0.00096 UJ	<0.00048 U	<0.0013 UJ	<0.00096 UJ	<0.00099 UJ	<0.00067 U	--	--	--
Hexachlorocyclopentadiene	mg/kg	NS	10.8	<0.930 UJ	<28.000 U	--	<26.000 U	<0.061 U	<21.000 U	<1.100 U	<0.061 U	<0.057 U	<0.076 U	<0.120 U	<0.063 U	<0.066 U	<0.064 U	<1.600 U	--	--	--
Hexachloroethane	mg/kg	NS	11.1	<0.390 UJ	<12.000 U	--	<11.000 U	<0.026 U	<8.900 U	<0.490 U	<0.026 U	<0.024 U	<0.032 U	<0.051 U	<0.027 U	<0.028 U	<0.027 U	<0.670 U	--	--	--
Isophorone	mg/kg	NS	2,420	<0.310 UJ	<9.600 U	--	<9.000 U	<0.021 U	<7.100 U	<0.390 U	<0.021 U	<0.019 U	<0.026 U	<0.041 U	<0.022 U	<0.022 U	<0.022 U	<0.530 U	--	--	--
Nitrobenzene	mg/kg	NS	32.4	<0.410 UJ	<12.000 U	--	<12.000 U	<0.027 U	<9.200 U	<0.500 U	<0.027 U	<0.025 U	<0.033 U	<0.053 U	<0.028 U	<0.029 U	<0.028 U	<0.690 U	--	--	--
N-nitrosodi-n-propylamine	mg/kg	NS	0.328	<0.570 UJ	<17.000 U	--	<16.000 U	<0.038 U	<13.000 U	<0.710 U	<0.038 U	<0.035 U	<0.047 U	<0.074 U	<0.039 U	<0.041 U	<0.040 U	<0.970 U	--	--	--
N-Nitrosodiphenylamine	mg/kg	0.0764	469	<0.390 UJ	<12.000 U	--	<11.000 U	<0.026 U	<8.800 U	<0.480 U	<0.026 U	<0.024 U	<0.032 U	<0.050 U	<0.027 U	<0.028 U	<0.027 U	<0.660 U	--	--	--
Pyridine	mg/kg	0.0069	1,170	<2.400 UJ	<73.000 U	--	<69.000 U	<0.160 U	<55.000 U	<3.000 U	<0.160 U	<0.150 U	<0.200 U	<0.310 U	<0.160 U	<0.170 U	<0.170 U	<4.100 U	--	--	--

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	CG-SB23				CG-SB24		CG-SB25		CG-SB26		CG-SB27			CG-SB28		CG-SB 53	CG-SB 54	
Sample / Duplicate:				CG-SB23	CG-SB23	CG-SB23	CG-SB23 DUP	CG-SB24	CG-SB24	CG-SB25	CG-SB25	CG-SB26	CG-SB26	CG-SB27	CG-SB27	CG-SB27 DUP	CG-SB28	CG-SB28	CG-SB 53	CG-SB 54	CG-SB 54
Field Sample ID:				CG-SB23-SS-121108	CG-SB23-0507-121108	MSS-CG-SB23-0507-121108	CG-SBDUP005-121108	CG-SB24-SS-120108	CG-SB24-0203-120108	CG-SB25-0204-101308	CG-SB25-0608-101308	CG-SB26-SS-120108	CG-SB26-0809-120108	CG-SB27-SS-112508	CG-SB27-0809-112508	CG-SBDUP001-112508	CG-SB28-SS-120308	CG-SB28-0607-120308	CS-SB53(20130509)	CG-SB 54 (0-0.5) 06092015	CG-SB 54 (4-6) 06092015
Sample Depth (feet):				0 - 0.5	5 - 7	5 - 7	5 - 7	0 - 0.5	2 - 3	2 - 4	6 - 8	0 - 0.5	8 - 9	0 - 0.5	8 - 9	8 - 9	0 - 0.5	6 - 7	0	0 - 0.5	4 - 6
Sample Date:				12/11/2008	12/11/2008	12/11/2008	12/11/2008	12/01/2008	12/01/2008	10/13/2008	10/13/2008	12/01/2008	12/01/2008	11/25/2008	11/25/2008	11/25/2008	12/03/2008	12/03/2008	05/09/2013	06/09/2015	06/09/2015
Phenols																					
2,4,5-Trichlorophenol	mg/kg	NS	82,100	<0.190 UJ	<5.600 U	--	<5.300 U	<0.012 U	<4.200 U	<0.230 U	<0.012 U	<0.011 U	<0.015 U	<0.024 U	<0.013 U	<0.013 U	<0.013 U	<0.310 U	--	--	--
2,4,6-Trichlorophenol	mg/kg	NS	209	<0.190 UJ	<5.600 U	--	<5.300 U	<0.012 U	<4.200 U	<0.230 U	<0.012 U	<0.011 U	<0.015 U	<0.024 U	<0.013 U	<0.013 U	<0.013 U	<0.310 U	--	--	--
2,4-Dichlorophenol	mg/kg	NS	2,460	<0.190 UJ	<5.600 U	--	<5.300 U	<0.012 U	<4.200 U	<0.230 U	<0.012 U	<0.011 U	<0.015 U	<0.024 U	<0.013 U	<0.013 U	<0.013 U	<0.310 U	--	--	--
2,4-Dimethylphenol	mg/kg	NS	16,400	<1.200 UJ	<37.000 U	--	<35.000 U	<0.080 U	<28.000 U	<1.500 U	0.100 J	<0.075 U	<0.100 U	<0.160 U	0.210 J	0.190 J	<0.084 U	<2.100 U	--	--	--
2,4-Dinitrophenol	mg/kg	NS	1,640	6.200 UR	<190.000 U	--	<180.000 U	<0.400 U	<140.000 U	<7.600 U	<0.410 U	<0.380 U	<0.500 U	<0.800 U	<0.420 U	<0.440 U	<0.430 U	<10.000 U	--	--	--
2-Chlorophenol	mg/kg	NS	5,840	<0.390 UJ	<12.000 U	--	<11.000 U	<0.026 U	<8.800 U	<0.480 U	<0.026 U	<0.024 U	<0.032 U	<0.050 U	<0.027 U	<0.028 U	<0.027 U	<0.660 U	--	--	--
2-Methylphenol	mg/kg	NS	41,000	<0.240 UJ	<7.300 U	--	<6.900 U	<0.016 U	<5.500 U	<0.300 U	0.120 J	<0.015 U	<0.020 U	<0.031 U	0.240 J	0.190 J	<0.017 U	<0.410 U	--	--	--
2-Nitrophenol	mg/kg	NS	NS	<0.190 UJ	<5.600 U	--	<5.300 U	<0.012 U	<4.200 U	<0.230 U	<0.012 U	<0.011 U	<0.015 U	<0.024 U	<0.013 U	<0.013 U	<0.013 U	<0.310 U	--	--	--
4-Chloro-3-methylphenol	mg/kg	NS	82,100	<1.200 UJ	<37.000 U	--	<35.000 U	<0.080 U	<28.000 U	<1.500 U	<0.081 U	<0.075 U	<0.100 U	<0.160 U	<0.084 U	<0.087 U	<0.084 U	<2.100 U	--	--	--
4-Methylphenol	mg/kg	NS	82,100	<0.610 UJ	<19.000 U	--	<17.000 U	<0.040 U	<14.000 U	<0.760 U	0.250 J	<0.038 U	<0.050 U	<0.079 U	0.550	0.410 J	<0.042 U	<1.000 U	--	--	--
4-Nitrophenol	mg/kg	NS	NS	<1.800 UJ	<55.000 U	--	<51.000 U	<0.120 U	<41.000 U	<2.200 U	<0.120 U	<0.110 U	<0.150 U	<0.230 U	<0.120 U	<0.130 U	<0.120 U	<3.000 U	--	--	--
4,6-Dinitro-2-methylphenol	mg/kg	NS	65.7	<6.100 UJ	<190.000 U	--	<170.000 U	<0.400 U	<140.000 U	<7.600 U	<0.410 U	<0.380 U	<0.500 U	<0.790 U	<0.420 U	<0.430 U	<0.420 U	<10.000 U	--	--	--
Pentachlorophenol	mg/kg	0.0028	3.97	6.100 UR	<190.000 U	--	<170.000 U	<0.400 U	<140.000 U	<7.600 U	<0.410 U	<0.380 U	<0.500 U	<0.790 U	<0.420 U	<0.430 U	<0.420 U	<10.000 U	--	--	--
Phenol	mg/kg	2.2946	100,000	<0.330 UJ	<10.000 U	--	<9.500 U	<0.022 U	<7.600 U	<0.410 U	0.130 J	<0.020 U	<0.027 U	<0.043 U	0.280 J	0.200 J	<0.023 U	<0.560 U	--	--	--
Metals																					
Aluminum, Total	mg/kg	600	100,000	*4,100*	*6,600*	--	*6,100*	*1,100*	*4,500*	*1,300*	*2,800*	*2,100*	*11,000*	*4,600*	*4,400*	*4,500*	*5,100*	*6,900*	--	--	--
Antimony, Total	mg/kg	0.542	467	0.280 J-	0.240 BJ-	--	0.290 J-	*0.770 J*	0.510 J	0.140 BJ-	0.160 BJ-	0.500 J	*0.790 J*	0.033 BJ-	0.082 BJ-	0.120 BJ-	*1.700 J*	0.160 JB	--	--	--
Arsenic, Total [1]	mg/kg	0.584	8.3	***10.000***	*7.300*	--	*6.100*	***10.000 JL***	***27.000 L***	***18.000***	***31.000***	*6.100 JL*	*4.000 L*	*3.300*	*4.900*	*8.300*	***23.000***	***75.000***	--	--	--
Barium, Total	mg/kg	164.8	100,000	75.000	140.000	--	82.000	*390.000 J*	83.000 J	16.000	50.000	46.000 J	*190.000 J*	39.000	45.000	57.000	130.000	72.000	--	--	--
Beryllium, Total	mg/kg	6.32	2,300	0.770	0.890	--	0.670	0.740	1.100	0.140	0.380	0.260	1.100	0.300	0.340	0.560	0.610	1.100	--	--	--
Cadmium, Total	mg/kg	0.752	985	*2.500*	0.390	--	0.350	*2.500*	0.480	0.310	0.060 B	*3.300*	*2.900*	0.510	0.130	0.190	*2.800*	0.640	--	--	--
Calcium, Total	mg/kg	NS	NS	17,000	5,300	--	5,300	3,400	1,300	29,000	5,400	75,000	95,000	71,000	8,900	13,000	24,000	67,000	--	--	--
Chromium, Hexavalent	mg/kg	NS	6.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.19 J	<0.18 U
Chromium, Total [3]	mg/kg	360,000	NS	53.000	6.500	--	6.200	24.000	8.800	7.300	4.900	73.000	41.000	13.000	5.600	6.900	24.000	19.000	--	24.000 B	9.700 B
Chromium, Trivalent	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	24	9.7
Cobalt, Total	mg/kg	3.6073	347	*6.100*	*5.400*	--	*4.700*	*7.900 JL*	*8.500 L*	0.970	2.300	*4.600 JL*	*6.700 L*	*5.000*	2.400	3.200	*6.100*	*6.600*	--	--	--
Copper, Total	mg/kg	91.6	46,700	60.000	*98.000*	--	80.000	57.000 JL	41.000 JL	15.000	12.000	84.000 JL	57.000 JL	20.000	12.000	16.000	*260.000*	40.000	--	--	--
Iron, Total	mg/kg	NS	100,000	24,000	12,000	--	13,000	38,000	14,000	5,700 J	8,400 J	15,000	15,000	10,000	8,100	9,200	35,000	15,000	--	--	--
Lead, Total	mg/kg	27	800	*180.000*	*110.000*	--	*67.000*	***4,500***	*59.000*	*34.000 J*	13.000 J	*54.000*	*270.000*	*36.000*	13.000	19.000	*320.000*	*73.000*	--	--	--
Magnesium, Total	mg/kg	NS	NS	7,200	480	--	610	1,500	950	15,000	1,400	41,000	29,000	37,000	4,200	4,400	12,000	27,000	--	--	--
Manganese, Total	mg/kg	39.1244	25,900	*450.000*	*71.000*	--	24.000	*320.000 JL*	*180.000 L*	*76.000 J*	36.000 J	*1,300 JL*	*460.000 L*	*310.000*	*58.000*	*77.000*	*330.000*	*250.000*	--	--	--
Mercury, Total	mg/kg	0.208	3.13	*0.900*	0.200	--	*0.390*	*0.210*	*0.330*	***5.700***	0.100	0.075	0.200	0.100	0.074	0.056	*1.800*	0.091	--	--	--
Nickel, Total	mg/kg	13.0612	22,500	*110.000*	12.000	--	13.000	*31.000 JL*	*16.000 L*	3.200	4.600	*21.000 JL*	*79.000 L*	*14.000*	5.700	8.100	*34.000*	*20.000*	--	--	--
Potassium, Total	mg/kg	NS	NS	570	510	--	340 B	260 B	440	240 B	550	390	1,600	1,400	580	560	710	1,100	--	--	--
Selenium, Total	mg/kg	0.52	5,840	*1.200*	*3.800*	--	*3.600*	*1.500*	*3.000*	*1.200 J*	*2.200 J*	0.400 B	*1.300*	*0.600*	*1.200*	*1.400*	*1.400*	*1.200*	--	--	--
Silver, Total	mg/kg	0.8491	5,840	0.080 B	0.090 B	--	0.071 B	0.100 B	0.066 B	<0.023 U	<0.025 U	0.160	0.160	0.074 B	0.040 B	0.049 B	0.220	0.097 B	--	--	--
Sodium, Total	mg/kg	NS	NS	190 B	380 B	--	300 B	88 B	96 B	98 B	210 B	160 B	1,700	160 B	470 B	510 B	200 B	240 B	--	--	--
Thallium, Total	mg/kg	0.284	11.7	0.150	0.079 B	--	0.058 B	0.180	*0.360*	0.052 B	*0.360*	0.070 B	0.064 B	0.160	0.097 B	0.120 B	*0.370*	*1.400*	--	--	--
Vanadium, Total	mg/kg	60	5,840	12.000	14.000	--	12.000	9.100 JL	12.000 L	2.900	7.000	9.300 JL	17.000 L	15.000	5.700	8.000	10.000	29.000	--	--	--
Zinc, Total	mg/kg	NS	100,000	360.000	88.000	--	86.000	530.000 JL	160.000 L	58.000	12.000	160.000 JL	820.000 L	57.000	33.000	51.000	240.000	84.000	--	--	--
Inorganic - Cyanide																					
Cyanide, Amenable	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*160*	--	--
Cyanide, Reactive	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Total	mg/kg	4.04	195	*21*	*15*	--	*47 g*	3	*5.5 J*	*23*	0.43 B	*6.7*	0.65 JB	*4.7*	0.75	1.1	3.4	0.59 B	*160*	--	--
Other																					
Sulfide, Reactive	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organic Matter	%	NS	NS	--	--	24.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent Moisture	%	NS	NS	19	29	27.2	24	18	29	13	19	12	34	17	21	24	22	20	--	--	--

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	CG-SB 55		CG-SB 56		CG-SB 57		CG-SB 58		CG-SB 59		CG-TT01	CG-TT02	CG-TT03		CG-TT04	CG-TT05	CG-TT06	CG-TT07
Sample / Duplicate:				CG-SB 55	CG-SB 55	CG-SB 56	CG-SB 56	CG-SB 57	CG-SB 57	CG-SB 58	CG-SB 58	CG-SB 59	CG-SB 59	CG-TT01	CG-TT02	CG-TT03	CG-TT03	CG-TT04	CG-TT05	CG-TT06	CG-TT07
Field Sample ID:				CG-SB 55 (0-0.5) 06092015	CG-SB 55 (4-6) 06092015	CG-SB 56 (0-0.5) 06092015	CG-SB 56 (4-6) 06092015	CG-SB 57 (0-0.5) 06092015	CG-SB 57 (4-6) 06092015	CG-SB 58 (0-0.5) 06092015	CG-SB 58 (4-6) 06092015	CG-SB 59 0-0.5) 06092015	CG-SB 59 (4-6) 06092015	CG-TT01-0910-101308	CG-TT02-0910-101308	CG-TT03-0607-101308	CG-TT03-0809-101408	CG-TT04-0910-101308	CG-TT05-0910-101308	CG-TT06-0203-100808	CG-TT07-0304-100808
Sample Depth (feet):				0 - 0.5	4 - 6	0 - 0.5	4 - 6	0 - 0.5	4 - 6	0 - 0.5	4 - 6	0 - 0.5	4 - 6	9 - 10	9 - 10	6 - 7	8 - 9	9 - 10	9 - 10	2 - 3	3 - 4
Sample Date:				06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	10/13/2008	10/13/2008	10/13/2008	10/14/2008	10/13/2008	10/13/2008	10/08/2008	10/08/2008
VOCs																					
1,1,1-Trichloroethane	mg/kg	0.1402	640	--	--	--	--	--	--	--	--	--	--	<0.00063 U	<0.00063 U	<0.00083 U	<0.100 U	<0.00089 U	<0.00058 U	<0.00055 U	<0.00085 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0002	3.6	--	--	--	--	--	--	--	--	--	--	<0.00073 U	<0.00073 U	<0.00097 U	<0.150 U	<0.0010 U	<0.00068 U	<0.00064 U	<0.00099 UJ
1,1,2-Trichloroethane	mg/kg	0.0032	7.01	--	--	--	--	--	--	--	--	--	--	<0.0011 U	<0.0011 U	<0.0014 U	<0.140 U	<0.0015 U	<0.00099 U	<0.00092 U	<0.0014 U
1,1-Dichloroethane	mg/kg	0.4834	22.2	--	--	--	--	--	--	--	--	--	--	<0.00025 U	<0.00025 U	<0.00033 U	<0.250 U	<0.00036 U	<0.00024 U	<0.00022 U	<0.00034 U
1,1-Dichloroethene	mg/kg	0.005	1,190	--	--	--	--	--	--	--	--	--	--	<0.00071 U	<0.00071 U	<0.00094 U	<0.250 U	<0.0010 U	<0.00066 U	<0.00062 U	0.0014 J
1,2-Dibromo-3-chloropropane	mg/kg	0.0002	0.092	--	--	--	--	--	--	--	--	--	--	<0.00072 U	<0.00072 U	<0.00095 U	<0.430 U	<0.0010 U	<0.00067 U	<0.00063 U	<0.00098 UJ
1,2-Dibromoethane	mg/kg	0.0000282	0.221	--	--	--	--	--	--	--	--	--	--	<0.00063 U	<0.00063 U	<0.00083 U	<0.130 U	<0.00089 U	<0.00058 U	<0.00055 U	<0.00085 U
1,2-Dichlorobenzene	mg/kg	1.168	376	--	--	--	--	--	--	--	--	--	--	<0.00054 U	<0.00054 U	<0.00072 U	<0.470 U	<0.00077 U	<0.00050 U	<0.00047 U	<0.00073 UJ
1,2-Dichloroethane	mg/kg	0.0028	2.87	--	--	--	--	--	--	--	--	--	--	<0.00084 U	<0.00084 U	<0.0011 U	<0.130 U	<0.0012 U	<0.00078 U	<0.00073 U	<0.0011 U
1,2-Dichloropropane	mg/kg	0.0033	1.78	--	--	--	--	--	--	--	--	--	--	<0.00066 U	<0.00066 U	<0.00087 U	<0.230 U	<0.00094 U	<0.00062 U	<0.00058 U	<0.00090 U
1,3-Dichlorobenzene	mg/kg	1.1528	297	--	--	--	--	--	--	--	--	--	--	<0.00058 U	<0.00058 U	<0.00076 U	<0.200 U	<0.00082 U	<0.00054 U	<0.00050 U	<0.00078 UJ
1,4-Dichlorobenzene	mg/kg	0.144	16.4	--	--	--	--	--	--	--	--	--	--	<0.00094 U	<0.00094 U	<0.0012 U	<0.130 U	<0.0013 U	<0.00087 U	<0.00082 U	<0.0013 UJ
2-Butanone (MEK)	mg/kg	1.6661	28,400	--	--	--	--	--	--	--	--	--	--	<0.0022 U	<0.0022 U	<0.0029 U	<1.500 U	<0.0031 U	<0.0020 U	<0.0019 U	<0.0030 U
2-Hexanone	mg/kg	NS	1,760	--	--	--	--	--	--	--	--	--	--	<0.0059 U	<0.0059 U	<0.0078 U	<1.100 U	<0.0083 U	<0.0055 U	<0.0051 U	<0.0080 U
4-Methyl-2-Pentanone (MIBK)	mg/kg	0.2252	3,360	--	--	--	--	--	--	--	--	--	--	<0.0053 U	<0.0053 U	<0.0069 U	<1.100 U	<0.0074 U	<0.0049 U	<0.0046 U	<0.0071 U
Acetone	mg/kg	3.6766	100,000	--	--	--	--	--	--	--	--	--	--	0.016 J	<0.0065 U	<0.0086 U	<2.000 U	<0.0092 U	<0.0060 U	<0.0056 U	0.015 J
Benzene	mg/kg	0.0051	7.07	--	--	--	--	--	--	--	--	--	--	<0.00057 U	*0.027*	<0.00075 U	*1.100 J*	<0.00080 U	<0.00053 U	<0.00049 U	0.002 J
Bromodichloromethane	mg/kg	0.0003	1.83	--	--	--	--	--	--	--	--	--	--	<0.00027 U	<0.00027 U	<0.00035 U	<0.200 U	<0.00038 U	<0.00025 U	<0.00023 U	<0.00036 U
Bromoform	mg/kg	0.0023	113	--	--	--	--	--	--	--	--	--	--	<0.00028 U	<0.00028 U	<0.00037 U	<0.150 U	<0.00039 U	<0.00026 U	<0.00024 U	<0.00037 U
Bromomethane	mg/kg	0.0051	43	--	--	--	--	--	--	--	--	--	--	<0.00060 U	<0.00060 U	<0.00079 U	<0.220 U	<0.00085 U	<0.00056 U	<0.00052 U	<0.00081 U
Carbon Disulfide	mg/kg	0.5919	738	--	--	--	--	--	--	--	--	--	--	<0.00051 U	<0.00051 U	<0.00067 U	<0.320 UJ	<0.00072 U	<0.00047 U	<0.00044 U	<0.00068 U
Carbon Tetrachloride	mg/kg	0.0039	4.03	--	--	--	--	--	--	--	--	--	--	<0.00076 U	<0.00076 U	<0.0010 U	<0.086 U	<0.0011 U	<0.00071 U	<0.00066 U	<0.0010 U
Chlorobenzene	mg/kg	0.1358	761	--	--	--	--	--	--	--	--	--	--	<0.00065 U	<0.00065 U	<0.00086 U	<0.150 U	<0.00092 U	<0.00060 U	<0.00057 U	<0.00088 U
Chloroethane	mg/kg	0.2266	2,120	--	--	--	--	--	--	--	--	--	--	<0.0011 U	<0.0011 U	<0.0014 U	<0.220 U	<0.0015 U	<0.0010 U	<0.00093 U	<0.0014 U
Chloroform	mg/kg	0.0033	1.98	--	--	--	--	--	--	--	--	--	--	<0.00035 U	<0.00035 U	<0.00046 U	<0.230 U	<0.00049 U	<0.00032 U	<0.00030 U	<0.00047 U
Chloromethane	mg/kg	0.0155	669	--	--	--	--	--	--	--	--	--	--	<0.00093 U	<0.00093 U	<0.0012 U	<0.250 U	<0.0013 U	<0.00086 U	<0.00081 U	<0.0013 U
cis-1,2-Dichloroethene	mg/kg	0.0412	2,340	--	--	--	--	--	--	--	--	--	--	<0.00067 U	<0.00067 U	<0.00089 U	<0.110 U	<0.00096 U	<0.00063 U	<0.00059 U	<0.00091 U
cis-1,3-Dichloropropene	mg/kg	NS	1,210	--	--	--	--	--	--	--	--	--	--	<0.0016 U	<0.0016 U	<0.0021 U	<0.140 U	<0.0022 U	<0.0014 U	<0.0014 U	<0.0021 U
Cyclohexane	mg/kg	NS	117	--	--	--	--	--	--	--	--	--	--	0.00051 J	<0.00048 U	<0.00064 U	<0.140 U	<0.00068 U	<0.00045 U	<0.00042 U	<0.00065 U
Dibromochloromethane	mg/kg	0.032	38.9	--	--	--	--	--	--	--	--	--	--	<0.00069 U	<0.00069 U	<0.00091 U	<0.170 U	<0.00097 U	<0.00064 U	<0.00060 U	<0.00093 U
Dichloromethane	mg/kg	0.0026	1,150	--	--	--	--	--	--	--	--	--	--	<0.00090 U	<0.00090 U	<0.0012 U	<0.350 U	<0.0013 U	<0.00084 U	<0.00079 U	0.0023 J
Ethylbenzene	mg/kg	1.57	35.4	--	--	--	--	--	--	--	--	--	--	<0.00081 U	<0.00081 U	<0.0011 U	<0.170 U	<0.0011 U	<0.00075 U	<0.00070 U	<0.0011 U
Freon 113	mg/kg	NS	910	--	--	--	--	--	--	--	--	--	--	<0.00054 U	<0.00054 U	<0.00072 U	<0.330 U	<0.00077 U	<0.00050 U	<0.00047 U	<0.00073 U
Freon 12	mg/kg	3.0863	530	--	--	--	--	--	--	--	--	--	--	<0.00063 U	<0.00063 U	<0.00083 U	<0.110 U	<0.00089 U	<0.00058 U	<0.00055 U	<0.00085 U
Isopropylbenzene	mg/kg	NS	268	--	--	--	--	--	--	--	--	--	--	<0.00071 U	<0.00071 U	<0.00094 U	<0.150 U	<0.0010 U	<0.00066 U	<0.00062 U	<0.00096 UJ
Methyl acetate	mg/kg	NS	29,000	--	--	--	--	--	--	--	--	--	--	<0.0033 U	<0.0033 U	<0.0044 U	<1.200 U	<0.0047 U	<0.0031 U	<0.0029 U	<0.0045 U
Methylcyclohexane	mg/kg	NS	67.6	--	--	--	--	--	--	--	--	--	--	<0.00051 U	<0.00051 U	<0.00067 U	<0.210 U	<0.00072 U	<0.00047 U	<0.00044 U	<0.00068 U
Methyl-tert-butyl-ether	mg/kg	0.027	282	--	--	--	--	--	--	--	--	--	--	<0.00041 U	<0.00041 U	<0.00054 U	<0.250 U	<0.00058 U	<0.00038 U	<0.00036 U	<0.00055 U
Styrene	mg/kg	0.22	867	--	--	--	--	--	--	--	--	--	--	<0.00076 U	0.0015 J	<0.0010 U	<0.130 U	<0.0011 U	<0.00071 U	<0.00066 U	<0.0010 U
Tetrachloroethene	mg/kg	0.0045	145	--	--	--	--	--	--	--	--	--	--	<0.00071 U	<0.00071 U	<0.00094 U	<0.140 U	<0.0010 U	<0.00066 U	<0.00062 U	<0.00096 U
Toluene	mg/kg	1.1072	818	--	--	--	--	--	--	--	--	--	--	<0.00083 U	0.0091	<0.0011 U	0.780 J	<0.0012 U	<0.00077 U	<0.00072 U	0.0018 J
trans-1,2-Dichloroethene	mg/kg	0.0626	1,850	--	--	--	--	--	--	--	--	--	--	<0.00047 U	<0.00047 U	<0.00062 U	<0.230 U	<0.00067 U	<0.00044 U	<0.00041 U	<0.00063 U
trans-1,3-Dichloropropene	mg/kg	NS	1,510	--	--	--	--	--	--	--	--	--	--	<0.00081 U	<0.00081 U	<0.0011 U	<0.210 U	<0.0011 U	<0.00075 U	<0.00070 U	<0.0011 U
Trichloroethene	mg/kg	0.0036	8.41	--	--	--	--	--	--	--	--	--	--	<0.00028 U	<0.00028 U	<0.00037 U	<0.120 U	<0.00039 U	<0.00026 U	<0.00024 U	<0.00037 U
Trichlorofluoromethane	mg/kg	4.4775	1,230	--	--	--	--	--	--	--	--	--	--	<0.0013 U	<0.0013 U	<0.0017 U	<0.250 U	<0.0018 U	<0.0012 U	<0.0011 U	<0.0017 U
Vinyl Chloride	mg/kg	0.0001	2.08	--	--	--	--	--	--	--	--	--	--	<0.0016 U	<0.0016 U	<0.0021 U	<0.140 U	<0.0023 U	<0.0015 U	<0.0014 U	<0.0022 U
Xylenes, Total	mg/kg	3.96	260	--	--	--	--	--	--	--	--	--	--	0.0018 J	0.0092	<0.00097 U	2.600	<0.0010 U	<0.00068 U	<0.00064 U	<0.00099 U
PCBs																					
PCB, Total [4]	mg/kg	0.0094	0.967	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1016	mg/kg	NS	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1221	mg/kg	NS	0.883	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1232	mg/kg	NS	0.792	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1242	mg/kg	NS	0.972	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1248	mg/kg	NS	0.975	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1254	mg/kg	NS	0.988	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1260	mg/kg	NS	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	CG-SB 55		CG-SB 56		CG-SB 57		CG-SB 58		CG-SB 59		CG-TT01	CG-TT02	CG-TT03		CG-TT04	CG-TT05	CG-TT06	CG-TT07
Sample / Duplicate:				CG-SB 55	CG-SB 55	CG-SB 56	CG-SB 56	CG-SB 57	CG-SB 57	CG-SB 58	CG-SB 58	CG-SB 59	CG-SB 59	CG-TT01	CG-TT02	CG-TT03	CG-TT03	CG-TT04	CG-TT05	CG-TT06	CG-TT07
Field Sample ID:				CG-SB 55 (0-0.5) 06092015	CG-SB 55 (4-6) 06092015	CG-SB 56 (0-0.5) 06092015	CG-SB 56 (4-6) 06092015	CG-SB 57 (0-0.5) 06092015	CG-SB 57 (4-6) 06092015	CG-SB 58 (0-0.5) 06092015	CG-SB 58 (4-6) 06092015	CG-SB 59 0-0.5) 06092015	CG-SB 59 (4-6) 06092015	CG-TT01-0910-101308	CG-TT02-0910-101308	CG-TT03-0607-101308	CG-TT03-0809-101408	CG-TT04-0910-101308	CG-TT05-0910-101308	CG-TT06-0203-100808	CG-TT07-0304-100808
Sample Depth (feet):				0 - 0.5	4 - 6	0 - 0.5	4 - 6	0 - 0.5	4 - 6	0 - 0.5	4 - 6	0 - 0.5	4 - 6	9 - 10	9 - 10	6 - 7	8 - 9	9 - 10	9 - 10	2 - 3	3 - 4
Sample Date:				06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	10/13/2008	10/13/2008	10/13/2008	10/14/2008	10/13/2008	10/13/2008	10/08/2008	10/08/2008
PAHs																					
2-Methylnaphthalene	mg/kg	NS	3,010	--	--	--	--	--	--	--	--	--	--	0.065 J	24.000 J	0.140 J	20.000	0.830 J	0.790 J	<0.400 U	1.100 J
Acenaphthene	mg/kg	NS	45,200	--	--	--	--	--	--	--	--	--	--	0.190 J	9.900 J	0.032 J	19.000	0.096 J	0.380 J	<0.220 U	0.350 J
Acenaphthylene	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	0.067 J	45.000	0.200 J	7.700 J	0.950 J	4.800 J	<0.360 U	0.940 J
Anthracene	mg/kg	196.9492	100,000	--	--	--	--	--	--	--	--	--	--	0.600	170.000	0.670	12.000	2.100	13.000	<0.360 U	1.400 J
Benzo(a)anthracene	mg/kg	NS	20.8	--	--	--	--	--	--	--	--	--	--	1.100 B	**380.000 B**	2.200 B	11.000	8.800 B	**47.000 B**	2.000 J	6.800
Benzo(a)pyrene	mg/kg	0.47	2.11	--	--	--	--	--	--	--	--	--	--	*0.860*	***320.000***	*1.800*	***7.800***	***7.200***	***35.000***	***2.500 J***	***6.500***
Benzo(b)fluoranthene	mg/kg	0.4793	21.1	--	--	--	--	--	--	--	--	--	--	*1.200 BK*	***470.000 BK***	*3.300 BK*	*12.000 JK*	*13.000 BK*	***61.000 BK***	*4.500 JKJ*	*12.000 JK*
Benzo(g,h,i)perylene	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	0.540	200.000	1.400	4.300 J	5.200	22.000	2.000 J	5.400
Benzo(k)fluoranthene	mg/kg	NS	211	--	--	--	--	--	--	--	--	--	--	<0.048 UK	<4.800 UK	<0.050 UK	<0.950 UKJ	<0.200 UK	<0.900 UK	<0.840 UKJ	<0.210 UKJ
Chrysene	mg/kg	0.1446	2,110	--	--	--	--	--	--	--	--	--	--	*1.200 B*	*330.000 B*	*2.500 B*	*13.000*	*11.000 B*	*50.000 B*	*2.600 J*	*7.100*
Dibenz(a,h)anthracene	mg/kg	NS	2.11	--	--	--	--	--	--	--	--	--	--	0.130 J	**61.000**	0.120 J	1.500 J	1.800	**7.800**	0.610 J	1.500 J
Fluoranthene	mg/kg	88.8778	30,100	--	--	--	--	--	--	--	--	--	--	2.100 B	*550.000 B*	3.000 B	25.000	10.000 B	76.000 B	2.500 J	10.000
Fluorene	mg/kg	14.8299	30,100	--	--	--	--	--	--	--	--	--	--	0.350 J	*71.000*	0.110 J	*16.000*	0.270 J	4.100 J	<0.380 U	0.530 J
Indeno(1,2,3-cd)pyrene	mg/kg	NS	21.1	--	--	--	--	--	--	--	--	--	--	0.440	**180.000**	1.200	4.100 J	4.900	21.000	1.700 J	4.800
Naphthalene	mg/kg	0.6582	24.1	--	--	--	--	--	--	--	--	--	--	0.250 J	***86.000***	0.640	***85.000***	*1.400 J*	*1.900 J*	<0.650 U	*6.900*
Phenanthrene	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	2.300 B	420.000 B	1.300 B	38.000	4.300 B	42.000 B	0.440 J	4.300
Pyrene	mg/kg	54.5455	22,600	--	--	--	--	--	--	--	--	--	--	2.600 B	*470.000 B*	2.700 B	20.000	9.800 B	*67.000 B*	2.500 J	9.500
SVOCs																					
1,2,4-Trichlorobenzene	mg/kg	0.408	113	--	--	--	--	--	--	--	--	--	--	<0.00088 U	<0.00088 U	<0.0012 U	<0.240 U	<0.0012 U	<0.00082 U	<0.00077 U	<0.0012 UJ
2,2-Oxybis(1-chloropropane)	mg/kg	NS	1,020	--	--	--	--	--	--	--	--	--	--	<0.028 U	<2.800 U	<0.029 U	<0.550 U	<0.110 U	<0.520 U	<0.480 U	<0.120 U
2,4-Dinitrotoluene	mg/kg	0.0001	7.37	--	--	--	--	--	--	--	--	--	--	<0.080 U	<8.000 U	<0.083 U	<1.600 U	<0.320 U	<1.500 U	<1.400 U	<0.340 U
2,6-Dinitrotoluene	mg/kg	0.0001	1.54	--	--	--	--	--	--	--	--	--	--	<0.034 U	<3.400 U	<0.035 U	<0.670 U	<0.140 U	<0.630 U	<0.590 U	<0.140 U
2-Chloronaphthalene	mg/kg	NS	60,300	--	--	--	--	--	--	--	--	--	--	<0.012 U	<1.200 U	<0.013 U	<0.240 U	<0.049 U	<0.220 U	<0.210 U	<0.052 U
2-Nitroaniline	mg/kg	NS	8,010	--	--	--	--	--	--	--	--	--	--	<0.060 U	<6.000 U	<0.063 U	<1.200 U	<0.250 U	<1.100 U	<1.000 U	<0.260 U
3,3-Dichlorobenzidine	mg/kg	NS	5.11	--	--	--	--	--	--	--	--	--	--	<0.110 U	<11.000 U	<0.110 U	<2.100 U	<0.440 U	<2.000 U	<1.900 U	<0.470 U
3-Nitroaniline	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	<0.088 U	<8.800 U	<0.091 U	<1.700 U	<0.360 U	<1.600 U	<1.500 U	<0.380 U
4-Bromodiphenyl ether	mg/kg	NS	26.9	--	--	--	--	--	--	--	--	--	--	<0.023 U	<2.300 U	<0.024 U	<0.450 U	<0.093 U	<0.430 U	<0.400 U	<0.098 U
4-Chloroaniline	mg/kg	NS	11.5	--	--	--	--	--	--	--	--	--	--	<0.099 U	<9.900 U	<0.100 U	<1.900 U	<0.400 U	<1.800 U	<1.700 U	<0.420 U
4-Chlorodiphenyl ether	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	<0.025 U	<2.500 U	<0.026 U	<0.500 U	<0.100 U	<0.470 U	<0.440 U	<0.110 U
4-Nitroaniline	mg/kg	NS	115	--	--	--	--	--	--	--	--	--	--	<0.087 U	<8.700 U	<0.091 U	<1.700 U	<0.360 U	<1.600 U	<1.500 U	<0.370 U
Acetophenone	mg/kg	NS	2,520	--	--	--	--	--	--	--	--	--	--	<0.024 U	<2.400 U	<0.025 U	<0.480 U	<0.098 U	<0.450 U	<0.420 U	<0.100 U
Benzaldehyde	mg/kg	NS	818	--	--	--	--	--	--	--	--	--	--	<0.081 U	<8.100 U	<0.084 U	<1.600 U	<0.330 U	<1.500 U	<1.400 U	<0.350 U
Biphenyl	mg/kg	NS	288	--	--	--	--	--	--	--	--	--	--	<0.060 U	7.500 J	<0.063 U	3.500 J	<0.250 U	<1.100 U	<1.000 U	0.270 J
Bis(2-Chloroethoxy)methane	mg/kg	NS	2,460	--	--	--	--	--	--	--	--	--	--	<0.028 U	<2.800 U	<0.029 U	<0.550 U	<0.110 U	<0.520 U	<0.480 U	<0.120 U
Bis(2-Chloroethyl)ether	mg/kg	NS	1.29	--	--	--	--	--	--	--	--	--	--	<0.020 U	<2.000 U	<0.021 U	<0.390 U	<0.081 U	<0.370 U	<0.350 U	<0.086 U
Bis(2-Ethylhexyl)phthalate	mg/kg	2.88	164	--	--	--	--	--	--	--	--	--	--	1.200	<5.500 U	<0.058 U	<1.100 U	<0.230 U	<1.000 U	*80.000*	2.800
Butyl benzyl phthalate	mg/kg	NS	1,210	--	--	--	--	--	--	--	--	--	--	<0.052 U	<5.200 U	<0.054 U	<1.000 U	<0.210 U	<0.960 U	<0.900 U	<0.220 U
Caprolactam	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	<0.130 U	<13.000 U	<0.130 U	<2.500 U	<0.520 U	<2.400 U	<2.200 U	<0.550 U
Carbazole	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	0.100 J	73.000	0.170 J	11.000	0.600 J	3.800 J	<0.760 U	0.430 J
Dibenzofuran	mg/kg	NS	1,040	--	--	--	--	--	--	--	--	--	--	0.087 J	44.000	0.140 J	11.000	0.550 J	2.200 J	<0.420 U	0.530 J
Diethyl phthalate	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	<0.031 U	<3.100 U	<0.033 U	<0.620 U	<0.130 U	<0.580 U	<0.550 U	<0.130 U
Dimethyl phthalate	mg/kg	NS	7,390	--	--	--	--	--	--	--	--	--	--	0.970	<2.800 U	<0.029 U	<0.550 U	<0.110 U	<0.520 U	<0.480 U	<0.120 U
Di-n-butyl phthalate	mg/kg	5.0333	82,100	--	--	--	--	--	--	--	--	--	--	<0.035 U	<3.500 U	<0.036 U	<0.690 U	<0.140 U	<0.650 U	<0.610 U	<0.150 U
Di-n-octyl phthalate	mg/kg	NS	8,210	--	--	--	--	--	--	--	--	--	--	<0.017 U	<1.700 U	<0.018 U	<0.340 U	<0.071 U	<0.320 U	2.200 J	<0.074 U
Hexachlorobenzene	mg/kg	0.0252	1.15	--	--	--	--	--	--	--	--	--	--	<0.035 U	<3.500 U	<0.036 U	<0.690 U	<0.140 U	<0.650 U	<0.610 U	<0.150 U
Hexachlorobutadiene	mg/kg	NS	7.19	--	--	--	--	--	--	--	--	--	--	<0.00066 U	<0.00066 U	<0.00087 U	<0.250 U	<0.00094 U	<0.00062 U	<0.00058 U	<0.00090 UJ
Hexachlorocyclopentadiene	mg/kg	NS	10.8	--	--	--	--	--	--	--	--	--	--	<0.060 U	<6.000 U	<0.063 U	<1.200 U	<0.250 U	<1.100 U	<1.000 U	<0.260 U
Hexachloroethane	mg/kg	NS	11.1	--	--	--	--	--	--	--	--	--	--	<0.026 U	<2.600 U	<0.027 U	<0.510 U	<0.100 U	<0.480 U	<0.450 U	<0.110 U
Isophorone	mg/kg	NS	2,420	--	--	--	--	--	--	--	--	--	--	<0.020 U	<2.000 U	<0.021 U	<0.400 U	<0.083 U	<0.380 U	<0.360 U	<0.088 U
Nitrobenzene	mg/kg	NS	32.4	--	--	--	--	--	--	--	--	--	--	<0.027 U	<2.700 U	<0.028 U	<0.520 U	<0.110 U	<0.490 U	<0.460 U	<0.110 U
N-nitrosodi-n-propylamine	mg/kg	NS	0.328	--	--	--	--	--	--	--	--	--	--	<0.037 U	<3.700 U	<0.039 U	<0.740 U	<0.150 U	<0.690 U	<0.650 U	<0.160 U
N-Nitrosodiphenylamine	mg/kg	0.0764	469	--	--	--	--	--	--	--	--	--	--	<0.025 U	<2.500 U	<0.026 U	<0.500 U	<0.100 U	<0.470 U	<0.440 U	<0.110 U
Pyridine	mg/kg	0.0069	1,170	--	--	--	--	--	--	--	--	--	--	<0.160 U	<16.000 U	<0.160 U	<3.100 U	<0.640 U	<2.900 U	<2.700 U	<0.670 U

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	CG-SB 55		CG-SB 56		CG-SB 57		CG-SB 58		CG-SB 59		CG-TT01	CG-TT02	CG-TT03		CG-TT04	CG-TT05	CG-TT06	CG-TT07
Sample / Duplicate:				CG-SB 55	CG-SB 55	CG-SB 56	CG-SB 56	CG-SB 57	CG-SB 57	CG-SB 58	CG-SB 58	CG-SB 59	CG-SB 59	CG-TT01	CG-TT02	CG-TT03	CG-TT03	CG-TT04	CG-TT05	CG-TT06	CG-TT07
Field Sample ID:				CG-SB 55 (0-0.5) 06092015	CG-SB 55 (4-6) 06092015	CG-SB 56 (0-0.5) 06092015	CG-SB 56 (4-6) 06092015	CG-SB 57 (0-0.5) 06092015	CG-SB 57 (4-6) 06092015	CG-SB 58 (0-0.5) 06092015	CG-SB 58 (4-6) 06092015	CG-SB 59 0-0.5) 06092015	CG-SB 59 (4-6) 06092015	CG-TT01-0910-101308	CG-TT02-0910-101308	CG-TT03-0607-101308	CG-TT03-0809-101408	CG-TT04-0910-101308	CG-TT05-0910-101308	CG-TT06-0203-100808	CG-TT07-0304-100808
Sample Depth (feet):				0 - 0.5	4 - 6	0 - 0.5	4 - 6	0 - 0.5	4 - 6	0 - 0.5	4 - 6	0 - 0.5	4 - 6	9 - 10	9 - 10	6 - 7	8 - 9	9 - 10	9 - 10	2 - 3	3 - 4
Sample Date:				06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	10/13/2008	10/13/2008	10/13/2008	10/14/2008	10/13/2008	10/13/2008	10/08/2008	10/08/2008
Phenols																					
2,4,5-Trichlorophenol	mg/kg	NS	82,100	--	--	--	--	--	--	--	--	--	--	<0.012 U	<1.200 U	<0.013 U	<0.240 U	<0.049 U	<0.220 U	<0.210 U	<0.052 U
2,4,6-Trichlorophenol	mg/kg	NS	209	--	--	--	--	--	--	--	--	--	--	<0.012 U	<1.200 U	<0.013 U	<0.240 U	<0.049 U	<0.220 U	<0.210 U	<0.052 U
2,4-Dichlorophenol	mg/kg	NS	2,460	--	--	--	--	--	--	--	--	--	--	<0.012 U	<1.200 U	<0.013 U	<0.240 U	<0.049 U	<0.220 U	<0.210 U	<0.052 U
2,4-Dimethylphenol	mg/kg	NS	16,400	--	--	--	--	--	--	--	--	--	--	<0.080 U	<8.000 U	<0.083 U	1.600 J	<0.320 U	<1.500 U	<1.400 U	<0.340 U
2,4-Dinitrophenol	mg/kg	NS	1,640	--	--	--	--	--	--	--	--	--	--	<0.400 U	<40.000 U	<0.420 U	<7.900 U	<1.600 U	<7.500 U	<7.000 U	<1.700 U
2-Chlorophenol	mg/kg	NS	5,840	--	--	--	--	--	--	--	--	--	--	<0.025 U	<2.500 U	<0.026 U	<0.500 U	<0.100 U	<0.470 U	<0.440 U	<0.110 U
2-Methylphenol	mg/kg	NS	41,000	--	--	--	--	--	--	--	--	--	--	<0.016 U	2.400 J	<0.016 U	0.460 J	<0.064 U	<0.290 U	<0.270 U	<0.067 U
2-Nitrophenol	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	<0.012 U	<1.200 U	<0.013 U	<0.240 U	<0.049 U	<0.220 U	<0.210 U	<0.052 U
4-Chloro-3-methylphenol	mg/kg	NS	82,100	--	--	--	--	--	--	--	--	--	--	<0.080 U	<8.000 U	<0.083 U	<1.600 U	<0.320 U	<1.500 U	<1.400 U	<0.340 U
4-Methylphenol	mg/kg	NS	82,100	--	--	--	--	--	--	--	--	--	--	<0.040 U	4.400 J	<0.041 U	<0.780 U	<0.160 U	<0.740 U	<0.690 U	<0.170 U
4-Nitrophenol	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	<0.120 U	<12.000 U	<0.120 U	<2.300 U	<0.480 U	<2.200 U	<2.000 U	<0.500 U
4,6-Dinitro-2-methylphenol	mg/kg	NS	65.7	--	--	--	--	--	--	--	--	--	--	<0.400 U	<40.000 U	<0.410 U	<7.800 U	<1.600 U	<7.400 U	<6.900 U	<1.700 U
Pentachlorophenol	mg/kg	0.0028	3.97	--	--	--	--	--	--	--	--	--	--	<0.400 U	<40.000 U	<0.410 U	<7.800 U	<1.600 U	<7.400 U	<6.900 U	<1.700 U
Phenol	mg/kg	2.2946	100,000	--	--	--	--	--	--	--	--	--	--	<0.022 U	*5.800 J*	0.026 J	0.460 J	<0.088 U	<0.400 U	<0.380 U	<0.093 U
Metals																					
Aluminum, Total	mg/kg	600	100,000	--	--	--	--	--	--	--	--	--	--	*7,700*	*4,500*	*6,900*	*1,000*	*5,800*	*4,000*	*3,200*	*8,400*
Antimony, Total	mg/kg	0.542	467	--	--	--	--	--	--	--	--	--	--	0.200 B	0.310	*0.620*	0.120 JB	0.410	0.360	0.062 BJ-	0.410 J-
Arsenic, Total [1]	mg/kg	0.584	8.3	--	--	--	--	--	--	--	--	--	--	*8.200*	*7.300*	*7.300*	*3.100*	***27.000***	*7.100*	*2.200*	***25.000***
Barium, Total	mg/kg	164.8	100,000	--	--	--	--	--	--	--	--	--	--	89.000	97.000	95.000	42.000	130.000	63.000	9.700	*300.000*
Beryllium, Total	mg/kg	6.32	2,300	--	--	--	--	--	--	--	--	--	--	0.580	0.490	1.300	0.720	1.400	0.600	0.160	1.100
Cadmium, Total	mg/kg	0.752	985	--	--	--	--	--	--	--	--	--	--	0.330	*0.780*	0.490	0.210	*3.000*	0.550	0.150	*2.700*
Calcium, Total	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	26,000	16,000	30,000	770	13,000	57,000	110,000	25,000
Chromium, Hexavalent	mg/kg	NS	6.36	0.46	0.21 UR	0.28 J	<0.19 U	<0.18 U	<0.20 U	0.22 J	<0.17 U	<1.2 U	<0.19 U	--	--	--	--	--	--	--	--
Chromium, Total [3]	mg/kg	360,000	NS	32.000 B	17.000 B	15.000 B	3.400 B	19.000 B	4.900 B	25.000 B	19.000 B	11.000	59.000	13.000	17.000	6.700	3.800	15.000	8.400	5.500	160.000
Chromium, Trivalent	mg/kg	NS	100,000	32	17 J	15	3.4	19	4.9	25	19	11	59	--	--	--	--	--	--	--	--
Cobalt, Total	mg/kg	3.6073	347	--	--	--	--	--	--	--	--	--	--	*4.000*	2.800	*4.100*	*8.200*	*6.500*	3.500	2.500	*8.000*
Copper, Total	mg/kg	91.6	46,700	--	--	--	--	--	--	--	--	--	--	32.000	52.000	89.000	18.000	*94.000*	40.000	12.000 J-	*110.000*
Iron, Total	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	29,000 J	10,000 J	20,000 J	2,300	20,000 J	20,000 J	9,900 J	9,600 J
Lead, Total	mg/kg	27	800	--	--	--	--	--	--	--	--	--	--	*93.000 J*	*130.000 J*	*81.000 J*	11.000	*220.000 J*	*150.000 J*	5.300 J	*150.000 J*
Magnesium, Total	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	11,000	6,100	13,000	300	5,600	30,000	52,000	10,000
Manganese, Total	mg/kg	39.1244	25,900	--	--	--	--	--	--	--	--	--	--	*370.000 J*	*170.000 J*	*580.000 J*	16.000	*330.000 J*	*370.000 J*	*320.000 J*	*260.000 J*
Mercury, Total	mg/kg	0.208	3.13	--	--	--	--	--	--	--	--	--	--	*0.240*	*2.400*	*0.400*	*0.260*	*2.200*	***6.700***	0.200 J+	*1.000*
Nickel, Total	mg/kg	13.0612	22,500	--	--	--	--	--	--	--	--	--	--	10.000	8.700	9.700	12.000	*17.000*	9.800	7.600 J-	*33.000*
Potassium, Total	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	940	710	960	110 B	920	720	860	760
Selenium, Total	mg/kg	0.52	5,840	--	--	--	--	--	--	--	--	--	--	*1.900 J*	*3.100 J*	*1.800 J*	*2.800*	*3.800 J*	*1.900 J*	0.260 B	*2.000*
Silver, Total	mg/kg	0.8491	5,840	--	--	--	--	--	--	--	--	--	--	0.094 B	0.071 B	0.058 B	0.024 B	0.100 B	0.064 B	<0.021 U	0.270
Sodium, Total	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	190 B	190 B	340 B	<70 U	300 B	230 B	200 B	180 B
Thallium, Total	mg/kg	0.284	11.7	--	--	--	--	--	--	--	--	--	--	0.190	*0.430*	0.160	0.170	*3.200*	*0.310*	<0.0037 UJ	*1.900 J*
Vanadium, Total	mg/kg	60	5,840	--	--	--	--	--	--	--	--	--	--	16.000	11.000	14.000	6.300	17.000	11.000	9.400	20.000
Zinc, Total	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	87.000	170.000	90.000	20.000	450.000	160.000	26.000 J-	300.000
Inorganic - Cyanide																					
Cyanide, Amenable	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Reactive	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Total	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	0.42 B	*55 g*	1.5	0.31 B	*23*	*13*	0.86	1.9
Other																					
Sulfide, Reactive	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organic Matter	%	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent Moisture	%	NS	NS	--	--	--	--	--	--	--	--	--	--	17	17	20	16	18	11	4.8	23

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	CG-TT08	CG-TT09	CG-TT10	CG-TT11	CG-TT12	CG-TT13	CG-TT14	CG-TT15	CG-TT16	CG-TT17		CS-SB01		CS-SB02		CS-SB03	
Sample / Duplicate:				CG-TT08	CG-TT09	CG-TT10	CG-TT11	CG-TT12	CG-TT13	CG-TT14	CG-TT15	CG-TT16	CG-TT17	CG-TT17 DUP	CS-SB01	CS-SB01	CS-SB02	CS-SB02	CS-SB03	CS-SB03
Field Sample ID:				CG-TT08-0506-100808	CG-TT09-0304-100908	CG-TT10-0607-100808	CG-TT11-0102-100908	CG-TT12-0809-100908	CG-TT13-0102-100908	CG-TT14-0910-101008	CG-TT15-0910-101008	CG-TT16-0910-101008	CG-TT17-0910-101008	TT17-DUP001-0910-101008	CS-SB01-SS-111908	CS-SB01-0708-111908	CS-SB02-SS-111908	CS-SB02-0910-111908	CS-SB03-SS-111908	CS-SB03-0777-111908
Sample Depth (feet):				5 - 6	3 - 4	6 - 7	1 - 2	8 - 9	1 - 2	9 - 10	9 - 10	9 - 10	9 - 10	9 - 10	0 - 0.5	7 - 8	0 - 0.5	9 - 10	0 - 0.5	7 - 7.7
Sample Date:				10/08/2008	10/09/2008	10/08/2008	10/09/2008	10/09/2008	10/09/2008	10/10/2008	10/10/2008	10/10/2008	10/10/2008	10/10/2008	11/19/2008	11/19/2008	11/19/2008	11/19/2008	11/19/2008	11/19/2008
VOCs																				
1,1,1-Trichloroethane	mg/kg	0.1402	640	<0.0010 U	<0.00078 U	<0.0011 U	<0.00085 U	<4.300 U	<0.00080 U	<0.0013 U	<0.00062 U	<0.0013 U	<0.0011 U	<0.0013 U	<0.00078 U	<0.00045 U	<0.00071 U	<0.00059 U	<0.00056 U	<0.00089 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0002	3.6	<0.0012 U	<0.00092 UJ	<0.0013 UJ	<0.00099 U	<6.300 U	<0.00094 U	<0.0015 U	<0.00073 U	<0.0015 U	<0.0013 U	<0.0015 U	<0.00091 U	<0.00053 U	<0.00083 U	<0.00070 U	<0.00066 U	<0.0010 U
1,1,2-Trichloroethane	mg/kg	0.0032	7.01	<0.0017 U	<0.0013 UJ	<0.0019 UJ	<0.0014 U	<5.900 U	<0.0014 U	<0.0022 U	<0.0011 U	<0.0022 U	<0.0019 U	<0.0022 U	<0.0013 U	<0.00076 U	<0.0012 U	<0.0010 U	<0.00095 U	<0.0015 U
1,1-Dichloroethane	mg/kg	0.4834	22.2	<0.00041 U	<0.00032 U	<0.00045 U	<0.00034 U	<11.000 U	<0.00032 U	<0.00053 U	<0.00025 U	<0.00051 U	<0.00046 U	<0.00053 U	<0.00031 U	<0.00018 U	<0.00028 U	<0.00024 U	<0.00023 U	<0.00036 U
1,1-Dichloroethene	mg/kg	0.005	1,190	0.0032 J	<0.00089 U	<0.0013 U	<0.00096 U	<11.000 U	<0.00091 U	<0.0015 U	<0.00071 U	<0.0014 U	<0.0013 U	<0.0015 U	<0.00088 U	<0.00051 U	<0.00080 U	<0.00067 U	<0.00064 U	<0.0010 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0002	0.092	<0.0012 U	<0.00090 UJ	<0.0013 UJ	<0.00098 U	<19.000 U	<0.00093 U	<0.0015 U	<0.00072 U	<0.0015 U	<0.0013 U	<0.0015 U	<0.00090 U	<0.00052 U	<0.00081 U	<0.00069 U	<0.00065 U	<0.0010 U
1,2-Dibromoethane	mg/kg	0.0000282	0.221	<0.0010 U	<0.00078 U	<0.0011 U	<0.00085 U	<5.400 U	<0.00080 U	<0.0013 U	<0.00062 U	<0.0013 U	<0.0011 U	<0.0013 U	<0.00078 U	<0.00045 U	<0.00071 U	<0.00059 U	<0.00056 U	<0.00089 U
1,2-Dichlorobenzene	mg/kg	1.168	376	<0.00088 U	<0.00068 UJ	<0.00096 UJ	<0.00073 U	<20.000 U	<0.00069 U	<0.0011 U	<0.00054 U	<0.0011 U	<0.00098 U	<0.0011 U	<0.00067 U	<0.00039 U	<0.00061 U	<0.00051 U	<0.00049 U	<0.00077 U
1,2-Dichloroethane	mg/kg	0.0028	2.87	<0.0014 U	<0.0011 U	<0.0015 U	<0.0011 U	<5.400 U	<0.0011 U	<0.0018 U	<0.00084 U	<0.0017 U	<0.0015 U	<0.0018 U	<0.0010 U	<0.00061 U	<0.00095 U	<0.00080 U	<0.00076 U	<0.0012 U
1,2-Dichloropropane	mg/kg	0.0033	1.78	<0.0011 U	<0.00083 U	<0.0012 U	<0.00090 U	<10.000 U	<0.00085 U	<0.0014 U	<0.00066 U	<0.0013 U	<0.0012 U	<0.0014 U	<0.00082 U	<0.00048 U	<0.00075 U	<0.00063 U	<0.00059 U	<0.00094 U
1,3-Dichlorobenzene	mg/kg	1.1528	297	<0.00093 U	<0.00072 UJ	<0.0010 UJ	<0.00078 U	<8.800 U	<0.00074 U	<0.0012 U	<0.00057 U	<0.0012 U	<0.0010 U	<0.0012 U	<0.00072 U	<0.00042 U	<0.00065 U	<0.00055 U	<0.00052 U	<0.00082 U
1,4-Dichlorobenzene	mg/kg	0.144	16.4	<0.0015 U	<0.0012 UJ	<0.0017 UJ	<0.0013 U	<5.400 U	<0.0012 U	<0.0020 U	<0.00093 U	<0.0019 U	<0.0017 U	<0.0020 U	<0.0012 U	<0.00068 U	<0.0011 U	<0.00089 U	<0.00084 U	<0.0013 U
2-Butanone (MEK)	mg/kg	1.6661	28,400	<0.0036 U	<0.0028 U	<0.0039 U	<0.0030 U	<64.000 U	<0.0028 U	<0.0046 U	<0.0022 U	<0.0045 U	<0.0040 U	<0.0046 U	<0.0027 U	<0.0016 U	<0.0025 U	<0.0021 U	<0.0020 U	<0.0031 U
2-Hexanone	mg/kg	NS	1,760	<0.0095 U	<0.0074 U	<0.010 UJ	<0.0080 U	<47.000 U	<0.0076 U	<0.012 U	<0.0059 U	<0.012 U	<0.011 U	<0.012 U	<0.0073 U	<0.0042 U	<0.0066 U	<0.0056 U	<0.0053 U	<0.0083 U
4-Methyl-2-Pentanone (MIBK)	mg/kg	0.2252	3,360	<0.0085 U	<0.0066 UJ	<0.0093 UJ	<0.0071 U	<49.000 U	<0.0067 U	<0.011 U	<0.0052 U	<0.011 U	<0.0095 U	<0.011 U	<0.0065 U	<0.0038 U	<0.0059 U	<0.0050 U	<0.0047 U	0.015 J
Acetone	mg/kg	3.6766	100,000	0.020 J	<0.0081 U	<0.012 U	<0.0088 U	<87.000 U	<0.0083 U	0.030 J	<0.0064 U	<0.013 U	<0.012 U	<0.014 U	<0.0081 U	0.0089 J	<0.0073 U	0.010 J	<0.0058 U	0.037
Benzene	mg/kg	0.0051	7.07	*0.083*	0.0012 J	*0.012*	<0.00077 U	<9.800 U	0.0011 J	0.0043 J	0.00086 J	<0.0011 U	*0.006 J*	*0.013*	<0.00070 U	<0.00041 U	*0.011*	0.003 J	<0.00051 U	***43.000***
Bromodichloromethane	mg/kg	0.0003	1.83	<0.00043 U	<0.00033 UJ	<0.00047 UJ	<0.00036 U	<8.600 U	<0.00034 U	<0.00055 U	<0.00026 U	<0.00054 U	<0.00048 U	<0.00055 U	<0.00033 U	<0.00019 U	<0.00030 U	<0.00025 U	<0.00024 U	<0.00038 U
Bromoform	mg/kg	0.0023	113	<0.00045 U	<0.00035 UJ	<0.00049 UJ	<0.00037 U	<6.300 U	<0.00036 U	<0.00058 U	<0.00028 U	<0.00056 U	<0.00050 U	<0.00058 U	<0.00034 U	<0.00020 U	<0.00031 U	<0.00026 U	<0.00025 U	<0.00039 U
Bromomethane	mg/kg	0.0051	43	<0.00097 U	<0.00075 U	<0.0011 U	<0.00081 U	<9.500 U	<0.00077 U	<0.0013 U	<0.00060 U	<0.0012 U	<0.0011 U	<0.0013 U	<0.00075 U	<0.00043 U	<0.00068 U	<0.00057 U	<0.00054 U	<0.00085 U
Carbon Disulfide	mg/kg	0.5919	738	<0.00082 U	<0.00063 U	<0.00090 U	<0.00068 U	<14.000 UJ	<0.00065 U	<0.0011 U	<0.00050 U	<0.0010 U	<0.00092 U	<0.0011 U	<0.00063 U	0.0015 J	<0.00057 U	<0.00048 U	<0.00045 U	<0.00072 U
Carbon Tetrachloride	mg/kg	0.0039	4.03	<0.0012 U	<0.00095 U	<0.0014 U	<0.0010 U	<3.700 U	<0.00097 U	<0.0016 U	<0.00075 U	<0.0015 U	<0.0014 U	<0.0016 U	<0.00094 U	<0.00055 U	<0.00086 U	<0.00072 U	<0.00068 U	<0.0011 U
Chlorobenzene	mg/kg	0.1358	761	<0.0011 U	<0.00081 UJ	<0.0012 UJ	<0.00088 U	<6.500 U	<0.00083 U	<0.0014 U	<0.00065 U	<0.0013 U	<0.0012 U	<0.0014 U	<0.00081 U	<0.00047 U	<0.00073 U	<0.00062 U	<0.00058 U	<0.00092 U
Chloroethane	mg/kg	0.2266	2,120	<0.0017 U	<0.0013 U	<0.0019 U	<0.0015 U	<9.500 U	<0.0014 U	<0.0022 U	<0.0011 U	<0.0022 U	<0.0019 U	<0.0022 U	<0.0013 U	<0.00077 U	<0.0012 U	<0.0010 U	<0.00096 U	<0.0015 U
Chloroform	mg/kg	0.0033	1.98	<0.00056 U	<0.00044 U	<0.00062 U	<0.00047 U	<10.000 U	<0.00045 U	<0.00073 U	<0.00035 U	<0.00071 U	<0.00063 U	<0.00073 U	<0.00043 U	<0.00025 U	<0.00039 U	<0.00033 U	<0.00031 U	<0.00049 U
Chloromethane	mg/kg	0.0155	669	<0.0015 U	<0.0012 U	<0.0017 U	<0.0013 U	<11.000 U	<0.0012 U	<0.0019 U	<0.00092 U	<0.0019 U	<0.0017 U	<0.0019 U	<0.0012 U	<0.00067 U	<0.0010 U	<0.00088 U	<0.00083 U	<0.0013 U
cis-1,2-Dichloroethene	mg/kg	0.0412	2,340	<0.0011 U	<0.00084 U	<0.0012 U	<0.00091 U	<4.800 U	<0.00086 U	<0.0014 U	<0.00067 U	<0.0014 U	<0.0012 U	<0.0014 U	<0.00084 U	<0.00049 U	<0.00076 U	<0.00064 U	<0.00061 U	<0.00095 U
cis-1,3-Dichloropropene	mg/kg	NS	1,210	<0.0025 U	<0.0019 UJ	<0.0028 UJ	<0.0021 U	<5.900 U	<0.0020 U	<0.0032 U	<0.0015 U	<0.0032 U	<0.0028 U	<0.0032 U	<0.0019 U	<0.0011 U	<0.0018 U	<0.0015 U	<0.0014 U	<0.0022 U
Cyclohexane	mg/kg	NS	117	<0.00078 U	0.00082 J	<0.00086 U	<0.00065 U	<6.100 U	<0.00062 U	<0.0010 U	<0.00048 U	<0.00098 U	<0.00087 U	<0.0010 U	<0.00060 U	<0.00035 U	<0.00054 U	<0.00046 U	<0.00043 U	0.036
Dibromochloromethane	mg/kg	0.032	38.9	<0.0011 U	<0.00086 UJ	<0.0012 UJ	<0.00093 U	<7.200 U	<0.00088 U	<0.0014 U	<0.00068 U	<0.0014 U	<0.0012 U	<0.0014 U	<0.00085 U	<0.00049 U	<0.00077 U	<0.00065 U	<0.00062 U	<0.00097 U
Dichloromethane	mg/kg	0.0026	1,150	<0.0015 U	<0.0011 U	<0.0016 U	<0.0012 U	*24.000 J*	<0.0012 U	<0.0019 U	<0.00090 U	<0.0018 U	<0.0016 U	<0.0019 U	<0.0011 U	<0.00065 U	<0.0010 U	<0.00086 U	<0.00081 U	<0.0013 U
Ethylbenzene	mg/kg	1.57	35.4	0.0067 J	<0.0010 UJ	<0.0014 UJ	<0.0011 U	<7.400 U	<0.0010 U	<0.0017 U	<0.00080 U	<0.0016 U	<0.0015 U	<0.0017 U	<0.0010 U	<0.00058 U	<0.00091 U	<0.00077 U	<0.00072 U	*5.900 J*
Freon 113	mg/kg	NS	910	<0.00088 U	<0.00068 U	<0.00096 U	<0.00073 U	<14.000 U	<0.00069 U	<0.0011 U	<0.00054 U	<0.0011 U	<0.00098 U	<0.0011 U	<0.00067 U	<0.00039 U	<0.00061 U	<0.00051 U	<0.00049 U	<0.00077 U
Freon 12	mg/kg	3.0863	530	<0.0010 U	<0.00078 U	<0.0011 U	<0.00085 U	<4.800 U	<0.00080 U	<0.0013 U	<0.00062 U	<0.0013 U	<0.0011 U	<0.0013 U	<0.00078 U	<0.00045 U	<0.00071 U	<0.00059 U	<0.00056 U	<0.00089 U
Isopropylbenzene	mg/kg	NS	268	<0.0011 U	<0.00089 UJ	<0.0013 UJ	<0.00096 U	<6.300 U	<0.00091 U	<0.0015 U	<0.00071 U	<0.0014 U	<0.0013 U	<0.0015 U	<0.00088 U	<0.00051 U	0.0028 J	<0.00067 U	<0.00064 U	0.025
Methyl acetate	mg/kg	NS	29,000	<0.0054 U	<0.0041 U	<0.0059 U	<0.0045 U	<52.000 U	<0.0042 U	<0.0069 U	<0.0033 U	<0.0067 U	<0.0060 U	<0.0069 U	<0.0041 U	<0.0024 U	<0.0037 U	<0.0031 U	<0.0030 U	<0.0047 U
Methylcyclohexane	mg/kg	NS	67.6	<0.00082 U	0.001 J	<0.00090 U	<0.00068 U	<9.100 U	<0.00065 U	<0.0011 U	<0.00050 U	<0.0010 U	<0.00092 U	<0.0011 U	<0.00063 U	<0.00036 U	<0.00057 U	<0.00048 U	<0.00045 U	0.036
Methyl-tert-butyl-ether	mg/kg	0.027	282	<0.00066 U	<0.00051 U	<0.00073 U	<0.00055 U	<11.000 U	<0.00053 U	<0.00086 U	<0.00041 U	<0.00083 U	<0.00074 U	<0.00085 U	<0.00051 U	<0.00029 U	<0.00046 U	<0.00039 U	<0.00037 U	<0.00058 U
Styrene	mg/kg	0.22	867	0.013	<0.00095 UJ	<0.0014 UJ	<0.0010 U	<5.600 U	<0.00097 U	<0.0016 U	<0.00075 U	<0.0015 U	<0.0014 U	<0.0016 U	<0.00094 U	<0.00055 U	<0.00086 U	<0.00072 U	<0.00068 U	*9.300 J*
Tetrachloroethene	mg/kg	0.0045	145	<0.0011 U	<0.00089 UJ	<0.0013 UJ	<0.00096 U	<5.900 U	<0.00091 U	<0.0015 U	<0.00071 U	<0.0014 U	<0.0013 U	<0.0015 U	<0.00088 U	<0.00051 U	<0.00080 U	<0.00067 U	<0.00064 U	<0.0010 U
Toluene	mg/kg	1.1072	818	0.094	0.0039 JJ	<0.0015 UJ	<0.0011 U	*14.000 J*	<0.0011 U	<0.0017 U	<0.00083 U	<0.0017 U	<0.0015 U	<0.0017 U	<0.0010 U	<0.00060 U	0.009	0.0018 J	<0.00075 U	*56.000*
trans-1,2-Dichloroethene	mg/kg	0.0626	1,850	<0.00076 U	<0.00059 U	<0.00084 U	<0.00064 U	<9.700 U	<0.00060 U	<0.00098 U	<0.00047 U	<0.00095 U	<0.00085 U	<0.00098 U	<0.00058 U	<0.00034 U	<0.00053 U	<0.00045 U	<0.00042 U	<0.00066 U
trans-1,3-Dichloropropene	mg/kg	NS	1,510	<0.0013 U	<0.0010 UJ	<0.0014 UJ	<0.0011 U	<9.000 U	<0.0010 U	<0.0017 U	<0.00080 U	<0.0016 U	<0.0015 U	<0.0017 U	<0.0010 U	<0.00058 U	<0.00091 U	<0.00077 U	<0.00072 U	<0.0011 U
Trichloroethene	mg/kg	0.0036	8.41	<0.00045 U	<0.00035 U	<0.00049 U	<0.00037 U	<5.000 U	<0.00036 U	<0.00058 U	<0.00028 U	<0.00056 U	<0.00050 U	<0.00058 U	<0.00034 U	<0.00020 U	<0.00031 U	<0.00026 U	<0.00025 U	<0.00039 U
Trichlorofluoromethane	mg/kg	4.4775	1,230	<0.0020 U	<0.0016 U	<0.0022 U	<0.0017 U	<11.000 U	<0.0016 U	<0.0026 U	<0.0012 U	<0.0025 U	<0.0023 U	<0.0026 U	<0.0016 U	<0.00090 U	<0.0014 U	<0.0012 U	<0.0011 U	<0.0018 U
Vinyl Chloride	mg/kg	0.0001	2.08	<0.0026 U	<0.0020 U	<0.0029 U	<0.0022 U	<5.900 U	<0.0021 U	<0.0034 U	<0.0016 U	<0.0033 U	<0.0029 U	<0.0034 U	<0.0020 U	<0.0012 U	<0.0018 U	<0.0015 U	<0.0014 U	<0.0023 U
Xylenes, Total	mg/kg	3.96	260	0.100	0.016 J	<0.0013 UJ	<0.00099 U	*140.000*	<0.00094 U	<0.0015 U	<0.00073 U	<0.0015 U	<0.0013 U	<0.0015 U	<0.00091 U	<0.00053 U	0.0081	0.0014 J	<0.00066 U	*120.000*
PCBs																				
PCB, Total [4]	mg/kg	0.0094	0.967	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1016	mg/kg	NS	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1221	mg/kg	NS	0.883	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1232	mg/kg	NS	0.792	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1242	mg/kg	NS	0.972	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1248	mg/kg	NS	0.975	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1254	mg/kg	NS	0.988	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1260	mg/kg	NS	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	CG-TT08	CG-TT09	CG-TT10	CG-TT11	CG-TT12	CG-TT13	CG-TT14	CG-TT15	CG-TT16	CG-TT17		CS-SB01		CS-SB02		CS-SB03	
Sample / Duplicate:				CG-TT08	CG-TT09	CG-TT10	CG-TT11	CG-TT12	CG-TT13	CG-TT14	CG-TT15	CG-TT16	CG-TT17	CG-TT17 DUP	CS-SB01	CS-SB01	CS-SB02	CS-SB02	CS-SB03	CS-SB03
Field Sample ID:				CG-TT08-0506-100808	CG-TT09-0304-100908	CG-TT10-0607-100808	CG-TT11-0102-100908	CG-TT12-0809-100908	CG-TT13-0102-100908	CG-TT14-0910-101008	CG-TT15-0910-101008	CG-TT16-0910-101008	CG-TT17-0910-101008	TT17-DUP001-0910-101008	CS-SB01-SS-111908	CS-SB01-0708-111908	CS-SB02-SS-111908	CS-SB02-0910-111908	CS-SB03-SS-111908	CS-SB03-0777-111908
Sample Depth (feet):				5 - 6	3 - 4	6 - 7	1 - 2	8 - 9	1 - 2	9 - 10	9 - 10	9 - 10	9 - 10	9 - 10	0 - 0.5	7 - 8	0 - 0.5	9 - 10	0 - 0.5	7 - 7.7
Sample Date:				10/08/2008	10/09/2008	10/08/2008	10/09/2008	10/09/2008	10/09/2008	10/10/2008	10/10/2008	10/10/2008	10/10/2008	10/10/2008	11/19/2008	11/19/2008	11/19/2008	11/19/2008	11/19/2008	11/19/2008
PAHs																				
2-Methylnaphthalene	mg/kg	NS	3,010	78.000 J	3.500 J	0.300 J	3.400 J	440.000	<4.800 U	0.420 J	0.063 J	<0.240 U	0.500 J	0.320 J	1.300 J	0.310 J	<2.200 U	0.260 J	0.700 J	**3,200**
Acenaphthene	mg/kg	NS	45,200	11.000 J	0.340 J	0.027 J	0.310 J	12.000 J	<2.600 U	<0.130 U	<0.012 U	<0.130 U	0.058 J	0.051 J	0.250 J	0.870 J	15.000 J	0.400	3.700	290.000 J
Acenaphthylene	mg/kg	NS	NS	55.000 J	4.800	0.380 J	3.200 J	61.000 J	28.000 J	1.300 J	0.055 J	0.800 J	0.500 J	0.630 J	1.000 J	0.310 J	2.500 J	0.460	<0.180 U	1,100
Anthracene	mg/kg	196.9492	100,000	*210.000*	11.000	0.330 J	2.400 J	43.000 J	<4.300 U	0.500 J	0.055 J	0.310 J	0.850	0.950 J	3.900	2.800 J	51.000	0.680	14.000	*1,700*
Benzo(a)anthracene	mg/kg	NS	20.8	**760.000**	**28.000**	4.000	7.800	**36.000 J**	<5.100 U	3.200 J	0.240 J	0.510 J	6.300	4.900	14.000	7.800	**100.000**	1.200	**21.000**	**1,800**
Benzo(a)pyrene	mg/kg	0.47	2.11	***890.000***	***23.000***	***4.300***	***7.900***	***26.000 J***	***9.600 J***	***4.600***	0.290 J	*0.590 J*	***5.600***	***5.000***	***9.200***	***7.300***	***82.000***	*0.780*	***15.000***	***1,200***
Benzo(b)fluoranthene	mg/kg	0.4793	21.1	***1,300 JK***	***40.000 JK***	*7.300 JK*	*15.000 JK*	***44.000 JKJ***	*15.000 JKJ*	*7.600 JK*	*0.560 JK*	*1.300 JKJ*	*9.600 JK*	*8.600 JK*	*17.000*	*8.000*	***130.000***	*1.300*	***23.000***	***1,800***
Benzo(g,h,i)perylene	mg/kg	NS	NS	610.000	16.000	3.800	8.900	15.000 J	12.000 J	4.100 J	0.370 J	0.850 J	3.700	3.600	5.300	3.900	48.000	0.460	9.400	620.000 J
Benzo(k)fluoranthene	mg/kg	NS	211	<9.900 UKJ	<0.480 UKJ	<0.048 UKJ	<0.470 UKJ	<23.000 UKJ	<10.000 UKJ	<0.510 UKJ	<0.048 UKJ	<0.500 UKJ	<0.092 UKJ	<0.180 UKJ	<0.460 U	<0.470 U	<4.500 U	<0.047 U	<0.430 U	<100.000 U
Chrysene	mg/kg	0.1446	2,110	*800.000*	*29.000*	*4.300*	*9.000*	*39.000 J*	*11.000 J*	*3.900 J*	*0.340 J*	*0.790 J*	*7.200*	*5.900*	*14.000*	*7.200*	*94.000*	*1.300*	*17.000*	*1,900*
Dibenz(a,h)anthracene	mg/kg	NS	2.11	**250.000**	<0.230 U	<0.023 U	**2.600 J**	<11.000 U	<4.800 U	1.100 J	<0.023 U	<0.240 U	1.300	1.300 J	**2.200 J**	0.930 J	**13.000 J**	0.190 J	**2.400 J**	<48.000 U
Fluoranthene	mg/kg	88.8778	30,100	*790.000*	44.000	2.900	12.000	78.000 J	<9.100 U	3.400 J	0.330 J	0.650 J	6.900	5.500	19.000	14.000	*250.000*	2.700	51.000	*5.000*
Fluorene	mg/kg	14.8299	30,100	*110.000*	1.400 J	0.042 J	1.200 J	*62.000 J*	<4.600 U	<0.230 U	<0.022 U	<0.220 U	0.120 J	0.160 J	1.900 J	1.800 J	*22.000 J*	0.730	6.600	*3.000*
Indeno(1,2,3-cd)pyrene	mg/kg	NS	21.1	**570.000**	15.000	3.400	7.600	<12.000 U	9.800 J	3.500 J	0.280 J	0.760 J	3.500	3.400	5.400	3.200 J	**46.000**	0.440	8.800	**610.000 J**
Naphthalene	mg/kg	0.6582	24.1	***300.000***	*15.000*	*0.700*	***51.000***	***2,700***	*8.900 J*	*3.100 J*	0.180 J	*0.930 J*	*1.200*	*0.990 J*	*1.500 J*	0.370 J	*6.200 J*	*1.100*	*0.670 J*	***15,000***
Phenanthrene	mg/kg	NS	NS	570.000	14.000	1.100	9.200	120.000 J	<4.300 U	1.500 J	0.200 J	1.100 J	2.400	2.000	11.000	12.000	170.000	2.000	38.000	8,800
Pyrene	mg/kg	54.5455	22,600	*700.000*	39.000	3.000	9.900	*62.000 J*	6.700 J	3.800 J	0.360 J	0.640 J	6.900	5.500	15.000	19.000	*190.000*	1.900	39.000	*3,100*
SVOCs																				
1,2,4-Trichlorobenzene	mg/kg	0.408	113	<0.0014 U	<0.0011 UJ	<0.0016 UJ	<0.0012 U	<10.000 U	<0.0011 U	<0.0018 U	<0.00087 U	<0.0018 U	<0.0016 U	<0.0018 U	<0.0011 U	<0.00063 U	<0.00099 U	<0.00084 U	<0.00079 U	<0.0012 U
2,2-Oxybis(1-chloropropane)	mg/kg	NS	1,020	<5.700 U	<0.280 U	<0.028 U	<0.270 U	<13.000 U	<5.800 U	<0.290 U	<0.028 U	<0.290 U	<0.053 U	<0.100 U	<0.260 U	<0.270 U	<2.600 U	<0.027 U	<0.250 U	<58.000 U
2,4-Dinitrotoluene	mg/kg	0.0001	7.37	<16.000 U	<0.800 U	<0.079 U	<0.770 U	<37.000 U	<17.000 U	<0.840 U	<0.079 U	<0.820 U	<0.150 U	<0.300 U	<0.760 U	<0.770 U	<7.500 U	<0.078 U	<0.710 U	<170.000 U
2,6-Dinitrotoluene	mg/kg	0.0001	1.54	<6.900 U	<0.340 U	<0.034 U	<0.330 U	<16.000 U	<7.100 U	<0.360 U	<0.034 U	*0.590 J*	<0.064 U	<0.130 U	<0.320 U	<0.330 U	<3.200 U	<0.033 U	<0.300 U	<70.000 U
2-Chloronaphthalene	mg/kg	NS	60,300	<2.500 U	<0.120 U	<0.012 U	<0.120 U	<5.700 U	<2.500 U	<0.130 U	<0.012 U	<0.120 U	<0.023 U	<0.045 U	<0.110 U	<0.120 U	<1.100 U	<0.012 U	<0.110 U	<25.000 U
2-Nitroaniline	mg/kg	NS	8,010	<12.000 U	<0.600 U	<0.060 U	<0.580 U	<28.000 U	<13.000 U	<0.640 U	<0.060 U	<0.620 U	<0.110 U	<0.230 U	<0.570 U	<0.590 U	<5.700 U	<0.059 U	<0.540 U	<130.000 U
3,3-Dichlorobenzidine	mg/kg	NS	5.11	<22.000 U	<1.100 U	<0.110 U	<1.000 U	<51.000 U	<23.000 U	<1.200 U	<0.110 U	<1.100 U	<0.210 U	<0.410 U	<1.000 U	<1.100 U	<10.000 U	<0.110 U	<0.970 U	<230.000 U
3-Nitroaniline	mg/kg	NS	NS	<18.000 U	<0.880 U	<0.087 U	<0.850 U	<41.000 U	<18.000 U	<0.930 U	<0.087 U	<0.910 U	<0.170 U	<0.330 U	<0.840 U	<0.850 U	<8.300 U	<0.086 U	<0.790 U	<180.000 U
4-Bromodiphenyl ether	mg/kg	NS	26.9	<4.700 U	<0.230 U	<0.023 U	<0.220 U	<11.000 U	<4.800 U	<0.240 U	<0.023 U	<0.240 U	<0.044 U	<0.086 U	<0.220 U	<0.220 U	<2.200 U	<0.022 U	<0.210 U	<48.000 U
4-Chloroaniline	mg/kg	NS	11.5	<20.000 U	<0.990 U	<0.098 U	<0.950 U	<46.000 U	<21.000 U	<1.000 U	<0.098 U	<1.000 U	<0.190 U	<0.370 U	<0.940 U	<0.960 U	<9.300 U	<0.097 U	<0.890 U	**5,400**
4-Chlorodiphenyl ether	mg/kg	NS	NS	<5.200 U	<0.250 U	<0.025 U	<0.240 U	<12.000 U	<5.300 U	<0.270 U	<0.025 U	<0.260 U	<0.048 U	<0.095 U	<0.240 U	<0.250 U	<2.400 U	<0.025 U	<0.230 U	<53.000 U
4-Nitroaniline	mg/kg	NS	115	<18.000 U	<0.870 U	<0.087 U	<0.840 U	<41.000 U	<18.000 U	<0.930 U	<0.087 U	<0.900 U	<0.170 U	<0.330 U	<0.830 U	<0.850 U	<8.200 U	<0.085 U	<0.780 U	<180.000 U
Acetophenone	mg/kg	NS	2,520	<5.000 U	0.600 J	<0.024 U	0.370 J	<11.000 U	<5.100 U	0.560 J	0.032 J	0.740 J	0.063 J	<0.091 U	<0.230 U	<0.230 U	<2.300 U	<0.024 U	<0.220 U	<50.000 U
Benzaldehyde	mg/kg	NS	818	<17.000 U	<0.810 U	<0.080 U	<0.780 U	<38.000 U	<17.000 U	<0.860 U	<0.080 U	<0.830 U	<0.150 U	<0.300 U	<0.770 U	<0.780 U	<7.600 U	<0.079 U	<0.720 U	<170.000 U
Biphenyl	mg/kg	NS	288	13.000 J	<0.600 U	<0.060 U	0.670 J	34.000 J	<13.000 U	<0.640 U	<0.060 U	<0.620 U	<0.110 U	<0.230 U	<0.570 U	<0.590 U	<5.700 U	0.080 J	<0.540 U	**550.000 J**
Bis(2-Chloroethoxy)methane	mg/kg	NS	2,460	<5.700 U	<0.280 U	<0.028 U	<0.270 U	<13.000 U	<5.800 U	<0.290 U	<0.028 U	<0.290 U	<0.053 U	<0.100 U	<0.260 U	<0.270 U	<2.600 U	<0.027 U	<0.250 U	<58.000 U
Bis(2-Chloroethyl)ether	mg/kg	NS	1.29	<4.100 U	<0.200 U	<0.020 U	<0.190 U	<9.400 U	<4.200 U	<0.210 U	<0.020 U	<0.210 U	<0.038 U	<0.075 U	<0.190 U	<0.190 U	<1.900 U	<0.020 U	<0.180 U	<42.000 U
Bis(2-Ethylhexyl)phthalate	mg/kg	2.88	164	<11.000 U	<0.550 U	2.200	<0.540 U	<26.000 U	<12.000 U	*19.000*	<0.055 U	<0.570 U	<0.110 U	<0.210 U	*5.700 B*	<0.540 UJB	*9.000 JB*	<0.054 UJB	<0.500 UJB	<120.000 U
Butyl benzyl phthalate	mg/kg	NS	1,210	<11.000 U	<0.520 U	<0.051 U	<0.500 U	<24.000 U	<11.000 U	<0.550 U	<0.051 U	<0.530 U	<0.099 U	<0.200 U	0.990 J	<0.500 U	<4.900 U	<0.051 U	<0.470 U	<110.000 U
Caprolactam	mg/kg	NS	100,000	<26.000 U	<1.300 U	<0.130 U	<1.200 U	<60.000 U	<27.000 U	<1.400 U	<0.130 U	<1.300 U	<0.240 U	<0.480 U	<1.200 U	<1.200 U	<12.000 U	<0.120 U	<1.100 U	<270.000 U
Carbazole	mg/kg	NS	NS	160.000	2.500 J	0.065 J	0.890 J	<20.000 U	<9.100 U	<0.460 U	<0.043 U	<0.450 U	0.190 J	0.200 J	0.770 J	<0.420 U	11.000 J	0.190 J	2.100 J	1,100
Dibenzofuran	mg/kg	NS	1,040	66.000 J	2.000 J	0.190 J	2.900 J	57.000 J	<5.100 U	<0.260 U	<0.024 U	<0.250 U	0.360 J	0.240 J	1.200 J	0.270 J	8.800 J	0.300 J	3.200 J	**2,000**
Diethyl phthalate	mg/kg	NS	100,000	<6.500 U	<0.310 U	<0.031 U	<0.300 U	<15.000 U	<6.600 U	<0.330 U	<0.031 U	<0.320 U	<0.060 U	<0.120 U	<0.300 U	<0.300 U	<3.000 U	<0.031 U	<0.280 U	<65.000 U
Dimethyl phthalate	mg/kg	NS	7,390	<5.700 U	<0.280 U	<0.028 U	<0.270 U	<13.000 U	<5.800 U	<0.290 U	0.034 J	<0.290 U	<0.053 U	<0.100 U	<0.260 U	<0.270 U	<2.600 U	<0.027 U	<0.250 U	<58.000 U
Di-n-butyl phthalate	mg/kg	5.0333	82,100	<7.200 U	<0.350 U	<0.035 U	<0.340 U	<16.000 U	<7.300 U	<0.370 U	<0.035 U	<0.360 U	<0.067 U	<0.130 U	<0.330 U	<0.340 U	<3.300 U	<0.034 U	<0.310 U	<73.000 U
Di-n-octyl phthalate	mg/kg	NS	8,210	<3.600 U	<0.170 U	0.110 J	<0.170 U	<8.200 U	<3.600 U	0.530 J	<0.017 U	<0.180 U	<0.033 U	<0.065 U	<0.160 U	<0.170 U	<1.600 U	<0.017 U	<0.160 U	<36.000 U
Hexachlorobenzene	mg/kg	0.0252	1.15	<7.200 U	<0.350 U	<0.035 U	<0.340 U	<16.000 U	<7.300 U	<0.370 U	<0.035 U	<0.360 U	<0.067 U	<0.130 U	<0.330 U	<0.340 U	<3.300 U	<0.034 U	<0.310 U	<73.000 U
Hexachlorobutadiene	mg/kg	NS	7.19	<0.0011 U	<0.00083 UJ	<0.0012 UJ	<0.00090 U	<11.000 U	<0.00085 U	<0.0014 U	<0.00066 U	<0.0013 U	<0.0012 U	<0.0014 U	0.00082 UR	0.00048 UR	<0.00075 U	<0.00063 U	<0.00059 U	<0.00094 U
Hexachlorocyclopentadiene	mg/kg	NS	10.8	<12.000 U	<0.600 U	<0.060 U	<0.580 U	<28.000 U	<13.000 U	<0.640 U	<0.060 U	<0.620 U	<0.110 U	<0.230 U	<0.570 U	<0.590 U	<5.700 U	<0.059 U	<0.540 U	<130.000 U
Hexachloroethane	mg/kg	NS	11.1	<5.300 U	<0.260 U	<0.026 U	<0.250 U	<12.000 U	<5.400 U	<0.270 U	<0.026 U	<0.260 U	<0.049 U	<0.097 U	<0.240 U	<0.250 U	<2.400 U	<0.025 U	<0.230 U	<53.000 U
Isophorone	mg/kg	NS	2,420	<4.200 U	<0.200 U	<0.020 U	<0.200 U	<9.600 U	<4.300 U	<0.220 U	<0.020 U	<0.210 U	<0.039 U	<0.077 U	<0.190 U	<0.200 U	<1.900 U	<0.020 U	<0.180 U	<43.000 U
Nitrobenzene	mg/kg	NS	32.4	<5.500 U	<0.270 U	<0.026 U	<0.260 U	<12.000 U	<5.600 U	<0.280 U	<0.026 U	<0.270 U	<0.051 U	<0.100 U	<0.250 U	<0.260 U	<2.500 U	<0.026 U	<0.240 U	<55.000 U
N-nitrosodi-n-propylamine	mg/kg	NS	0.328	<7.700 U	<0.370 U	<0.037 U	<0.360 U	<18.000 U	<7.800 U	<0.400 U	<0.037 U	<0.380 U	<0.071 U	<0.140 U	<0.350 U	<0.360 U	<3.500 U	<0.037 U	<0.340 U	<78.000 U
N-Nitrosodiphenylamine	mg/kg	0.0764	469	<5.200 U	<0.250 U	<0.025 U	<0.240 U	<12.000 U	<5.300 U	<0.270 U	<0.025 U	<0.260 U	<0.048 U	<0.095 U	<0.240 U	<0.250 U	<2.400 U	<0.025 U	<0.230 U	<53.000 U
Pyridine	mg/kg	0.0069	1,170	<32.000 U	<1.600 U	<0.160 U	<1.500 U	<74.000 U	<33.000 U	<1.700 U	<0.160 U	<1.600 U	<0.300 U	<0.590 U	<1.500 U	<1.500 U	<15.000 U	<0.150 U	<1.400 U	<330.000 U

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	CG-TT08	CG-TT09	CG-TT10	CG-TT11	CG-TT12	CG-TT13	CG-TT14	CG-TT15	CG-TT16	CG-TT17		CS-SB01		CS-SB02		CS-SB03	
Sample / Duplicate:				CG-TT08	CG-TT09	CG-TT10	CG-TT11	CG-TT12	CG-TT13	CG-TT14	CG-TT15	CG-TT16	CG-TT17	CG-TT17 DUP	CS-SB01	CS-SB01	CS-SB02	CS-SB02	CS-SB03	CS-SB03
Field Sample ID:				CG-TT08-0506-100808	CG-TT09-0304-100908	CG-TT10-0607-100808	CG-TT11-0102-100908	CG-TT12-0809-100908	CG-TT13-0102-100908	CG-TT14-0910-101008	CG-TT15-0910-101008	CG-TT16-0910-101008	CG-TT17-0910-101008	TT17-DUP001-0910-101008	CS-SB01-SS-111908	CS-SB01-0708-111908	CS-SB02-SS-111908	CS-SB02-0910-111908	CS-SB03-SS-111908	CS-SB03-0777-111908
Sample Depth (feet):				5 - 6	3 - 4	6 - 7	1 - 2	8 - 9	1 - 2	9 - 10	9 - 10	9 - 10	9 - 10	9 - 10	0 - 0.5	7 - 8	0 - 0.5	9 - 10	0 - 0.5	7 - 7.7
Sample Date:				10/08/2008	10/09/2008	10/08/2008	10/09/2008	10/09/2008	10/09/2008	10/10/2008	10/10/2008	10/10/2008	10/10/2008	10/10/2008	11/19/2008	11/19/2008	11/19/2008	11/19/2008	11/19/2008	11/19/2008
Phenols																				
2,4,5-Trichlorophenol	mg/kg	NS	82,100	<2.500 U	<0.120 U	<0.012 U	<0.120 U	<5.700 U	<2.500 U	<0.130 U	<0.012 U	<0.120 U	<0.023 U	<0.045 U	<0.110 U	<0.120 U	<1.100 U	<0.012 U	<0.110 U	<25.000 U
2,4,6-Trichlorophenol	mg/kg	NS	209	<2.500 U	<0.120 U	<0.012 U	<0.120 U	<5.700 U	<2.500 U	<0.130 U	<0.012 U	<0.120 U	<0.023 U	<0.045 U	<0.110 U	<0.120 U	<1.100 U	<0.012 U	<0.110 U	<25.000 U
2,4-Dichlorophenol	mg/kg	NS	2,460	<2.500 U	<0.120 U	<0.012 U	<0.120 U	<5.700 U	<2.500 U	<0.130 U	<0.012 U	<0.120 U	<0.023 U	<0.045 U	<0.110 U	<0.120 U	<1.100 U	<0.012 U	<0.110 U	<25.000 U
2,4-Dimethylphenol	mg/kg	NS	16,400	18.000 J	<0.800 U	<0.079 U	<0.770 U	<37.000 U	<17.000 U	<0.840 U	<0.079 U	<0.820 U	<0.150 U	<0.300 U	<0.760 U	<0.770 U	<7.500 U	<0.078 U	<0.710 U	210.000 J
2,4-Dinitrophenol	mg/kg	NS	1,640	<83.000 U	<4.000 U	<0.400 U	<3.900 U	<190.000 U	<84.000 U	<4.300 U	<0.400 U	<4.100 U	<0.760 U	<1.500 U	<3.800 U	<3.900 U	<38.000 U	<0.390 U	<3.600 U	<840.000 U
2-Chlorophenol	mg/kg	NS	5,840	<5.200 U	<0.250 U	<0.025 U	<0.240 U	<12.000 U	<5.300 U	<0.270 U	<0.025 U	<0.260 U	<0.048 U	<0.095 U	<0.240 U	<0.250 U	<2.400 U	<0.025 U	<0.230 U	<53.000 U
2-Methylphenol	mg/kg	NS	41,000	17.000 J	<0.160 U	<0.016 U	<0.150 U	<7.400 U	<3.300 U	<0.170 U	<0.016 U	<0.160 U	0.049 J	<0.059 U	<0.150 U	<0.150 U	<1.500 U	0.028 J	<0.140 U	160.000 J
2-Nitrophenol	mg/kg	NS	NS	<2.500 U	<0.120 U	<0.012 U	<0.120 U	<5.700 U	<2.500 U	<0.130 U	<0.012 U	<0.120 U	<0.023 U	<0.045 U	<0.110 U	<0.120 U	<1.100 U	<0.012 U	<0.110 U	<25.000 U
4-Chloro-3-methylphenol	mg/kg	NS	82,100	<16.000 U	<0.800 U	<0.079 U	<0.770 U	<37.000 U	<17.000 U	<0.840 U	<0.079 U	<0.820 U	<0.150 U	<0.300 U	<0.760 U	<0.770 U	<7.500 U	<0.078 U	<0.710 U	<170.000 U
4-Methylphenol	mg/kg	NS	82,100	37.000 J	<0.400 U	<0.040 U	<0.380 U	<19.000 U	<8.400 U	<0.420 U	<0.040 U	<0.410 U	0.081 J	<0.150 U	<0.380 U	<0.390 U	<3.800 U	<0.039 U	<0.360 U	240.000 J
4-Nitrophenol	mg/kg	NS	NS	<24.000 U	<1.200 U	<0.120 U	<1.100 U	<55.000 U	<25.000 U	<1.200 U	<0.120 U	<1.200 U	<0.220 U	<0.440 U	<1.100 U	<1.100 U	<11.000 U	<0.110 U	<1.000 U	<240.000 U
4,6-Dinitro-2-methylphenol	mg/kg	NS	65.7	<82.000 U	<4.000 U	<0.400 U	<3.800 U	<190.000 U	<84.000 U	<4.200 U	<0.400 U	<4.100 U	<0.760 U	<1.500 U	<3.800 U	<3.900 U	<38.000 U	<0.390 U	<3.600 U	<830.000 U
Pentachlorophenol	mg/kg	0.0028	3.97	<82.000 U	<4.000 U	<0.400 U	<3.800 U	<190.000 U	<84.000 U	<4.200 U	<0.400 U	<4.100 U	<0.760 U	<1.500 U	<3.800 U	<3.900 U	<38.000 U	<0.390 U	<3.600 U	<830.000 U
Phenol	mg/kg	2.2946	100,000	*32.000 J*	<0.220 U	0.036 J	<0.210 U	<10.000 U	<4.600 U	<0.230 U	<0.022 U	<0.220 U	0.160 J	0.097 J	<0.210 U	<0.210 U	<2.000 U	<0.021 U	<0.190 U	*72.000 J*
Metals																				
Aluminum, Total	mg/kg	600	100,000	*11,000*	*1,600*	*2,800*	*1,800*	*1,700*	*3,700*	*11,000*	*2,200*	*2,900*	*2,200*	*5,900*	*1,400*	*3,700*	*3,800*	*6,800*	*3,900*	*2,500*
Antimony, Total	mg/kg	0.542	467	0.160 BJ-	0.310 J-	0.470 J-	0.370 J-	0.110 BJ-	0.230 BJ-	0.300 J-	0.360 J-	0.150 BJ-	0.210 BJ-	0.260 J-	0.230 J-	0.190 BJ-	0.084 BJ-	<0.017 UJ	0.082 BJ-	0.260 J-
Arsenic, Total [1]	mg/kg	0.584	8.3	*8.200*	*8.100*	*7.600*	***11.000***	*5.700*	***17.000***	***13.000***	*5.300*	***13.000***	*6.900*	***8.400***	*6.300*	*4.500*	*3.500*	*2.600*	*3.300*	***10.000***
Barium, Total	mg/kg	164.8	100,000	130.000	84.000	80.000	85.000	35.000	110.000	52.000	45.000	48.000	54.000	41.000	51.000	24.000	40.000	62.000	29.000 J+	39.000
Beryllium, Total	mg/kg	6.32	2,300	2.200	0.720	0.600	0.590	0.270	0.330	1.100	0.610	0.320	0.340	0.380	0.700	0.300	0.230	0.690	0.210	0.410
Cadmium, Total	mg/kg	0.752	985	*0.950*	*1.400*	0.280	*1.200*	0.078 B	0.590	0.430	0.430	0.130	0.230	0.210	0.730	0.280	0.570	0.350	0.380	*1.300*
Calcium, Total	mg/kg	NS	NS	38,000	20,000	12,000	7,800	5,700	21,000	12,000	6,600	5,000	6,600	29,000	11,000 J	57,000 J	92,000 J	64,000 J	93,000 J	14,000 J
Chromium, Hexavalent	mg/kg	NS	6.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium, Total [3]	mg/kg	360,000	NS	8.700	16.000	6.500	32.000	2.800	11.000	12.000	9.700	4.600	6.000	4.700	37.000	10.000	8.700	15.000	9.300	5.000
Chromium, Trivalent	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt, Total	mg/kg	3.6073	347	3.300	*3.800*	3.000	*3.800*	1.300	2.200	*4.100*	*5.200*	2.600	2.500	2.500	*4.600*	*5.300*	3.100	*8.100*	3.100	3.100
Copper, Total	mg/kg	91.6	46,700	25.000	80.000	34.000	70.000	7.800	62.000	63.000	32.000	17.000	19.000	20.000	42.000 J	25.000 J	17.000 J	18.000 J	22.000 J	15.000 J
Iron, Total	mg/kg	NS	100,000	11,000 J	9,600 J	31,000 J	11,000 J	3,900 J	43,000 J	14,000 J	9,800 J	7,300 J	11,000 J	24,000 J	16,000	14,000	12,000	14,000	11,000	8,800
Lead, Total	mg/kg	27	800	*92.000 J*	*310.000 J*	*75.000 J*	*520.000 J*	11.000 J	*630.000 J*	*28.000 J*	*48.000 J*	*50.000 J*	*42.000 J*	*34.000 J*	*67.000*	20.000	*51.000*	14.000	*93.000*	*86.000*
Magnesium, Total	mg/kg	NS	NS	18,000	10,000	5,200	3,500	1,500	6,000	4,400	2,000	840	2,200	13,000	5,500 J	21,000 J	38,000 J	31,000 J	47,000 J	3,000 J
Manganese, Total	mg/kg	39.1244	25,900	*440.000 J*	*150.000 J*	*170.000 J*	*220.000 J*	14.000 J	*180.000 J*	*300.000 J*	*480.000 J*	*53.000 J*	*90.000 J*	*67.000 J*	*110.000*	*310.000*	*290.000*	*250.000*	*290.000*	*44.000*
Mercury, Total	mg/kg	0.208	3.13	*0.730*	***3.200***	*0.970*	***24.000***	*0.360*	***110.000***	*0.270*	0.120	0.038	*2.600*	*2.100*	0.180	0.014 B	0.080	0.150	0.150	*0.980*
Nickel, Total	mg/kg	13.0612	22,500	8.400	12.000	6.600	*14.000*	2.400	7.900	8.300	*14.000*	5.100	6.600	5.600	*24.000*	*15.000*	13.000	*18.000*	12.000	6.000
Potassium, Total	mg/kg	NS	NS	1,300	390	520	320 B	310 B	490	1,100	420	690	430	880	260 B	900	860	2,000	920	490
Selenium, Total	mg/kg	0.52	5,840	*3.000*	*1.600*	*2.200*	*2.000*	*1.900*	*2.800*	*2.300*	*0.810*	*2.300*	*1.900*	*1.700*	*1.700*	*0.710*	0.200 B	*0.620*	0.220 B	*3.900*
Silver, Total	mg/kg	0.8491	5,840	0.064 B	0.130	<0.024 U	0.052 B	<0.029 U	<0.026 U	<0.026 U	<0.024 U	<0.025 U	<0.023 U	<0.023 U	0.052 B	0.035 B	0.064 B	0.061 B	0.065 BJ-	0.034 B
Sodium, Total	mg/kg	NS	NS	330 B	150 B	140 B	88 B	130 B	190 B	230 B	150 B	170 B	150 B	260 B	97 B	180 B	170 B	260 B	230 B	200 B
Thallium, Total	mg/kg	0.284	11.7	*0.750 J*	0.250 JJ	0.210 JJ	0.190 JJ	<0.0050 UJB	<0.0044 UJB	<0.0045 UJB	0.200 JJ	0.160 JJ	0.180 JJ	0.220 JJ	0.140	0.140	0.110 B	0.130	0.093 B	*7.400*
Vanadium, Total	mg/kg	60	5,840	10.000	9.600	8.900	9.100	4.500	4.700	8.400	19.000	5.300	5.100	4.700	9.300	17.000	16.000	20.000	12.000 J+	6.200
Zinc, Total	mg/kg	NS	100,000	100.000	170.000	57.000	230.000	33.000	190.000	84.000	71.000	31.000	52.000	51.000	110.000	56.000	80.000	35.000	80.000 J+	100.000
Inorganic - Cyanide																				
Cyanide, Amenable	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Reactive	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Total	mg/kg	4.04	195	*12*	*34 q*	2.5	*47 q*	*19*	*54 q*	3.3	2.3	0.65	2.5	1.9	3.5	<0.12 U	<0.12 U	0.51 B	0.8	*20*
Other																				
Sulfide, Reactive	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organic Matter	%	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent Moisture	%	NS	NS	19	17	16	14	30	21	22	16	19	13	12	13	15	16	15	7.5	22

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	CS-SB04				CS-SB05		CS-SB06			CS-SB07			CS-SB08			CS-SB09	
Sample / Duplicate:				CS-SB04	CS-SB04	CS-SB04	CS-SB04 DUP	CS-SB05	CS-SB05	CS-SB06	CS-SB06 DUP	CS-SB06	CS-SB07	CS-SB07 DUP	CS-SB07	CS-SB08	CS-SB08	CS-SB08	CS-SB09	CS-SB09
Field Sample ID:				CS-SB04-SS-120808	CS-SB04-0608-120808	MSS-CS-SB04-0608-120808	CS-SBDUP004-120808	CS-SB05-SS-111908	CS-SB05-10108-111908	CS-SB06-SS-111908	CS-SBDUP-001-0001-111908	CS-SB06-4454-111908	CS-SB07-SS-112008	CS-SBDUP002-112008	CS-SB07-0506-112008	CS-SB08-SS-120808	CS-SB08-0405-120808	MSS-CS-SB08-0405-120808	CS-SB09-SS-111908	CS-SB09-0607-111908
Sample Depth (feet):				0 - 0.5	6 - 8	6 - 8	6 - 8	0 - 0.5	10 - 10.8	0 - 0.5	0 - 0.5	4.4 - 5.4	0 - 0.5	0 - 0.5	5 - 6	0 - 0.5	4 - 5	4 - 5	0 - 0.5	6 - 7
Sample Date:				12/08/2008	12/08/2008	12/08/2008	12/08/2008	11/19/2008	11/19/2008	11/19/2008	11/19/2008	11/19/2008	11/20/2008	11/20/2008	11/20/2008	12/08/2008	12/08/2008	12/08/2008	11/19/2008	11/19/2008
VOCs																				
1,1,1-Trichloroethane	mg/kg	0.1402	640	<0.00048 U	<0.00049 U	--	<0.00048 UJ	<0.00060 U	<0.00054 U	<0.00058 U	<0.00059 U	<0.00077 U	<0.00057 U	<0.00055 U	<0.00072 U	<0.00066 U	<0.00066 UJ	--	<0.00049 U	<0.0011 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0002	3.6	<0.00056 UJ	<0.00057 UJ	--	<0.00056 U	<0.00070 U	<0.00063 U	<0.00068 U	<0.00070 U	<0.00090 U	<0.00067 U	<0.00065 U	<0.00084 U	<0.00077 U	<0.00078 U	--	<0.00058 U	<0.0013 UJ
1,1,2-Trichloroethane	mg/kg	0.0032	7.01	<0.00082 U	<0.00082 UJ	--	<0.00081 U	<0.0010 U	<0.00091 U	<0.00099 U	<0.0010 U	<0.0013 U	<0.00097 U	<0.00093 U	<0.0012 U	<0.0011 U	<0.0011 U	--	<0.00083 U	<0.0019 UJ
1,1-Dichloroethane	mg/kg	0.4834	22.2	<0.00019 U	<0.00020 U	--	<0.00019 UJ	<0.00024 U	<0.00022 U	<0.00024 U	<0.00024 U	<0.00031 U	<0.00023 U	<0.00022 U	<0.00029 U	<0.00026 U	<0.00027 UJ	--	<0.00020 U	<0.00046 U
1,1-Dichloroethene	mg/kg	0.005	1,190	<0.00055 U	<0.00055 U	--	<0.00054 UJ	<0.00068 U	<0.00061 U	<0.00066 U	<0.00067 U	<0.00087 U	<0.00065 U	<0.00063 U	<0.00082 U	<0.00074 U	<0.00075 UJ	--	<0.00056 U	0.0032 J
1,2-Dibromo-3-chloropropane	mg/kg	0.0002	0.092	<0.00056 UJ	<0.00056 UJ	--	<0.00055 U	<0.00069 U	<0.00062 U	<0.00067 U	<0.00069 U	<0.00089 U	<0.00066 U	<0.00064 U	<0.00083 U	<0.00076 U	<0.00077 U	--	<0.00057 U	<0.0013 UJ
1,2-Dibromoethane	mg/kg	0.0000282	0.221	<0.00048 U	<0.00049 UJ	--	<0.00048 U	<0.00060 U	<0.00054 U	<0.00058 U	<0.00059 U	<0.00077 U	<0.00057 U	<0.00055 U	<0.00072 U	<0.00066 U	<0.00066 U	--	<0.00049 U	<0.0011 UJ
1,2-Dichlorobenzene	mg/kg	1.168	376	<0.00042 UJ	<0.00042 UJ	--	<0.00041 U	<0.00052 U	<0.00047 U	<0.00050 U	<0.00051 U	<0.00066 U	<0.00050 U	<0.00048 U	<0.00062 U	<0.00057 U	<0.00058 U	--	<0.00043 U	<0.00098 UJ
1,2-Dichloroethane	mg/kg	0.0028	2.87	<0.00065 U	<0.00065 U	--	<0.00064 UJ	<0.00080 U	<0.00072 U	<0.00079 U	<0.00080 U	<0.0010 U	<0.00077 U	<0.00074 U	<0.00097 U	<0.00088 U	<0.00090 UJ	--	<0.00066 U	<0.0015 U
1,2-Dichloropropane	mg/kg	0.0033	1.78	<0.00051 U	<0.00051 U	--	<0.00050 UJ	<0.00063 U	<0.00057 U	<0.00062 U	<0.00063 U	<0.00081 U	<0.00061 U	<0.00058 U	<0.00076 U	<0.00069 U	<0.00070 UJ	--	<0.00052 U	<0.0012 U
1,3-Dichlorobenzene	mg/kg	1.1528	297	<0.00044 UJ	<0.00045 UJ	--	<0.00044 U	<0.00055 U	<0.00050 U	<0.00054 U	<0.00055 U	<0.00071 U	<0.00053 U	<0.00051 U	<0.00066 U	<0.00061 U	<0.00061 U	--	<0.00045 U	<0.0010 UJ
1,4-Dichlorobenzene	mg/kg	0.144	16.4	<0.00072 UJ	<0.00073 UJ	--	<0.00071 U	<0.00090 U	<0.00081 U	<0.00087 U	<0.00089 U	<0.0012 U	<0.00086 U	<0.00083 U	<0.0011 U	<0.00098 U	<0.0010 U	--	<0.00074 U	<0.0017 UJ
2-Butanone (MEK)	mg/kg	1.6661	28,400	<0.0017 U	<0.0017 U	--	<0.0017 UJ	<0.0021 U	0.0024 J	<0.0021 U	<0.0021 U	<0.0027 U	<0.0020 U	<0.0019 U	<0.0025 U	<0.0023 U	<0.0023 UJ	--	<0.0017 U	<0.0040 U
2-Hexanone	mg/kg	NS	1,760	<0.0045 U	<0.0046 U	--	<0.0045 U	<0.0056 U	<0.0051 U	<0.0055 U	<0.0056 U	<0.0072 U	<0.0054 U	<0.0052 U	<0.0068 U	<0.0062 U	<0.0063 U	--	<0.0046 U	<0.011 U
4-Methyl-2-Pentanone (MIBK)	mg/kg	0.2252	3,360	<0.0040 U	<0.0041 UJ	--	<0.0040 U	<0.0050 U	<0.0045 U	<0.0049 U	<0.0050 U	<0.0064 U	<0.0048 U	<0.0046 U	<0.0060 U	<0.0055 U	<0.0056 U	--	<0.0041 U	<0.0095 UJ
Acetone	mg/kg	3.6766	100,000	<0.0050 U	0.013 J	--	<0.0049 UJ	<0.0062 U	0.010 J	<0.0060 U	<0.0061 U	0.024 J	<0.0059 U	<0.0057 U	0.014 J	<0.0068 U	0.0095 J	--	<0.0051 U	0.037 J
Benzene	mg/kg	0.0051	7.07	<0.00044 U	0.00079 J	--	0.0026 J	0.00091 J	0.00091 J	0.0019 J	0.0013 J	0.0022 J	<0.00052 U	<0.00050 U	0.0013 J	<0.00059 U	<0.00060 UJ	--	<0.00044 U	*0.0075 J*
Bromodichloromethane	mg/kg	0.0003	1.83	<0.00020 U	<0.00021 UJ	--	<0.00020 U	<0.00025 U	<0.00023 U	<0.00025 U	<0.00025 U	<0.00032 U	<0.00024 U	<0.00023 U	<0.00030 U	<0.00028 U	<0.00028 U	--	<0.00021 U	<0.00048 UJ
Bromoform	mg/kg	0.0023	113	<0.00021 U	<0.00021 UJ	--	<0.00021 U	<0.00026 U	<0.00024 U	<0.00026 U	<0.00026 U	<0.00034 U	<0.00025 U	<0.00024 U	<0.00032 U	<0.00029 U	<0.00029 U	--	<0.00022 U	<0.00050 UJ
Bromomethane	mg/kg	0.0051	43	<0.00046 U	<0.00047 U	--	<0.00046 UJ	<0.00057 U	<0.00052 U	<0.00056 U	<0.00057 U	<0.00074 U	<0.00055 U	<0.00053 U	<0.00069 U	<0.00063 U	<0.00064 UJ	--	<0.00047 U	<0.0011 U
Carbon Disulfide	mg/kg	0.5919	738	<0.00039 U	<0.00039 U	--	0.00053 J	<0.00048 U	<0.00043 U	<0.00047 U	<0.00048 U	<0.00062 U	<0.00046 U	<0.00045 U	<0.00058 U	<0.00053 U	<0.00054 U	--	<0.00040 U	<0.00091 U
Carbon Tetrachloride	mg/kg	0.0039	4.03	<0.00058 U	<0.00059 U	--	<0.00058 UJ	<0.00072 U	<0.00065 U	<0.00071 U	<0.00072 U	<0.00093 U	<0.00069 U	<0.00067 U	<0.00087 U	<0.00079 U	<0.00081 UJ	--	<0.00060 U	<0.0014 U
Chlorobenzene	mg/kg	0.1358	761	<0.00050 U	<0.00050 UJ	--	<0.00049 U	<0.00062 U	<0.00056 U	<0.00061 U	<0.00062 U	<0.00080 U	<0.00059 U	<0.00057 U	<0.00075 U	<0.00068 U	<0.00069 U	--	<0.00051 U	<0.0012 UJ
Chloroethane	mg/kg	0.2266	2,120	<0.00082 U	<0.00083 U	--	<0.00081 UJ	<0.0010 U	<0.00092 U	<0.0010 U	<0.0010 U	<0.0013 U	<0.00098 U	<0.00094 U	<0.0012 U	<0.0011 U	<0.0011 UJ	--	<0.00084 U	<0.0019 U
Chloroform	mg/kg	0.0033	1.98	<0.00027 U	<0.00027 U	--	<0.00027 UJ	<0.00033 U	<0.00030 U	<0.00033 U	<0.00033 U	<0.00043 U	<0.00032 U	<0.00031 U	<0.00040 U	<0.00037 U	<0.00037 UJ	--	<0.00027 U	<0.00063 U
Chloromethane	mg/kg	0.0155	669	<0.00071 U	<0.00072 U	--	<0.00070 UJ	<0.00088 U	<0.00080 U	<0.00086 U	<0.00088 U	<0.0011 U	<0.00085 U	<0.00082 U	<0.0011 U	<0.00097 U	<0.00098 UJ	--	<0.00073 U	<0.0017 U
cis-1,2-Dichloroethene	mg/kg	0.0412	2,340	<0.00052 U	<0.00052 U	--	<0.00051 UJ	<0.00064 U	<0.00058 U	<0.00063 U	<0.00064 U	<0.00083 U	<0.00062 U	<0.00059 U	<0.00078 U	<0.00071 U	<0.00072 UJ	--	<0.00053 U	<0.0012 U
cis-1,3-Dichloropropene	mg/kg	NS	1,210	<0.0012 U	<0.0012 UJ	--	<0.0012 U	<0.0015 U	<0.0013 U	<0.0014 U	<0.0015 U	<0.0019 U	<0.0014 U	<0.0014 U	<0.0018 U	<0.0016 U	<0.0016 U	--	<0.0012 U	<0.0028 UJ
Cyclohexane	mg/kg	NS	117	<0.00037 U	0.015	--	0.310	<0.00046 U	<0.00041 U	<0.00045 U	<0.00046 U	0.0015 J	<0.00044 U	<0.00042 U	0.0012 J	<0.00050 U	<0.00051 U	--	<0.00038 U	0.010 J
Dibromochloromethane	mg/kg	0.032	38.9	<0.00053 U	<0.00053 UJ	--	<0.00052 U	<0.00065 U	<0.00059 U	<0.00064 U	<0.00065 U	<0.00084 U	<0.00063 U	<0.00060 U	<0.00079 U	<0.00072 U	<0.00073 U	--	<0.00054 U	<0.0012 UJ
Dichloromethane	mg/kg	0.0026	1,150	<0.00069 U	<0.00070 U	--	0.0019 J	<0.00086 U	<0.00078 U	<0.00084 U	<0.00086 U	<0.0011 U	<0.00083 U	<0.00080 U	<0.0010 U	<0.00095 U	<0.00096 UJ	--	<0.00071 U	<0.0016 U
Ethylbenzene	mg/kg	1.57	35.4	<0.00062 U	0.00094 J	--	0.098 J	<0.00077 U	<0.00069 U	<0.00075 U	<0.00077 U	<0.00099 U	<0.00074 U	<0.00071 U	<0.00093 U	<0.00085 U	<0.00086 U	--	<0.00063 U	0.0021 J
Freon 113	mg/kg	NS	910	<0.00042 U	<0.00042 U	--	<0.00041 U	<0.00052 U	<0.00047 U	<0.00050 U	<0.00051 U	<0.00066 U	<0.00050 U	<0.00048 U	<0.00062 U	<0.00057 U	<0.00058 U	--	<0.00043 U	<0.00098 U
Freon 12	mg/kg	3.0863	530	<0.00048 U	<0.00049 U	--	<0.00048 UJ	<0.00060 U	<0.00054 U	<0.00058 U	<0.00059 U	<0.00077 U	<0.00057 U	<0.00055 U	<0.00072 U	<0.00066 U	<0.00066 UJ	--	<0.00049 U	<0.0011 U
Isopropylbenzene	mg/kg	NS	268	<0.00055 UJ	0.0012 J	--	0.046 J	<0.00068 U	<0.00061 U	<0.00066 U	<0.00067 U	<0.00087 U	<0.00065 U	<0.00063 U	<0.00082 U	<0.00074 U	<0.00075 U	--	<0.00056 U	<0.0013 UJ
Methyl acetate	mg/kg	NS	29,000	<0.0025 U	<0.0026 U	--	<0.0025 U	0.0034 J	<0.0028 U	<0.0031 U	<0.0031 U	<0.0041 U	<0.0030 U	<0.0029 U	<0.0038 U	<0.0035 U	<0.0035 U	--	0.019	<0.0060 U
Methylcyclohexane	mg/kg	NS	67.6	<0.00039 U	0.023	--	1.100	<0.00048 U	<0.00043 U	<0.00047 U	<0.00048 U	0.0017 J	<0.00046 U	<0.00045 U	0.0018 J	0.00082 J	<0.00054 U	--	<0.00040 U	0.015
Methyl-tert-butyl-ether	mg/kg	0.027	282	<0.00031 U	<0.00032 U	--	<0.00031 UJ	<0.00039 U	<0.00035 U	<0.00038 U	<0.00039 U	<0.00050 U	<0.00037 U	<0.00036 U	<0.00047 U	<0.00043 U	<0.00043 UJ	--	<0.00032 U	<0.00074 U
Styrene	mg/kg	0.22	867	<0.00058 U	<0.00059 UJ	--	<0.00058 U	<0.00072 U	<0.00065 U	<0.00071 U	<0.00072 U	<0.00093 U	<0.00069 U	<0.00067 U	<0.00087 U	<0.00079 U	<0.00081 U	--	<0.00060 U	<0.0014 UJ
Tetrachloroethene	mg/kg	0.0045	145	<0.00055 U	<0.00055 UJ	--	<0.00054 U	<0.00068 U	<0.00061 U	<0.00066 U	<0.00067 U	<0.00087 U	<0.00065 U	<0.00063 U	<0.00082 U	<0.00074 U	<0.00075 U	--	<0.00056 U	<0.0013 UJ
Toluene	mg/kg	1.1072	818	<0.00064 U	0.0015 J	--	0.015	<0.00079 U	<0.00071 U	0.0011 J	<0.00079 U	0.0013 J	<0.00076 U	<0.00073 U	<0.00096 U	<0.00087 U	<0.00088 U	--	<0.00065 U	0.034 J
trans-1,2-Dichloroethene	mg/kg	0.0626	1,850	<0.00036 U	<0.00036 U	--	<0.00036 UJ	<0.00045 U	<0.00040 U	<0.00044 U	<0.00045 U	<0.00058 U	<0.00043 U	<0.00041 U	<0.00054 U	<0.00049 U	<0.00050 UJ	--	<0.00037 U	<0.00085 U
trans-1,3-Dichloropropene	mg/kg	NS	1,510	<0.00062 U	<0.00063 UJ	--	<0.00061 U	<0.00077 U	<0.00069 U	<0.00075 U	<0.00077 U	<0.00099 U	<0.00074 U	<0.00071 U	<0.00093 U	<0.00085 U	<0.00086 U	--	<0.00063 U	<0.0015 UJ
Trichloroethene	mg/kg	0.0036	8.41	<0.00021 U	<0.00021 U	--	*0.043 J*	<0.00026 U	<0.00024 U	<0.00026 U	<0.00026 U	<0.00034 U	<0.00025 U	<0.00024 U	<0.00032 U	<0.00029 U	<0.00029 UJ	--	<0.00022 U	<0.00050 U
Trichlorofluoromethane	mg/kg	4.4775	1,230	<0.00096 U	<0.00097 U	--	<0.00095 UJ	<0.0012 U	<0.0011 U	<0.0012 U	<0.0012 U	<0.0015 U	<0.0011 U	<0.0011 U	<0.0014 U	<0.0013 U	<0.0013 UJ	--	<0.00098 U	<0.0023 U
Vinyl Chloride	mg/kg	0.0001	2.08	<0.0012 U	<0.0013 U	--	<0.0012 UJ	<0.0015 U	<0.0014 U	<0.0015 U	<0.0015 U	<0.0020 U	<0.0015 U	<0.0014 U	<0.0019 U	<0.0017 U	<0.0017 UJ	--	<0.0013 U	<0.0029 U
Xylenes, Total	mg/kg	3.96	260	<0.00056 U	0.011 J	--	0.510	<0.00070 U	<0.00063 U	<0.00068 U	<0.00070 U	<0.00090 U	<0.00067 U	<0.00065 U	<0.00084 U	<0.00077 U	<0.00078 U	--	<0.00058 U	0.019 J
PCBs																				
PCB, Total [4]	mg/kg	0.0094	0.967	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1016	mg/kg	NS	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1221	mg/kg	NS	0.883	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1232	mg/kg	NS	0.792	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1242	mg/kg	NS	0.972	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1248	mg/kg	NS	0.975	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1254	mg/kg	NS	0.988	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1260	mg/kg	NS	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	CS-SB04				CS-SB05		CS-SB06			CS-SB07			CS-SB08			CS-SB09	
Sample / Duplicate:				CS-SB04	CS-SB04	CS-SB04	CS-SB04 DUP	CS-SB05	CS-SB05	CS-SB06	CS-SB06 DUP	CS-SB06	CS-SB07	CS-SB07 DUP	CS-SB07	CS-SB08	CS-SB08	CS-SB08	CS-SB09	CS-SB09
Field Sample ID:				CS-SB04-SS-120808	CS-SB04-0608-120808	MSS-CS-SB04-0608-120808	CS-SBDUP004-120808	CS-SB05-SS-111908	CS-SB05-10108-111908	CS-SB06-SS-111908	CS-SBDUP-001-0001-111908	CS-SB06-4454-111908	CS-SB07-SS-112008	CS-SBDUP002-112008	CS-SB07-0506-112008	CS-SB08-SS-120808	CS-SB08-0405-120808	MSS-CS-SB08-0405-120808	CS-SB09-SS-111908	CS-SB09-0607-111908
Sample Depth (feet):				0 - 0.5	6 - 8	6 - 8	6 - 8	0 - 0.5	10 - 10.8	0 - 0.5	0 - 0.5	4.4 - 5.4	0 - 0.5	0 - 0.5	5 - 6	0 - 0.5	4 - 5	4 - 5	0 - 0.5	6 - 7
Sample Date:				12/08/2008	12/08/2008	12/08/2008	12/08/2008	11/19/2008	11/19/2008	11/19/2008	11/19/2008	11/19/2008	11/20/2008	11/20/2008	11/20/2008	12/08/2008	12/08/2008	12/08/2008	11/19/2008	11/19/2008
PAHs																				
2-Methylnaphthalene	mg/kg	NS	3,010	<0.095 U	0.270 J	--	0.300 J	<2.100 U	0.074 J	<1.900 U	<2.000 U	0.032 J	0.095 J	<0.042 U	1.900 J	0.030 J	<0.420 U	--	2.400 J	4.700
Acenaphthene	mg/kg	NS	45,200	0.170 J	0.240 J	--	0.620	1.900 J	0.029 J	5.600 J	3.500 J	0.041 J	0.300 J	0.100 J	0.910 J	0.064 J	<0.230 U	--	21.000 J	5.500
Acenaphthylene	mg/kg	NS	NS	0.130 J	0.055 J	--	0.120 J	<1.900 U	<0.019 U	<1.700 U	<1.800 U	<0.020 U	<0.055 U	0.055 J	1.700 J	0.053 J	<0.370 U	--	<1.900 U	<0.200 U
Anthracene	mg/kg	196.9492	100,000	0.900 J	0.270 J	--	0.690	6.300 J	0.045 J	18.000 J	10.000 J	0.061 J	1.200	0.470 J	12.000	0.310 J	0.800 J	--	89.000	9.600
Benzo(a)anthracene	mg/kg	NS	20.8	4.100	0.350 J	--	0.860	**22.000 J**	0.110 J	**64.000**	**47.000**	0.230 J	5.300	3.800	**32.000**	1.500	3.400 J	--	**280.000**	18.000
Benzo(a)pyrene	mg/kg	0.47	2.11	***3.800***	0.300 J	--	*0.620*	***21.000 J***	0.088 J	***57.000***	***47.000***	0.220 J	***4.000***	***3.000***	***27.000***	*1.600*	***3.100 J***	--	***200.000***	***13.000***
Benzo(b)fluoranthene	mg/kg	0.4793	21.1	*6.300 JK*	0.470 JK	--	*0.980 JK*	***35.000 J***	0.140 J	***92.000***	***75.000***	0.350 J	*7.200 JK*	*5.300 JK*	***43.000 JK***	*2.600 JK*	*5.000 JK*	--	***320.000***	***22.000***
Benzo(g,h,i)perylene	mg/kg	NS	NS	2.900	0.180 J	--	0.290 J	15.000 J	0.078 J	40.000	33.000 J	0.160 J	3.200	2.800	18.000	1.000	1.600 J	--	120.000	8.000
Benzo(k)fluoranthene	mg/kg	NS	211	<0.200 UKJ	<0.046 UKJ	--	<0.045 UKJ	<4.400 U	<0.045 U	<4.000 U	<4.200 U	<0.046 U	<0.130 UKJ	<0.087 UKJ	<0.590 UKJ	<0.047 UKJ	<0.880 UKJ	--	<4.400 U	<0.460 U
Chrysene	mg/kg	0.1446	2,110	*4.100*	*0.380*	--	*0.840*	*23.000 J*	0.130 J	*59.000*	*48.000*	*0.230 J*	*5.800*	*3.800*	*29.000*	*1.600*	*3.600 J*	--	*210.000*	*18.000*
Dibenz(a,h)anthracene	mg/kg	NS	2.11	0.920 J	0.056 J	--	0.120 J	**4.200 J**	<0.021 U	**9.700 J**	**12.000 J**	0.042 J	1.100	0.910	**6.300**	0.320 J	0.470 J	--	**13.000 J**	**2.200 J**
Fluoranthene	mg/kg	88.8778	30,100	8.200	0.930	--	2.200	43.000	0.230 J	*130.000*	88.000	0.430	10.000	5.800	56.000	3.000	5.900 J	--	*490.000*	43.000
Fluorene	mg/kg	14.8299	30,100	0.230 J	0.220 J	--	0.540	2.500 J	0.037 J	6.500 J	3.700 J	0.034 J	0.390 J	0.120 J	5.500	0.079 J	<0.400 U	--	*27.000 J*	7.000
Indeno(1,2,3-cd)pyrene	mg/kg	NS	21.1	2.500	0.160 J	--	0.270 J	14.000 J	0.048 J	**35.000**	**30.000 J**	0.150 J	2.800	2.400	16.000	0.860	1.500 J	--	**110.000**	7.800
Naphthalene	mg/kg	0.6582	24.1	<0.160 U	*0.900*	--	*1.400*	<3.400 U	*0.690*	<3.100 U	<3.200 U	0.052 J	0.130 J	<0.068 U	*7.200*	0.042 J	<0.680 U	--	<3.400 U	*11.000*
Phenanthrene	mg/kg	NS	NS	2.900	1.000	--	2.500	22.000 J	0.230 J	59.000	38.000	0.230 J	5.000	1.700	46.000	1.000	1.600 J	--	190.000	40.000
Pyrene	mg/kg	54.5455	22,600	6.100	0.630	--	1.500	35.000 J	0.220 J	*100.000*	*76.000*	0.360 J	11.000	5.900	45.000	2.100	6.600 J	--	*470.000*	34.000
SVOCs																				
1,2,4-Trichlorobenzene	mg/kg	0.408	113	<0.00068 UJ	<0.00068 UJ	--	<0.00067 U	<0.00084 U	<0.00075 U	<0.00082 U	<0.00083 U	<0.0011 U	<0.00080 U	<0.00077 U	<0.0010 U	<0.00092 U	<0.00093 U	--	<0.00069 U	<0.0016 UJ
2,2-Oxybis(1-chloropropane)	mg/kg	NS	1,020	<0.120 U	<0.027 U	--	<0.026 U	<2.500 U	<0.026 U	<2.300 U	<2.400 U	<0.027 U	<0.074 U	<0.050 U	<0.340 U	<0.027 U	<0.510 U	--	<2.500 U	<0.270 U
2,4-Dinitrotoluene	mg/kg	0.0001	7.37	<0.330 U	<0.076 U	--	<0.075 U	<7.300 U	<0.074 U	<6.700 U	<6.900 U	<0.076 U	<0.210 U	<0.140 U	<0.970 U	<0.078 U	<1.500 U	--	<7.300 U	<0.760 U
2,6-Dinitrotoluene	mg/kg	0.0001	1.54	<0.140 U	<0.032 U	--	<0.032 U	<3.100 U	<0.031 U	<2.800 U	<2.900 U	<0.032 U	<0.091 U	<0.061 U	<0.410 U	<0.033 U	<0.620 U	--	<3.100 U	<0.320 U
2-Chloronaphthalene	mg/kg	NS	60,300	<0.050 U	<0.012 U	--	<0.011 U	<1.100 U	<0.011 U	<1.000 U	<1.000 U	<0.012 U	<0.032 U	<0.022 U	<0.150 U	<0.012 U	<0.220 U	--	<1.100 U	<0.120 U
2-Nitroaniline	mg/kg	NS	8,010	<0.250 U	<0.058 U	--	<0.056 U	<5.500 U	<0.056 U	<5.000 U	<5.200 U	<0.058 U	<0.160 U	<0.110 U	<0.740 U	<0.059 U	<1.100 U	--	<5.500 U	<0.580 U
3,3-Dichlorobenzidine	mg/kg	NS	5.11	<0.450 U	<0.100 U	--	<0.100 U	<9.900 U	<0.100 U	<9.100 U	<9.400 U	<0.100 U	<0.290 U	<0.200 U	<1.300 U	<0.110 U	<2.000 U	--	<9.900 U	<1.000 U
3-Nitroaniline	mg/kg	NS	NS	<0.370 U	<0.084 U	--	<0.082 U	<8.000 U	<0.082 U	<7.400 U	<7.600 U	<0.084 U	<0.240 U	<0.160 U	<1.100 U	<0.086 U	<1.600 U	--	<8.000 U	<0.840 U
4-Bromodiphenyl ether	mg/kg	NS	26.9	<0.095 U	<0.022 U	--	<0.021 U	<2.100 U	<0.021 U	<1.900 U	<2.000 U	<0.022 U	<0.062 U	<0.042 U	<0.280 U	<0.022 U	<0.420 U	--	<2.100 U	<0.220 U
4-Chloroaniline	mg/kg	NS	11.5	<0.410 U	<0.094 U	--	<0.093 U	<9.000 U	0.230 J	<8.300 U	<8.600 U	<0.094 U	<0.270 U	<0.180 U	<1.200 U	<0.097 U	<1.800 U	--	<9.000 U	<0.950 U
4-Chlorodiphenyl ether	mg/kg	NS	NS	<0.110 U	<0.024 U	--	<0.024 U	<2.300 U	<0.024 U	<2.100 U	<2.200 U	<0.024 U	<0.068 U	<0.046 U	<0.310 U	<0.025 U	<0.460 U	--	<2.300 U	<0.240 U
4-Nitroaniline	mg/kg	NS	115	<0.360 U	<0.084 U	--	<0.082 U	<8.000 U	<0.081 U	<7.300 U	<7.600 U	<0.084 U	<0.230 U	<0.160 U	<1.100 U	<0.085 U	<1.600 U	--	<8.000 U	<0.840 U
Acetophenone	mg/kg	NS	2,520	<0.100 U	<0.023 U	--	<0.023 U	<2.200 U	<0.022 U	<2.000 U	<2.100 U	<0.023 U	<0.065 U	<0.044 U	<0.290 U	<0.024 U	<0.440 U	--	<2.200 U	<0.230 U
Benzaldehyde	mg/kg	NS	818	<0.340 U	<0.077 U	--	<0.076 U	<7.400 U	<0.075 U	<6.800 U	<7.000 U	<0.077 U	<0.220 U	<0.150 U	<0.990 U	<0.079 U	<1.500 U	--	<7.400 U	<0.770 U
Biphenyl	mg/kg	NS	288	<0.250 U	<0.058 U	--	0.064 J	<5.500 U	<0.056 U	<5.000 U	<5.200 U	<0.058 U	<0.160 U	<0.110 U	<0.740 U	<0.059 U	<1.100 U	--	<5.500 U	0.910 J
Bis(2-Chloroethoxy)methane	mg/kg	NS	2,460	<0.120 U	<0.027 U	--	<0.026 U	<2.500 U	<0.026 U	<2.300 U	<2.400 U	<0.027 U	<0.074 U	<0.050 U	<0.340 U	<0.027 U	<0.510 U	--	<2.500 U	<0.270 U
Bis(2-Chloroethyl)ether	mg/kg	NS	1.29	<0.083 U	<0.019 U	--	<0.019 U	<1.800 U	<0.019 U	<1.700 U	<1.700 U	<0.019 U	<0.054 U	<0.036 U	<0.240 U	<0.020 U	<0.370 U	--	<1.800 U	<0.190 U
Bis(2-Ethylhexyl)phthalate	mg/kg	2.88	164	0.440 J	0.110 J	--	0.110 J	*8.500 JB*	<0.052 UJB	*8.100 JB*	<4.800 U	<0.053 UJB	0.270 J	0.240 J	<0.680 U	0.120 J	1.700 J	--	<5.100 U	<0.530 UJB
Butyl benzyl phthalate	mg/kg	NS	1,210	<0.220 U	<0.050 U	--	<0.049 U	<4.700 U	<0.048 U	<4.300 U	<4.500 U	<0.050 U	<0.140 U	<0.094 U	<0.630 U	<0.051 U	<0.950 U	--	<4.700 U	<0.500 U
Caprolactam	mg/kg	NS	100,000	<0.530 U	<0.120 U	--	<0.120 U	<12.000 U	<0.120 U	<11.000 U	<11.000 U	<0.120 U	<0.340 U	<0.230 U	<1.600 U	<0.120 U	<2.300 U	--	<12.000 U	<1.200 U
Carbazole	mg/kg	NS	NS	0.200 J	0.180 J	--	0.380	<4.000 U	<0.040 U	4.200 J	<3.800 U	<0.042 U	0.280 J	0.150 J	7.200	0.072 J	<0.790 U	--	12.000 J	5.600
Dibenzofuran	mg/kg	NS	1,040	0.100 J	0.150 J	--	0.340 J	<2.200 U	0.026 J	2.500 J	<2.100 U	<0.023 U	0.250 J	0.087 J	3.900 J	0.036 J	<0.440 U	--	12.000 J	4.800
Diethyl phthalate	mg/kg	NS	100,000	<0.130 U	<0.030 U	--	<0.029 U	<2.900 U	<0.029 U	<2.600 U	<2.700 U	<0.030 U	<0.084 U	<0.057 U	<0.380 U	<0.031 U	<0.570 U	--	<2.900 U	<0.300 U
Dimethyl phthalate	mg/kg	NS	7,390	<0.120 U	<0.027 U	--	<0.026 U	<2.500 U	<0.026 U	<2.300 U	<2.400 U	<0.027 U	<0.074 U	<0.050 U	<0.340 U	<0.027 U	<0.510 U	--	<2.500 U	<0.270 U
Di-n-butyl phthalate	mg/kg	5.0333	82,100	<0.150 U	<0.033 U	--	<0.033 U	<3.200 U	<0.033 U	<2.900 U	<3.000 U	<0.033 U	<0.094 U	<0.063 U	<0.430 U	<0.034 U	<0.640 U	--	<3.200 U	<0.340 U
Di-n-octyl phthalate	mg/kg	NS	8,210	<0.072 U	<0.017 U	--	<0.016 U	<1.600 U	<0.016 U	<1.500 U	<1.500 U	<0.017 U	<0.047 U	<0.031 U	<0.210 U	<0.017 U	<0.320 U	--	<1.600 U	<0.170 U
Hexachlorobenzene	mg/kg	0.0252	1.15	<0.150 U	<0.033 U	--	<0.033 U	<3.200 U	<0.033 U	<2.900 U	<3.000 U	<0.033 U	<0.094 U	<0.063 U	<0.430 U	<0.034 U	<0.640 U	--	<3.200 U	<0.340 U
Hexachlorobutadiene	mg/kg	NS	7.19	<0.00051 UJ	<0.00051 UJ	--	<0.00050 U	<0.00063 U	<0.00057 U	<0.00062 U	<0.00063 U	<0.00081 U	0.00061 UR	<0.00058 UJ	0.00076 UR	<0.00069 U	<0.00070 U	--	0.00052 UR	0.0012 UR
Hexachlorocyclopentadiene	mg/kg	NS	10.8	<0.250 U	<0.058 U	--	<0.056 U	<5.500 U	<0.056 U	<5.000 U	<5.200 U	<0.058 U	<0.160 U	<0.110 U	<0.740 U	<0.059 U	<1.100 U	--	<5.500 U	<0.580 U
Hexachloroethane	mg/kg	NS	11.1	<0.110 U	<0.025 U	--	<0.024 U	<2.300 U	<0.024 U	<2.100 U	<2.200 U	<0.025 U	<0.069 U	<0.047 U	<0.310 U	<0.025 U	<0.470 U	--	<2.300 U	<0.250 U
Isophorone	mg/kg	NS	2,420	<0.085 U	<0.020 U	--	<0.019 U	<1.900 U	<0.019 U	<1.700 U	<1.800 U	<0.020 U	<0.055 U	<0.037 U	<0.250 U	<0.020 U	<0.370 U	--	<1.900 U	<0.200 U
Nitrobenzene	mg/kg	NS	32.4	<0.110 U	<0.025 U	--	<0.025 U	<2.400 U	<0.025 U	<2.200 U	<2.300 U	<0.025 U	<0.071 U	<0.048 U	<0.320 U	<0.026 U	<0.490 U	--	<2.400 U	<0.250 U
N-nitrosodi-n-propylamine	mg/kg	NS	0.328	<0.160 U	<0.036 U	--	<0.035 U	<3.400 U	<0.035 U	<3.100 U	<3.200 U	<0.036 U	<0.100 U	<0.068 U	<0.460 U	<0.037 U	<0.680 U	--	<3.400 U	<0.360 U
N-Nitrosodiphenylamine	mg/kg	0.0764	469	<0.110 U	<0.024 U	--	<0.024 U	<2.300 U	<0.024 U	<2.100 U	<2.200 U	<0.024 U	<0.068 U	<0.046 U	<0.310 U	<0.025 U	<0.460 U	--	<2.300 U	<0.240 U
Pyridine	mg/kg	0.0069	1,170	<0.650 U	<0.150 U	--	<0.150 U	<14.000 U	<0.150 U	<13.000 U	<14.000 U	<0.150 U	<0.420 U	<0.280 U	<1.900 U	<0.150 U	<2.900 U	--	<14.000 U	<1.500 U

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	CS-SB04				CS-SB05		CS-SB06			CS-SB07			CS-SB08			CS-SB09	
Sample / Duplicate:				CS-SB04	CS-SB04	CS-SB04	CS-SB04 DUP	CS-SB05	CS-SB05	CS-SB06	CS-SB06 DUP	CS-SB06	CS-SB07	CS-SB07 DUP	CS-SB07	CS-SB08	CS-SB08	CS-SB08	CS-SB09	CS-SB09
Field Sample ID:				CS-SB04-SS-120808	CS-SB04-0608-120808	MSS-CS-SB04-0608-120808	CS-SBDUP004-120808	CS-SB05-SS-111908	CS-SB05-10108-111908	CS-SB06-SS-111908	CS-SBDUP-001-0001-111908	CS-SB06-4454-111908	CS-SB07-SS-112008	CS-SBDUP002-112008	CS-SB07-0506-112008	CS-SB08-SS-120808	CS-SB08-0405-120808	MSS-CS-SB08-0405-120808	CS-SB09-SS-111908	CS-SB09-0607-111908
Sample Depth (feet):				0 - 0.5	6 - 8	6 - 8	6 - 8	0 - 0.5	10 - 10.8	0 - 0.5	0 - 0.5	4.4 - 5.4	0 - 0.5	0 - 0.5	5 - 6	0 - 0.5	4 - 5	4 - 5	0 - 0.5	6 - 7
Sample Date:				12/08/2008	12/08/2008	12/08/2008	12/08/2008	11/19/2008	11/19/2008	11/19/2008	11/19/2008	11/19/2008	11/20/2008	11/20/2008	11/20/2008	12/08/2008	12/08/2008	12/08/2008	11/19/2008	11/19/2008
Phenols																				
2,4,5-Trichlorophenol	mg/kg	NS	82,100	<0.050 U	<0.012 U	--	<0.011 U	<1.100 U	<0.011 U	<1.000 U	<1.000 U	<0.012 U	<0.032 U	<0.022 U	<0.150 U	<0.012 U	<0.220 U	--	<1.100 U	<0.120 U
2,4,6-Trichlorophenol	mg/kg	NS	209	<0.050 U	<0.012 U	--	<0.011 U	<1.100 U	<0.011 U	<1.000 U	<1.000 U	<0.012 U	<0.032 U	<0.022 U	<0.150 U	<0.012 U	<0.220 U	--	<1.100 U	<0.120 U
2,4-Dichlorophenol	mg/kg	NS	2,460	<0.050 U	<0.012 U	--	<0.011 U	<1.100 U	<0.011 U	<1.000 U	<1.000 U	<0.012 U	<0.032 U	<0.022 U	<0.150 U	<0.012 U	<0.220 U	--	<1.100 U	<0.120 U
2,4-Dimethylphenol	mg/kg	NS	16,400	<0.330 U	<0.076 U	--	<0.075 U	<7.300 U	<0.074 U	<6.700 U	<6.900 U	<0.076 U	<0.210 U	<0.140 U	<0.970 U	<0.078 U	<1.500 U	--	<7.300 U	<0.760 U
2,4-Dinitrophenol	mg/kg	NS	1,640	<1.700 U	<0.380 U	--	<0.380 U	<37.000 U	<0.370 U	<34.000 U	<35.000 U	<0.380 U	<1.100 U	<0.730 U	<4.900 U	<0.390 U	<7.300 U	--	<37.000 U	<3.800 U
2-Chlorophenol	mg/kg	NS	5,840	<0.110 U	<0.024 U	--	<0.024 U	<2.300 U	<0.024 U	<2.100 U	<2.200 U	<0.024 U	<0.068 U	<0.046 U	<0.310 U	<0.025 U	<0.460 U	--	<2.300 U	<0.240 U
2-Methylphenol	mg/kg	NS	41,000	<0.065 U	<0.015 U	--	<0.015 U	<1.400 U	<0.015 U	<1.300 U	<1.400 U	<0.015 U	<0.042 U	<0.028 U	<0.190 U	<0.015 U	<0.290 U	--	<1.400 U	<0.150 U
2-Nitrophenol	mg/kg	NS	NS	<0.050 U	<0.012 U	--	<0.011 U	<1.100 U	<0.011 U	<1.000 U	<1.000 U	<0.012 U	<0.032 U	<0.022 U	<0.150 U	<0.012 U	<0.220 U	--	<1.100 U	<0.120 U
4-Chloro-3-methylphenol	mg/kg	NS	82,100	<0.330 U	<0.076 U	--	<0.075 U	<7.300 U	<0.074 U	<6.700 U	<6.900 U	<0.076 U	<0.210 U	<0.140 U	<0.970 U	<0.078 U	<1.500 U	--	<7.300 U	<0.760 U
4-Methylphenol	mg/kg	NS	82,100	<0.170 U	<0.038 U	--	<0.037 U	<3.600 U	<0.037 U	<3.300 U	<3.500 U	<0.038 U	<0.110 U	<0.072 U	<0.490 U	<0.039 U	<0.730 U	--	<3.600 U	<0.380 U
4-Nitrophenol	mg/kg	NS	NS	<0.490 U	<0.110 U	--	<0.110 U	<11.000 U	<0.110 U	<9.800 U	<10.000 U	<0.110 U	<0.310 U	<0.210 U	<1.400 U	<0.110 U	<2.100 U	--	<11.000 U	<1.100 U
4,6-Dinitro-2-methylphenol	mg/kg	NS	65.7	<1.700 U	<0.380 U	--	<0.370 U	<36.000 U	<0.370 U	<33.000 U	<35.000 U	<0.380 U	<1.100 U	<0.720 U	<4.900 U	<0.390 U	<7.300 U	--	<36.000 U	<3.800 U
Pentachlorophenol	mg/kg	0.0028	3.97	<1.700 U	<0.380 U	--	<0.370 U	<36.000 U	<0.370 U	<33.000 U	<35.000 U	<0.380 U	<1.100 U	<0.720 U	<4.900 U	<0.390 U	<7.300 U	--	<36.000 U	<3.800 U
Phenol	mg/kg	2.2946	100,000	<0.090 U	<0.021 U	--	<0.020 U	<2.000 U	<0.020 U	<1.800 U	<1.900 U	<0.021 U	<0.058 U	<0.039 U	<0.270 U	<0.021 U	<0.400 U	--	<2.000 U	<0.210 U
Metals																				
Aluminum, Total	mg/kg	600	100,000	*4,300*	*6,300*	--	*5,700*	*1,500*	*2,100*	*1,100*	*2,400*	*20,000*	*4,000*	*4,200*	*9,500*	*6,100*	*4,100*	--	*2,700*	*4,500*
Antimony, Total	mg/kg	0.542	467	0.055 BJ-	0.023 BJ-	--	0.017 BJ-	0.400 J-	0.330 J-	0.032 BJ-	0.031 BJ-	<0.016 UJ	0.030 BJ-	0.028 BJ-	0.260 BJ-	0.025 BJ-	0.042 BJ-	--	0.110 BJ-	0.070 BJ-
Arsenic, Total [1]	mg/kg	0.584	8.3	*3.000*	*3.100*	--	*2.900*	*4.600*	*4.900*	*1.200*	*1.100*	*1.900*	*2.000*	*2.000*	*5.600*	*3.400*	*3.000*	--	*3.900*	*6.500*
Barium, Total	mg/kg	164.8	100,000	60.000 J-	55.000	--	44.000	65.000	86.000	11.000	12.000	*420.000*	41.000	42.000	110.000	48.000	40.000	--	40.000	96.000
Beryllium, Total	mg/kg	6.32	2,300	0.350	0.460	--	0.400	0.320	0.240	0.110	0.120	5.200	0.260	0.370	1.600	0.420	0.230	--	0.300	0.750
Cadmium, Total	mg/kg	0.752	985	0.600	0.500	--	0.440	0.640	*0.790*	0.190	0.230	*0.880*	0.290	0.310	*0.870*	0.400	0.430	--	0.520	0.560
Calcium, Total	mg/kg	NS	NS	130,000	110,000	--	120,000	84,000 J	16,000 J	130,000 J	120,000 J	97,000 J	130,000	130,000	41,000	120,000	150,000	--	120,000 J	60,000 J
Chromium, Hexavalent	mg/kg	NS	6.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium, Total [3]	mg/kg	360,000	NS	14.000	15.000	--	13.000	8.900	5.100	6.400	3.300	5.000	8.200	9.000	8.900	9.100	12.000	--	130.000	16.000
Chromium, Trivalent	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt, Total	mg/kg	3.6073	347	3.200	*5.600*	--	*4.500*	2.900	2.500	2.000	1.200	*12.000*	2.600	2.400	*4.000*	3.500	3.100	--	3.000	*4.300*
Copper, Total	mg/kg	91.6	46,700	21.000	18.000	--	16.000	41.000 J	*370.000 J*	5.600 J	5.500 J	6.900 J	14.000	12.000	*110.000*	21.000	77.000	--	39.000 J	18.000 J
Iron, Total	mg/kg	NS	100,000	9,100	11,000	--	9,200	28,000	23,000	2,600	5,500	16,000	5,500	5,900	16,000	15,000	6,100	--	15,000	6,700
Lead, Total	mg/kg	27	800	*66.000 J+*	*56.000*	--	*42.000*	*510.000*	*82.000*	19.000	25.000	4.900	*30.000*	24.000	*120.000*	22.000	*95.000*	--	*66.000*	*190.000*
Magnesium, Total	mg/kg	NS	NS	55,000	470	--	49,000	43,000 J	1,800 J	76,000 J	67,000 J	47,000 J	62,000	56,000	13,000	43,000	58,000	--	59,000 J	24,000 J
Manganese, Total	mg/kg	39.1244	25,900	*400.000 J*	*760.000 J*	--	*370.000 J*	*170.000*	*220.000*	*140.000*	*130.000*	*1.800*	*280.000*	*370.000*	*320.000*	*630.000 J*	*260.000 J*	--	*340.000*	*160.000*
Mercury, Total	mg/kg	0.208	3.13	0.049	0.065	--	0.078	0.190	0.058	0.020	0.040	0.013 B	0.018	0.024	*0.410*	0.025	0.0062 B	--	0.031	*0.440*
Nickel, Total	mg/kg	13.0612	22,500	11.000	*15.000*	--	13.000	12.000	6.100	8.600	7.500	*16.000*	9.700	9.500	12.000	12.000	11.000	--	*20.000*	*19.000*
Potassium, Total	mg/kg	NS	NS	890	<47 U	--	1,100	350	430	340	370	1,900	570	670	1,300	830	480	--	540	1,800
Selenium, Total	mg/kg	0.52	5,840	*0.550 B*	*0.640*	--	*0.640*	0.460 B	0.290 B	<0.140 U	<0.140 U	*3.600*	0.190 B	0.310 B	*1.300*	0.510 B	0.520 B	--	0.340 B	*1.100*
Silver, Total	mg/kg	0.8491	5,840	0.082 B	*1.400*	--	*1.700*	0.038 B	0.099 B	0.021 B	0.027 B	0.110 B	0.046 B	0.051 B	0.091 B	0.052 B	0.092 B	--	0.110	0.062 B
Sodium, Total	mg/kg	NS	NS	220 B	<68 U	--	450 B	140 B	180 B	160 B	250 B	1,400	230 B	230 B	470 B	250 B	240 B	--	200 B	580
Thallium, Total	mg/kg	0.284	11.7	<0.0044 UJB	0.170 J	--	0.150 J	0.097 B	0.046 B	0.064 B	0.059 B	0.036 B	0.038 B	0.048 B	0.150	<0.0041 UJB	<0.0039 UJB	--	0.095 B	0.110 B
Vanadium, Total	mg/kg	60	5,840	15.000	21.000	--	19.000	13.000	7.400	14.000	12.000	6.900	12.000	12.000	13.000	15.000	14.000	--	8.000	11.000
Zinc, Total	mg/kg	NS	100,000	100.000	60.000	--	56.000	120.000	200.000	26.000	21.000	35.000	780.000	41.000	230.000	50.000	49.000	--	98.000	120.000
Inorganic - Cyanide																				
Cyanide, Amenable	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Reactive	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Total	mg/kg	4.04	195	0.84	0.32 B	--	0.37 B	2.3	*15*	*8.1*	0.66	1.9	0.56 J-	0.71 J-	1.2	0.38 B	*18*	--	0.45 B	0.19 BJ-
Other																				
Sulfide, Reactive	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organic Matter	%	NS	NS	--	--	1.8	--	--	--	--	--	--	--	--	--	--	--	1.6	--	--
Percent Moisture	%	NS	NS	20	13	12.4	12	7.7	11	4.6	4.6	13	7.4	8.5	32	15	9.3	10.8	7.9	14

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	CS-SB10		CS-SB11		CS-SB12		CS-SB13	CS-SB14		CS-SB15			CS-SB16		CS-SB17		CS-SB18	
Sample / Duplicate:				CS-SB10	CS-SB10	CS-SB11	CS-SB11	CS-SB12	CS-SB12	CS-SB13	CS-SB14	CS-SB14	CS-SB15	CS-SB15	CS-SB15	CS-SB16	CS-SB16	CS-SB17	CS-SB17	CS-SB18	CS-SB18
Field Sample ID:				CS-SB10-SS-112008	CS-SB10-0405-112008	CS-SB11-SS-112008	CS-SB11-1011-112008	CS-SB12-SS-112008	CS-SB12-0405-112008	CS-SB13-SS-112008	CS-SB14-SS-112108	CS-SB14-0809-112108	CS-SB15-SS-120808	CS-SB15-0810-120808	MSS-CS-SB15-0810-120808	CS-SB16-SS-112008	CS-SB16-0304-112008	CS-SB17-SS-112108	CS-SB17-0809-11208	CS-SB18-SS-112108	CS-SB18-0809-112108
Sample Depth (feet):				0 - 0.5	4 - 5	0 - 0.5	10 - 11	0 - 0.5	4 - 5	0 - 0.5	0 - 0.5	8 - 9	0 - 0.5	8 - 10	8 - 10	0 - 0.5	3 - 4	0 - 0.5	8 - 9	0 - 0.5	8 - 9
Sample Date:				11/20/2008	11/20/2008	11/20/2008	11/20/2008	11/20/2008	11/20/2008	11/20/2008	11/21/2008	11/21/2008	12/08/2008	12/08/2008	12/08/2008	11/20/2008	11/20/2008	11/21/2008	11/21/2008	11/21/2008	11/21/2008
VOCs																					
1,1,1-Trichloroethane	mg/kg	0.1402	640	<0.00058 U	<0.00052 UJ	<0.00057 U	<0.00054 U	<0.00069 UJ	<0.00070 U	<0.00049 U	<0.00095 U	<0.00062 U	<0.00058 U	<0.00048 U	--	<0.00059 U	<0.00059 U	<0.00053 U	<0.00053 U	<0.00065 UJ	<0.00048 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0002	3.6	<0.00068 U	<0.00061 U	<0.00067 U	<0.00064 U	<0.00081 UJ	<0.00082 UJ	<0.00057 U	<0.0011 UJ	<0.00073 U	<0.00068 U	<0.00056 U	--	<0.00069 U	<0.00069 U	<0.00063 U	<0.00062 U	<0.00076 UJ	<0.00057 U
1,1,2-Trichloroethane	mg/kg	0.0032	7.01	<0.00098 U	<0.00087 U	<0.00096 U	<0.00092 U	<0.0012 UJ	<0.0012 UJ	<0.00082 U	<0.0016 U	<0.0011 U	<0.00098 U	<0.00081 U	--	<0.00099 U	<0.0010 U	<0.00090 U	<0.00090 U	<0.0011 UJ	<0.00082 U
1,1-Dichloroethane	mg/kg	0.4834	22.2	<0.00023 U	<0.00021 UJ	<0.00023 U	<0.00022 U	<0.00028 UJ	<0.00028 U	<0.00020 U	<0.00038 U	<0.00025 U	<0.00023 U	<0.00019 U	--	<0.00024 U	<0.00024 U	<0.00022 U	<0.00021 U	<0.00026 UJ	<0.00019 U
1,1-Dichloroethene	mg/kg	0.005	1,190	<0.00066 U	<0.00059 UJ	<0.00064 U	<0.00062 U	<0.00079 UJ	<0.00079 U	<0.00055 U	<0.0011 U	<0.00070 U	<0.00065 U	<0.00054 U	--	<0.00067 U	<0.00067 U	<0.00060 U	<0.00060 U	<0.00073 UJ	<0.00055 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0002	0.092	<0.00067 U	<0.00060 U	<0.00066 U	<0.00063 U	<0.00080 UJ	<0.00081 UJ	<0.00056 U	<0.0011 UJ	<0.00072 U	<0.00067 U	<0.00055 U	--	<0.00068 U	<0.00068 U	<0.00061 U	<0.00061 U	<0.00075 UJ	<0.00056 U
1,2-Dibromoethane	mg/kg	0.0000282	0.221	<0.00058 U	<0.00052 U	<0.00057 U	<0.00054 U	<0.00069 UJ	<0.00070 UJ	<0.00049 U	<0.00095 U	<0.00062 U	<0.00058 U	<0.00048 U	--	<0.00059 U	<0.00059 U	<0.00053 U	<0.00053 U	<0.00065 UJ	<0.00048 U
1,2-Dichlorobenzene	mg/kg	1.168	376	<0.00050 UJB	<0.00045 U	<0.00049 U	<0.00047 U	<0.00060 UJ	<0.00061 UJ	<0.00042 U	<0.00082 UJ	<0.00054 U	<0.00050 U	<0.00041 U	--	<0.00051 U	<0.00051 U	<0.00046 U	<0.00046 U	<0.00056 UJ	<0.00042 U
1,2-Dichloroethane	mg/kg	0.0028	2.87	<0.00078 U	<0.00070 UJ	<0.00076 U	<0.00073 U	<0.00093 UJ	<0.00094 U	<0.00065 U	<0.0013 U	<0.00084 U	<0.00078 U	<0.00064 U	--	<0.00079 U	<0.00079 U	<0.00072 U	<0.00071 U	<0.00087 UJ	<0.00065 U
1,2-Dichloropropane	mg/kg	0.0033	1.78	<0.00061 U	<0.00055 UJ	<0.00060 U	<0.00057 U	<0.00073 UJ	<0.00074 U	<0.00051 U	<0.0010 U	<0.00066 U	<0.00061 U	<0.00050 U	--	<0.00062 U	<0.00062 U	<0.00056 U	<0.00056 U	<0.00068 UJ	<0.00051 U
1,3-Dichlorobenzene	mg/kg	1.1528	297	<0.00053 U	<0.00048 U	<0.00052 U	<0.00050 U	<0.00064 UJ	<0.00065 UJ	<0.00045 U	<0.00088 UJ	<0.00057 U	<0.00053 U	<0.00044 U	--	<0.00054 U	<0.00054 U	<0.00049 U	<0.00049 U	<0.00060 UJ	<0.00044 U
1,4-Dichlorobenzene	mg/kg	0.144	16.4	<0.00087 U	<0.00078 U	<0.00085 U	<0.00081 U	<0.0010 UJ	<0.0010 UJ	<0.00073 U	<0.0014 UJ	<0.00093 U	<0.00086 U	<0.00072 U	--	<0.00088 U	<0.00088 U	<0.00080 U	<0.00079 U	<0.00097 UJ	<0.00072 U
2-Butanone (MEK)	mg/kg	1.6661	28,400	<0.0020 U	<0.0018 UJ	<0.0020 U	0.0046 J	<0.0024 UJ	<0.0025 U	<0.0017 U	<0.0033 U	0.053	<0.0020 U	0.0088 J	--	<0.0021 U	<0.0021 U	<0.0019 U	0.010 J	<0.0023 UJ	0.0023 J
2-Hexanone	mg/kg	NS	1,760	<0.0054 U	<0.0049 U	<0.0053 U	<0.0051 U	<0.0065 UJ	<0.0066 U	<0.0046 U	<0.0089 U	<0.0058 U	<0.0054 U	<0.0045 U	--	<0.0055 U	<0.0055 U	<0.0050 U	<0.0050 U	<0.0061 UJ	<0.0045 U
4-Methyl-2-Pentanone (MIBK)	mg/kg	0.2252	3,360	<0.0049 U	<0.0043 U	<0.0048 U	<0.0046 U	<0.0058 UJ	<0.0059 UJ	<0.0041 U	<0.0080 U	<0.0052 U	<0.0048 U	<0.0040 U	--	<0.0049 U	<0.0049 U	<0.0045 U	<0.0044 U	<0.0054 UJ	<0.0040 U
Acetone	mg/kg	3.6766	100,000	0.011 J	<0.0053 UJ	<0.0059 U	0.023	<0.0072 UJ	0.011 J	<0.0050 U	<0.0098 U	0.270	<0.0060 U	0.038	--	<0.0061 U	0.017 J	0.0065 J	0.050	<0.0067 UJ	0.016 J
Benzene	mg/kg	0.0051	7.07	0.0011 J	<0.00047 UJ	<0.00051 U	0.0015 J	<0.00063 UJ	0.0032 J	<0.00044 U	<0.00086 U	0.0018 J	<0.00052 U	<0.00043 U	--	<0.00053 U	0.0015 J	0.0029 J	0.00074 J	<0.00058 UJ	0.0013 J
Bromodichloromethane	mg/kg	0.0003	1.83	<0.00024 U	<0.00022 U	<0.00024 U	<0.00023 U	<0.00029 UJ	<0.00030 UJ	<0.00021 U	<0.00040 U	<0.00026 U	<0.00024 U	<0.00020 U	--	<0.00025 U	<0.00025 U	<0.00023 U	<0.00022 U	<0.00027 UJ	<0.00020 U
Bromoform	mg/kg	0.0023	113	<0.00026 U	<0.00023 U	<0.00025 U	<0.00024 U	<0.00031 UJ	<0.00031 UJ	<0.00021 U	<0.00042 U	<0.00027 U	<0.00025 U	<0.00021 U	--	<0.00026 U	<0.00026 U	<0.00024 U	<0.00023 U	<0.00029 UJ	<0.00021 U
Bromomethane	mg/kg	0.0051	43	<0.00056 U	<0.00050 UJ	<0.00055 U	<0.00052 U	<0.00067 UJ	<0.00067 U	<0.00047 U	<0.00091 U	<0.00060 U	<0.00055 U	<0.00046 U	--	<0.00056 U	<0.00057 U	<0.00051 U	<0.00051 U	<0.00062 UJ	<0.00046 U
Carbon Disulfide	mg/kg	0.5919	738	<0.00047 U	<0.00042 U	<0.00046 U	0.00051 J	<0.00056 UJ	<0.00056 U	<0.00039 U	<0.00077 U	0.002 J	<0.00047 U	<0.00039 U	--	<0.00047 U	0.0013 J	<0.00043 U	0.00067 J	<0.00052 UJ	<0.00039 U
Carbon Tetrachloride	mg/kg	0.0039	4.03	<0.00070 U	<0.00063 UJ	<0.00069 U	<0.00066 U	<0.00084 UJ	<0.00085 U	<0.00059 U	<0.0012 U	<0.00075 U	<0.00070 U	<0.00058 U	--	<0.00071 U	<0.00071 U	<0.00065 U	<0.00064 U	<0.00078 UJ	<0.00058 U
Chlorobenzene	mg/kg	0.1358	761	<0.00060 U	<0.00054 U	<0.00059 U	<0.00056 U	<0.00072 UJ	<0.00073 UJ	<0.00050 U	<0.00099 U	<0.00064 U	<0.00060 U	<0.00050 U	--	<0.00061 U	<0.00061 U	<0.00055 U	<0.00055 U	<0.00067 UJ	<0.00050 U
Chloroethane	mg/kg	0.2266	2,120	<0.00099 U	<0.00088 UJ	<0.00097 U	<0.00093 U	<0.0012 UJ	<0.0012 U	<0.00083 U	<0.0016 U	<0.0011 U	<0.00099 U	<0.00082 U	--	<0.0010 U	<0.0010 U	<0.00091 U	<0.00091 U	<0.0011 UJ	<0.00082 U
Chloroform	mg/kg	0.0033	1.98	<0.00032 U	<0.00029 UJ	<0.00032 U	<0.00030 U	<0.00039 UJ	<0.00039 U	<0.00027 U	<0.00053 U	<0.00035 U	<0.00032 U	<0.00027 U	--	<0.00033 U	<0.00033 U	<0.00030 U	<0.00030 U	<0.00036 UJ	<0.00027 U
Chloromethane	mg/kg	0.0155	669	<0.00086 U	<0.00077 UJ	<0.00084 U	<0.00080 U	<0.0010 UJ	<0.0010 U	<0.00072 U	<0.0014 U	<0.00092 U	<0.00085 U	<0.00071 U	--	<0.00087 U	<0.00087 U	<0.00079 U	<0.00078 U	<0.00096 UJ	<0.00071 U
cis-1,2-Dichloroethene	mg/kg	0.0412	2,340	<0.00062 U	<0.00056 UJ	<0.00061 U	<0.00058 U	<0.00075 UJ	<0.00075 U	<0.00052 U	<0.0010 U	<0.00067 U	<0.00062 U	<0.00051 U	--	<0.00063 U	<0.00063 U	<0.00057 U	<0.00057 U	<0.00070 UJ	<0.00052 U
cis-1,3-Dichloropropene	mg/kg	NS	1,210	<0.0014 U	<0.0013 U	<0.0014 U	<0.0013 U	<0.0017 UJ	<0.0017 UJ	<0.0012 U	<0.0024 U	<0.0015 U	<0.0014 U	<0.0012 U	--	<0.0015 U	<0.0015 U	<0.0013 U	<0.0013 U	<0.0016 UJ	<0.0012 U
Cyclohexane	mg/kg	NS	117	0.0024 J	<0.00040 U	<0.00044 U	<0.00042 U	0.00064 J	0.021	<0.00037 U	0.0022 J	0.0011 J	<0.00044 U	<0.00037 U	--	<0.00045 U	0.004 J	0.0025 J	0.0014 J	<0.00050 UJ	<0.00037 U
Dibromochloromethane	mg/kg	0.032	38.9	<0.00063 U	<0.00057 U	<0.00062 U	<0.00060 U	<0.00076 UJ	<0.00077 UJ	<0.00053 U	<0.0010 U	<0.00068 U	<0.00063 U	<0.00052 U	--	<0.00064 U	<0.00065 U	<0.00058 U	<0.00058 U	<0.00071 UJ	<0.00053 U
Dichloromethane	mg/kg	0.0026	1,150	<0.00083 U	<0.00075 UJ	<0.00082 U	<0.00078 U	<0.0010 UJ	<0.0010 U	<0.00070 U	<0.0014 U	<0.00090 U	<0.00083 U	<0.00069 U	--	<0.00085 U	<0.00085 U	<0.00077 U	<0.00076 U	<0.00093 UJ	<0.00069 U
Ethylbenzene	mg/kg	1.57	35.4	0.003 J	<0.00067 U	<0.00073 U	<0.00070 U	<0.00089 UJ	0.00097 J	<0.00063 U	<0.0012 U	<0.00080 U	<0.00074 U	<0.00061 U	--	<0.00076 U	<0.00076 U	<0.00069 U	<0.00068 U	<0.00083 UJ	<0.00062 U
Freon 113	mg/kg	NS	910	<0.00050 U	<0.00045 U	<0.00049 U	<0.00047 U	<0.00060 UJ	<0.00061 U	<0.00042 U	<0.00082 U	<0.00054 U	<0.00050 U	<0.00041 U	--	<0.00051 U	<0.00051 U	<0.00046 U	<0.00046 U	<0.00056 UJ	<0.00042 U
Freon 12	mg/kg	3.0863	530	<0.00058 U	<0.00052 UJ	<0.00057 U	<0.00054 U	<0.00069 UJ	<0.00070 U	<0.00049 U	<0.00095 U	<0.00062 U	<0.00058 U	<0.00048 U	--	<0.00059 U	<0.00059 U	<0.00053 U	<0.00053 U	<0.00065 UJ	<0.00048 U
Isopropylbenzene	mg/kg	NS	268	<0.00066 U	<0.00059 U	<0.00064 U	<0.00062 U	<0.00079 UJ	<0.00079 UJ	<0.00055 U	<0.0011 UJ	<0.00070 U	<0.00065 U	<0.00054 U	--	<0.00067 U	<0.00067 U	<0.00060 U	<0.00060 U	<0.00073 UJ	<0.00055 U
Methyl acetate	mg/kg	NS	29,000	<0.0031 U	<0.0027 U	<0.0030 U	<0.0029 U	<0.0037 UJ	<0.0037 U	<0.0026 U	<0.0050 U	<0.0033 U	<0.0030 U	<0.0025 U	--	<0.0031 U	<0.0031 U	<0.0028 U	<0.0028 U	<0.0034 UJ	<0.0025 U
Methylcyclohexane	mg/kg	NS	67.6	0.0031 J	<0.00042 U	<0.00046 U	0.00052 J	0.00085 J	0.028	<0.00039 U	0.0015 J	0.002 J	<0.00047 U	<0.00039 U	--	<0.00047 U	0.0054 J	0.0012 J	0.0019 J	<0.00052 UJ	<0.00039 U
Methyl-tert-butyl-ether	mg/kg	0.027	282	<0.00038 U	<0.00034 UJ	<0.00037 U	<0.00036 U	<0.00045 UJ	<0.00046 U	<0.00032 U	<0.00062 U	<0.00041 U	<0.00038 U	<0.00031 U	--	<0.00038 U	<0.00038 U	<0.00035 U	<0.00035 U	<0.00042 UJ	<0.00031 U
Styrene	mg/kg	0.22	867	<0.00070 U	<0.00063 U	<0.00069 U	<0.00066 U	<0.00084 UJ	<0.00085 UJ	<0.00059 U	<0.0012 U	<0.00075 U	<0.00070 U	<0.00058 U	--	<0.00071 U	<0.00071 U	<0.00065 U	<0.00064 U	<0.00078 UJ	<0.00058 U
Tetrachloroethene	mg/kg	0.0045	145	<0.00066 U	<0.00059 U	<0.00064 U	<0.00062 U	<0.00079 UJ	<0.00079 UJ	<0.00055 U	<0.0011 U	<0.00070 U	<0.00065 U	<0.00054 U	--	<0.00067 U	<0.00067 U	<0.00060 U	<0.00060 U	<0.00073 UJ	<0.00055 U
Toluene	mg/kg	1.1072	818	0.0048 J	<0.00069 U	<0.00075 U	<0.00072 U	<0.00092 UJ	0.006 J	<0.00064 U	0.0023 J	<0.00082 U	<0.00076 U	<0.00063 U	--	<0.00078 U	0.0024 J	0.0033 J	0.00093 J	<0.00086 UJ	<0.00064 U
trans-1,2-Dichloroethene	mg/kg	0.0626	1,850	<0.00043 U	<0.00039 UJ	<0.00043 U	<0.00041 U	<0.00052 UJ	<0.00052 U	<0.00036 U	<0.00071 U	<0.00047 U	<0.00043 U	<0.00036 U	--	<0.00044 U	<0.00044 U	<0.00040 U	<0.00040 U	<0.00048 UJ	<0.00036 U
trans-1,3-Dichloropropene	mg/kg	NS	1,510	<0.00075 U	<0.00067 U	<0.00073 U	<0.00070 U	<0.00089 UJ	<0.00090 UJ	<0.00063 U	<0.0012 U	<0.00080 U	<0.00074 U	<0.00061 U	--	<0.00076 U	<0.00076 U	<0.00069 U	<0.00068 U	<0.00083 UJ	<0.00062 U
Trichloroethene	mg/kg	0.0036	8.41	<0.00026 U	<0.00023 UJ	<0.00025 U	<0.00024 U	<0.00031 UJ	<0.00031 U	<0.00021 U	<0.00042 U	<0.00027 U	<0.00025 U	<0.00021 U	--	<0.00026 U	<0.00026 U	<0.00024 U	<0.00023 U	<0.00029 UJ	<0.00021 U
Trichlorofluoromethane	mg/kg	4.4775	1,230	<0.0012 U	<0.0010 UJ	<0.0011 U	<0.0011 U	<0.0014 UJ	<0.0014 U	<0.00097 U	<0.0019 U	<0.0012 U	<0.0012 U	<0.00095 U	--	<0.0012 U	<0.0012 U	<0.0011 U	<0.0011 U	<0.0013 UJ	<0.00096 U
Vinyl Chloride	mg/kg	0.0001	2.08	<0.0015 U	<0.0013 UJ	<0.0015 U	<0.0014 U	<0.0018 UJ	<0.0018 U	<0.0013 U	<0.0024 U	<0.0016 U	<0.0015 U	<0.0012 U	--	<0.0015 U	<0.0015 U	<0.0014 U	<0.0014 U	<0.0017 UJ	<0.0012 U
Xylenes, Total	mg/kg	3.96	260	0.012	<0.00061 U	<0.00067 U	<0.00064 U	<0.00081 UJ	0.0098 J	<0.00057 U	<0.0011 U	<0.00073 U	<0.00068 U	<0.00056 U	--	<0.00069 U	0.0023 J	<0.00063 U	<0.00062 U	<0.00076 UJ	<0.00057 U
PCBs																					
PCB, Total [4]	mg/kg	0.0094	0.967	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1016	mg/kg	NS	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1221	mg/kg	NS	0.883	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1232	mg/kg	NS	0.792	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1242	mg/kg	NS	0.972	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1248	mg/kg	NS	0.975	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1254	mg/kg	NS	0.988	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1260	mg/kg	NS	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	CS-SB10		CS-SB11		CS-SB12		CS-SB13	CS-SB14		CS-SB15			CS-SB16		CS-SB17		CS-SB18	
Sample / Duplicate:				CS-SB10	CS-SB10	CS-SB11	CS-SB11	CS-SB12	CS-SB12	CS-SB13	CS-SB14	CS-SB14	CS-SB15	CS-SB15	CS-SB15	CS-SB16	CS-SB16	CS-SB17	CS-SB17	CS-SB18	CS-SB18
Field Sample ID:				CS-SB10-SS-112008	CS-SB10-0405-112008	CS-SB11-SS-112008	CS-SB11-1011-112008	CS-SB12-SS-112008	CS-SB12-0405-112008	CS-SB13-SS-112008	CS-SB14-SS-112108	CS-SB14-0809-112108	CS-SB15-SS-120808	CS-SB15-0810-120808	MSS-CS-SB15-0810-120808	CS-SB16-SS-112008	CS-SB16-0304-112008	CS-SB17-SS-112108	CS-SB17-0809-11208	CS-SB18-SS-112108	CS-SB18-0809-112108
Sample Depth (feet):				0 - 0.5	4 - 5	0 - 0.5	10 - 11	0 - 0.5	4 - 5	0 - 0.5	0 - 0.5	8 - 9	0 - 0.5	8 - 10	8 - 10	0 - 0.5	3 - 4	0 - 0.5	8 - 9	0 - 0.5	8 - 9
Sample Date:				11/20/2008	11/20/2008	11/20/2008	11/20/2008	11/20/2008	11/20/2008	11/20/2008	11/21/2008	11/21/2008	12/08/2008	12/08/2008	12/08/2008	11/20/2008	11/20/2008	11/21/2008	11/21/2008	11/21/2008	11/21/2008
PAHs																					
2-Methylnaphthalene	mg/kg	NS	3,010	0.730 J	0.120 J	<0.130 U	1.800 J	0.330 J	4.400	0.190 J	1.500 J	<0.250 U	<0.087 U	0.096 J	--	<0.042 U	0.240 J	<0.770 U	1.400 J	<0.220 U	<0.210 U
Acenaphthene	mg/kg	NS	45,200	1.400 J	0.560 J	0.610 J	18.000	0.710 J	1.100 J	1.900 J	<0.120 U	0.740 J	0.190 J	0.069 J	--	0.230 J	0.550	<0.420 U	2.200 J	0.180 J	0.380 J
Acenaphthylene	mg/kg	NS	NS	0.260 J	<0.056 U	<0.120 U	<0.480 U	<0.075 U	1.800 J	<0.150 U	<0.200 U	<0.230 U	<0.078 U	0.040 J	--	<0.038 U	0.046 J	<0.690 U	1.000 J	<0.200 U	<0.190 U
Anthracene	mg/kg	196.9492	100,000	4.100	1.600	6.000	39.000	2.600 J	5.800	6.900	0.250 J	1.600 J	0.880 J	0.230 J	--	1.100	1.100	<0.690 U	3.000 J	0.780 J	2.200 J
Benzo(a)anthracene	mg/kg	NS	20.8	11.000	5.300	13.000	**36.000**	6.900 J	14.000	18.000	0.550 J	5.100	4.200	0.620	--	4.600	2.100	0.850 J	5.300	2.700 J	2.500 J
Benzo(a)pyrene	mg/kg	0.47	2.11	***10.000***	***4.600***	***9.600***	***25.000***	***5.700 J***	***8.800***	***13.000***	0.390 J	*1.100 J*	***3.900***	*0.550*	--	***3.700***	*1.600*	<0.810 U	***3.800 J***	***2.200 J***	***2.200 J***
Benzo(b)fluoranthene	mg/kg	0.4793	21.1	*16.000 JK*	*7.100 JK*	*16.000 JK*	***36.000 JK***	*8.800 JK*	*14.000 JK*	*20.000 JK*	*0.790 J*	*7.000*	*6.500 JK*	*0.930 JK*	--	*6.100 JK*	*2.400 JK*	*1.200 J*	*6.200*	*3.500 J*	*3.000 J*
Benzo(g,h,i)perylene	mg/kg	NS	NS	8.400	3.400	5.900	14.000	3.800 J	4.900	9.500	0.380 J	3.000 J	2.300	0.310 J	--	2.800	1.000	1.000 J	2.200 J	1.500 J	1.300 J
Benzo(k)fluoranthene	mg/kg	NS	211	<0.220 UKJ	<0.130 UKJ	<0.270 UKJ	<1.100 UKJ	<0.180 UKJ	<0.280 UKJ	<0.350 UKJ	<0.470 U	<0.530 U	<0.180 UKJ	<0.048 UKJ	--	<0.089 UKJ	<0.048 UKJ	<1.600 U	<0.470 U	<0.460 UJ	<0.450 U
Chrysene	mg/kg	0.1446	2,110	*11.000*	*5.500*	*12.000*	*31.000*	*6.700 J*	*13.000*	*16.000*	*0.950 J*	*5.400*	*4.100*	*0.640*	--	*4.700*	*1.900*	<1.100 U	*5.400*	*2.600 J*	*2.300 J*
Dibenz(a,h)anthracene	mg/kg	NS	2.11	**3.100**	1.200	**2.600**	**5.400 J**	1.400 J	2.000 J	**3.400**	<0.230 U	0.880 J	0.730 J	0.092 J	--	0.760	0.340 J	<0.770 U	0.730 J	0.230 J	0.270 J
Fluoranthene	mg/kg	88.8778	30,100	24.000	9.800	28.000	88.000	14.000 J	28.000	38.000	0.960 J	13.000	8.200	1.300	--	10.000	5.000	<1.500 U	11.000	4.600	7.000
Fluorene	mg/kg	14.8299	30,100	1.500 J	0.540 J	1.300 J	*22.000*	1.300 J	5.600	1.900 J	<0.210 U	1.000 J	0.230 J	0.094 J	--	0.200 J	0.740	<0.730 U	3.200 J	0.280 J	0.460 J
Indeno(1,2,3-cd)pyrene	mg/kg	NS	21.1	7.400	3.000	5.400	12.000	3.500 J	4.600	8.300	0.330 J	2.500 J	2.200	0.290 J	--	2.500	0.940	<0.900 U	1.800 J	1.200 J	1.200 J
Naphthalene	mg/kg	0.6582	24.1	*1.900*	0.620 J	<0.210 U	*2.300 J*	*0.670 J*	*6.900*	<0.270 U	*2.700 J*	*2.800 J*	<0.140 U	0.120 J	--	<0.069 U	0.630	<1.300 U	*22.000*	<0.360 U	<0.350 U
Phenanthrene	mg/kg	NS	NS	15.000	5.000	21.000	110.000	8.500 J	28.000	23.000	1.800 J	8.200	2.900	0.760	--	3.000	4.200	<0.690 U	11.000	2.600 J	4.800
Pyrene	mg/kg	54.5455	22,600	17.000	9.500	24.000	*71.000*	13.000 J	22.000	33.000	0.730 J	9.800	6.200	0.960	--	8.200	3.700	0.990 J	8.200	3.900	5.800
SVOCs																					
1,2,4-Trichlorobenzene	mg/kg	0.408	113	<0.00081 U	<0.00073 U	<0.00080 U	<0.00076 U	<0.00097 UJ	<0.00098 UJ	<0.00068 U	<0.0013 UJ	<0.00087 U	<0.00081 U	<0.00067 U	--	<0.00082 U	<0.00083 U	<0.00075 U	<0.00074 U	<0.00091 UJ	<0.00068 U
2,2-Oxybis(1-chloropropane)	mg/kg	NS	1,020	<0.130 U	<0.076 U	<0.160 U	<0.650 U	<0.025 U	<0.160 U	<0.200 U	<0.270 U	<0.310 U	<0.110 U	<0.027 U	--	<0.051 U	<0.027 U	<0.940 U	<0.270 U	<0.260 U	<0.260 U
2,4-Dinitrotoluene	mg/kg	0.0001	7.37	<0.360 U	<0.220 U	<0.450 U	<1.900 U	<0.290 U	<0.460 U	<0.580 U	<0.780 U	<0.880 U	<0.300 U	<0.079 U	--	<0.150 U	<0.079 U	<2.700 U	<0.770 U	<0.760 U	<0.740 U
2,6-Dinitrotoluene	mg/kg	0.0001	1.54	<0.150 U	<0.093 U	<0.190 U	<0.790 U	<0.120 U	<0.190 U	<0.250 U	<0.330 U	<0.370 U	<0.130 U	<0.033 U	--	<0.062 U	<0.033 U	<1.100 U	<0.330 U	<0.320 U	<0.310 U
2-Chloronaphthalene	mg/kg	NS	60,300	<0.055 U	<0.033 U	<0.068 U	<0.280 U	<0.044 U	<0.069 U	<0.088 U	<0.120 U	<0.130 U	<0.046 U	<0.012 U	--	<0.022 U	<0.012 U	<0.410 U	<0.120 U	<0.120 U	<0.110 U
2-Nitroaniline	mg/kg	NS	8,010	<0.280 U	<0.170 U	<0.340 U	<1.400 U	<0.220 U	<0.340 U	<0.440 U	<0.590 U	<0.660 U	<0.230 U	<0.060 U	--	<0.110 U	<0.060 U	<2.000 U	<0.580 U	<0.580 U	<0.560 U
3,3-Dichlorobenzidine	mg/kg	NS	5.11	<0.500 U	<0.300 U	<0.610 U	<2.600 U	<0.400 U	<0.620 U	<0.790 U	<1.100 U	<1.200 U	<0.410 U	<0.110 U	--	<0.200 U	<0.110 U	<3.700 U	<1.100 U	<1.000 U	<1.000 U
3-Nitroaniline	mg/kg	NS	NS	<0.400 U	<0.240 U	<0.500 U	<2.100 U	<0.320 U	<0.500 U	<0.640 U	<0.870 U	<0.970 U	<0.330 U	<0.087 U	--	<0.160 U	<0.087 U	<3.000 U	<0.850 U	<0.840 U	<0.810 U
4-Bromodiphenyl ether	mg/kg	NS	26.9	<0.100 U	<0.063 U	<0.130 U	<0.540 U	<0.084 U	<0.130 U	<0.170 U	<0.230 U	<0.250 U	<0.087 U	<0.023 U	--	<0.042 U	<0.023 U	<0.770 U	<0.220 U	<0.220 U	<0.210 U
4-Chloroaniline	mg/kg	NS	11.5	<0.450 U	<0.270 U	<0.560 U	<2.300 U	<0.360 U	<0.560 U	<0.720 U	<0.970 U	<1.100 U	<0.370 U	<0.098 U	--	<0.180 U	<0.098 U	<3.300 U	<0.960 U	<0.940 U	<0.910 U
4-Chlorodiphenyl ether	mg/kg	NS	NS	<0.120 U	<0.070 U	<0.140 U	<0.600 U	<0.092 U	<0.140 U	<0.180 U	<0.250 U	<0.280 U	<0.096 U	<0.025 U	--	<0.047 U	<0.025 U	<0.860 U	<0.250 U	<0.240 U	<0.230 U
4-Nitroaniline	mg/kg	NS	115	<0.400 U	<0.240 U	<0.490 U	<2.100 U	<0.320 U	<0.500 U	<0.640 U	<0.860 U	<0.960 U	<0.330 U	<0.086 U	--	<0.160 U	<0.086 U	<3.000 U	<0.850 U	<0.830 U	<0.810 U
Acetophenone	mg/kg	NS	2,520	<0.110 U	<0.066 U	<0.140 U	<0.570 U	<0.088 U	<0.140 U	<0.180 U	<0.240 U	<0.270 U	<0.091 U	<0.024 U	--	<0.044 U	<0.024 U	<0.810 U	<0.230 U	<0.230 U	<0.220 U
Benzaldehyde	mg/kg	NS	818	<0.370 U	<0.220 U	<0.460 U	<1.900 U	<0.290 U	<0.460 U	<0.590 U	<0.790 U	<0.890 U	<0.310 U	<0.080 U	--	<0.150 U	<0.080 U	<2.700 U	<0.780 U	<0.770 U	<0.750 U
Biphenyl	mg/kg	NS	288	<0.280 U	<0.170 U	<0.340 U	<1.400 U	<0.220 U	0.660 J	<0.440 U	<0.590 U	<0.660 U	<0.230 U	<0.060 U	--	<0.110 U	0.066 J	<2.000 U	<0.580 U	<0.580 U	<0.560 U
Bis(2-Chloroethoxy)methane	mg/kg	NS	2,460	<0.130 U	<0.076 U	<0.160 U	<0.650 U	<0.100 U	<0.160 U	<0.200 U	<0.270 U	<0.310 U	<0.110 U	<0.027 U	--	<0.051 U	<0.027 U	<0.940 U	<0.270 U	<0.260 U	<0.260 U
Bis(2-Chloroethyl)ether	mg/kg	NS	1.29	<0.091 U	<0.055 U	<0.110 U	<0.470 U	<0.073 U	<0.110 U	<0.150 U	<0.200 U	<0.220 U	<0.076 U	<0.020 U	--	<0.037 U	<0.020 U	<0.680 U	<0.190 U	<0.190 U	<0.190 U
Bis(2-Ethylhexyl)phthalate	mg/kg	2.88	164	0.620 J	0.310 J	<0.310 U	<1.300 U	<0.200 U	0.820 J	<0.400 U	1.000 J	1.300 J	0.380 J	0.390	--	0.230 J	1.400	<1.900 U	1.200 J	0.930 J	0.850 J
Butyl benzyl phthalate	mg/kg	NS	1,210	<0.240 U	<0.140 U	<0.290 U	<1.200 U	<0.190 U	<0.300 U	<0.380 U	<0.510 U	<0.570 U	<0.200 U	0.091 J	--	<0.095 U	0.074 J	<1.800 U	<0.500 U	<0.490 U	<0.480 U
Caprolactam	mg/kg	NS	100,000	<0.580 U	<0.350 U	<0.720 U	<3.000 U	<0.470 U	<0.730 U	<0.930 U	<1.300 U	<1.400 U	<0.480 U	<0.130 U	--	<0.230 U	<0.130 U	<4.300 U	<1.200 U	<1.200 U	<1.200 U
Carbazole	mg/kg	NS	NS	1.400 J	0.500 J	2.300	6.500 J	0.600 J	2.900	1.400 J	<0.430 U	<0.480 U	0.170 J	0.053 J	--	0.200 J	0.440	<1.500 U	1.400 J	<0.410 U	<0.400 U
Dibenzofuran	mg/kg	NS	1,040	0.920 J	0.280 J	0.620 J	15.000	0.790 J	4.200	1.000 J	0.420 J	0.350 J	0.093 J	0.049 J	--	0.097 J	0.430	<0.810 U	1.400 J	<0.230 U	<0.220 U
Diethyl phthalate	mg/kg	NS	100,000	<0.140 U	<0.086 U	<0.180 U	<0.740 U	<0.110 U	<0.180 U	<0.230 U	<0.310 U	<0.340 U	<0.120 U	<0.031 U	--	<0.058 U	<0.031 U	<1.100 U	<0.300 U	<0.300 U	<0.290 U
Dimethyl phthalate	mg/kg	NS	7,390	<0.130 U	<0.076 U	<0.160 U	<0.650 U	<0.100 U	<0.160 U	<0.200 U	<0.270 U	<0.310 U	<0.110 U	0.061 J	--	<0.051 U	<0.027 U	<0.940 U	<0.270 U	<0.260 U	<0.260 U
Di-n-butyl phthalate	mg/kg	5.0333	82,100	<0.160 U	<0.096 U	<0.200 U	<0.820 U	<0.130 U	<0.200 U	<0.250 U	<0.340 U	<0.380 U	<0.130 U	0.049 J	--	<0.064 U	<0.035 U	<1.200 U	<0.340 U	<0.330 U	<0.320 U
Di-n-octyl phthalate	mg/kg	NS	8,210	<0.079 U	<0.048 U	<0.098 U	<0.410 U	<0.063 U	<0.099 U	<0.130 U	<0.170 U	<0.190 U	<0.066 U	<0.017 U	--	<0.032 U	<0.017 U	<0.590 U	<0.170 U	<0.170 U	<0.160 U
Hexachlorobenzene	mg/kg	0.0252	1.15	<0.160 U	<0.096 U	<0.200 U	<0.820 U	<0.130 U	<0.200 U	<0.250 U	<0.340 U	<0.380 U	<0.130 U	<0.035 U	--	<0.064 U	<0.035 U	<1.200 U	<0.340 U	<0.330 U	<0.320 U
Hexachlorobutadiene	mg/kg	NS	7.19	0.00061 UR	<0.00055 U	0.00060 UR	0.00057 UR	0.00073 UR	0.00074 UR	0.00051 UR	<0.0010 UJ	<0.00066 U	<0.00061 U	<0.00050 U	--	0.00062 UR	0.00062 UR	<0.00056 U	<0.00056 U	<0.00068 UJ	<0.00051 U
Hexachlorocyclopentadiene	mg/kg	NS	10.8	<0.280 U	<0.170 U	<0.340 U	<1.400 U	<0.220 U	<0.340 U	<0.440 U	<0.590 U	<0.660 U	<0.230 U	<0.060 U	--	<0.110 U	<0.060 U	<2.000 U	<0.580 U	<0.580 UJ	<0.560 U
Hexachloroethane	mg/kg	NS	11.1	<0.120 U	<0.071 U	<0.150 U	<0.600 U	<0.094 U	<0.150 U	<0.190 U	<0.250 U	<0.280 U	<0.097 U	<0.025 U	--	<0.047 U	<0.025 U	<0.870 U	<0.250 U	<0.250 U	<0.240 U
Isophorone	mg/kg	NS	2,420	<0.094 U	<0.056 U	<0.120 U	<0.480 U	<0.075 U	<0.120 U	<0.150 U	<0.200 U	<0.230 U	<0.078 U	<0.020 U	--	<0.038 U	<0.020 U	<0.690 U	<0.200 U	<0.200 U	<0.190 U
Nitrobenzene	mg/kg	NS	32.4	<0.120 U	<0.073 U	<0.150 U	<0.620 U	<0.097 U	<0.150 U	<0.190 U	<0.260 U	<0.290 U	<0.100 U	<0.026 U	--	<0.049 U	<0.026 U	<0.900 U	<0.260 U	<0.250 U	<0.250 U
N-nitrosodi-n-propylamine	mg/kg	NS	0.328	<0.170 U	<0.100 U	<0.210 U	<0.880 U	<0.140 U	<0.210 U	<0.270 U	<0.370 U	<0.410 U	<0.140 U	<0.037 U	--	<0.069 U	<0.037 U	<1.300 U	<0.360 U	<0.360 U	<0.350 U
N-Nitrosodiphenylamine	mg/kg	0.0764	469	<0.120 U	<0.070 U	<0.140 U	<0.600 U	<0.092 U	<0.140 U	<0.180 U	<0.250 U	<0.280 U	<0.096 U	<0.025 U	--	<0.047 U	<0.025 U	<0.860 U	<0.250 U	<0.240 U	<0.230 U
Pyridine	mg/kg	0.0069	1,170	<0.720 U	<0.430 U	<0.890 U	<3.700 U	<0.570 U	<0.900 U	<1.100 U	<1.500 U	<1.700 U	<0.590 U	<0.150 U	--	<0.290 U	<0.150 U	<5.300 U	<1.500 U	1.500 UR	<1.500 U

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	CS-SB10		CS-SB11		CS-SB12		CS-SB13	CS-SB14		CS-SB15			CS-SB16		CS-SB17		CS-SB18	
Sample / Duplicate:				CS-SB10	CS-SB10	CS-SB11	CS-SB11	CS-SB12	CS-SB12	CS-SB13	CS-SB14	CS-SB14	CS-SB15	CS-SB15	CS-SB15	CS-SB16	CS-SB16	CS-SB17	CS-SB17	CS-SB18	CS-SB18
Field Sample ID:				CS-SB10-SS-112008	CS-SB10-0405-112008	CS-SB11-SS-112008	CS-SB11-1011-112008	CS-SB12-SS-112008	CS-SB12-0405-112008	CS-SB13-SS-112008	CS-SB14-SS-112108	CS-SB14-0809-112108	CS-SB15-SS-120808	CS-SB15-0810-120808	MSS-CS-SB15-0810-120808	CS-SB16-SS-112008	CS-SB16-0304-112008	CS-SB17-SS-112108	CS-SB17-0809-11208	CS-SB18-SS-112108	CS-SB18-0809-112108
Sample Depth (feet):				0 - 0.5	4 - 5	0 - 0.5	10 - 11	0 - 0.5	4 - 5	0 - 0.5	0 - 0.5	8 - 9	0 - 0.5	8 - 10	8 - 10	0 - 0.5	3 - 4	0 - 0.5	8 - 9	0 - 0.5	8 - 9
Sample Date:				11/20/2008	11/20/2008	11/20/2008	11/20/2008	11/20/2008	11/20/2008	11/20/2008	11/21/2008	11/21/2008	12/08/2008	12/08/2008	12/08/2008	11/20/2008	11/20/2008	11/21/2008	11/21/2008	11/21/2008	11/21/2008
Phenols																					
2,4,5-Trichlorophenol	mg/kg	NS	82,100	<0.055 U	<0.033 U	<0.068 U	<0.280 U	<0.044 UJ	<0.069 U	<0.088 U	<0.120 U	<0.130 U	<0.046 U	<0.012 U	--	<0.022 U	<0.012 U	<0.410 U	<0.120 U	<0.120 U	<0.110 U
2,4,6-Trichlorophenol	mg/kg	NS	209	<0.055 U	<0.033 U	<0.068 U	<0.280 U	<0.044 UJ	<0.069 U	<0.088 U	<0.120 U	<0.130 U	<0.046 U	<0.012 U	--	<0.022 U	<0.012 U	<0.410 U	<0.120 U	<0.120 U	<0.110 U
2,4-Dichlorophenol	mg/kg	NS	2,460	<0.055 U	<0.033 U	<0.068 U	<0.280 U	<0.044 UJ	<0.069 U	<0.088 U	<0.120 U	<0.130 U	<0.046 U	<0.012 U	--	<0.022 U	<0.012 U	<0.410 U	<0.120 U	<0.120 U	<0.110 U
2,4-Dimethylphenol	mg/kg	NS	16,400	<0.360 U	<0.220 U	<0.450 U	<1.900 U	<0.290 U	<0.460 U	<0.580 U	<0.780 U	<0.880 U	<0.300 U	<0.079 U	--	<0.150 U	<0.079 U	<2.700 U	<0.770 U	<0.760 U	<0.740 U
2,4-Dinitrophenol	mg/kg	NS	1,640	<1.800 U	<1.100 U	<2.300 U	<9.400 U	<1.500 U	<2.300 U	<2.900 U	<4.000 U	<4.400 U	<1.500 U	<0.400 U	--	<0.740 U	<0.400 U	<14.000 U	<3.900 U	3.800 UR	<3.700 U
2-Chlorophenol	mg/kg	NS	5,840	<0.120 U	<0.070 U	<0.140 U	<0.600 U	<0.092 U	<0.140 U	<0.180 U	<0.250 U	<0.280 U	<0.096 U	<0.025 U	--	<0.047 U	<0.025 U	<0.860 U	<0.250 U	<0.240 U	<0.230 U
2-Methylphenol	mg/kg	NS	41,000	<0.072 U	<0.043 U	<0.089 U	<0.370 U	<0.057 U	0.290 J	<0.110 U	<0.150 U	<0.170 U	<0.059 U	<0.015 U	--	<0.029 U	<0.015 U	<0.530 U	<0.150 U	<0.150 U	<0.150 U
2-Nitrophenol	mg/kg	NS	NS	<0.055 U	<0.033 U	<0.068 U	<0.280 U	<0.044 UJ	<0.069 U	<0.088 U	<0.120 U	<0.130 U	<0.046 U	<0.012 U	--	<0.022 U	<0.012 U	<0.410 U	<0.120 U	<0.120 U	<0.110 U
4-Chloro-3-methylphenol	mg/kg	NS	82,100	<0.360 U	<0.220 U	<0.450 U	<1.900 U	<0.290 U	<0.460 U	<0.580 U	<0.780 U	<0.880 U	<0.300 U	<0.079 U	--	<0.150 U	<0.079 U	<2.700 U	<0.770 U	<0.760 U	<0.740 U
4-Methylphenol	mg/kg	NS	82,100	<0.180 U	<0.110 U	<0.230 U	<0.940 U	<0.150 U	0.340 J	<0.290 U	<0.390 U	<0.440 U	<0.150 U	<0.039 U	--	<0.073 U	<0.039 U	<1.300 U	<0.390 U	<0.380 U	<0.370 U
4-Nitrophenol	mg/kg	NS	NS	<0.530 U	<0.320 U	<0.660 U	<2.800 U	<0.430 UJ	<0.670 U	<0.850 U	<1.200 U	<1.300 U	<0.440 U	<0.120 U	--	<0.210 U	<0.120 U	<3.900 U	<1.100 U	<1.100 UJ	<1.100 U
4,6-Dinitro-2-methylphenol	mg/kg	NS	65.7	<1.800 U	<1.100 U	<2.300 U	<9.400 U	1.500 UR	<2.300 U	<2.900 U	<3.900 U	<4.400 U	<1.500 U	<0.390 U	--	<0.730 U	<0.390 U	<13.000 U	<3.900 U	3.800 UR	<3.700 U
Pentachlorophenol	mg/kg	0.0028	3.97	<1.800 U	<1.100 U	<2.300 U	<9.400 U	1.500 UR	<2.300 U	<2.900 U	<3.900 U	<4.400 U	<1.500 U	<0.390 U	--	<0.730 U	<0.390 U	<13.000 U	<3.900 U	3.800 UR	<3.700 U
Phenol	mg/kg	2.2946	100,000	<0.099 U	<0.060 U	<0.120 U	<0.510 U	<0.079 U	<0.120 U	<0.160 U	<0.210 U	<0.240 U	<0.082 U	<0.021 U	--	<0.040 U	<0.021 U	<0.730 U	<0.210 U	<0.210 U	<0.200 U
Metals																					
Aluminum, Total	mg/kg	600	100,000	3,600	4,200	5,400	6,200	5,200	4,500	3,700	1,200	4,800	6,800	14,000	--	5,500	6,200	2,500	4,600	7,700	7,100
Antimony, Total	mg/kg	0.542	467	0.160 BJ-	0.036 BJ-	0.041 BJ-	0.019 BJ-	0.042 BJ-	0.087 BJ-	0.870 J-	0.100 BJ-	0.310 J-	0.032 BJ-	<0.017 UJ	--	0.027 BJ-	0.067 BJ-	0.028 BJ-	0.240 J-	0.340 J-	<0.016 UJ-
Arsenic, Total [1]	mg/kg	0.584	8.3	4.800	3.900	2.700	3.900	3.100	3.600	2.800	6.600	**27.000**	2.800	5.500	--	2.800	3.600	1.700	**20.000**	2.700	2.800
Barium, Total	mg/kg	164.8	100,000	58.000	50.000	57.000	45.000	55.000 J+	120.000	45.000	46.000	590.000	54.000	84.000	--	50.000	310.000	21.000	380.000	50.000 J+	30.000
Beryllium, Total	mg/kg	6.32	2,300	0.460	0.250	0.400	0.450	0.390	0.670	0.320	0.860	0.490	0.440	0.700	--	0.430	0.400	0.130	0.450	0.340	0.380
Cadmium, Total	mg/kg	0.752	985	0.720	0.400	0.840	0.450	0.410	0.420	0.400	0.540	1.300	0.450	0.690	--	0.450	0.750	0.200	1.900	0.400	0.250
Calcium, Total	mg/kg	NS	NS	89,000	97,000	110,000	86,000	120,000	60,000	130,000	9,600	73,000	110,000	56,000	--	120,000	120,000	110,000	72,000	63,000	44,000
Chromium, Hexavalent	mg/kg	NS	6.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium, Total [3]	mg/kg	360,000	NS	32.000	12.000	12.000	13.000	14.000 J-	12.000	10.000	7.500	360.000	11.000	27.000	--	10.000	21.000	10.000	290.000	9.500	14.000
Chromium, Trivalent	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt, Total	mg/kg	3.6073	347	4.800	3.800	2.900	7.000	3.200 J-	5.900	2.700	4.300	5.000	3.400	10.000	--	3.200	4.100	1.900	4.900	3.400	5.800
Copper, Total	mg/kg	91.6	46,700	29.000	17.000	14.000	18.000	14.000 J	14.000	12.000	23.000	46.000	19.000	21.000	--	13.000	22.000	9.300	48.000	16.000 J-	16.000
Iron, Total	mg/kg	NS	100,000	33,000	8,900	14,000	11,000	6,700	7,600	5,300	4,200	10,000	10,000	19,000	--	7,700	11,000	5,200	10,000	8,500	13,000
Lead, Total	mg/kg	27	800	**820.000**	54.000	36.000	48.000	50.000 J-	130.000	85.000	150.000 J	210.000 J	49.000	34.000	--	44.000	**840.000**	12.000 J	170.000 J	150.000 J	7.600 J
Magnesium, Total	mg/kg	NS	NS	38,000	35,000	41,000	44,000	54,000	30,000	60,000	3,700	27,000	35,000	24,000	--	48,000	51,000	61,000	35,000	27,000	20,000
Manganese, Total	mg/kg	39.1244	25,900	330.000	340.000	370.000	430.000	320.000	200.000	300.000	60.000	290.000	340.000 J	660.000 J	--	460.000	450.000	170.000	260.000	250.000	200.000
Mercury, Total	mg/kg	0.208	3.13	0.120	0.110	0.044	0.086	0.057	0.089	0.043	0.042	0.730	0.053	0.092	--	0.038	0.140	0.018	0.470	0.058 J+	0.016 B
Nickel, Total	mg/kg	13.0612	22,500	23.000	14.000	10.000	17.000	11.000 J-	12.000	11.000	12.000	14.000	12.000	25.000	--	12.000	22.000	7.300	17.000	11.000 J-	14.000
Potassium, Total	mg/kg	NS	NS	760	850	860	1,300	700	1,000	570	270 B	880	1,100	2,000	--	800	1,100	480	1,100	2,100	1,300
Selenium, Total	mg/kg	0.52	5,840	0.700	0.460 B	0.230 B	0.200 B	0.420 B	0.970	0.400 B	1.700	1.200	0.550 B	0.800	--	0.300 B	0.440 B	0.290 B	0.930	0.540 B	0.490 B
Silver, Total	mg/kg	0.8491	5,840	0.054 B	0.060 B	0.057 B	0.072 B	0.110 J-	0.047 B	0.064 B	0.040 B	0.750	0.061 B	0.082 B	--	0.052 B	1.100	0.038 B	0.860	0.041 B	0.044 B
Sodium, Total	mg/kg	NS	NS	190 B	260 B	230 B	310 B	270 B	350 B	190 B	110 B	290 B	310 B	220 B	--	<65 UB	<70 UB	230 B	290 B	1,200	190 B
Thallium, Total	mg/kg	0.284	11.7	0.100 B	0.096 B	0.074 B	0.190	0.085 B	0.150	0.074 B	0.140	0.220	<0.0040 UJB	0.290 J	--	0.077 B	0.097 B	0.019 B	0.200	0.073 B	0.150
Vanadium, Total	mg/kg	60	5,840	19.000	13.000	13.000	20.000	14.000	16.000	15.000	13.000	4.800	13.000	31.000	--	13.000	16.000	14.000	7.300	19.000	22.000
Zinc, Total	mg/kg	NS	100,000	160.000	96.000	69.000	74.000	56.000 J+	270.000	49.000	83.000 J	170.000 J	59.000	96.000	--	55.000	290.000	23.000 J	150.000 J	82.000 J	32.000 J
Inorganic - Cyanide																					
Cyanide, Amenable	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Reactive	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Total	mg/kg	4.04	195	3.9 J-	0.24 B	0.55 BJ-	1.9	2.9 J-	0.18 B	0.22 BJ-	0.9 J	1.4	0.74	0.18 B	--	0.18 BJ-	2.9	0.15 JB	0.23 B	1.3 J	0.6
Other																					
Sulfide, Reactive	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organic Matter	%	NS	NS	--	--	--	--	--	--	--	--	--	--	--	2.5	--	--	--	--	--	--
Percent Moisture	%	NS	NS	9.2	9.5	12	12	9.1	13	9	16	25	12	16	20.3	9.7	16	3.4	14	13	10

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	CS-SB19		CS-SB20		CS-SB21		CS-SB 31		CS-SB 32		CS-SB 33		CS-SB 34		CS-TT01	CS-TT02	CS-TT03
Sample / Duplicate:				CS-SB19	CS-SB19	CS-SB20	CS-SB20 DUP	CS-SB21	CS-SB21	CS-SB 31	CS-SB 31	CS-SB 32	CS-SB 32	CS-SB 33	CS-SB 33	CS-SB 34	CS-SB 34	CS-TT01	CS-TT02	CS-TT03
Field Sample ID:				CS-SB19-SS-112108	CS-SB19-0405 112108	CS-SB20-SS-112108	CS-SBDUP003-112108	CS-SB21-SS-112108	CS-SB21-0708 112108	CS-SB 31 (0-0.5) 06092015	CS-SB 31 (4-6) 06092015	CS-SB 32 (0-0.5) 06092015	CS-SB 32(4-6) 06092015	CS-SB 33 (0-0.5) 06092015	CS-SB 33 (4-6) 06092015	CS-SB 34 (0-0.5) 06092015	CS-SB 34 (4-6) 06092015	CS-TT01-0607-101308	CS-TT02-0506-101408	CS-TT03-0708-101408
Sample Depth (feet):				0 - 0.5	4 - 5	0 - 0.5	0 - 0.5	0 - 0.5	7 - 8	0 - 0.5	4 - 6	0 - 0.5	4 - 6	0 - 0.5	4 - 6	0 - 0.5	4 - 6	6 - 7	5 - 6	7 - 8
Sample Date:				11/21/2008	11/21/2008	11/21/2008	11/21/2008	11/21/2008	11/21/2008	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	10/13/2008	10/14/2008	10/14/2008
VOCs																				
1,1,1-Trichloroethane	mg/kg	0.1402	640	<0.00087 U	<0.00072 U	<0.00089 U	<0.00085 U	<0.00078 U	<0.0010 U	--	--	--	--	--	--	--	--	<0.00099 U	<0.00059 U	<0.00074 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0002	3.6	<0.0010 UJ	<0.00085 U	<0.0010 U	<0.00099 U	<0.00091 UJ	<0.0012 U	--	--	--	--	--	--	--	--	<0.0012 U	<0.00069 U	<0.00087 U
1,1,2-Trichloroethane	mg/kg	0.0032	7.01	<0.0015 UJ	<0.0012 U	<0.0015 U	<0.0014 U	<0.0013 U	<0.0017 U	--	--	--	--	--	--	--	--	<0.0017 U	<0.0010 U	<0.0013 U
1,1-Dichloroethane	mg/kg	0.4834	22.2	<0.00035 U	<0.00029 U	<0.00036 U	<0.00034 U	<0.00031 U	<0.00041 U	--	--	--	--	--	--	--	--	<0.00040 U	<0.00024 U	<0.00030 U
1,1-Dichloroethene	mg/kg	0.005	1,190	<0.00099 U	<0.00082 U	<0.0010 U	<0.00096 U	<0.00088 U	<0.0012 U	--	--	--	--	--	--	--	--	<0.0011 U	<0.00067 U	<0.00084 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0002	0.092	<0.0010 UJ	<0.00083 U	<0.0010 U	<0.00098 U	<0.00090 UJ	<0.0012 U	--	--	--	--	--	--	--	--	<0.0011 U	<0.00068 U	<0.00085 U
1,2-Dibromoethane	mg/kg	0.0000282	0.221	<0.00087 UJ	<0.00072 U	<0.00089 U	<0.00085 U	<0.00078 U	<0.0010 U	--	--	--	--	--	--	--	--	<0.00099 U	<0.00059 U	<0.00074 U
1,2-Dichlorobenzene	mg/kg	1.168	376	<0.00075 UJ	<0.00063 U	<0.00077 U	<0.00073 U	<0.00067 UJ	<0.00088 U	--	--	--	--	--	--	--	--	<0.00086 U	<0.00051 U	<0.00064 U
1,2-Dichloroethane	mg/kg	0.0028	2.87	<0.0012 U	<0.00097 U	<0.0012 U	<0.0011 U	<0.0010 U	<0.0014 U	--	--	--	--	--	--	--	--	<0.0013 U	<0.00079 U	<0.00099 U
1,2-Dichloropropane	mg/kg	0.0033	1.78	<0.00092 U	<0.00077 U	<0.00094 U	<0.00090 U	<0.00082 U	<0.0011 U	--	--	--	--	--	--	--	--	<0.0010 U	<0.00062 U	<0.00078 U
1,3-Dichlorobenzene	mg/kg	1.1528	297	<0.00080 UJ	<0.00067 U	<0.00082 U	<0.00078 U	<0.00072 UJ	<0.00094 U	--	--	--	--	--	--	--	--	<0.00091 U	<0.00054 U	<0.00068 U
1,4-Dichlorobenzene	mg/kg	0.144	16.4	<0.0013 UJ	<0.0011 U	<0.0013 U	<0.0013 U	<0.0012 UJ	<0.0015 U	--	--	--	--	--	--	--	--	<0.0015 U	<0.00088 U	<0.0011 U
2-Butanone (MEK)	mg/kg	1.6661	28,400	<0.0031 U	0.011 J	<0.0031 U	<0.0030 U	<0.0027 U	<0.0036 U	--	--	--	--	--	--	--	--	<0.0035 U	0.0026 J	0.004 J
2-Hexanone	mg/kg	NS	1,760	<0.0082 U	<0.0068 U	<0.0083 U	<0.0080 U	<0.0073 U	<0.0096 U	--	--	--	--	--	--	--	--	<0.0093 U	<0.0055 U	<0.0069 U
4-Methyl-2-Pentanone (MIBK)	mg/kg	0.2252	3,360	<0.0073 UJ	<0.0061 U	<0.0074 U	<0.0071 U	<0.0065 U	<0.0085 U	--	--	--	--	--	--	--	--	<0.0083 U	<0.0049 U	<0.0062 U
Acetone	mg/kg	3.6766	100,000	<0.0090 U	0.060	0.0096 J	<0.0088 U	0.044	<0.011 U	--	--	--	--	--	--	--	--	0.013 J	<0.0061 UJB	<0.0076 UJB
Benzene	mg/kg	0.0051	7.07	0.0013 J	<0.00065 U	0.0018 J	<0.00077 U	0.0038 J	0.0042 J	--	--	--	--	--	--	--	--	<0.00089 U	<0.00053 U	<0.00067 U
Bromodichloromethane	mg/kg	0.0003	1.83	<0.00037 UJ	<0.00031 U	<0.00038 U	<0.00036 U	<0.00033 U	<0.00043 U	--	--	--	--	--	--	--	--	<0.00042 U	<0.00025 U	<0.00031 U
Bromoform	mg/kg	0.0023	113	<0.00038 UJ	<0.00032 U	<0.00039 U	<0.00037 U	<0.00034 U	<0.00045 U	--	--	--	--	--	--	--	--	<0.00044 U	<0.00026 U	<0.00033 U
Bromomethane	mg/kg	0.0051	43	<0.00084 U	<0.00070 U	<0.00085 U	<0.00081 U	<0.00075 U	<0.00098 U	--	--	--	--	--	--	--	--	<0.00095 U	<0.00057 U	<0.00071 U
Carbon Disulfide	mg/kg	0.5919	738	<0.00070 U	0.00064 J	0.0013 J	<0.00068 U	<0.00063 U	<0.00082 U	--	--	--	--	--	--	--	--	<0.00080 U	<0.00048 U	<0.00060 U
Carbon Tetrachloride	mg/kg	0.0039	4.03	<0.0011 U	<0.00088 U	<0.0011 U	<0.0010 U	<0.00094 U	<0.0012 U	--	--	--	--	--	--	--	--	<0.0012 U	<0.00071 U	<0.00089 U
Chlorobenzene	mg/kg	0.1358	761	<0.00090 UJ	<0.00075 U	<0.00092 U	<0.00088 U	<0.00081 U	<0.0011 U	--	--	--	--	--	--	--	--	<0.0010 U	<0.00061 U	<0.00077 U
Chloroethane	mg/kg	0.2266	2,120	<0.0015 U	<0.0012 U	<0.0015 U	<0.0014 U	<0.0013 U	<0.0017 U	--	--	--	--	--	--	--	--	<0.0017 U	<0.0010 U	<0.0013 U
Chloroform	mg/kg	0.0033	1.98	<0.00049 U	<0.00040 U	<0.00049 U	<0.00047 U	<0.00043 U	<0.00057 U	--	--	--	--	--	--	--	--	<0.00055 U	<0.00033 U	<0.00041 U
Chloromethane	mg/kg	0.0155	669	<0.0013 U	<0.0011 U	<0.0013 U	<0.0013 U	<0.0012 U	<0.0015 U	--	--	--	--	--	--	--	--	<0.0015 U	<0.00087 U	<0.0011 U
cis-1,2-Dichloroethene	mg/kg	0.0412	2,340	<0.00094 U	<0.00078 U	<0.00095 U	<0.00091 U	<0.00084 U	<0.0011 U	--	--	--	--	--	--	--	--	<0.0011 U	<0.00063 U	<0.00080 U
cis-1,3-Dichloropropene	mg/kg	NS	1,210	<0.0022 UJ	<0.0018 U	<0.0022 U	<0.0021 U	<0.0019 U	<0.0025 U	--	--	--	--	--	--	--	--	<0.0025 U	<0.0015 U	<0.0018 U
Cyclohexane	mg/kg	NS	117	0.00068 J	0.0012 J	0.0025 J	<0.00065 U	0.0057 J	<0.00078 U	--	--	--	--	--	--	--	--	0.0015 J	<0.00045 U	0.00072 J
Dibromochloromethane	mg/kg	0.032	38.9	<0.00095 UJ	<0.00079 U	<0.00097 U	<0.00093 U	<0.00085 U	<0.0011 U	--	--	--	--	--	--	--	--	<0.0011 U	<0.00064 U	<0.00081 U
Dichloromethane	mg/kg	0.0026	1,150	<0.0013 U	<0.0010 U	<0.0013 U	<0.0012 U	<0.0011 U	<0.0015 U	--	--	--	--	--	--	--	--	<0.0014 U	<0.00085 U	<0.0011 U
Ethylbenzene	mg/kg	1.57	35.4	<0.0011 UJ	<0.00093 U	<0.0011 U	<0.0011 U	<0.0010 U	<0.0013 U	--	--	--	--	--	--	--	--	<0.0013 U	<0.00076 U	<0.00095 U
Freon 113	mg/kg	NS	910	<0.00075 U	<0.00063 U	<0.00077 U	<0.00073 U	<0.00067 U	<0.00088 U	--	--	--	--	--	--	--	--	<0.00086 U	<0.00051 U	<0.00064 U
Freon 12	mg/kg	3.0863	530	<0.00087 U	<0.00072 U	<0.00089 U	<0.00085 U	<0.00078 U	<0.0010 U	--	--	--	--	--	--	--	--	<0.00099 U	<0.00059 U	<0.00074 U
Isopropylbenzene	mg/kg	NS	268	<0.00099 UJ	<0.00082 U	<0.0010 U	<0.00096 U	<0.00088 UJ	<0.0012 U	--	--	--	--	--	--	--	--	<0.0011 U	<0.00067 U	<0.00084 U
Methyl acetate	mg/kg	NS	29,000	<0.0046 U	<0.0038 U	<0.0047 U	<0.0045 U	0.079	<0.0054 U	--	--	--	--	--	--	--	--	<0.0052 U	<0.0031 U	<0.0039 U
Methylcyclohexane	mg/kg	NS	67.6	0.0021 J	0.0016 J	0.0044 J	<0.00068 U	0.0045 J	<0.00082 U	--	--	--	--	--	--	--	--	0.0013 J	<0.00048 U	0.0016 J
Methyl-tert-butyl-ether	mg/kg	0.027	282	<0.00057 U	<0.00047 U	<0.00058 U	<0.00055 U	<0.00051 U	<0.00067 U	--	--	--	--	--	--	--	--	<0.00065 U	<0.00038 U	<0.00048 U
Styrene	mg/kg	0.22	867	<0.0011 UJ	<0.00088 U	<0.0011 U	<0.0010 U	<0.00094 U	<0.0012 U	--	--	--	--	--	--	--	--	<0.0012 U	<0.00071 U	<0.00089 U
Tetrachloroethene	mg/kg	0.0045	145	<0.00099 UJ	<0.00082 U	<0.0010 U	<0.00096 U	<0.00088 U	<0.0012 U	--	--	--	--	--	--	--	--	<0.0011 U	<0.00067 U	<0.00084 U
Toluene	mg/kg	1.1072	818	0.0015 J	<0.00096 U	0.0018 J	<0.0011 U	0.017	0.0014 J	--	--	--	--	--	--	--	--	<0.0013 U	<0.00078 U	<0.00098 U
trans-1,2-Dichloroethene	mg/kg	0.0626	1,850	<0.00065 U	<0.00054 U	<0.00067 U	<0.00064 U	<0.00058 U	<0.00076 U	--	--	--	--	--	--	--	--	<0.00074 U	<0.00044 U	<0.00055 U
trans-1,3-Dichloropropene	mg/kg	NS	1,510	<0.0011 UJ	<0.00093 U	<0.0011 U	<0.0011 U	<0.0010 U	<0.0013 U	--	--	--	--	--	--	--	--	<0.0013 U	<0.00076 U	<0.00095 U
Trichloroethene	mg/kg	0.0036	8.41	<0.00038 U	<0.00032 U	<0.00039 U	<0.00037 U	<0.00034 U	<0.00045 U	--	--	--	--	--	--	--	--	<0.00044 U	<0.00026 U	<0.00033 U
Trichlorofluoromethane	mg/kg	4.4775	1,230	<0.0017 U	<0.0014 U	<0.0018 U	<0.0017 U	<0.0016 U	<0.0020 U	--	--	--	--	--	--	--	--	<0.0020 U	<0.0012 U	<0.0015 U
Vinyl Chloride	mg/kg	0.0001	2.08	<0.0022 U	<0.0019 U	<0.0023 U	<0.0022 U	<0.0020 U	<0.0026 U	--	--	--	--	--	--	--	--	<0.0025 U	<0.0015 U	<0.0019 U
Xylenes, Total	mg/kg	3.96	260	<0.0010 UJ	<0.00085 U	<0.0010 U	<0.00099 U	0.0027 J	<0.0012 U	--	--	--	--	--	--	--	--	<0.0012 U	<0.00069 U	<0.00087 U
PCBs																				
PCB, Total [4]	mg/kg	0.0094	0.967	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1016	mg/kg	NS	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1221	mg/kg	NS	0.883	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1232	mg/kg	NS	0.792	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1242	mg/kg	NS	0.972	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1248	mg/kg	NS	0.975	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1254	mg/kg	NS	0.988	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1260	mg/kg	NS	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	CS-SB19		CS-SB20		CS-SB21		CS-SB 31		CS-SB 32		CS-SB 33		CS-SB 34		CS-TT01	CS-TT02	CS-TT03
Sample / Duplicate:				CS-SB19	CS-SB19	CS-SB20	CS-SB20 DUP	CS-SB21	CS-SB21	CS-SB 31	CS-SB 31	CS-SB 32	CS-SB 32	CS-SB 33	CS-SB 33	CS-SB 34	CS-SB 34	CS-TT01	CS-TT02	CS-TT03
Field Sample ID:				CS-SB19-SS-112108	CS-SB19-0405-112108	CS-SB20-SS-112108	CS-SBDUP003-112108	CS-SB21-SS-112108	CS-SB21-0708-112108	CS-SB 31 (0-0.5) 06092015	CS-SB 31 (4-6) 06092015	CS-SB 32 (0-0.5) 06092015	CS-SB 32(4-6) 06092015	CS-SB 33 (0-0.5) 06092015	CS-SB 33 (4-6) 06092015	CS-SB 34 (0-0.5) 06092015	CS-SB 34 (4-6) 06092015	CS-TT01-0607-101308	CS-TT02-0506-101408	CS-TT03-0708-101408
Sample Depth (feet):				0 - 0.5	4 - 5	0 - 0.5	0 - 0.5	0 - 0.5	7 - 8	0 - 0.5	4 - 6	0 - 0.5	4 - 6	0 - 0.5	4 - 6	0 - 0.5	4 - 6	6 - 7	5 - 6	7 - 8
Sample Date:				11/21/2008	11/21/2008	11/21/2008	11/21/2008	11/21/2008	11/21/2008	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	10/13/2008	10/14/2008	10/14/2008
PAHs																				
2-Methylnaphthalene	mg/kg	NS	3,010	0.380 J	0.430 J	0.520 J	0.910 J	<0.220 U	<0.029 U	--	--	--	--	--	--	--	--	1.200	0.140 J	7.000
Acenaphthene	mg/kg	NS	45,200	0.710 J	0.620 J	1.500 J	7.800 J	<0.120 U	<0.016 U	--	--	--	--	--	--	--	--	0.180 J	0.340 J	11.000
Acenaphthylene	mg/kg	NS	NS	0.220 J	<0.200 U	0.430 J	<0.430 U	<0.200 U	<0.026 U	--	--	--	--	--	--	--	--	0.210 J	0.140 J	1.200 J
Anthracene	mg/kg	196.9492	100,000	2.700 J	2.200 J	4.000	15.000	<0.200 U	<0.026 U	--	--	--	--	--	--	--	--	0.490	0.640	18.000
Benzo(a)anthracene	mg/kg	NS	20.8	10.000	5.000	12.000	**43.000**	0.630 J	0.480 J	--	--	--	--	--	--	--	--	0.590 B	1.100	**26.000**
Benzo(a)pyrene	mg/kg	0.47	2.11	***8.400***	***4.100***	***10.000***	***36.000***	*0.630 J*	*0.480 J*	--	--	--	--	--	--	--	--	0.410	*0.900*	***20.000***
Benzo(b)fluoranthene	mg/kg	0.4793	21.1	*13.000*	*6.100*	*16.000*	***54.000***	*1.100 J*	*0.930*	--	--	--	--	--	--	--	--	*0.700 BK*	*1.500 K*	***32.000 JK***
Benzo(g,h,i)perylene	mg/kg	NS	NS	6.100	2.600 J	6.800	25.000	0.490 J	0.310 J	--	--	--	--	--	--	--	--	0.280 J	0.580	11.000
Benzo(k)fluoranthene	mg/kg	NS	211	<0.460 U	<0.480 U	<0.490 U	<1.000 U	<0.470 U	<0.060 U	--	--	--	--	--	--	--	--	<0.045 UK	<0.045 UK	<0.450 UKJ
Chrysene	mg/kg	0.1446	2,110	*8.400*	*4.500*	*10.000*	*40.000*	*0.680 J*	*0.570*	--	--	--	--	--	--	--	--	*0.840 B*	*1.200*	*26.000*
Dibenz(a,h)anthracene	mg/kg	NS	2.11	0.640 J	0.310 J	0.870 J	**9.500**	0.240 J	0.072 J	--	--	--	--	--	--	--	--	0.097 J	0.150 J	**3.200 J**
Fluoranthene	mg/kg	88.8778	30,100	18.000	9.700	24.000	*89.000*	0.730 J	0.270 J	--	--	--	--	--	--	--	--	1.800 B	2.800	56.000
Fluorene	mg/kg	14.8299	30,100	0.910 J	0.760 J	1.800 J	7.000 J	<0.210 U	<0.027 U	--	--	--	--	--	--	--	--	0.680	0.560	14.000
Indeno(1,2,3-cd)pyrene	mg/kg	NS	21.1	5.400	2.300 J	6.200	**23.000**	0.480 J	0.300 J	--	--	--	--	--	--	--	--	0.220 J	0.510	10.000
Naphthalene	mg/kg	0.6582	24.1	0.470 J	0.460 J	*0.740 J*	*1.400 J*	<0.370 U	<0.047 U	--	--	--	--	--	--	--	--	*0.970*	0.230 J	*11.000*
Phenanthrene	mg/kg	NS	NS	8.500	6.400	15.000	64.000	0.340 J	0.046 J	--	--	--	--	--	--	--	--	1.800 B	2.400	54.000
Pyrene	mg/kg	54.5455	22,600	15.000	9.000	20.000	*81.000*	0.620 J	0.250 J	--	--	--	--	--	--	--	--	1.300 B	2.200	51.000
SVOCs																				
1,2,4-Trichlorobenzene	mg/kg	0.408	113	<0.0012 UJ	<0.0010 U	<0.0012 U	<0.0012 U	<0.0011 UJ	<0.0014 U	--	--	--	--	--	--	--	--	<0.0014 U	<0.00083 U	<0.0010 U
2,2-Oxybis(1-chloropropane)	mg/kg	NS	1,020	<0.270 U	<0.270 U	<0.280 U	<0.580 U	<0.270 U	<0.035 U	--	--	--	--	--	--	--	--	<0.026 U	<0.026 U	<0.260 U
2,4-Dinitrotoluene	mg/kg	0.0001	7.37	<0.770 U	<0.780 U	<0.800 U	<1.700 U	<0.780 U	<0.099 U	--	--	--	--	--	--	--	--	<0.074 U	<0.075 U	<0.740 U
2,6-Dinitrotoluene	mg/kg	0.0001	1.54	<0.330 U	<0.330 U	<0.340 U	<0.700 U	<0.330 U	<0.042 U	--	--	--	--	--	--	--	--	<0.031 U	<0.032 U	<0.310 U
2-Chloronaphthalene	mg/kg	NS	60,300	<0.120 U	<0.120 U	<0.120 U	<0.250 U	<0.120 U	<0.015 U	--	--	--	--	--	--	--	--	<0.011 U	<0.011 U	<0.110 U
2-Nitroaniline	mg/kg	NS	8,010	<0.580 U	<0.590 U	<0.610 U	<1.300 U	<0.590 U	<0.075 U	--	--	--	--	--	--	--	--	<0.056 U	<0.057 U	<0.560 U
3,3-Dichlorobenzidine	mg/kg	NS	5.11	<1.000 U	<1.100 U	<1.100 U	<2.300 U	<1.100 U	<0.140 U	--	--	--	--	--	--	--	--	<0.100 U	<0.100 U	<1.000 U
3-Nitroaniline	mg/kg	NS	NS	<0.850 U	<0.870 U	<0.890 U	<1.800 U	<0.860 U	<0.110 U	--	--	--	--	--	--	--	--	<0.082 U	<0.083 U	<0.820 U
4-Bromodiphenyl ether	mg/kg	NS	26.9	<0.220 U	<0.230 U	<0.230 U	<0.480 U	<0.220 U	<0.029 U	--	--	--	--	--	--	--	--	<0.021 U	<0.021 U	<0.210 U
4-Chloroaniline	mg/kg	NS	11.5	<0.950 U	<0.970 U	<1.000 U	<2.100 U	<0.970 U	<0.120 U	--	--	--	--	--	--	--	--	<0.092 U	<0.093 U	<0.920 U
4-Chlorodiphenyl ether	mg/kg	NS	NS	<0.240 U	<0.250 U	<0.260 U	<0.530 U	<0.250 U	<0.032 U	--	--	--	--	--	--	--	--	<0.023 U	<0.024 U	<0.230 U
4-Nitroaniline	mg/kg	NS	115	<0.840 U	<0.860 U	<0.880 U	<1.800 U	<0.850 U	<0.110 U	--	--	--	--	--	--	--	--	<0.081 U	<0.082 U	<0.810 U
Acetophenone	mg/kg	NS	2,520	<0.230 U	<0.240 U	<0.240 U	<0.500 U	<0.240 U	<0.030 U	--	--	--	--	--	--	--	--	<0.022 U	<0.023 U	<0.220 U
Benzaldehyde	mg/kg	NS	818	<0.780 U	<0.800 U	<0.820 U	<1.700 U	<0.790 U	<0.100 U	--	--	--	--	--	--	--	--	<0.075 U	<0.076 U	<0.750 U
Biphenyl	mg/kg	NS	288	<0.580 U	<0.590 U	<0.610 U	<1.300 U	<0.590 U	<0.075 U	--	--	--	--	--	--	--	--	0.490	<0.057 U	1.700 J
Bis(2-Chloroethoxy)methane	mg/kg	NS	2,460	<0.270 U	<0.270 U	<0.280 U	<0.580 U	<0.270 U	<0.035 U	--	--	--	--	--	--	--	--	<0.026 U	<0.026 U	<0.260 U
Bis(2-Chloroethyl)ether	mg/kg	NS	1.29	<0.190 U	<0.200 U	<0.200 U	<0.420 U	<0.200 U	<0.025 U	--	--	--	--	--	--	--	--	<0.019 U	<0.019 U	<0.190 U
Bis(2-Ethylhexyl)phthalate	mg/kg	2.88	164	<0.530 U	0.920 J	1.100 J	<1.200 U	0.920 J	0.120 J	--	--	--	--	--	--	--	--	*3.100*	0.091 J	0.640 J
Butyl benzyl phthalate	mg/kg	NS	1,210	<0.500 U	<0.510 U	<0.520 U	<1.100 U	<0.510 U	<0.065 U	--	--	--	--	--	--	--	--	<0.048 U	<0.049 U	<0.480 U
Caprolactam	mg/kg	NS	100,000	<1.200 U	<1.300 U	<1.300 U	<2.700 U	<1.200 U	<0.160 U	--	--	--	--	--	--	--	--	<0.120 U	<0.120 U	<1.200 U
Carbazole	mg/kg	NS	NS	0.550 J	<0.430 U	1.400 J	5.300 J	<0.420 U	<0.054 U	--	--	--	--	--	--	--	--	0.170 J	0.220 J	6.400
Dibenzofuran	mg/kg	NS	1,040	0.490 J	0.600 J	0.910 J	3.600 J	<0.240 U	<0.030 U	--	--	--	--	--	--	--	--	0.340 J	0.230 J	9.800
Diethyl phthalate	mg/kg	NS	100,000	<0.300 U	<0.310 U	<0.320 U	<0.650 U	<0.310 U	<0.039 U	--	--	--	--	--	--	--	--	<0.029 U	<0.029 U	<0.290 U
Dimethyl phthalate	mg/kg	NS	7,390	<0.270 U	<0.270 U	<0.280 U	<0.580 U	<0.270 U	<0.035 U	--	--	--	--	--	--	--	--	<0.026 U	<0.026 U	<0.260 U
Di-n-butyl phthalate	mg/kg	5.0333	82,100	<0.340 U	<0.340 U	<0.350 U	<0.730 U	<0.340 U	<0.044 U	--	--	--	--	--	--	--	--	<0.032 U	<0.033 U	<0.320 U
Di-n-octyl phthalate	mg/kg	NS	8,210	<0.170 U	<0.170 U	<0.180 U	<0.360 U	<0.170 U	<0.022 U	--	--	--	--	--	--	--	--	<0.016 U	<0.016 U	<0.160 U
Hexachlorobenzene	mg/kg	0.0252	1.15	<0.340 U	<0.340 U	<0.350 U	<0.730 U	<0.340 U	<0.044 U	--	--	--	--	--	--	--	--	<0.032 U	<0.033 U	<0.320 U
Hexachlorobutadiene	mg/kg	NS	7.19	<0.00092 UJ	<0.00077 U	<0.00094 U	<0.00090 U	<0.00082 UJ	<0.0011 U	--	--	--	--	--	--	--	--	<0.0010 U	<0.00062 U	<0.00078 U
Hexachlorocyclopentadiene	mg/kg	NS	10.8	<0.580 U	<0.590 U	<0.610 U	<1.300 U	<0.590 U	<0.075 U	--	--	--	--	--	--	--	--	<0.056 U	<0.057 U	<0.560 U
Hexachloroethane	mg/kg	NS	11.1	<0.250 U	<0.250 U	<0.260 U	<0.530 U	<0.250 U	<0.032 U	--	--	--	--	--	--	--	--	<0.024 U	<0.024 U	<0.240 U
Isophorone	mg/kg	NS	2,420	<0.200 U	<0.200 U	<0.210 U	<0.430 U	<0.200 U	<0.026 U	--	--	--	--	--	--	--	--	<0.019 U	<0.019 U	<0.190 U
Nitrobenzene	mg/kg	NS	32.4	<0.260 U	<0.260 U	<0.270 U	<0.550 U	<0.260 U	<0.033 U	--	--	--	--	--	--	--	--	<0.025 U	<0.025 U	<0.250 U
N-nitrosodi-n-propylamine	mg/kg	NS	0.328	<0.360 U	<0.370 U	<0.380 U	<0.780 U	<0.370 U	<0.047 U	--	--	--	--	--	--	--	--	<0.035 U	<0.035 U	<0.350 U
N-Nitrosodiphenylamine	mg/kg	0.0764	469	<0.240 U	<0.250 U	<0.260 U	<0.530 U	<0.250 U	<0.032 U	--	--	--	--	--	--	--	--	<0.023 U	<0.024 U	<0.230 U
Pyridine	mg/kg	0.0069	1,170	<1.500 U	<1.500 U	<1.600 U	<3.300 U	<1.500 U	<0.200 U	--	--	--	--	--	--	--	--	<0.150 U	<0.150 U	<1.500 U

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	CS-SB19		CS-SB20		CS-SB21		CS-SB 31		CS-SB 32		CS-SB 33		CS-SB 34		CS-TT01	CS-TT02	CS-TT03
Sample / Duplicate:				CS-SB19	CS-SB19	CS-SB20	CS-SB20 DUP	CS-SB21	CS-SB21	CS-SB 31	CS-SB 31	CS-SB 32	CS-SB 32	CS-SB 33	CS-SB 33	CS-SB 34	CS-SB 34	CS-TT01	CS-TT02	CS-TT03
Field Sample ID:				CS-SB19-SS-112108	CS-SB19-0405-112108	CS-SB20-SS-112108	CS-SBDUP003-112108	CS-SB21-SS-112108	CS-SB21-0708-112108	CS-SB 31 (0-0.5) 06092015	CS-SB 31 (4-6) 06092015	CS-SB 32 (0-0.5) 06092015	CS-SB 32(4-6) 06092015	CS-SB 33 (0-0.5) 06092015	CS-SB 33 (4-6) 06092015	CS-SB 34 (0-0.5) 06092015	CS-SB 34 (4-6) 06092015	CS-TT01-0607-101308	CS-TT02-0506-101408	CS-TT03-0708-101408
Sample Depth (feet):				0 - 0.5	4 - 5	0 - 0.5	0 - 0.5	0 - 0.5	7 - 8	0 - 0.5	4 - 6	0 - 0.5	4 - 6	0 - 0.5	4 - 6	0 - 0.5	4 - 6	6 - 7	5 - 6	7 - 8
Sample Date:				11/21/2008	11/21/2008	11/21/2008	11/21/2008	11/21/2008	11/21/2008	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	10/13/2008	10/14/2008	10/14/2008
Phenols																				
2,4,5-Trichlorophenol	mg/kg	NS	82,100	<0.120 U	<0.120 U	<0.120 U	<0.250 U	<0.120 U	<0.015 U	--	--	--	--	--	--	--	--	<0.011 U	<0.011 U	<0.110 U
2,4,6-Trichlorophenol	mg/kg	NS	209	<0.120 U	<0.120 U	<0.120 U	<0.250 U	<0.120 U	<0.015 U	--	--	--	--	--	--	--	--	<0.011 U	<0.011 U	<0.110 U
2,4-Dichlorophenol	mg/kg	NS	2,460	<0.120 U	<0.120 U	<0.120 U	<0.250 U	<0.120 U	<0.015 U	--	--	--	--	--	--	--	--	<0.011 U	<0.011 U	<0.110 U
2,4-Dimethylphenol	mg/kg	NS	16,400	<0.770 U	<0.780 U	<0.800 U	<1.700 U	<0.780 U	<0.099 U	--	--	--	--	--	--	--	--	<0.074 U	<0.075 U	<0.740 U
2,4-Dinitrophenol	mg/kg	NS	1,640	<3.900 U	<4.000 U	<4.100 U	<8.300 U	<3.900 U	<0.500 U	--	--	--	--	--	--	--	--	<0.370 U	<0.380 U	<3.700 U
2-Chlorophenol	mg/kg	NS	5,840	<0.240 U	<0.250 U	<0.260 U	<0.530 U	<0.250 U	<0.032 U	--	--	--	--	--	--	--	--	<0.023 U	<0.024 U	<0.230 U
2-Methylphenol	mg/kg	NS	41,000	<0.150 U	<0.150 U	<0.160 U	<0.330 U	<0.150 U	<0.020 U	--	--	--	--	--	--	--	--	<0.015 U	<0.015 U	<0.150 U
2-Nitrophenol	mg/kg	NS	NS	<0.120 U	<0.120 U	<0.120 U	<0.250 U	<0.120 U	<0.015 U	--	--	--	--	--	--	--	--	<0.011 U	<0.011 U	<0.110 U
4-Chloro-3-methylphenol	mg/kg	NS	82,100	<0.770 U	<0.780 U	<0.800 U	<1.700 U	<0.780 U	<0.099 U	--	--	--	--	--	--	--	--	<0.074 U	<0.075 U	<0.740 U
4-Methylphenol	mg/kg	NS	82,100	<0.380 U	<0.390 U	<0.400 U	<0.830 U	<0.390 U	<0.050 U	--	--	--	--	--	--	--	--	<0.037 U	<0.037 U	<0.370 U
4-Nitrophenol	mg/kg	NS	NS	<1.100 U	<1.200 U	<1.200 U	<2.400 U	<1.100 U	<0.150 U	--	--	--	--	--	--	--	--	<0.110 U	<0.110 U	<1.100 U
4,6-Dinitro-2-methylphenol	mg/kg	NS	65.7	<3.800 U	<3.900 U	<4.000 U	<8.300 U	<3.900 U	<0.500 U	--	--	--	--	--	--	--	--	<0.370 U	<0.370 U	<3.700 U
Pentachlorophenol	mg/kg	0.0028	3.97	<3.800 U	<3.900 U	<4.000 U	<8.300 U	<3.900 U	<0.500 U	--	--	--	--	--	--	--	--	<0.370 U	<0.370 U	<3.700 U
Phenol	mg/kg	2.2946	100,000	<0.210 U	<0.210 U	<0.220 U	<0.450 U	<0.210 U	<0.027 U	--	--	--	--	--	--	--	--	0.021 J	<0.020 U	<0.200 U
Metals																				
Aluminum, Total	mg/kg	600	100,000	*5,700*	*3,900*	*3,200*	*5,300*	*1,800*	*3,700*	--	--	--	--	--	--	--	--	*990*	*6,900*	*2,300*
Antimony, Total	mg/kg	0.542	467	0.200 BJ-	*15.000 J-*	*0.970 J-*	0.320 J-	*0.550 J-*	0.110 BJ-	--	--	--	--	--	--	--	--	0.074 B	0.058 BJ-	0.490 J-
Arsenic, Total [1]	mg/kg	0.584	8.3	*1.900*	***17.000***	*3.500*	*3.300*	*5.500*	*3.900*	--	--	--	--	--	--	--	--	*3.600*	*4.800*	*6.900*
Barium, Total	mg/kg	164.8	100,000	62.000	*550.000*	39.000	92.000	59.000	78.000	--	--	--	--	--	--	--	--	35.000	46.000	81.000
Beryllium, Total	mg/kg	6.32	2,300	1.000	0.720	0.880	1.200	0.460	0.550	--	--	--	--	--	--	--	--	0.670	0.430	0.820
Cadmium, Total	mg/kg	0.752	985	0.470	*3.500*	*71.000*	0.510	*2.200*	0.110 B	--	--	--	--	--	--	--	--	0.093 B	0.510	0.460
Calcium, Total	mg/kg	NS	NS	80,000	41,000	32,000	56,000	6,700	7,900	--	--	--	--	--	--	--	--	1,100	68,000	63,000
Chromium, Hexavalent	mg/kg	NS	6.36	--	--	--	--	--	--	<0.16 U	<0.18 U	<0.17 U	<0.17 U	<0.17 U	0.60	<0.19 U	<0.18 U	--	--	--
Chromium, Total [3]	mg/kg	360,000	NS	9.300	13.000	9.100	12.000	17.000	5.700	6.200 B	6.300 B	30.000 B	6.000 B	7.800 B	380.000 B	7.600 B	9.600 B	3.700	14.000	9.700
Chromium, Trivalent	mg/kg	NS	100,000	--	--	--	--	--	--	6.2	6.3	30	6.0	7.8	380	7.6	9.6	--	--	--
Cobalt, Total	mg/kg	3.6073	347	*3.800*	*4.700*	*5.100*	*5.800*	3.500	2.600	--	--	--	--	--	--	--	--	*5.100*	*5.800*	*4.700*
Copper, Total	mg/kg	91.6	46,700	11.000	*1.100*	55.000	30.000	47.000	19.000	--	--	--	--	--	--	--	--	10.000	23.000	23.000
Iron, Total	mg/kg	NS	100,000	9,100	17,000	9,500	7,300	14,000	4,900	--	--	--	--	--	--	--	--	3,600 J	14,000	5,100
Lead, Total	mg/kg	27	800	*41.000 J*	***910.000 J***	*100.000 J*	*57.000 J*	*100.000 J*	*45.000 J*	--	--	--	--	--	--	--	--	4.800 J	*57.000*	*220.000*
Magnesium, Total	mg/kg	NS	NS	35,000	20,000	15,000	27,000	1,900	1,700	--	--	--	--	--	--	--	--	550	36,000	37,000
Manganese, Total	mg/kg	39.1244	25,900	*260.000*	*350.000*	*220.000*	*230.000*	*130.000*	*43.000*	--	--	--	--	--	--	--	--	17.000 J	*370.000*	*150.000*
Mercury, Total	mg/kg	0.208	3.13	0.082	*1.700*	0.170	0.095	*0.300*	0.053	--	--	--	--	--	--	--	--	0.029	0.034	0.090
Nickel, Total	mg/kg	13.0612	22,500	*15.000*	*14.000*	*22.000*	*26.000*	*14.000*	8.500	--	--	--	--	--	--	--	--	7.000	*15.000*	12.000
Potassium, Total	mg/kg	NS	NS	1,700	780	1,100	1,800	360	790	--	--	--	--	--	--	--	--	96 B	2,600	580
Selenium, Total	mg/kg	0.52	5,840	*0.660*	*1.100*	*31.000*	*0.770*	*1.200*	*0.920*	--	--	--	--	--	--	--	--	*2.100 J*	*0.720*	*2.000*
Silver, Total	mg/kg	0.8491	5,840	0.037 B	0.270	0.340	0.200	0.130	0.033 B	--	--	--	--	--	--	--	--	<0.023 U	0.080 B	0.038 B
Sodium, Total	mg/kg	NS	NS	540 B	290 B	390 B	830	210 B	380 B	--	--	--	--	--	--	--	--	<66 U	340 B	250 B
Thallium, Total	mg/kg	0.284	11.7	0.059 B	*0.360*	0.170	0.110 B	0.130	0.200	--	--	--	--	--	--	--	--	0.190	0.200	0.160
Vanadium, Total	mg/kg	60	5,840	13.000	13.000	23.000	18.000	7.700	8.500	--	--	--	--	--	--	--	--	7.600	21.000	13.000
Zinc, Total	mg/kg	NS	100,000	110.000 J	1,000 J	48,000 J	83.000 J	120.000 J	62.000 J	--	--	--	--	--	--	--	--	6.400	80.000	93.000
Inorganic - Cyanide																				
Cyanide, Amenable	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Reactive	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Total	mg/kg	4.04	195	<0.12 UJ	0.81	0.63 J	0.79 J	2.1 J	<0.16 U	--	--	--	--	--	--	--	--	<0.12 U	<0.12 U	<0.12 U
Other																				
Sulfide, Reactive	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organic Matter	%	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent Moisture	%	NS	NS	14	16	18	20	15	34	--	--	--	--	--	--	--	--	11	12	11

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	CS-TT04		CS-TT05	FT-SB01		FT-SB02		FT-SB03		FT-SB04		FT-SB05		FT-SB06		
Sample / Duplicate:				CS-TT04	CS-TT04 DUP	CS-TT05	FT-SB01	FT-SB01	FT-SB02	FT-SB02	FT-SB03	FT-SB03	FT-SB04	FT-SB04	FT-SB05	FT-SB05	FT-SB06	FT-SB06 DUP	FT-SB06
Field Sample ID:				CS-TT04-0506-101408	CS-TTDUP002-0506-101408	CS-TT05-0607-101408	FT-SB01-SS-120308	FT-SB01-0607-120308	FT-SB02-SS-112408	FT-SB02-0910-112408	FT-SB03-SS-112408	FT-SB03-0809-112408	FT-SB04-SS-112408	FT-SB04-0405-112408	FT-SB05-SS-112408	FT-SB05-0405-112408	FT-SB06-SS-112408	FT-SBDUP001-112408	FT-SB06-0809-112408
Sample Depth (feet):				5 - 6	5 - 6	6 - 7	0 - 0.5	6 - 7	0 - 0.5	9 - 10	0 - 0.5	8 - 9	0 - 0.5	4 - 5	0 - 0.5	4 - 5	0 - 0.5	0 - 0.5	8 - 9
Sample Date:				10/14/2008	10/14/2008	10/14/2008	12/03/2008	12/03/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008
VOCs																			
1,1,1-Trichloroethane	mg/kg	0.1402	640	<0.00061 U	<0.00061 U	<0.00064 U	<0.00087 U	<0.0012 U	<0.00070 U	<0.00059 U	<0.00061 U	<0.00071 U	<0.00089 U	<0.00053 U	<0.00087 UJ	<0.00064 U	<0.0010 U	<0.00087 U	<0.00051 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0002	3.6	<0.00072 U	<0.00072 U	<0.00075 UJ	<0.0010 UJ	<0.0014 UJ	<0.00082 UJ	<0.00069 UJ	<0.00071 UJ	<0.00083 U	<0.0010 UJ	<0.00062 U	<0.0010 UJ	<0.00075 U	<0.0012 UJ	<0.0010 UJ	<0.00060 U
1,1,2-Trichloroethane	mg/kg	0.0032	7.01	<0.0010 U	<0.0010 U	<0.0011 UJ	<0.0015 UJ	<0.0021 UJ	<0.0012 U	<0.00099 U	<0.0010 U	<0.0012 U	<0.0015 U	<0.00090 U	<0.0015 UJ	<0.0011 U	<0.0017 UJ	<0.0015 U	<0.00086 U
1,1-Dichloroethane	mg/kg	0.4834	22.2	<0.00025 U	<0.00025 U	<0.00026 U	<0.00035 U	<0.00049 U	<0.00028 U	<0.00024 U	<0.00024 U	<0.00029 U	<0.00036 U	<0.00022 U	<0.00035 UJ	<0.00026 U	<0.00041 U	<0.00035 U	<0.00020 U
1,1-Dichloroethene	mg/kg	0.005	1,190	<0.00069 U	<0.00070 U	<0.00073 UJ	<0.00099 U	<0.0014 U	<0.00079 U	<0.00067 U	<0.00069 U	<0.00080 U	<0.0010 U	<0.00060 U	<0.00099 UJ	<0.00073 U	<0.0012 U	<0.00099 U	<0.00058 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0002	0.092	<0.00071 U	<0.00071 U	<0.00074 U	<0.0010 UJ	<0.0014 UJ	<0.00080 UJ	<0.00068 UJ	<0.00070 UJ	<0.00082 U	<0.0010 UJ	<0.00061 U	<0.0010 UJ	<0.00074 U	<0.0012 UJ	<0.0010 UJ	<0.00059 U
1,2-Dibromoethane	mg/kg	0.0000282	0.221	<0.00061 U	<0.00061 U	<0.00064 UJ	<0.00087 UJ	<0.0012 UJ	<0.00070 U	<0.00059 U	<0.00061 U	<0.00071 U	<0.00089 U	<0.00053 U	<0.00087 UJ	<0.00064 U	<0.0010 UJ	<0.00087 U	<0.00051 U
1,2-Dichlorobenzene	mg/kg	1.168	376	<0.00053 U	<0.00053 U	<0.00056 UJ	<0.00075 UJ	<0.0011 UJ	<0.00060 UJ	<0.00051 UJ	<0.00052 UJ	<0.00061 U	<0.00077 UJ	<0.00046 U	<0.00075 UJ	<0.00056 U	<0.00088 UJ	<0.00075 UJ	<0.00044 U
1,2-Dichloroethane	mg/kg	0.0028	2.87	<0.00082 U	<0.00083 U	<0.00086 UJ	<0.0012 U	<0.0016 U	<0.00094 U	<0.00079 U	<0.00082 U	<0.00095 U	<0.0012 U	<0.00072 U	<0.0012 UJ	<0.00086 U	<0.0014 U	<0.0012 U	<0.00068 U
1,2-Dichloropropane	mg/kg	0.0033	1.78	<0.00065 U	<0.00065 U	<0.00068 UJ	<0.00092 U	<0.0013 U	<0.00074 U	<0.00062 U	<0.00064 U	<0.00075 U	<0.00095 U	<0.00056 U	<0.00092 UJ	<0.00068 U	<0.0011 U	<0.00092 U	<0.00054 U
1,3-Dichlorobenzene	mg/kg	1.1528	297	<0.00056 U	<0.00057 U	<0.00059 UJ	<0.00080 UJ	<0.0011 UJ	<0.00064 UJ	<0.00054 UJ	<0.00056 UJ	<0.00065 U	<0.00083 UJ	<0.00049 U	<0.00080 UJ	<0.00059 U	<0.00094 UJ	<0.00080 UJ	<0.00047 U
1,4-Dichlorobenzene	mg/kg	0.144	16.4	<0.00092 U	<0.00092 U	<0.00096 UJ	<0.0013 UJ	<0.0018 UJ	<0.0010 UJ	<0.00088 UJ	<0.00091 UJ	<0.0011 U	<0.0013 UJ	<0.00080 U	<0.0013 UJ	<0.00096 U	<0.0015 UJ	<0.0013 UJ	<0.00076 U
2-Butanone (MEK)	mg/kg	1.6661	28,400	<0.0022 U	<0.0022 U	0.0035 J	<0.0031 U	<0.0043 U	<0.0025 U	<0.0021 U	<0.0021 U	0.021 J	<0.0031 U	<0.0019 U	<0.0031 UJ	<0.0023 U	<0.0036 U	<0.0031 U	<0.0018 U
2-Hexanone	mg/kg	NS	1,760	<0.0058 U	<0.0058 U	<0.0060 UJ	<0.0082 U	<0.012 U	<0.0066 U	<0.0055 U	<0.0057 U	<0.0067 U	<0.0084 U	<0.0050 U	<0.0082 UJ	<0.0060 U	<0.0096 U	<0.0082 U	<0.0048 U
4-Methyl-2-Pentanone (MIBK)	mg/kg	0.2252	3,360	<0.0051 U	<0.0051 U	<0.0054 U	<0.0073 UJ	<0.010 UJ	<0.0058 U	<0.0049 U	<0.0051 U	<0.0059 U	<0.0075 U	<0.0045 U	<0.0073 UJ	<0.0054 U	<0.0086 UJ	<0.0073 U	<0.0043 U
Acetone	mg/kg	3.6766	100,000	<0.0063 UJB	0.015 JB	<0.0066 UJB	<0.0090 U	<0.013 U	0.0094 J	<0.0061 U	<0.0063 U	0.110	0.0097 J	0.041	0.033 J	<0.0066 UJ	0.013 J	0.010 J	<0.0053 U
Benzene	mg/kg	0.0051	7.07	0.00096 J	0.00084 J	<0.00058 UJ	<0.00079 U	0.0013 J	<0.00063 U	<0.00053 U	<0.00055 U	0.0014 J	<0.00081 U	<0.00048 U	<0.00079 UJ	<0.00058 U	<0.00092 U	<0.00079 U	<0.00046 U
Bromodichloromethane	mg/kg	0.0003	1.83	<0.00026 U	<0.00026 U	<0.00027 UJ	<0.00037 UJ	<0.00052 UJ	<0.00030 U	<0.00025 U	<0.00026 U	<0.00030 U	<0.00038 U	<0.00023 U	<0.00037 UJ	<0.00027 U	<0.00043 UJ	<0.00037 U	<0.00021 U
Bromoform	mg/kg	0.0023	113	<0.00027 U	<0.00027 U	<0.00028 UJ	<0.00038 UJ	<0.00054 UJ	<0.00031 U	<0.00026 U	<0.00027 U	<0.00031 U	<0.00040 U	<0.00024 U	<0.00038 UJ	<0.00028 U	<0.00045 UJ	<0.00038 U	<0.00022 U
Bromomethane	mg/kg	0.0051	43	<0.00059 U	<0.00059 U	<0.00062 U	<0.00084 U	<0.0012 U	<0.00067 U	<0.00056 U	<0.00058 U	<0.00068 U	<0.00086 U	<0.00051 U	<0.00084 UJ	<0.00062 U	<0.00098 U	<0.00084 U	<0.00049 U
Carbon Disulfide	mg/kg	0.5919	738	<0.00049 U	<0.00050 U	<0.00052 UJ	<0.00070 U	<0.00099 U	<0.00056 U	<0.00047 U	<0.00049 U	0.0027 J	<0.00072 U	<0.00043 U	<0.00070 UJ	<0.00052 U	<0.00082 U	<0.00070 U	<0.00041 U
Carbon Tetrachloride	mg/kg	0.0039	4.03	<0.00074 U	<0.00074 U	<0.00078 U	<0.0011 U	<0.0015 U	<0.00085 U	<0.00071 U	<0.00073 U	<0.00086 U	<0.0011 U	<0.00065 U	<0.0011 UJ	<0.00078 U	<0.0012 U	<0.0011 U	<0.00061 U
Chlorobenzene	mg/kg	0.1358	761	<0.00064 U	<0.00064 U	<0.00067 UJ	<0.00090 UJ	<0.0013 UJ	<0.00072 U	<0.00061 U	<0.00063 U	<0.00074 U	<0.00093 U	<0.00055 U	<0.00090 UJ	<0.00067 U	<0.0011 UJ	<0.00090 U	<0.00053 U
Chloroethane	mg/kg	0.2266	2,120	<0.0010 U	<0.0011 U	<0.0011 U	<0.0015 U	<0.0021 U	<0.0012 UJ	<0.0010 UJ	<0.0010 UJ	<0.0012 UJ	<0.0015 UJ	<0.00091 UJ	<0.0015 UJ	<0.0011 UJ	<0.0017 UJ	<0.0015 UJ	<0.00087 UJ
Chloroform	mg/kg	0.0033	1.98	<0.00034 U	<0.00034 U	<0.00036 UJ	<0.00048 U	<0.00068 U	<0.00039 U	<0.00033 U	<0.00034 U	<0.00040 U	<0.00050 U	<0.00030 U	<0.00049 UJ	<0.00036 U	<0.00057 U	<0.00048 U	<0.00028 U
Chloromethane	mg/kg	0.0155	669	<0.00091 U	<0.00091 U	<0.00095 U	<0.0013 U	<0.0018 U	<0.0010 U	<0.00087 U	<0.00090 U	<0.0010 U	<0.0013 U	<0.00079 U	<0.0013 UJ	<0.00095 U	<0.0015 U	<0.0013 U	<0.00075 U
cis-1,2-Dichloroethene	mg/kg	0.0412	2,340	<0.00066 U	<0.00066 U	<0.00069 UJ	<0.00094 U	<0.0013 U	<0.00075 U	<0.00063 U	<0.00065 U	<0.00076 U	<0.00096 U	<0.00057 U	<0.00094 UJ	<0.00069 U	<0.0011 U	<0.00094 U	<0.00055 U
cis-1,3-Dichloropropene	mg/kg	NS	1,210	<0.0015 U	<0.0015 U	<0.0016 UJ	<0.0022 UJ	<0.0030 UJ	<0.0017 U	<0.0015 U	<0.0015 U	<0.0018 U	<0.0022 U	<0.0013 U	<0.0022 UJ	<0.0016 U	<0.0025 UJ	<0.0022 U	<0.0013 U
Cyclohexane	mg/kg	NS	117	<0.00047 U	<0.00047 U	<0.00049 U	0.0025 J	0.0095 J	<0.00054 U	<0.00045 U	<0.00047 U	<0.00054 U	0.0012 J	0.00065 J	0.0014 J	<0.00049 U	0.0055 J	0.0019 J	<0.00039 U
Dibromochloromethane	mg/kg	0.032	38.9	<0.00067 U	<0.00067 U	<0.00070 UJ	<0.00095 UJ	<0.0013 UJ	<0.00076 U	<0.00064 U	<0.00066 U	<0.00078 U	<0.00098 U	<0.00058 U	<0.00095 UJ	<0.00070 U	<0.0011 UJ	<0.00095 U	<0.00056 U
Dichloromethane	mg/kg	0.0026	1,150	<0.00088 U	<0.00089 U	<0.00093 UJ	<0.0013 U	<0.0018 U	<0.0010 U	<0.00085 U	<0.00087 U	<0.0010 UJB	<0.0013 U	<0.00077 U	<0.0013 UJ	<0.00093 U	<0.0015 U	<0.0013 U	<0.00073 U
Ethylbenzene	mg/kg	1.57	35.4	<0.00079 U	<0.00079 U	<0.00083 UJ	<0.0011 UJ	<0.0016 UJ	<0.00090 U	<0.00076 U	<0.00078 U	<0.00091 U	<0.0012 U	<0.00069 U	<0.0011 UJ	<0.00083 U	<0.0013 UJ	<0.0011 U	<0.00065 U
Freon 113	mg/kg	NS	910	<0.00053 U	<0.00053 U	<0.00056 U	<0.00075 U	<0.0011 U	<0.00060 U	<0.00051 U	<0.00052 U	<0.00061 U	<0.00077 U	<0.00046 U	<0.00075 UJ	<0.00056 U	<0.00088 U	<0.00075 U	<0.00044 U
Freon 12	mg/kg	3.0863	530	<0.00061 U	<0.00061 U	<0.00064 U	<0.00087 U	<0.0012 U	<0.00070 U	<0.00059 U	<0.00061 U	<0.00071 U	<0.00089 U	<0.00053 U	<0.00087 UJ	<0.00064 U	<0.0010 U	<0.00087 U	<0.00051 U
Isopropylbenzene	mg/kg	NS	268	<0.00069 U	<0.00070 U	<0.00073 UJ	<0.00099 UJ	<0.0014 UJ	<0.00079 UJ	<0.00067 UJ	<0.00069 UJ	<0.00080 U	<0.0010 UJ	<0.00060 U	<0.00099 UJ	<0.00073 U	<0.0012 UJ	<0.00099 UJ	<0.00058 U
Methyl acetate	mg/kg	NS	29,000	<0.0032 U	<0.0032 U	<0.0034 U	<0.0046 U	<0.0065 U	0.0037 J	<0.0031 U	<0.0032 U	<0.0037 U	<0.0047 U	<0.0028 U	0.042 J	<0.0034 U	<0.0054 U	0.070	<0.0027 U
Methylcyclohexane	mg/kg	NS	67.6	0.00068 J	0.00081 J	0.00052 J	0.0025 J	0.015	0.00064 J	<0.00047 U	<0.00049 U	0.0015 J	0.0011 J	0.0012 J	0.0015 J	0.00055 J	0.0088 J	0.0036 J	0.00056 J
Methyl-tert-butyl-ether	mg/kg	0.027	282	<0.00040 U	<0.00040 U	<0.00042 U	<0.00057 U	<0.00080 U	<0.00046 U	<0.00038 U	<0.00040 U	<0.00046 U	<0.00058 U	<0.00035 U	<0.00057 UJ	<0.00042 U	<0.00067 U	<0.00057 U	<0.00033 U
Styrene	mg/kg	0.22	867	<0.00074 U	<0.00074 U	<0.00078 UJ	<0.0011 UJ	<0.0015 UJ	<0.00085 U	<0.00071 U	<0.00073 U	<0.00086 U	<0.0011 U	<0.00065 U	<0.0011 UJ	<0.00078 U	<0.0012 UJ	<0.0011 U	<0.00061 U
Tetrachloroethene	mg/kg	0.0045	145	<0.00069 U	<0.00070 U	<0.00073 UJ	<0.00099 UJ	<0.0014 UJ	<0.00079 U	<0.00067 U	<0.00069 U	<0.00080 U	<0.0010 U	<0.00060 U	<0.00099 UJ	<0.00073 U	<0.0012 UJ	<0.00099 U	<0.00058 U
Toluene	mg/kg	1.1072	818	<0.00081 U	<0.00081 U	<0.00085 UJ	0.0032 J	0.0041 J	0.00095 J	<0.00078 U	0.00087 J	0.0028 J	<0.0012 U	<0.00071 U	0.0019 J	<0.00085 U	0.0034 J	<0.0012 U	<0.00067 U
trans-1,2-Dichloroethene	mg/kg	0.0626	1,850	<0.00046 U	<0.00046 U	<0.00048 UJ	<0.00065 U	<0.00092 U	<0.00052 U	<0.00044 U	<0.00045 U	<0.00053 U	<0.00067 U	<0.00040 U	<0.00065 UJ	<0.00048 U	<0.00077 U	<0.00065 U	<0.00038 U
trans-1,3-Dichloropropene	mg/kg	NS	1,510	<0.00079 U	<0.00079 U	<0.00083 UJ	<0.0011 UJ	<0.0016 UJ	<0.00090 U	<0.00076 U	<0.00078 U	<0.00091 U	<0.0012 U	<0.00069 U	<0.0011 UJ	<0.00083 U	<0.0013 UJ	<0.0011 U	<0.00065 U
Trichloroethene	mg/kg	0.0036	8.41	<0.00027 U	<0.00027 U	<0.00028 UJ	<0.00038 U	<0.00054 U	<0.00031 U	<0.00026 U	<0.00027 U	<0.00031 U	<0.00040 U	<0.00024 U	<0.00038 UJ	<0.00028 U	<0.00045 U	<0.00038 U	<0.00022 U
Trichlorofluoromethane	mg/kg	4.4775	1,230	<0.0012 U	<0.0012 U	<0.0013 U	<0.0017 U	<0.0024 U	<0.0014 U	<0.0012 U	<0.0012 U	<0.0014 U	<0.0018 U	<0.0011 U	<0.0017 UJ	<0.0013 U	<0.0020 U	<0.0017 U	<0.0010 U
Vinyl Chloride	mg/kg	0.0001	2.08	<0.0016 U	<0.0016 U	<0.0017 U	<0.0022 U	<0.0032 U	<0.0018 U	<0.0015 U	<0.0016 U	<0.0018 U	<0.0023 U	<0.0014 U	<0.0022 UJ	<0.0017 U	<0.0026 U	<0.0022 U	<0.0013 U
Xylenes, Total	mg/kg	3.96	260	<0.00072 U	<0.00072 U	0.0012 J	<0.0010 UJ	0.0057 J	<0.00082 U	<0.00069 U	<0.00071 U	0.0015 J	<0.0010 U	<0.00062 U	<0.0010 UJ	<0.00075 U	0.0051 J	<0.0010 U	<0.00060 U
PCBs																			
PCB, Total [4]	mg/kg	0.0094	0.967	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1016	mg/kg	NS	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1221	mg/kg	NS	0.883	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1232	mg/kg	NS	0.792	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1242	mg/kg	NS	0.972	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1248	mg/kg	NS	0.975	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1254	mg/kg	NS	0.988	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1260	mg/kg	NS	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	CS-TT04		CS-TT05	FT-SB01		FT-SB02		FT-SB03		FT-SB04		FT-SB05		FT-SB06		
Sample / Duplicate:				CS-TT04	CS-TT04 DUP	CS-TT05	FT-SB01	FT-SB01	FT-SB02	FT-SB02	FT-SB03	FT-SB03	FT-SB04	FT-SB04	FT-SB05	FT-SB05	FT-SB06	FT-SB06 DUP	FT-SB06
Field Sample ID:				CS-TT04-0506-101408	CS-TTDUP002-0506-101408	CS-TT05-0607-101408	FT-SB01-SS-120308	FT-SB01-0607-120308	FT-SB02-SS-112408	FT-SB02-0910-112408	FT-SB03-SS-112408	FT-SB03-0809-112408	FT-SB04-SS-112408	FT-SB04-0405-112408	FT-SB05-SS-112408	FT-SB05-0405-112408	FT-SB06-SS-112408	FT-SBDUP001-112408	FT-SB06-0809-112408
Sample Depth (feet):				5 - 6	5 - 6	6 - 7	0 - 0.5	6 - 7	0 - 0.5	9 - 10	0 - 0.5	8 - 9	0 - 0.5	4 - 5	0 - 0.5	4 - 5	0 - 0.5	0 - 0.5	8 - 9
Sample Date:				10/14/2008	10/14/2008	10/14/2008	12/03/2008	12/03/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008
PAHs																			
2-Methylnaphthalene	mg/kg	NS	3,010	0.540 J	0.580 J	<0.023 U	0.079 J	0.490	0.590 J	<0.023 U	0.540	0.270 J	0.710	0.390 J	0.490	<0.023 U	1.300	1.100	<0.022 U
Acenaphthene	mg/kg	NS	45,200	1.900	1.600 J	<0.013 UJ	0.034 J	0.047 J	0.094 J	<0.013 U	0.063 J	2.000	<0.013 U	0.580 J	0.034 J	0.055 J	<0.012 U	0.033 J	<0.012 U
Acenaphthylene	mg/kg	NS	NS	0.310 J	0.300 J	0.160 J	0.038 J	<0.023 U	0.300 J	<0.021 U	0.049 J	<0.090 U	0.044 J	<0.041 U	0.022 J	<0.021 U	<0.020 U	<0.021 U	<0.020 U
Anthracene	mg/kg	196.9492	100,000	4.500	3.500	0.440	0.190 J	0.100 J	0.750 J	<0.021 U	0.220 J	5.700	0.230 J	1.100	0.150 J	0.150 J	0.043 J	0.059 J	<0.020 U
Benzo(a)anthracene	mg/kg	NS	20.8	11.000	9.700	3.000 J	1.100	0.210 J	4.900	0.027 J	1.300	9.900	0.630	3.000	0.560	0.310 J	0.150 J	0.240 J	<0.023 U
Benzo(a)pyrene	mg/kg	0.47	2.11	***11.000***	***8.800***	***3.700 J***	*1.000*	0.150 J	***3.300***	<0.025 U	*1.200*	***9.600***	0.380 J	***2.700***	0.440	0.270 J	0.120 J	0.230 J	<0.023 U
Benzo(b)fluoranthene	mg/kg	0.4793	21.1	*17.000 JK*	*14.000 JK*	*4.400 JK*	*1.800 JK*	0.220 JK	*6.200 JK*	<0.032 U	*2.000 JK*	*13.000 JK*	*1.000 JK*	*3.900 JK*	*0.870 JK*	0.420 JK	0.190 JK	0.350 JK	<0.030 U
Benzo(g,h,i)perylene	mg/kg	NS	NS	6.900	5.600	2.400 J	0.850	0.110 J	2.600	<0.020 U	1.000	6.100	0.380 J	2.200	0.370 J	0.200 J	0.110 J	0.200 J	<0.018 U
Benzo(k)fluoranthene	mg/kg	NS	211	<0.240 UKJ	<0.240 UKJ	<0.049 UKJ	<0.050 UKJ	<0.053 UKJ	<0.096 UKJ	<0.049 U	<0.046 UKJ	<0.210 UKJ	<0.051 UKJ	<0.096 UKJ	<0.046 UKJ	<0.048 UKJ	<0.048 UKJ	<0.049 UKJ	<0.046 U
Chrysene	mg/kg	0.1446	2,110	*12.000*	*9.900*	*3.100 J*	*1.200*	*0.230 J*	*4.900*	<0.033 U	*1.400*	*9.200*	*1.200*	*2.700*	*0.770*	*0.290 J*	*0.190 J*	*0.290 J*	<0.031 U
Dibenz(a,h)anthracene	mg/kg	NS	2.11	1.600 J	1.300 J	0.490	0.320 J	<0.025 U	1.100	<0.023 U	0.290 J	1.400 J	0.200 J	0.590 J	0.140 J	0.050 J	0.026 J	0.037 J	<0.022 U
Fluoranthene	mg/kg	88.8778	30,100	23.000	19.000	3.800 J	1.700	0.340 J	6.700	<0.044 U	2.500	24.000	0.900	6.600	0.930 J	0.660	0.190 J	0.380 J	<0.041 U
Fluorene	mg/kg	14.8299	30,100	2.200	1.900	0.062 J	0.055 J	0.042 J	0.310 J	<0.022 U	0.076 J	1.900	0.078 J	0.470 J	0.053 J	0.065 J	0.028 J	0.038 J	<0.021 U
Indeno(1,2,3-cd)pyrene	mg/kg	NS	21.1	6.200	5.000	1.800 J	0.780	0.075 J	2.500	<0.027 U	0.900	5.500	0.320 J	1.900	0.310 J	0.170 J	0.070 J	0.140 J	<0.025 U
Naphthalene	mg/kg	0.6582	24.1	*0.700 J*	0.620 J	<0.038 U	0.097 J	0.260 J	*1.400*	<0.038 U	*0.920*	0.550 J	*3.300*	0.480 J	0.380	<0.038 U	*0.810*	*0.760*	<0.036 U
Phenanthrene	mg/kg	NS	NS	13.000	11.000	0.820 J	0.770	0.530	4.100	<0.021 U	1.000	16.000	1.400	6.100	0.740	0.480	0.630	0.660	0.027 J
Pyrene	mg/kg	54.5455	22,600	21.000	17.000	5.800 J	1.500	0.380 J	6.300	0.030 J	2.000	21.000	0.710	7.300	0.750	0.600	0.210 J	0.390 J	0.019 J
SVOCs																			
1,2,4-Trichlorobenzene	mg/kg	0.408	113	<0.00086 U	<0.00086 U	<0.00090 UJ	<0.0012 UJ	<0.0017 UJ	<0.00098 UJ	<0.00082 UJ	<0.00085 UJ	<0.00099 U	<0.0013 UJ	<0.00075 U	<0.0012 UJ	<0.00090 U	<0.0014 UJ	<0.0012 UJ	<0.00071 U
2,2-Oxybis(1-chloropropane)	mg/kg	NS	1,020	<0.140 U	<0.140 U	<0.028 U	<0.029 U	<0.031 U	<0.055 U	<0.028 U	<0.026 U	<0.120 U	<0.029 U	<0.055 U	<0.027 U	<0.028 U	<0.028 U	<0.028 U	<0.026 U
2,4-Dinitrotoluene	mg/kg	0.0001	7.37	<0.390 U	<0.390 U	<0.081 U	<0.082 U	<0.088 U	<0.160 U	<0.081 U	<0.075 U	<0.350 U	<0.083 U	<0.160 U	<0.077 U	<0.080 U	<0.079 U	<0.081 U	<0.076 U
2,6-Dinitrotoluene	mg/kg	0.0001	1.54	<0.160 U	<0.170 U	<0.035 U	<0.035 U	<0.037 U	<0.067 U	<0.034 U	<0.032 U	<0.150 U	<0.035 U	<0.067 U	<0.033 U	<0.034 U	<0.034 U	<0.034 U	<0.032 U
2-Chloronaphthalene	mg/kg	NS	60,300	<0.059 U	<0.059 U	<0.012 U	<0.012 U	<0.013 U	<0.024 U	<0.012 U	<0.011 U	<0.053 U	<0.013 U	<0.024 U	<0.012 U	<0.012 U	<0.012 U	<0.012 U	<0.011 U
2-Nitroaniline	mg/kg	NS	8,010	<0.290 U	<0.300 U	<0.062 U	<0.062 U	<0.066 U	<0.120 U	<0.061 U	<0.057 U	<0.260 U	<0.063 U	<0.120 U	<0.058 U	<0.061 U	<0.060 U	<0.061 U	<0.057 U
3,3-Dichlorobenzidine	mg/kg	NS	5.11	<0.530 U	<0.530 U	<0.110 U	<0.110 U	<0.120 U	<0.220 U	<0.110 U	<0.100 U	<0.480 U	<0.110 U	<0.220 U	<0.100 UJ	<0.110 U	<0.110 U	<0.110 U	<0.100 U
3-Nitroaniline	mg/kg	NS	NS	<0.430 U	<0.430 U	<0.090 U	<0.091 U	<0.097 U	<0.170 U	<0.090 U	<0.083 U	<0.390 U	<0.092 U	<0.180 U	<0.085 U	<0.088 U	<0.087 U	<0.090 U	<0.084 U
4-Bromodiphenyl ether	mg/kg	NS	26.9	<0.110 U	<0.110 U	<0.023 U	<0.024 U	<0.025 U	<0.046 U	<0.023 U	<0.022 U	<0.100 U	<0.024 U	<0.046 U	<0.022 U	<0.023 U	<0.023 U	<0.023 U	<0.022 U
4-Chloroaniline	mg/kg	NS	11.5	<0.480 U	<0.480 U	<0.100 U	<0.100 U	<0.110 U	<0.200 U	<0.100 U	<0.093 U	<0.430 U	<0.100 U	<0.200 U	<0.095 U	<0.099 U	<0.098 U	<0.100 U	<0.094 U
4-Chlorodiphenyl ether	mg/kg	NS	NS	<0.120 U	<0.120 U	<0.026 U	<0.026 U	<0.028 U	<0.050 U	<0.026 U	<0.024 U	<0.110 U	<0.027 U	<0.051 U	<0.024 U	<0.025 U	<0.025 U	<0.026 U	<0.024 U
4-Nitroaniline	mg/kg	NS	115	<0.430 U	<0.430 U	<0.090 U	<0.090 U	<0.096 U	<0.170 U	<0.089 U	<0.083 U	<0.380 U	<0.092 U	<0.170 U	<0.084 U	<0.088 U	<0.087 U	<0.089 U	<0.083 U
Acetophenone	mg/kg	NS	2,520	<0.120 U	<0.120 U	<0.025 U	<0.025 U	<0.027 U	<0.048 U	<0.025 U	<0.023 U	<0.110 U	<0.025 U	<0.048 U	<0.023 U	<0.024 U	<0.024 U	0.040 J	<0.023 U
Benzaldehyde	mg/kg	NS	818	<0.390 U	<0.400 U	<0.083 U	<0.084 U	<0.089 U	<0.160 U	<0.082 U	<0.076 U	<0.350 U	<0.085 U	<0.160 U	<0.078 U	<0.081 U	0.088 J	<0.082 U	<0.077 U
Biphenyl	mg/kg	NS	288	<0.290 U	<0.300 U	<0.062 U	<0.062 U	<0.066 U	0.210 J	<0.061 U	0.065 J	<0.260 U	0.180 J	<0.120 U	0.081 J	<0.061 U	0.086 J	0.079 J	<0.057 U
Bis(2-Chloroethoxy)methane	mg/kg	NS	2,460	<0.140 U	<0.140 U	<0.028 U	<0.029 U	<0.031 U	<0.055 U	<0.028 U	<0.026 U	<0.120 U	<0.029 U	<0.055 U	<0.027 U	<0.028 U	<0.028 U	<0.028 U	<0.026 U
Bis(2-Chloroethyl)ether	mg/kg	NS	1.29	<0.098 U	<0.098 U	<0.020 U	<0.021 U	<0.022 U	<0.040 U	<0.020 U	<0.019 U	<0.088 U	<0.021 U	<0.040 U	<0.019 U	<0.020 U	<0.020 U	<0.020 U	<0.019 U
Bis(2-Ethylhexyl)phthalate	mg/kg	2.88	164	*4.500*	<0.270 U	<0.057 U	0.130 J	<0.061 U	<0.110 UJB	<0.056 UJB	<0.053 UJB	<0.240 UJB	<0.058 UJB	<0.110 U	<0.053 UJB	<0.056 UJB	<0.055 UJB	<0.057 UJB	<0.053 UJB
Butyl benzyl phthalate	mg/kg	NS	1,210	<0.250 U	<0.250 U	<0.053 U	<0.054 U	<0.057 U	<0.100 U	<0.053 U	<0.049 U	<0.230 U	<0.054 U	<0.100 U	<0.050 U	<0.052 U	<0.051 U	<0.053 U	<0.049 U
Caprolactam	mg/kg	NS	100,000	<0.620 U	<0.630 U	<0.130 U	<0.130 U	<0.140 U	<0.250 U	<0.130 U	<0.120 U	<0.560 U	<0.130 U	<0.260 U	<0.120 U	<0.130 U	<0.130 U	<0.130 U	<0.120 U
Carbazole	mg/kg	NS	NS	1.200 J	1.000 J	<0.044 U	0.064 J	<0.048 U	0.330 J	<0.044 U	0.059 J	0.460 J	0.086 J	0.430 J	0.052 J	<0.044 U	<0.043 U	<0.044 U	<0.041 U
Dibenzofuran	mg/kg	NS	1,040	1.200 J	1.100 J	<0.025 U	0.044 J	0.160 J	0.490 J	<0.025 U	0.150 J	0.950 J	0.170 J	0.410 J	0.150 J	0.034 J	0.360 J	0.310 J	<0.023 U
Diethyl phthalate	mg/kg	NS	100,000	<0.150 U	<0.150 U	<0.032 U	<0.032 U	<0.035 U	<0.062 U	<0.032 U	<0.030 U	<0.140 U	<0.033 U	<0.063 U	<0.030 U	<0.031 U	<0.031 U	<0.032 U	<0.030 U
Dimethyl phthalate	mg/kg	NS	7,390	0.360 J	<0.140 U	0.140 J	<0.029 U	<0.031 U	<0.055 U	<0.028 U	<0.026 U	<0.120 U	<0.029 U	<0.055 U	<0.027 U	<0.028 U	<0.028 U	<0.028 U	<0.026 U
Di-n-butyl phthalate	mg/kg	5.0333	82,100	<0.170 U	<0.170 U	<0.036 U	<0.036 U	<0.039 U	<0.069 U	<0.036 U	<0.033 U	<0.150 U	<0.037 U	<0.070 U	<0.034 U	<0.035 U	<0.035 U	<0.036 U	<0.033 U
Di-n-octyl phthalate	mg/kg	NS	8,210	<0.085 U	<0.085 U	<0.018 U	<0.018 U	<0.019 U	<0.034 U	<0.018 U	<0.016 U	<0.076 U	<0.018 U	<0.035 U	<0.017 U	<0.017 U	<0.017 U	<0.018 U	<0.017 U
Hexachlorobenzene	mg/kg	0.0252	1.15	<0.170 U	<0.170 U	<0.036 U	<0.036 U	<0.039 U	<0.069 U	<0.036 U	<0.033 U	<0.150 U	<0.037 U	<0.070 U	<0.034 U	<0.035 U	<0.035 U	<0.036 U	<0.033 U
Hexachlorobutadiene	mg/kg	NS	7.19	<0.00065 U	<0.00065 U	<0.00068 UJ	<0.00092 UJ	<0.0013 UJ	<0.00074 UJ	<0.00062 UJ	<0.00064 UJ	<0.00075 U	<0.00095 UJ	<0.00056 U	<0.00092 UJ	<0.00068 U	<0.0011 UJ	<0.00092 UJ	<0.00054 U
Hexachlorocyclopentadiene	mg/kg	NS	10.8	<0.290 U	<0.300 U	<0.062 UJ	<0.062 U	<0.066 U	<0.120 U	<0.061 U	<0.057 U	<0.260 U	<0.063 U	<0.120 U	<0.058 U	<0.061 U	<0.060 U	<0.061 U	<0.057 U
Hexachloroethane	mg/kg	NS	11.1	<0.130 U	<0.130 U	<0.026 U	<0.027 U	<0.028 U	<0.051 U	<0.026 U	<0.024 U	<0.110 U	<0.027 U	<0.051 U	<0.025 U	<0.026 U	<0.026 U	<0.026 U	<0.024 U
Isophorone	mg/kg	NS	2,420	<0.100 U	<0.100 U	<0.021 U	<0.021 U	<0.023 U	<0.041 U	<0.021 U	<0.019 U	<0.090 U	<0.021 U	<0.041 U	<0.020 U	<0.021 U	<0.020 U	<0.021 U	<0.020 U
Nitrobenzene	mg/kg	NS	32.4	<0.130 U	<0.130 U	<0.027 U	<0.027 U	<0.029 U	<0.053 U	<0.027 U	<0.025 U	<0.120 U	<0.028 U	<0.053 U	<0.026 U	<0.027 U	<0.026 U	<0.027 U	<0.025 U
N-nitrosodi-n-propylamine	mg/kg	NS	0.328	<0.180 U	<0.180 U	<0.038 U	<0.039 U	<0.041 U	<0.074 U	<0.038 U	<0.035 U	<0.160 U	<0.039 U	<0.075 U	<0.036 U	<0.038 U	<0.037 U	<0.038 U	<0.036 U
N-Nitrosodiphenylamine	mg/kg	0.0764	469	<0.120 U	<0.120 U	<0.026 U	<0.026 U	<0.028 U	<0.050 U	<0.026 U	<0.024 U	<0.110 U	<0.027 U	<0.051 U	<0.024 U	<0.025 U	<0.025 U	<0.026 U	<0.024 U
Pyridine	mg/kg	0.0069	1,170	<0.760 U	<0.770 U	<0.160 U	<0.160 U	<0.170 U	<0.310 U	<0.160 U	<0.150 U	<0.690 U	<0.160 U	<0.310 U	<0.150 U	<0.160 U	<0.160 U	<0.160 U	<0.150 U

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	CS-TT04		CS-TT05	FT-SB01		FT-SB02		FT-SB03		FT-SB04		FT-SB05		FT-SB06		
Sample / Duplicate:				CS-TT04	CS-TT04 DUP	CS-TT05	FT-SB01	FT-SB01	FT-SB02	FT-SB02	FT-SB03	FT-SB03	FT-SB04	FT-SB04	FT-SB05	FT-SB05	FT-SB06	FT-SB06 DUP	FT-SB06
Field Sample ID:				CS-TT04-0506-101408	CS-TTDUP002-0506-101408	CS-TT05-0607-101408	FT-SB01-SS-120308	FT-SB01-0607-120308	FT-SB02-SS-112408	FT-SB02-0910-112408	FT-SB03-SS-112408	FT-SB03-0809-112408	FT-SB04-SS-112408	FT-SB04-0405-112408	FT-SB05-SS-112408	FT-SB05-0405-112408	FT-SB06-SS-112408	FT-SBDUP001-112408	FT-SB06-0809-112408
Sample Depth (feet):				5 - 6	5 - 6	6 - 7	0 - 0.5	6 - 7	0 - 0.5	9 - 10	0 - 0.5	8 - 9	0 - 0.5	4 - 5	0 - 0.5	4 - 5	0 - 0.5	0 - 0.5	8 - 9
Sample Date:				10/14/2008	10/14/2008	10/14/2008	12/03/2008	12/03/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008
Phenols																			
2,4,5-Trichlorophenol	mg/kg	NS	82,100	<0.059 U	<0.059 U	<0.012 U	<0.012 U	<0.013 U	<0.024 U	<0.012 U	<0.011 U	<0.053 U	<0.013 U	<0.024 U	<0.012 U	<0.012 U	<0.012 U	<0.012 U	<0.011 U
2,4,6-Trichlorophenol	mg/kg	NS	209	<0.059 U	<0.059 U	<0.012 U	<0.012 U	<0.013 U	<0.024 U	<0.012 U	<0.011 U	<0.053 U	<0.013 U	<0.024 U	<0.012 U	<0.012 U	<0.012 U	<0.012 U	<0.011 U
2,4-Dichlorophenol	mg/kg	NS	2,460	<0.059 U	<0.059 U	<0.012 U	<0.012 U	<0.013 U	<0.024 U	<0.012 U	<0.011 U	<0.053 U	<0.013 U	<0.024 U	<0.012 U	<0.012 U	<0.012 U	<0.012 U	<0.011 U
2,4-Dimethylphenol	mg/kg	NS	16,400	<0.390 U	<0.390 U	<0.081 U	<0.082 U	<0.088 U	<0.160 U	<0.081 U	<0.075 U	<0.350 U	<0.083 U	<0.160 U	<0.077 UJ	<0.080 U	<0.079 U	<0.081 U	<0.076 U
2,4-Dinitrophenol	mg/kg	NS	1,640	<2.000 U	<2.000 U	<0.410 U	<0.420 U	<0.440 U	<0.800 U	<0.410 U	<0.380 U	<1.800 U	<0.420 U	<0.800 U	<0.390 U	<0.400 U	<0.400 U	<0.410 U	<0.380 U
2-Chlorophenol	mg/kg	NS	5,840	<0.120 U	<0.120 U	<0.026 U	<0.026 U	<0.028 U	<0.050 U	<0.026 U	<0.024 U	<0.110 U	<0.027 U	<0.051 U	<0.024 U	<0.025 U	<0.025 U	<0.026 U	<0.024 U
2-Methylphenol	mg/kg	NS	41,000	<0.076 U	<0.077 U	<0.016 U	<0.016 U	<0.017 U	<0.031 U	<0.016 U	<0.015 U	<0.069 U	<0.016 U	<0.031 U	<0.015 U	<0.016 U	<0.016 U	<0.016 U	<0.015 U
2-Nitrophenol	mg/kg	NS	NS	<0.059 U	<0.059 U	<0.012 U	<0.012 U	<0.013 U	<0.024 U	<0.012 U	<0.011 U	<0.053 U	<0.013 U	<0.024 U	<0.012 U	<0.012 U	<0.012 U	<0.012 U	<0.011 U
4-Chloro-3-methylphenol	mg/kg	NS	82,100	<0.390 U	<0.390 U	<0.081 U	<0.082 U	<0.088 U	<0.160 U	<0.081 U	<0.075 U	<0.350 U	<0.083 U	<0.160 U	<0.077 U	<0.080 U	<0.079 U	<0.081 U	<0.076 U
4-Methylphenol	mg/kg	NS	82,100	<0.190 U	<0.190 U	<0.041 U	<0.041 U	<0.044 U	<0.079 U	<0.040 U	<0.038 U	<0.170 U	<0.042 U	<0.080 U	<0.038 U	<0.040 U	<0.040 U	<0.041 U	<0.038 U
4-Nitrophenol	mg/kg	NS	NS	<0.570 U	<0.570 U	<0.120 U	<0.120 U	<0.130 U	<0.230 U	<0.120 U	<0.110 U	<0.510 U	<0.120 U	<0.230 U	<0.110 U	<0.120 U	<0.120 U	<0.120 U	<0.110 U
4,6-Dinitro-2-methylphenol	mg/kg	NS	65.7	<1.900 U	<1.900 U	<0.410 UJ	<0.410 U	<0.440 U	<0.790 U	<0.400 U	<0.380 U	<1.700 U	<0.420 U	<0.800 U	<0.380 U	<0.400 U	<0.400 U	<0.410 U	<0.380 U
Pentachlorophenol	mg/kg	0.0028	3.97	<1.900 U	<1.900 U	<0.410 U	<0.410 U	<0.440 U	<0.790 U	<0.400 U	<0.380 U	<1.700 U	<0.420 U	<0.800 U	<0.380 U	<0.400 U	<0.400 U	<0.410 U	<0.380 U
Phenol	mg/kg	2.2946	100,000	<0.110 U	<0.110 U	<0.022 U	<0.022 U	<0.024 U	<0.043 U	<0.022 U	<0.021 U	<0.095 U	<0.023 U	<0.043 U	<0.021 U	<0.022 U	<0.022 U	<0.022 U	<0.021 U
Metals																			
Aluminum, Total	mg/kg	600	100,000	*4,300*	*5,200*	*6,300*	*3,800*	*4,900*	*2,900*	*4,200*	*4,000*	*6,100*	*1,900*	*3,100*	*1,400*	*7,100*	*2,300*	*2,900*	*5,000*
Antimony, Total	mg/kg	0.542	467	0.160 BJ-	0.160 BJ-	*0.920 J-*	0.370 J	0.190 JB	*1.200 J-*	0.070 BJ-	0.240 J-	0.230 BJ-	0.140 BJ-	0.270 J-	0.083 BJ-	0.082 BJ-	0.150 BJ-	0.240 BJ-	<0.016 UJ
Arsenic, Total [1]	mg/kg	0.584	8.3	*3.900*	*5.400*	*5.000*	***10.000***	***69.000***	*7.800*	*2.400*	*5.500*	***13.000***	*2.900*	***58.000***	*2.100*	***25.000***	*7.900*	***11.000***	*3.800*
Barium, Total	mg/kg	164.8	100,000	*220.000*	*210.000*	56.000 J-	63.000	48.000	90.000	38.000	40.000	140.000	43.000	48.000	27.000 J+	46.000	33.000	43.000	16.000
Beryllium, Total	mg/kg	6.32	2,300	0.460	0.690	0.510	0.350	0.750	0.760	0.240	0.420	0.740	0.280	0.690	0.210	0.700	0.630	0.520	0.210
Cadmium, Total	mg/kg	0.752	985	0.550	0.640	0.520	0.700	0.250	*0.840*	0.300	0.580	*0.860*	0.230	0.280	0.380	0.370	0.290	0.490	0.270
Calcium, Total	mg/kg	NS	NS	77,000	80,000	50,000	99,000	13,000	59,000	55,000	82,000	75,000	4,100	20,000	100,000	52,000	6,000	13,000	61,000
Chromium, Hexavalent	mg/kg	NS	6.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium, Total [3]	mg/kg	360,000	NS	10.000	18.000	11.000	64.000	17.000	20.000	7.700	12.000	15.000	4.900	21.000	4.500	13.000	5.100	6.500	13.000
Chromium, Trivalent	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt, Total	mg/kg	3.6073	347	3.500	*4.500*	*4.300*	*7.400*	*6.500*	*5.600*	*4.600*	*4.400*	*5.800*	2.200	*4.300*	1.400	*5.800*	3.500	*4.300*	*5.300*
Copper, Total	mg/kg	91.6	46,700	16.000	25.000	59.000 J-	78.000	16.000	*110.000*	12.000	*160.000*	62.000	18.000	22.000	12.000	55.000	19.000	36.000	8.000
Iron, Total	mg/kg	NS	100,000	9,100	12,000	16,000	53,000	18,000	17,000	9,900	20,000	14,000	5,100	10,000	6,900	15,000	12,000	16,000	14,000
Lead, Total	mg/kg	27	800	*540.000*	*530.000*	*130.000*	*460.000*	*60.000*	*410.000*	6.700	*64.000*	*220.000*	*36.000*	*140.000*	22.000 J+	*41.000*	15.000	*33.000*	8.100
Magnesium, Total	mg/kg	NS	NS	35,000	34,000	24,000	25,000	1,500	33,000	16,000	45,000	33,000	1,400	6,200	6,100 J+	28,000	2,300	7,100	42,000
Manganese, Total	mg/kg	39.1244	25,900	*280.000*	*340.000*	*220.000*	*1.100*	*86.000*	*360.000*	*800.000*	*320.000*	*510.000*	*56.000*	*93.000*	*73.000 J*	*330.000*	*45.000*	*130.000*	*660.000*
Mercury, Total	mg/kg	0.208	3.13	0.110	0.120	*0.390 J-*	***8.800***	0.017 B	*0.840*	0.041	*0.290*	*0.520*	0.110	0.046	0.060	0.120	0.099	0.098	0.013 B
Nickel, Total	mg/kg	13.0612	22,500	10.000	*16.000*	12.000	*46.000*	*22.000*	*17.000*	10.000	*15.000*	*15.000*	5.100	11.000	5.000	*16.000*	8.800	11.000	*15.000*
Potassium, Total	mg/kg	NS	NS	940	1,100	1,300	590	390 B	620	800	750	1,300	290 B	270 B	360	1,400	300 B	390	1,100
Selenium, Total	mg/kg	0.52	5,840	*0.830*	*0.850*	*1.300*	*0.590 B*	*0.860*	*1.100 J*	*1.000 J*	*0.560 JB*	*2.900 J*	*1.400 J*	*0.870 J*	*0.930 J*	*1.100 J*	*0.830 J*	*0.880 J*	<0.150 UJB
Silver, Total	mg/kg	0.8491	5,840	0.062 B	0.069 B	0.110 B	0.095 B	0.037 B	0.100 B	0.045 B	0.080 B	0.170	0.050 B	0.078 B	0.045 B	0.069 B	0.053 B	0.072 B	0.047 B
Sodium, Total	mg/kg	NS	NS	290 B	380 B	230 B	190 B	240 B	160 B	150 B	290 B	380 B	110 B	150 B	110 B	190 B	120 B	130 B	170 B
Thallium, Total	mg/kg	0.284	11.7	0.100 B	0.140 J	0.270	0.084 B	*0.550*	*0.310*	0.063 B	0.150	*0.580*	0.063 B	*0.470*	0.058 B	*0.520*	0.190	0.220	0.053 B
Vanadium, Total	mg/kg	60	5,840	15.000	17.000	19.000	8.500	20.000	14.000	14.000	16.000	23.000	5.200	19.000	3.300	22.000	12.000	13.000	18.000
Zinc, Total	mg/kg	NS	100,000	390.000	290.000	89.000 J+	90.000	18.000	150.000	55.000	74.000	160.000	29.000	41.000	28.000 J	49.000	31.000	68.000	41.000
Inorganic - Cyanide																			
Cyanide, Amenable	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Reactive	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Total	mg/kg	4.04	195	0.56 B	1.7	0.39 BJ-	1.1	0.4 B	*14*	0.22 B	0.64	1.1	2.1	0.51 B	*8.5 J+*	0.26 B	0.36 B	0.24 JB	<0.12 U
Other																			
Sulfide, Reactive	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organic Matter	%	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent Moisture	%	NS	NS	15	15	19	20	25	16	18	12	24	21	17	14	17	16	19	13

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	FT-SB07				FT-SB08		FT-SB09			FT-SB10		FT-SB11		FT-SB12		FT-SB13	
Sample / Duplicate:				FT-SB07	FT-SB07	FT-SB07	FT-SB07 DUP	FT-SB08	FT-SB08	FT-SB09	FT-SB09	FT-SB09	FT-SB10	FT-SB10	FT-SB11	FT-SB11	FT-SB12	FT-SB12	FT-SB13	FT-SB13
Field Sample ID:				FT-SB07-SS-120408	FT-SB07-0911-120408	MSS-FT-SB07-0911-120408	FT-SBDUP004-120408	FT-SB08-SS-112508	FT-SB08-4656-112508	FT-SB09-SS-120508	FT-SB09-0405-120508	MSS-FT-SB09-0405-120508	FT-SB10-SS-112408	FT-SB10-1112-112408	FT-SB11-SS-112408	FT-SB11-1112-112408	FT-SB12-SS-112408	FT-SB12-0708-112408	FT-SB13-SS-112408	FT-SB13-0304-112408
Sample Depth (feet):				0 - 0.5	9 - 11	9 - 11	9 - 11	0 - 0.5	4.6 - 5.6	0 - 0.5	4 - 5	4 - 5	0 - 0.5	11 - 12	0 - 0.5	11 - 12	0 - 0.5	7 - 8	0 - 0.5	3 - 4
Sample Date:				12/04/2008	12/04/2008	12/04/2008	12/04/2008	11/25/2008	11/25/2008	12/05/2008	12/05/2008	12/05/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008
VOCs																				
1,1,1-Trichloroethane	mg/kg	0.1402	640	<0.00083 UJ	<0.00064 U	--	<0.00074 U	<0.0010 UJ	<0.00060 U	<0.00079 U	<0.0010 UJ	--	<0.0012 U	<0.0028 U	<0.00085 U	<0.00047 U	<0.00084 U	<0.00048 U	<0.00094 U	<0.00063 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0002	3.6	<0.00097 U	<0.00075 U	--	<0.00087 U	<0.0012 UJ	<0.00071 UJ	<0.00092 UJ	<0.0012 UJ	--	<0.0014 U	<0.0033 U	<0.0010 U	<0.00055 U	<0.00099 U	<0.00056 U	<0.0011 U	<0.00074 U
1,1,2-Trichloroethane	mg/kg	0.0032	7.01	<0.0014 U	<0.0011 U	--	<0.0013 U	<0.0017 UJ	<0.0010 UJ	<0.0013 U	<0.0017 UJ	--	<0.0020 U	<0.0047 U	<0.0014 U	<0.00079 U	<0.0014 U	<0.00081 U	<0.0016 U	<0.0011 U
1,1-Dichloroethane	mg/kg	0.4834	22.2	<0.00033 UJ	<0.00026 U	--	<0.00030 U	<0.00041 UJ	<0.00024 U	<0.00032 U	<0.00042 UJ	--	<0.00049 U	<0.0011 U	<0.00034 U	<0.00019 U	<0.00034 U	<0.00019 U	<0.00038 U	<0.00026 U
1,1-Dichloroethene	mg/kg	0.005	1,190	<0.00094 UJ	<0.00072 U	--	<0.00084 U	<0.0012 UJ	<0.00068 U	<0.00089 U	<0.0012 UJ	--	<0.0014 U	<0.0031 U	<0.00097 U	<0.00053 U	<0.00096 U	<0.00055 U	<0.0011 U	<0.00072 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0002	0.092	<0.00096 U	<0.00074 U	--	<0.00086 U	<0.0012 UJ	<0.00070 UJ	<0.00091 UJ	<0.0012 UJ	--	<0.0014 U	<0.0032 U	<0.00098 U	<0.00054 U	<0.00097 U	<0.00056 U	<0.0011 U	<0.00073 U
1,2-Dibromoethane	mg/kg	0.0000282	0.221	<0.00083 U	<0.00064 U	--	<0.00074 U	<0.0010 UJ	<0.00060 UJ	<0.00079 U	<0.0010 UJ	--	<0.0012 U	<0.0028 U	<0.00085 U	<0.00047 U	<0.00084 U	<0.00048 U	<0.00094 U	<0.00063 U
1,2-Dichlorobenzene	mg/kg	1.168	376	<0.00072 U	<0.00055 U	--	<0.00064 U	<0.00088 UJ	<0.00052 UJ	<0.00068 UJ	<0.00089 UJ	--	<0.0010 U	<0.0024 U	<0.00074 U	<0.00040 U	<0.00073 U	<0.00042 U	<0.00082 U	<0.00055 U
1,2-Dichloroethane	mg/kg	0.0028	2.87	<0.0011 UJ	<0.00086 U	--	<0.0010 U	<0.0014 UJ	<0.00081 U	<0.0011 U	<0.0014 UJ	--	<0.0016 U	<0.0037 U	<0.0011 U	<0.00063 U	<0.0011 U	<0.00065 U	<0.0013 U	<0.00085 U
1,2-Dichloropropane	mg/kg	0.0033	1.78	<0.00088 UJ	<0.00067 U	--	<0.00079 U	<0.0011 UJ	<0.00064 U	<0.00083 U	<0.0011 UJ	--	<0.0013 U	<0.0029 U	<0.00090 U	<0.00049 U	<0.00089 U	<0.00051 U	<0.0010 U	<0.00067 U
1,3-Dichlorobenzene	mg/kg	1.1528	297	<0.00076 U	<0.00059 U	--	<0.00069 U	<0.00094 UJ	<0.00056 UJ	<0.00073 UJ	<0.00095 UJ	--	<0.0011 U	<0.0026 U	<0.00079 U	<0.00043 U	<0.00078 U	<0.00044 U	<0.00087 U	<0.00058 U
1,4-Dichlorobenzene	mg/kg	0.144	16.4	<0.0012 U	<0.00096 U	--	<0.0011 U	<0.0015 UJ	<0.00090 UJ	<0.0012 UJ	<0.0015 UJ	--	<0.0018 U	<0.0042 U	<0.0013 U	<0.00070 U	<0.0013 U	<0.00072 U	<0.0014 U	<0.00095 U
2-Butanone (MEK)	mg/kg	1.6661	28,400	<0.0029 UJ	0.022 J	--	0.016 J	<0.0036 UJ	<0.0021 U	0.015 J	<0.0036 UJ	--	<0.0042 U	0.024 J	<0.0030 U	<0.0016 U	<0.0030 U	<0.0017 U	<0.0033 U	0.0057 J
2-Hexanone	mg/kg	NS	1,760	<0.0078 U	<0.0060 U	--	<0.0070 U	<0.0096 UJ	<0.0057 U	<0.0074 U	<0.0097 UJ	--	<0.011 U	<0.026 U	<0.0080 U	<0.0044 U	<0.0079 U	<0.0045 U	<0.0089 U	<0.0059 U
4-Methyl-2-Pentanone (MIBK)	mg/kg	0.2252	3,360	<0.0069 U	<0.0053 U	--	<0.0062 U	<0.0085 UJ	<0.0051 UJ	<0.0066 U	<0.0086 UJ	--	<0.010 U	<0.023 U	<0.0071 U	<0.0039 U	<0.0071 U	<0.0040 U	<0.0079 U	<0.0053 U
Acetone	mg/kg	3.6766	100,000	<0.0086 UJ	0.110	--	0.073	0.028 J	<0.0062 U	0.081	<0.011 UJ	--	0.020 J	0.160	<0.0088 U	0.0069 J	0.0095 J	<0.0050 U	0.021 J	0.043
Benzene	mg/kg	0.0051	7.07	<0.00075 UJ	<0.00058 U	--	<0.00067 U	0.0019 J	0.00059 J	<0.00071 U	<0.00093 UJ	--	<0.0011 U	<0.0025 U	<0.00077 U	<0.00042 U	<0.00076 U	<0.00043 U	<0.00085 U	<0.00057 U
Bromodichloromethane	mg/kg	0.0003	1.83	<0.00035 U	<0.00027 U	--	<0.00031 U	<0.00043 UJ	<0.00026 UJ	<0.00033 U	<0.00043 UJ	--	<0.00051 U	<0.0012 U	<0.00036 U	<0.00020 U	<0.00036 U	<0.00020 U	<0.00040 U	<0.00027 U
Bromoform	mg/kg	0.0023	113	<0.00037 U	<0.00028 U	--	<0.00033 U	<0.00045 UJ	<0.00027 UJ	<0.00035 U	<0.00045 UJ	--	<0.00053 U	<0.0012 U	<0.00038 U	<0.00021 U	<0.00037 U	<0.00021 U	<0.00042 U	<0.00028 U
Bromomethane	mg/kg	0.0051	43	<0.00080 UJ	<0.00061 U	--	<0.00071 U	<0.00098 UJ	<0.00058 U	<0.00076 U	<0.00099 UJ	--	<0.0012 U	<0.0027 U	<0.00082 U	<0.00045 U	<0.00081 U	<0.00046 U	<0.00091 U	<0.00061 U
Carbon Disulfide	mg/kg	0.5919	738	<0.00067 U	0.0031 J	--	0.0011 J	<0.00082 UJ	<0.00049 U	<0.00063 U	<0.00083 UJ	--	<0.00097 U	0.0051 J	<0.00069 U	<0.00038 U	<0.00068 U	<0.00039 U	<0.00076 U	<0.00051 U
Carbon Tetrachloride	mg/kg	0.0039	4.03	<0.0010 UJ	<0.00077 U	--	<0.00090 U	<0.0012 UJ	<0.00073 U	<0.00095 U	<0.0012 UJ	--	<0.0015 U	<0.0034 U	<0.0010 U	<0.00057 U	<0.0010 U	<0.00058 U	<0.0011 U	<0.00077 U
Chlorobenzene	mg/kg	0.1358	761	<0.00086 U	<0.00066 U	--	<0.00077 U	<0.0011 UJ	<0.00063 UJ	<0.00082 U	<0.0011 UJ	--	<0.0012 U	<0.0029 U	<0.00088 U	<0.00049 U	<0.00088 U	<0.00050 U	<0.00098 U	<0.00066 U
Chloroethane	mg/kg	0.2266	2,120	<0.0014 UJ	<0.0011 U	--	<0.0013 U	<0.0017 UJ	<0.0010 U	<0.0013 U	<0.0018 UJ	--	<0.0021 UJ	<0.0047 UJ	<0.0015 UJ	<0.00080 UJ	<0.0014 UJ	<0.00082 UJ	<0.0016 UJ	<0.0011 UJ
Chloroform	mg/kg	0.0033	1.98	<0.00046 UJ	<0.00036 U	--	<0.00041 U	<0.00057 UJ	<0.00034 U	<0.00044 U	<0.00057 UJ	--	<0.00067 U	<0.0015 U	<0.00047 U	<0.00026 U	<0.00047 U	<0.00027 U	<0.00053 U	<0.00035 U
Chloromethane	mg/kg	0.0155	669	<0.0012 UJ	<0.00094 U	--	<0.0011 U	<0.0015 UJ	<0.00089 U	<0.0012 U	<0.0015 UJ	--	<0.0018 U	<0.0041 U	<0.0013 U	<0.00069 U	<0.0012 U	<0.00071 U	<0.0014 U	<0.00094 U
cis-1,2-Dichloroethene	mg/kg	0.0412	2,340	<0.00089 UJ	<0.00069 U	--	<0.00080 U	<0.0011 UJ	<0.00065 U	<0.00085 U	<0.0011 UJ	--	<0.0013 U	<0.0030 U	<0.00092 U	<0.00050 U	<0.00091 U	<0.00052 U	<0.0010 U	<0.00068 U
cis-1,3-Dichloropropene	mg/kg	NS	1,210	<0.0021 U	<0.0016 U	--	<0.0018 U	<0.0025 UJ	<0.0015 UJ	<0.0020 U	<0.0025 UJ	--	<0.0030 U	<0.0069 U	<0.0021 U	<0.0012 U	<0.0021 U	<0.0012 U	<0.0023 U	<0.0016 U
Cyclohexane	mg/kg	NS	117	<0.00064 U	<0.00049 U	--	<0.00057 U	0.0066 J	0.0015 J	<0.00060 U	<0.00079 UJ	--	<0.00092 U	<0.0021 U	<0.00065 U	<0.00036 U	<0.00065 U	<0.00037 U	0.0036 J	<0.00049 U
Dibromochloromethane	mg/kg	0.032	38.9	<0.00091 U	<0.00070 U	--	<0.00081 U	<0.0011 UJ	<0.00066 UJ	<0.00086 U	<0.0011 UJ	--	<0.0013 U	<0.0030 U	<0.00093 U	<0.00051 U	<0.00092 U	<0.00053 U	<0.0010 U	<0.00069 U
Dichloromethane	mg/kg	0.0026	1,150	<0.0012 UJ	<0.00092 U	--	<0.0011 U	<0.0015 UJ	<0.00087 U	<0.0011 U	<0.0015 UJ	--	<0.0017 U	<0.0040 U	<0.0012 U	<0.00067 U	<0.0012 U	<0.00069 U	<0.0014 U	<0.00091 U
Ethylbenzene	mg/kg	1.57	35.4	<0.0011 U	<0.00082 U	--	<0.00096 U	<0.0013 UJ	<0.00078 UJ	<0.0010 U	<0.0013 UJ	--	<0.0015 U	<0.0036 U	<0.0011 U	<0.00060 U	<0.0011 U	<0.00062 U	<0.0012 U	<0.00081 U
Freon 113	mg/kg	NS	910	<0.00072 U	<0.00055 U	--	<0.00064 U	<0.00088 UJ	<0.00052 U	<0.00068 U	<0.00089 UJ	--	<0.0010 U	<0.0024 U	<0.00074 U	<0.00040 U	<0.00073 U	<0.00042 U	<0.00082 U	<0.00055 U
Freon 12	mg/kg	3.0863	530	<0.00083 UJ	<0.00064 U	--	<0.00074 U	<0.0010 UJ	<0.00060 U	<0.00079 U	<0.0010 UJ	--	<0.0012 U	<0.0028 U	<0.00085 U	<0.00047 U	<0.00084 U	<0.00048 U	<0.00094 U	<0.00063 U
Isopropylbenzene	mg/kg	NS	268	<0.00094 U	<0.00072 U	--	<0.00084 U	<0.0012 UJ	<0.00068 UJ	<0.00089 UJ	<0.0012 UJ	--	<0.0014 U	<0.0031 U	<0.00097 U	<0.00053 U	<0.00096 U	<0.00055 U	<0.0011 U	<0.00072 U
Methyl acetate	mg/kg	NS	29,000	<0.0044 U	<0.0034 U	--	<0.0039 U	<0.0054 UJ	<0.0032 U	<0.0042 U	<0.0054 UJ	--	<0.0064 U	<0.015 U	<0.0045 U	<0.0025 U	<0.0045 U	<0.0025 U	<0.0050 U	<0.0033 U
Methylcyclohexane	mg/kg	NS	67.6	0.00073 J	<0.00052 U	--	<0.00060 U	0.0051 J	0.0025 J	<0.00063 U	0.0015 J	--	0.0011 J	<0.0022 U	<0.00069 U	<0.00038 U	<0.00068 U	<0.00039 U	0.0038 J	<0.00051 U
Methyl-tert-butyl-ether	mg/kg	0.027	282	<0.00054 UJ	<0.00042 U	--	<0.00049 U	<0.00066 UJ	<0.00039 U	<0.00051 U	<0.00067 UJ	--	<0.00079 U	<0.0018 U	<0.00056 U	<0.00031 U	<0.00055 U	<0.00031 U	<0.00062 U	<0.00041 U
Styrene	mg/kg	0.22	867	<0.0010 U	<0.00077 U	--	<0.00090 U	<0.0012 UJ	<0.00073 UJ	<0.00095 U	<0.0012 UJ	--	<0.0015 U	<0.0034 U	<0.0010 U	<0.00057 U	<0.0010 U	<0.00058 U	<0.0011 U	<0.00077 U
Tetrachloroethene	mg/kg	0.0045	145	<0.00094 U	<0.00072 U	--	<0.00084 U	<0.0012 UJ	<0.00068 UJ	<0.00089 U	<0.0012 UJ	--	<0.0014 U	<0.0031 U	<0.00097 U	<0.00053 U	<0.00096 U	<0.00055 U	<0.0011 U	<0.00072 U
Toluene	mg/kg	1.1072	818	<0.0011 U	<0.00085 U	--	<0.00099 U	0.015 J	0.0014 J	<0.0010 U	0.0032 J	--	<0.0016 U	<0.0037 U	<0.0011 U	<0.00062 U	<0.0011 U	<0.00064 U	0.0017 J	<0.00084 U
trans-1,2-Dichloroethene	mg/kg	0.0626	1,850	<0.00062 UJ	<0.00048 U	--	<0.00056 U	<0.00076 UJ	<0.00045 U	<0.00059 U	<0.00077 UJ	--	<0.00090 U	<0.0021 U	<0.00064 U	<0.00035 U	<0.00063 U	<0.00036 U	<0.00071 U	<0.00047 U
trans-1,3-Dichloropropene	mg/kg	NS	1,510	<0.0011 U	<0.00082 U	--	<0.00096 U	<0.0013 UJ	<0.00078 UJ	<0.0010 U	<0.0013 UJ	--	<0.0015 U	<0.0036 U	<0.0011 U	<0.00060 U	<0.0011 U	<0.00062 U	<0.0012 U	<0.00081 U
Trichloroethene	mg/kg	0.0036	8.41	<0.00037 UJ	<0.00028 U	--	<0.00033 U	<0.00045 UJ	<0.00027 U	<0.00035 U	<0.00045 UJ	--	<0.00053 U	<0.0012 U	<0.00038 U	<0.00021 U	<0.00037 U	<0.00021 U	<0.00042 U	<0.00028 U
Trichlorofluoromethane	mg/kg	4.4775	1,230	<0.0017 UJ	<0.0013 U	--	<0.0015 U	<0.0020 UJ	<0.0012 U	<0.0016 U	<0.0021 UJ	--	<0.0024 U	<0.0055 U	<0.0017 U	<0.00094 U	<0.0017 U	<0.00096 U	<0.0019 U	<0.0013 U
Vinyl Chloride	mg/kg	0.0001	2.08	<0.0021 UJ	<0.0016 U	--	<0.0019 U	<0.0026 UJ	<0.0016 U	<0.0020 U	<0.0026 UJ	--	<0.0031 U	<0.0071 U	<0.0022 U	<0.0012 U	<0.0022 U	<0.0012 U	<0.0024 U	<0.0016 U
Xylenes, Total	mg/kg	3.96	260	<0.00097 U	<0.00075 U	--	<0.00087 U	0.0029 J	<0.00071 UJ	<0.00092 U	<0.0012 UJ	--	<0.0014 U	<0.0033 U	<0.0010 U	<0.00055 U	<0.00099 U	<0.00056 U	<0.0011 U	<0.00074 U
PCBs																				
PCB, Total [4]	mg/kg	0.0094	0.967	--	--	--	--	*0.630*	<0.0031 U	--	--	--	--	--	--	--	--	--	--	--
PCB-1016	mg/kg	NS	28	--	--	--	--	<0.012 UJ	<0.0059 U	--	--	--	--	--	--	--	--	--	--	--
PCB-1221	mg/kg	NS	0.883	--	--	--	--	<0.037 U	<0.018 U	--	--	--	--	--	--	--	--	--	--	--
PCB-1232	mg/kg	NS	0.792	--	--	--	--	<0.012 U	<0.0059 U	--	--	--	--	--	--	--	--	--	--	--
PCB-1242	mg/kg	NS	0.972	--	--	--	--	<0.022 U	<0.011 U	--	--	--	--	--	--	--	--	--	--	--
PCB-1248	mg/kg	NS	0.975	--	--	--	--	<0.013 U	<0.0065 U	--	--	--	--	--	--	--	--	--	--	--
PCB-1254	mg/kg	NS	0.988	--	--	--	--	<0.013 U	<0.0064 U	--	--	--	--	--	--	--	--	--	--	--
PCB-1260	mg/kg	NS	1	--	--	--	--	0.630	<0.0031 U	--	--	--	--	--	--	--	--	--	--	--

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	FT-SB07				FT-SB08		FT-SB09			FT-SB10		FT-SB11		FT-SB12		FT-SB13	
Sample / Duplicate:				FT-SB07	FT-SB07	FT-SB07	FT-SB07 DUP	FT-SB08	FT-SB08	FT-SB09	FT-SB09	FT-SB09	FT-SB10	FT-SB10	FT-SB11	FT-SB11	FT-SB12	FT-SB12	FT-SB13	FT-SB13
Field Sample ID:				FT-SB07-SS-120408	FT-SB07-0911-120408	MSS-FT-SB07-0911-120408	FT-SBDUP004-120408	FT-SB08-SS-112508	FT-SB08-4656-112508	FT-SB09-SS-120508	FT-SB09-0405-120508	MSS-FT-SB09-0405-120508	FT-SB10-SS-112408	FT-SB10-1112-112408	FT-SB11-SS-112408	FT-SB11-1112-112408	FT-SB12-SS-112408	FT-SB12-0708-112408	FT-SB13-SS-112408	FT-SB13-0304-112408
Sample Depth (feet):				0 - 0.5	9 - 11	9 - 11	9 - 11	0 - 0.5	4.6 - 5.6	0 - 0.5	4 - 5	4 - 5	0 - 0.5	11 - 12	0 - 0.5	11 - 12	0 - 0.5	7 - 8	0 - 0.5	3 - 4
Sample Date:				12/04/2008	12/04/2008	12/04/2008	12/04/2008	11/25/2008	11/25/2008	12/05/2008	12/05/2008	12/05/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008
PAHs																				
2-Methylnaphthalene	mg/kg	NS	3,010	0.074 J	<0.024 U	--	<0.024 U	0.540 J	0.220 J	0.270 J	0.370 J	--	0.680	<0.057 U	0.140 J	<0.022 U	0.270 J	<0.023 U	0.700	0.150 J
Acenaphthene	mg/kg	NS	45,200	0.690	<0.013 U	--	<0.013 U	0.076 J	0.140 J	0.800 J	0.630 J	--	0.083 J	<0.031 U	0.017 J	<0.012 U	0.110 J	<0.012 U	0.038 J	0.035 J
Acenaphthylene	mg/kg	NS	NS	0.030 J	<0.021 U	--	<0.021 U	0.440 J	0.029 J	0.160 J	<0.088 U	--	0.079 J	<0.051 U	0.055 J	<0.020 U	0.089 J	<0.020 U	0.026 J	<0.020 U
Anthracene	mg/kg	196.9492	100,000	1.400	<0.021 U	--	<0.021 U	0.710 J	0.550	2.200	1.500 J	--	0.350 J	<0.051 U	0.200 J	<0.020 U	0.280 J	<0.020 U	0.170 J	0.120 J
Benzo(a)anthracene	mg/kg	NS	20.8	4.100	0.027 J	--	<0.025 U	9.800	1.500	5.100	4.200	--	1.300	<0.060 U	0.910	<0.024 U	1.800	<0.024 U	0.410 J	0.460
Benzo(a)pyrene	mg/kg	0.47	2.11	***3.500***	<0.025 U	--	<0.025 U	***6.600***	*1.400*	***3.900***	***4.100***	--	*0.950*	<0.060 U	*0.710*	<0.024 U	*1.700*	<0.024 U	0.320 J	0.400
Benzo(b)fluoranthene	mg/kg	0.4793	21.1	*5.800 JK*	<0.033 U	--	<0.033 U	*12.000 JK*	*2.000 JK*	*7.100 K*	*6.100 K*	--	*1.700 JK*	<0.079 U	*1.300 JK*	<0.031 U	*3.200 JK*	<0.031 U	*0.630 JK*	*0.770 JK*
Benzo(g,h,i)perylene	mg/kg	NS	NS	2.700	<0.020 U	--	<0.020 U	3.900	1.000	2.200	2.900	--	0.660	<0.048 U	0.480	<0.019 U	1.500	<0.019 U	0.300 J	0.340 J
Benzo(k)fluoranthene	mg/kg	NS	211	<0.056 UKJ	<0.051 U	--	<0.051 U	<0.190 UKJ	<0.046 UKJ	<0.230 UK	<0.210 UK	--	<0.049 UKJ	<0.120 U	<0.048 UKJ	<0.047 U	<0.050 UKJ	<0.048 U	<0.051 UKJ	<0.047 UKJ
Chrysene	mg/kg	0.1446	2,110	*3.800*	<0.034 U	--	<0.034 U	*9.400*	*1.500*	*5.900*	*4.400*	--	*1.400*	<0.081 U	*1.000*	<0.032 U	*2.200*	<0.032 U	*0.680*	*0.520*
Dibenz(a,h)anthracene	mg/kg	NS	2.11	0.990	<0.024 U	--	<0.024 U	1.900	0.250 J	0.800 J	0.840 J	--	0.290 J	<0.057 U	0.170 J	<0.022 U	0.520	<0.023 U	0.150 J	0.120 J
Fluoranthene	mg/kg	88.8778	30,100	8.500	<0.046 U	--	<0.046 U	13.000	3.200	13.000	9.400	--	2.800	<0.110 U	1.600	<0.043 U	3.700	<0.043 U	0.450	0.890
Fluorene	mg/kg	14.8299	30,100	0.620	<0.023 U	--	<0.023 U	0.190 J	0.150 J	1.500 J	0.580 J	--	0.230 J	<0.054 U	0.043 J	<0.021 U	0.081 J	<0.022 U	0.065 J	0.044 J
Indeno(1,2,3-cd)pyrene	mg/kg	NS	21.1	2.300	<0.028 U	--	<0.028 U	4.000	0.890	2.200	2.500	--	0.610	<0.066 U	0.450	<0.026 U	1.300	<0.026 U	0.230 J	0.290 J
Naphthalene	mg/kg	0.6582	24.1	0.130 J	<0.039 U	--	<0.039 U	*0.680 J*	0.150 J	0.290 J	0.430 J	--	0.650	<0.093 U	0.160 J	<0.037 U	0.200 J	<0.037 U	*1.000*	0.130 J
Phenanthrene	mg/kg	NS	NS	6.200	<0.021 U	--	<0.021 U	3.400	1.900	12.000	5.400	--	2.200	0.067 J	0.670	<0.020 U	1.600	<0.020 U	1.100	0.630
Pyrene	mg/kg	54.5455	22,600	6.300	0.038 J	--	<0.015 U	14.000 B	2.800 B	9.800	7.400	--	1.800	0.064 J	1.200	0.017 J	3.000	0.023 J	0.390 J	0.740
SVOCs																				
1,2,4-Trichlorobenzene	mg/kg	0.408	113	<0.0012 U	<0.00090 U	--	<0.0010 U	<0.0014 UJ	<0.00085 UJ	<0.0011 UJ	<0.0014 UJ	--	<0.0017 U	<0.0039 U	<0.0012 U	<0.00066 U	<0.0012 U	<0.00068 U	<0.0013 U	<0.00089 U
2,2-Oxybis(1-chloropropane)	mg/kg	NS	1,020	<0.032 U	<0.029 U	--	<0.029 U	<0.110 U	<0.027 U	<0.130 U	<0.120 U	--	<0.028 U	<0.069 U	<0.027 U	<0.027 U	<0.029 U	<0.028 U	<0.029 U	<0.027 U
2,4-Dinitrotoluene	mg/kg	0.0001	7.37	<0.092 U	<0.083 U	--	<0.083 U	<0.320 U	<0.077 U	<0.380 U	<0.340 U	--	<0.081 U	<0.200 U	<0.079 U	<0.078 U	<0.083 U	<0.079 U	<0.084 U	<0.078 U
2,6-Dinitrotoluene	mg/kg	0.0001	1.54	<0.039 U	<0.035 U	--	<0.035 U	<0.130 U	<0.032 U	<0.160 U	<0.150 U	--	<0.034 U	<0.084 U	<0.033 U	<0.033 U	<0.035 U	<0.034 U	<0.036 U	<0.033 U
2-Chloronaphthalene	mg/kg	NS	60,300	<0.014 U	<0.013 U	--	<0.013 U	<0.048 U	<0.012 U	<0.058 U	<0.052 U	--	<0.012 U	<0.030 U	<0.012 U	<0.012 U	<0.013 U	<0.012 U	<0.013 U	<0.012 U
2-Nitroaniline	mg/kg	NS	8,010	<0.070 U	<0.063 U	--	<0.063 U	<0.240 U	<0.058 U	<0.290 U	<0.260 U	--	<0.061 U	<0.150 U	<0.060 U	<0.059 U	<0.063 U	<0.060 U	<0.064 U	<0.059 U
3,3-Dichlorobenzidine	mg/kg	NS	5.11	<0.130 U	<0.110 U	--	<0.110 U	<0.430 U	<0.100 U	<0.520 U	<0.470 U	--	<0.110 U	<0.270 U	<0.110 U	<0.110 U	<0.110 U	<0.110 U	<0.110 U	<0.110 U
3-Nitroaniline	mg/kg	NS	NS	<0.100 U	<0.092 U	--	<0.092 U	<0.350 U	<0.085 U	<0.420 U	<0.380 U	--	<0.089 U	<0.220 U	<0.087 U	<0.086 U	<0.092 U	<0.088 U	<0.093 U	<0.086 U
4-Bromodiphenyl ether	mg/kg	NS	26.9	<0.027 U	<0.024 U	--	<0.024 U	<0.091 U	<0.022 U	<0.110 U	<0.099 U	--	<0.023 U	<0.057 U	<0.023 U	<0.022 U	<0.024 U	<0.023 U	<0.024 U	<0.022 U
4-Chloroaniline	mg/kg	NS	11.5	<0.110 U	<0.100 U	--	<0.100 U	<0.390 U	<0.095 U	<0.480 U	<0.430 U	--	<0.100 U	<0.250 U	<0.098 U	<0.097 U	<0.100 U	<0.098 U	<0.100 U	<0.097 U
4-Chlorodiphenyl ether	mg/kg	NS	NS	<0.029 U	<0.027 U	--	<0.027 U	<0.100 U	<0.024 U	<0.120 U	<0.110 U	--	<0.026 U	<0.063 U	<0.025 U	<0.025 U	<0.026 U	<0.025 U	<0.027 U	<0.025 U
4-Nitroaniline	mg/kg	NS	115	<0.100 U	<0.092 U	--	<0.092 U	<0.350 U	<0.084 U	<0.420 U	<0.380 U	--	<0.089 U	<0.220 U	<0.087 U	<0.086 U	<0.091 U	<0.087 U	<0.093 U	<0.086 U
Acetophenone	mg/kg	NS	2,520	<0.028 U	<0.025 U	--	<0.025 U	<0.096 U	<0.023 U	<0.120 U	<0.100 U	--	<0.024 U	<0.060 U	<0.024 U	<0.024 U	<0.025 U	<0.024 U	<0.026 U	<0.024 U
Benzaldehyde	mg/kg	NS	818	<0.094 U	<0.085 U	--	<0.085 U	<0.320 U	<0.078 U	<0.390 U	<0.350 U	--	<0.082 U	<0.200 U	<0.080 U	<0.079 U	<0.084 U	<0.081 U	0.089 J	<0.079 U
Biphenyl	mg/kg	NS	288	<0.070 U	<0.063 U	--	<0.063 U	<0.240 U	<0.058 U	<0.290 U	<0.260 U	--	0.180 J	<0.150 U	<0.060 U	<0.059 U	<0.063 U	<0.060 U	0.160 J	<0.059 U
Bis(2-Chloroethoxy)methane	mg/kg	NS	2,460	<0.032 U	<0.029 U	--	<0.029 U	<0.110 U	<0.027 U	<0.130 U	<0.120 U	--	<0.028 U	<0.069 U	<0.027 U	<0.027 U	<0.029 U	<0.028 U	<0.029 U	<0.027 U
Bis(2-Chloroethyl)ether	mg/kg	NS	1.29	<0.023 U	<0.021 U	--	<0.021 U	<0.080 U	<0.019 U	<0.097 U	<0.086 U	--	<0.020 U	<0.050 U	<0.020 U	<0.020 U	<0.021 U	<0.020 U	<0.021 U	<0.020 U
Bis(2-Ethylhexyl)phthalate	mg/kg	2.88	164	0.160 J	0.110 J	--	0.110 J	<0.220 U	<0.053 UJB	0.520 J	<0.240 U	--	<0.056 UJB	<0.140 UJB	<0.055 UJB	<0.054 UJB	<0.058 UJB	<0.055 UJB	<0.059 UJB	<0.054 UJB
Butyl benzyl phthalate	mg/kg	NS	1,210	<0.060 U	<0.054 U	--	<0.054 U	<0.210 U	<0.050 U	<0.250 U	<0.220 U	--	<0.053 U	<0.130 U	<0.051 U	<0.051 U	<0.054 U	<0.052 U	<0.055 U	<0.051 U
Caprolactam	mg/kg	NS	100,000	<0.150 U	<0.130 U	--	<0.130 U	<0.510 U	<0.120 U	<0.620 U	<0.550 U	--	<0.130 U	<0.320 U	<0.130 U	<0.130 U	<0.130 U	<0.130 U	<0.140 U	<0.130 U
Carbazole	mg/kg	NS	NS	0.580	<0.046 U	--	<0.046 U	0.190 J	0.074 J	1.300 J	0.370 J	--	0.180 J	<0.110 U	0.056 J	<0.043 U	0.095 J	<0.043 U	0.057 J	<0.043 U
Dibenzofuran	mg/kg	NS	1,040	0.270 J	<0.025 U	--	<0.025 U	0.310 J	0.120 J	0.900 J	0.440 J	--	0.230 J	<0.060 U	0.051 J	<0.024 U	0.120 J	<0.024 U	0.180 J	0.095 J
Diethyl phthalate	mg/kg	NS	100,000	<0.036 U	<0.033 U	--	<0.033 U	<0.120 U	<0.030 U	<0.150 U	<0.140 U	--	<0.032 U	<0.078 U	<0.031 U	<0.031 U	<0.033 U	<0.031 U	<0.033 U	<0.031 U
Dimethyl phthalate	mg/kg	NS	7,390	<0.032 U	<0.029 U	--	<0.029 U	<0.110 U	<0.027 U	<0.130 U	<0.120 U	--	<0.028 U	<0.069 U	<0.027 U	<0.027 U	<0.029 U	<0.028 U	<0.029 U	<0.027 U
Di-n-butyl phthalate	mg/kg	5.0333	82,100	<0.041 U	<0.037 U	--	<0.037 U	<0.140 U	<0.034 U	<0.170 U	<0.150 U	--	<0.035 U	<0.087 U	<0.035 U	<0.034 U	<0.036 U	<0.035 U	<0.037 U	<0.034 U
Di-n-octyl phthalate	mg/kg	NS	8,210	<0.020 U	<0.018 U	--	<0.018 U	<0.069 U	<0.017 U	<0.084 U	<0.075 U	--	<0.018 U	<0.043 U	<0.017 U	<0.017 U	<0.018 U	<0.017 U	<0.018 U	<0.017 U
Hexachlorobenzene	mg/kg	0.0252	1.15	<0.041 U	<0.037 U	--	<0.037 U	<0.140 U	<0.034 U	<0.170 U	<0.150 U	--	<0.035 U	<0.087 U	<0.035 U	<0.034 U	<0.036 U	<0.035 U	<0.037 U	<0.034 U
Hexachlorobutadiene	mg/kg	NS	7.19	<0.00088 U	<0.00067 U	--	<0.00079 U	<0.0011 UJ	<0.00064 UJ	<0.00083 UJ	<0.0011 UJ	--	<0.0013 U	<0.0029 U	<0.00090 U	<0.00049 U	<0.00089 U	<0.00051 U	<0.0010 U	<0.00067 U
Hexachlorocyclopentadiene	mg/kg	NS	10.8	<0.070 U	<0.063 U	--	<0.063 U	<0.240 U	<0.058 U	<0.290 U	<0.260 U	--	<0.061 U	<0.150 U	<0.060 U	<0.059 U	<0.063 U	<0.060 U	<0.064 U	<0.059 U
Hexachloroethane	mg/kg	NS	11.1	<0.030 U	<0.027 U	--	<0.027 U	<0.100 U	<0.025 U	<0.120 U	<0.110 U	--	<0.026 U	<0.064 U	<0.025 U	<0.025 U	<0.027 U	<0.026 U	<0.027 U	<0.025 U
Isophorone	mg/kg	NS	2,420	<0.024 U	<0.021 U	--	<0.021 U	<0.082 U	<0.020 U	<0.099 U	<0.088 U	--	<0.021 U	<0.051 U	<0.020 U	<0.020 U	<0.021 U	<0.020 U	<0.022 U	<0.020 U
Nitrobenzene	mg/kg	NS	32.4	<0.031 U	<0.028 U	--	<0.028 U	<0.110 U	<0.026 U	<0.130 U	<0.110 U	--	<0.027 U	<0.066 U	<0.026 U	<0.026 U	<0.028 U	<0.026 U	<0.028 U	<0.026 U
N-nitrosodi-n-propylamine	mg/kg	NS	0.328	<0.043 U	<0.039 U	--	<0.039 U	<0.150 U	<0.036 U	<0.180 U	<0.160 U	--	<0.038 U	<0.093 U	<0.037 U	<0.037 U	<0.039 U	<0.037 U	<0.040 U	<0.037 U
N-Nitrosodiphenylamine	mg/kg	0.0764	469	<0.029 U	<0.027 U	--	<0.027 U	<0.100 U	<0.024 U	<0.120 U	<0.110 U	--	<0.026 U	<0.063 U	<0.025 U	<0.025 U	<0.026 U	<0.025 U	<0.027 U	<0.025 U
Pyridine	mg/kg	0.0069	1,170	<0.180 U	<0.160 U	--	<0.160 U	<0.620 U	<0.150 U	<0.760 U	<0.680 U	--	<0.160 U	<0.390 U	<0.160 U	<0.150 U	<0.160 U	<0.160 U	<0.170 U	<0.150 U

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	FT-SB07				FT-SB08		FT-SB09			FT-SB10		FT-SB11		FT-SB12		FT-SB13	
Sample / Duplicate:				FT-SB07	FT-SB07	FT-SB07	FT-SB07 DUP	FT-SB08	FT-SB08	FT-SB09	FT-SB09	FT-SB09	FT-SB10	FT-SB10	FT-SB11	FT-SB11	FT-SB12	FT-SB12	FT-SB13	FT-SB13
Field Sample ID:				FT-SB07-SS-120408	FT-SB07-0911-120408	MSS-FT-SB07-0911-120408	FT-SBDUP004-120408	FT-SB08-SS-112508	FT-SB08-4656-112508	FT-SB09-SS-120508	FT-SB09-0405-120508	MSS-FT-SB09-0405-120508	FT-SB10-SS-112408	FT-SB10-1112-112408	FT-SB11-SS-112408	FT-SB11-1112-112408	FT-SB12-SS-112408	FT-SB12-0708-112408	FT-SB13-SS-112408	FT-SB13-0304-112408
Sample Depth (feet):				0 - 0.5	9 - 11	9 - 11	9 - 11	0 - 0.5	4.6 - 5.6	0 - 0.5	4 - 5	4 - 5	0 - 0.5	11 - 12	0 - 0.5	11 - 12	0 - 0.5	7 - 8	0 - 0.5	3 - 4
Sample Date:				12/04/2008	12/04/2008	12/04/2008	12/04/2008	11/25/2008	11/25/2008	12/05/2008	12/05/2008	12/05/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008	11/24/2008
Phenols																				
2,4,5-Trichlorophenol	mg/kg	NS	82,100	<0.014 U	<0.013 U	--	<0.013 U	<0.048 U	<0.012 U	<0.058 U	<0.052 U	--	<0.012 U	<0.030 U	<0.012 U	<0.012 U	<0.013 U	<0.012 U	<0.013 U	<0.012 U
2,4,6-Trichlorophenol	mg/kg	NS	209	<0.014 U	<0.013 U	--	<0.013 U	<0.048 U	<0.012 U	<0.058 U	<0.052 U	--	<0.012 U	<0.030 U	<0.012 U	<0.012 U	<0.013 U	<0.012 U	<0.013 U	<0.012 U
2,4-Dichlorophenol	mg/kg	NS	2,460	<0.014 U	<0.013 U	--	<0.013 U	<0.048 U	<0.012 U	<0.058 U	<0.052 U	--	<0.012 U	<0.030 U	<0.012 U	<0.012 U	<0.013 U	<0.012 U	<0.013 U	<0.012 U
2,4-Dimethylphenol	mg/kg	NS	16,400	<0.092 U	<0.083 U	--	<0.083 U	<0.320 U	<0.077 U	<0.380 U	<0.340 U	--	<0.081 U	<0.200 U	<0.079 U	<0.078 U	<0.083 U	<0.079 U	<0.084 U	<0.078 U
2,4-Dinitrophenol	mg/kg	NS	1,640	<0.470 U	<0.420 U	--	<0.420 U	<1.600 U	<0.390 U	<1.900 U	<1.700 U	--	<0.410 U	<1.000 U	<0.400 U	<0.390 U	<0.420 U	<0.400 U	<0.430 U	<0.390 U
2-Chlorophenol	mg/kg	NS	5,840	<0.029 U	<0.027 U	--	<0.027 U	<0.100 U	<0.024 U	<0.120 U	<0.110 U	--	<0.026 U	<0.063 U	<0.025 U	<0.025 U	<0.026 U	<0.025 U	<0.027 U	<0.025 U
2-Methylphenol	mg/kg	NS	41,000	<0.018 U	<0.016 U	--	<0.016 U	<0.062 U	<0.015 U	<0.076 U	<0.068 U	--	<0.016 U	<0.039 U	<0.016 U	<0.015 U	<0.016 U	<0.016 U	0.022 J	<0.015 U
2-Nitrophenol	mg/kg	NS	NS	<0.014 U	<0.013 U	--	<0.013 U	<0.048 U	<0.012 U	<0.058 U	<0.052 U	--	<0.012 U	<0.030 U	<0.012 U	<0.012 U	<0.013 U	<0.012 U	<0.013 U	<0.012 U
4-Chloro-3-methylphenol	mg/kg	NS	82,100	<0.092 U	<0.083 U	--	<0.083 U	<0.320 U	<0.077 U	<0.380 U	<0.340 U	--	<0.081 U	<0.200 U	<0.079 U	<0.078 U	<0.083 U	<0.079 U	<0.084 U	<0.078 U
4-Methylphenol	mg/kg	NS	82,100	<0.046 U	<0.042 U	--	<0.042 U	<0.160 U	<0.038 U	<0.190 U	<0.170 U	--	<0.040 U	<0.099 U	<0.039 U	<0.039 U	<0.041 U	<0.040 U	0.060 J	<0.039 U
4-Nitrophenol	mg/kg	NS	NS	<0.140 U	<0.120 U	--	<0.120 U	<0.470 U	<0.110 U	<0.560 U	<0.500 U	--	<0.120 U	<0.290 U	<0.120 U	<0.110 U	<0.120 U	<0.120 U	<0.120 U	<0.110 U
4,6-Dinitro-2-methylphenol	mg/kg	NS	65.7	<0.460 U	<0.420 U	--	<0.420 U	<1.600 U	<0.380 U	<1.900 U	<1.700 U	--	<0.400 U	<0.990 U	<0.390 U	<0.390 U	<0.410 U	<0.400 U	<0.420 U	<0.390 U
Pentachlorophenol	mg/kg	0.0028	3.97	<0.460 U	<0.420 U	--	<0.420 U	<1.600 U	<0.380 U	<1.900 U	<1.700 U	--	<0.400 U	<0.990 U	<0.390 U	<0.390 U	<0.410 U	<0.400 U	<0.420 U	<0.390 U
Phenol	mg/kg	2.2946	100,000	<0.025 U	<0.023 U	--	<0.023 U	<0.086 U	<0.021 U	<0.100 U	<0.094 U	--	<0.022 U	<0.054 U	<0.022 U	<0.021 U	<0.023 U	<0.022 U	0.036 J	<0.021 U
Metals																				
Aluminum, Total	mg/kg	600	100,000	*9,400*	*2,300*	--	*2,500*	*1,900*	*3,500*	*3,900*	*6,000*	--	*1,500*	*7,900*	*2,800*	*9,000*	*2,100*	*6,900*	*2,300*	*6,900*
Antimony, Total	mg/kg	0.542	467	0.180 BJ-	<0.018 UJ-	--	<0.018 UJ-	0.120 BJ-	0.390 J-	0.180 BJ-	*0.600 J-*	--	0.110 BJ-	<0.042 UJ	0.095 BJ-	<0.017 UJ	0.280 J-	<0.017 UJ	0.110 BJ-	0.140 BJ-
Arsenic, Total [1]	mg/kg	0.584	8.3	*5.700*	*1.300*	--	*1.400*	*3.600*	***11.000***	*5.800*	***15.000***	--	*3.200*	*2.100*	*3.300*	*2.800*	*5.000*	*1.100*	*4.000*	***13.000***
Barium, Total	mg/kg	164.8	100,000	*170.000*	5.600	--	6.900	48.000	34.000	50.000	*170.000*	--	40.000	38.000	24.000	43.000	47.000	19.000	48.000	58.000
Beryllium, Total	mg/kg	6.32	2,300	0.420	0.140	--	0.130	0.420	0.410	0.420	0.830	--	0.750	0.360	0.210	0.530	0.380	0.270	0.630	0.800
Cadmium, Total	mg/kg	0.752	985	*1.600*	0.140	--	0.110 B	0.330	0.480	*0.820*	*1.600*	--	0.390	0.490	0.290	0.340	0.750	0.270	0.330	0.670
Calcium, Total	mg/kg	NS	NS	82,000	24,000	--	13,000	24,000	31,000	78,000	51,000	--	3,600	23,000	97,000	84,000	35,000	79,000	5,700	53,000
Chromium, Hexavalent	mg/kg	NS	6.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium, Total [3]	mg/kg	360,000	NS	39.000	5.300	--	4.200	6.600	9.000	13.000	15.000	--	7.400	13.000	5.200	18.000	13.000	11.000	6.500	13.000
Chromium, Trivalent	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt, Total	mg/kg	3.6073	347	*5.800*	2.100	--	1.900	2.700	*4.500*	*3.800*	*5.600*	--	*4.000*	*3.800*	3.100	*5.300*	3.500	*4.500*	3.200	*4.800*
Copper, Total	mg/kg	91.6	46,700	52.000	2.300	--	2.800	18.000	*100.000*	36.000	*200.000*	--	19.000	14.000	18.000	14.000	46.000	7.800	20.000	27.000
Iron, Total	mg/kg	NS	100,000	54,000	3,400	--	4,400	4,000	22,000	26,000	33,000	--	6,000	8,500	7,900	13,000	13,000	9,300	6,400	13,000
Lead, Total	mg/kg	27	800	*230.000*	2.300	--	3.100	*84.000*	*710.000*	*130.000*	***1,000***	--	21.000	6.700	15.000	7.500	*92.000*	5.400	16.000	*71.000*
Magnesium, Total	mg/kg	NS	NS	30,000	14,000	--	5,900	16,000	17,000	47,000	20,000	--	1,700	8,200	34,000	42,000	18,000	45,000	2,100	28,000
Manganese, Total	mg/kg	39.1244	25,900	*830.000*	*61.000*	--	*60.000*	*90.000*	*300.000*	*260.000*	*430.000*	--	*58.000*	*270.000*	*180.000*	*290.000*	*240.000*	*270.000*	*140.000*	*290.000*
Mercury, Total	mg/kg	0.208	3.13	0.160	0.012 B	--	0.020 B	0.065	*0.240*	*0.580*	*1.200*	--	0.040	0.050 B	0.050	0.016 B	0.092	0.022	0.190	0.070
Nickel, Total	mg/kg	13.0612	22,500	*26.000*	4.800	--	4.100	7.400	11.000	*14.000*	*14.000*	--	8.500	*14.000*	7.500	*18.000*	13.000	11.000	12.000	*15.000*
Potassium, Total	mg/kg	NS	NS	1,800	260 B	--	310 B	340 B	490	610	850	--	290 B	580 B	490	2,600	380	1,600	450	1,200
Selenium, Total	mg/kg	0.52	5,840	0.450 B	0.260 B	--	0.390 B	*1.100*	*1.300*	*0.630 B*	*1.300*	--	*1.900 J*	*2.100 J*	*1.000 J*	*0.680 J*	*1.400 J*	*0.680 J*	*1.600 J*	*1.000 J*
Silver, Total	mg/kg	0.8491	5,840	0.150	<0.026 U	--	<0.026 U	0.068 B	0.099 B	0.097 B	0.150	--	0.069 B	0.083 B	0.052 B	0.074 B	0.130	0.055 B	0.150	0.160
Sodium, Total	mg/kg	NS	NS	610 B	94 B	--	83 B	120 B	140 B	180 B	200 B	--	73 B	260 B	170 B	230 B	120 B	140 B	170 B	670
Thallium, Total	mg/kg	0.284	11.7	0.100 B	0.028 B	--	0.030 B	0.110 B	0.180	0.210	*0.340*	--	0.120	0.076 B	0.120	0.200	0.170	0.073 B	0.098 B	*0.560*
Vanadium, Total	mg/kg	60	5,840	22.000	8.900	--	7.500	7.300	16.000	11.000	18.000	--	8.900	29.000	6.900	22.000	9.500	16.000	8.100	20.000
Zinc, Total	mg/kg	NS	100,000	240.000	9.800	--	10.000	35.000	120.000	130.000	950.000	--	39.000	22.000	54.000	39.000	110.000	29.000	77.000	95.000
Inorganic - Cyanide																				
Cyanide, Amenable	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Reactive	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Total	mg/kg	4.04	195	0.56 B	0.2 B	--	0.5 B	0.95	0.18 B	*29*	0.77	--	<0.13 U	<0.31 U	0.27 JB	<0.12 U	0.47 B	<0.12 U	1.8	0.43 B
Other																				
Sulfide, Reactive	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organic Matter	%	NS	NS	--	--	6.1	--	--	--	--	--	11.9	--	--	--	--	--	--	--	--
Percent Moisture	%	NS	NS	28	21	36.6	21	17	14	31	23	19.6	18	67	16	16	20	17	22	15

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	FT-SB14			FT-SB15		FT-SB16		FT-SB17		FT-SB18		FT-SB19		FT-SB20		FT-SB21			
Sample / Duplicate:				FT-SB14	FT-SB14	FT-SB14	FT-SB15	FT-SB15	FT-SB16	FT-SB16 DUP	FT-SB17	FT-SB17	FT-SB18	FT-SB18	FT-SB19	FT-SB19	FT-SB20	FT-SB20	FT-SB21	FT-SB21	FT-SB21	FT-SB21 DUP
Field Sample ID:				FT-SB14-SS-120508	FT-SB14-0810-120508	MSS-FT-SB14-0810-120508	FT-SB15-SS-112508	FT-SB15-0708-112508	FT-SB16-SS-112508	FT-SBDUP003-112508	FT-SB17-SS-101408	FT-SB17-1213-101408	FT-SB18-SS-112508	FT-SB18-0506-112508	FT-SB19-SS-112508	FT-SB19-0506-112508	FT-SB20-SS-112508	FT-SB20-0809-112508	FT-SB21-SS-120508	FT-SB21-0810-120508	MSS-FT-SB21-0810-120508	FT-SBDUP005-120508
Sample Depth (feet):				0 - 0.5	8 - 10	8 - 10	0 - 0.5	7 - 8	0 - 0.5	0 - 0.5	0 - 0.5	12 - 13	0 - 0.5	5 - 6	0 - 0.5	5 - 6	0 - 0.5	8 - 9	0 - 0.5	8 - 10	8 - 10	8 - 10
Sample Date:				12/05/2008	12/05/2008	12/05/2008	11/25/2008	11/25/2008	11/25/2008	11/25/2008	10/14/2008	10/14/2008	11/25/2008	11/25/2008	11/25/2008	11/25/2008	11/25/2008	11/25/2008	12/05/2008	12/05/2008	12/05/2008	12/05/2008
VOCs																						
1,1,1-Trichloroethane	mg/kg	0.1402	640	<0.00076 U	<0.00046 UJ	--	<0.00065 U	<0.00048 U	<0.00047 U	<0.00052 U	<0.0010 U	<0.0014 U	<0.00086 U	<0.00069 U	<0.00059 U	<0.0029 U	<0.00052 U	<0.00066 U	<0.00057 U	<0.00047 U	--	<0.00052 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0002	3.6	<0.00089 U	<0.00054 UJ	--	<0.00076 UJ	<0.00057 U	<0.00055 U	<0.00061 U	<0.0012 U	<0.0017 UJ	<0.0010 UJ	<0.00081 UJ	<0.00069 U	<0.0033 UJ	<0.00061 U	<0.00078 UJ	<0.00067 U	<0.00055 U	--	<0.00061 U
1,1,2-Trichloroethane	mg/kg	0.0032	7.01	<0.0013 U	<0.00078 UJ	--	<0.0011 UJ	<0.00082 U	<0.00080 U	<0.00087 U	<0.0017 U	<0.0024 U	<0.0015 UJ	<0.0012 UJ	<0.0010 U	<0.0048 U	<0.00089 U	<0.0011 U	<0.00097 U	<0.00079 U	--	<0.00088 U
1,1-Dichloroethane	mg/kg	0.4834	22.2	<0.00031 U	<0.00019 UJ	--	<0.00026 U	<0.00019 U	<0.00019 U	<0.00021 U	<0.00042 U	<0.00058 U	<0.00035 U	<0.00028 U	<0.00024 U	<0.0012 U	<0.00021 U	<0.00027 U	<0.00023 U	<0.00019 U	--	<0.00021 U
1,1-Dichloroethene	mg/kg	0.005	1,190	<0.00086 U	<0.00052 UJ	--	<0.00074 U	0.0011 J	<0.00053 U	<0.00059 U	<0.0012 U	<0.0016 U	<0.00097 U	<0.00078 U	<0.00067 U	<0.0032 U	<0.00059 U	<0.00075 U	<0.00065 U	<0.00053 U	--	<0.00059 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0002	0.092	<0.00087 U	<0.00053 UJ	--	<0.00075 UJ	<0.00056 U	<0.00054 U	<0.00060 U	<0.0012 U	<0.0017 UJ	<0.00099 UJ	<0.00080 UJ	<0.00068 U	<0.0033 UJ	<0.00060 U	<0.00077 UJ	<0.00066 U	<0.00054 U	--	<0.00060 U
1,2-Dibromoethane	mg/kg	0.0000282	0.221	<0.00076 U	<0.00046 UJ	--	<0.00065 UJ	<0.00048 U	<0.00047 U	<0.00052 U	<0.0010 U	<0.0014 UJ	<0.00086 UJ	<0.00069 UJ	<0.00059 U	<0.0029 U	<0.00052 U	<0.00066 U	<0.00057 U	<0.00047 U	--	<0.00052 U
1,2-Dichlorobenzene	mg/kg	1.168	376	<0.00065 U	<0.00040 UJ	--	<0.00056 UJ	<0.00042 U	<0.00041 U	<0.00045 U	<0.00089 U	<0.0013 UJ	<0.00074 UJ	<0.00060 UJ	<0.00051 U	<0.0025 UJ	<0.00045 U	<0.00057 UJ	<0.00049 U	<0.00041 U	--	<0.00045 U
1,2-Dichloroethane	mg/kg	0.0028	2.87	<0.0010 U	<0.00062 UJ	--	<0.00088 U	<0.00065 U	<0.00063 U	<0.00069 U	<0.0014 U	<0.0019 U	<0.0012 U	<0.00093 U	<0.00079 U	<0.0038 U	<0.00071 U	<0.00089 U	<0.00077 U	<0.00063 U	--	<0.00070 U
1,2-Dichloropropane	mg/kg	0.0033	1.78	<0.00080 U	<0.00049 UJ	--	<0.00069 U	<0.00051 U	<0.00050 U	<0.00055 U	<0.0011 U	<0.0015 U	<0.00091 U	<0.00073 U	<0.00062 U	<0.0030 U	<0.00055 U	<0.00070 U	<0.00060 U	<0.00050 U	--	<0.00055 U
1,3-Dichlorobenzene	mg/kg	1.1528	297	<0.00070 U	<0.00042 UJ	--	<0.00060 UJ	<0.00044 U	<0.00043 U	<0.00048 U	<0.00095 U	<0.0013 UJ	<0.00079 UJ	<0.00064 UJ	<0.00054 U	<0.0026 UJ	<0.00048 U	<0.00061 UJ	<0.00053 U	<0.00043 U	--	<0.00048 U
1,4-Dichlorobenzene	mg/kg	0.144	16.4	<0.0011 U	<0.00069 UJ	--	<0.00098 UJ	<0.00072 U	<0.00071 U	<0.00077 U	<0.0015 U	<0.0022 UJ	<0.0013 UJ	<0.0010 UJ	<0.00088 U	<0.0043 UJ	<0.00079 U	<0.0010 UJ	<0.00086 U	<0.00070 U	--	<0.00078 U
2-Butanone (MEK)	mg/kg	1.6661	28,400	<0.0027 U	<0.0016 UJ	--	<0.0023 U	<0.0017 U	<0.0017 U	<0.0018 U	<0.0036 U	0.200 J	<0.0030 U	<0.0024 U	<0.0021 U	<0.010 U	<0.0018 U	0.014 J	<0.0020 U	<0.0017 U	--	<0.0018 U
2-Hexanone	mg/kg	NS	1,760	<0.0071 U	<0.0043 UJ	--	<0.0061 U	<0.0045 U	<0.0044 U	<0.0049 U	<0.0097 U	<0.014 U	<0.0081 U	<0.0065 U	<0.0055 U	<0.027 U	<0.0049 U	<0.0062 U	<0.0054 U	<0.0044 U	--	<0.0049 U
4-Methyl-2-Pentanone (MIBK)	mg/kg	0.2252	3,360	<0.0063 U	<0.0039 UJ	--	<0.0054 UJ	<0.0040 U	<0.0039 U	<0.0043 U	<0.0086 U	<0.012 U	<0.0072 UJ	<0.0058 UJ	<0.0049 U	<0.024 U	<0.0044 U	<0.0056 U	<0.0048 U	<0.0039 U	--	<0.0044 U
Acetone	mg/kg	3.6766	100,000	<0.0078 U	<0.0048 UJ	--	<0.0067 U	<0.0050 U	0.0052 J	<0.0053 U	<0.011 U	1.100 JB	0.013 J	<0.0072 U	0.0078 J	<0.030 U	0.0073 J	0.063	<0.0059 U	<0.0049 U	--	<0.0054 U
Benzene	mg/kg	0.0051	7.07	<0.00068 U	<0.00042 UJ	--	<0.00059 U	<0.00044 U	<0.00042 U	<0.00047 U	<0.00093 U	0.0036 J	<0.00078 U	<0.00062 U	<0.00053 U	<0.0026 U	<0.00047 U	<0.00060 U	<0.00052 U	<0.00042 U	--	<0.00047 U
Bromodichloromethane	mg/kg	0.0003	1.83	<0.00032 U	<0.00019 UJ	--	<0.00028 UJ	<0.00020 U	<0.00020 U	<0.00022 U	<0.00044 U	<0.00061 U	<0.00036 UJ	<0.00029 UJ	<0.00025 U	<0.0012 U	<0.00022 U	<0.00028 U	<0.00024 U	<0.00020 U	--	<0.00022 U
Bromoform	mg/kg	0.0023	113	<0.00033 U	<0.00020 UJ	--	<0.00029 UJ	<0.00021 U	<0.00021 U	<0.00023 U	<0.00046 U	<0.00064 UJ	<0.00038 UJ	<0.00031 UJ	<0.00026 U	<0.0013 U	<0.00023 U	<0.00029 U	<0.00025 U	<0.00021 U	--	<0.00023 U
Bromomethane	mg/kg	0.0051	43	<0.00073 U	<0.00044 UJ	--	<0.00062 U	<0.00046 U	<0.00045 U	<0.00050 U	<0.00099 U	<0.0014 U	<0.00083 U	<0.00066 U	<0.00057 U	<0.0027 U	<0.00050 U	<0.00064 U	<0.00055 U	<0.00045 U	--	<0.00050 U
Carbon Disulfide	mg/kg	0.5919	738	<0.00061 U	<0.00037 UJ	--	<0.00052 U	<0.00039 U	<0.00038 U	<0.00042 U	<0.00083 U	0.0046 J	<0.00069 U	0.0018 J	<0.00048 U	<0.0023 U	<0.00042 U	0.0031 J	<0.00046 U	<0.00038 U	--	<0.00042 U
Carbon Tetrachloride	mg/kg	0.0039	4.03	<0.00092 U	<0.00056 UJ	--	<0.00079 U	<0.00058 U	<0.00057 U	<0.00063 U	<0.0012 U	<0.0018 U	<0.0010 U	<0.00084 U	<0.00071 U	<0.0035 U	<0.00063 U	<0.00080 U	<0.00069 U	<0.00057 U	--	<0.00063 U
Chlorobenzene	mg/kg	0.1358	761	<0.00078 U	<0.00048 UJ	--	<0.00068 UJ	<0.00050 U	<0.00049 U	<0.00054 U	<0.0011 U	<0.0015 UJ	<0.00089 UJ	<0.00072 UJ	<0.00061 U	<0.0030 U	<0.00054 U	<0.00069 U	<0.00059 U	<0.00049 U	--	<0.00054 U
Chloroethane	mg/kg	0.2266	2,120	<0.0013 U	<0.00079 UJ	--	<0.0011 U	<0.00082 U	<0.00080 U	<0.00088 U	<0.0018 U	<0.0025 U	<0.0015 U	<0.0012 U	<0.0010 U	<0.0049 U	<0.00090 U	<0.0011 U	<0.00098 U	<0.00080 U	--	<0.00089 U
Chloroform	mg/kg	0.0033	1.98	<0.00042 U	<0.00026 UJ	--	<0.00036 U	<0.00027 U	<0.00026 U	<0.00029 U	<0.00057 U	<0.00081 U	<0.00048 U	<0.00039 U	<0.00033 U	<0.0016 U	<0.00029 U	0.00089 J	<0.00032 U	<0.00026 U	--	<0.00029 U
Chloromethane	mg/kg	0.0155	669	<0.0011 U	<0.00068 UJ	--	<0.00096 U	<0.00071 U	<0.00070 U	<0.00076 U	<0.0015 U	<0.0021 U	<0.0013 U	<0.0010 U	<0.00087 U	<0.0042 U	<0.00078 U	<0.00098 U	<0.00084 U	<0.00070 U	--	<0.00077 U
cis-1,2-Dichloroethene	mg/kg	0.0412	2,340	<0.00081 U	<0.00050 UJ	--	<0.00070 U	<0.00052 U	<0.00051 U	<0.00056 U	<0.0011 U	<0.0016 U	<0.00092 U	<0.00074 U	<0.00064 U	<0.0031 U	<0.00056 U	<0.00071 U	<0.00061 U	<0.00051 U	--	<0.00056 U
cis-1,3-Dichloropropene	mg/kg	NS	1,210	<0.0019 U	<0.0011 UJ	--	<0.0016 UJ	<0.0012 U	<0.0012 U	<0.0013 U	<0.0026 U	<0.0036 U	<0.0021 UJ	<0.0017 UJ	<0.0015 U	<0.0071 U	<0.0013 U	<0.0016 U	<0.0014 U	<0.0012 U	--	<0.0013 U
Cyclohexane	mg/kg	NS	117	<0.00058 U	<0.00035 UJ	--	<0.00050 U	<0.00037 U	<0.00036 U	<0.00040 U	<0.00079 U	0.0063 J	<0.00066 U	<0.00053 U	<0.00045 U	<0.0022 U	<0.00040 U	0.001 J	<0.00044 U	<0.00036 U	--	<0.00040 U
Dibromochloromethane	mg/kg	0.032	38.9	<0.00083 U	<0.00050 UJ	--	<0.00071 UJ	<0.00053 U	<0.00052 U	<0.00057 U	<0.0011 U	<0.0016 UJ	<0.00094 UJ	<0.00076 UJ	<0.00065 U	<0.0031 U	<0.00057 U	<0.00073 U	<0.00063 U	<0.00051 U	--	<0.00057 U
Dichloromethane	mg/kg	0.0026	1,150	<0.0011 U	<0.00066 UJ	--	0.0017 J	0.0019 J	0.0021 J	0.0015 J	<0.0015 U	<0.0021 U	<0.0012 U	<0.0010 U	<0.00085 U	0.0075 J	0.0016 J	0.0015 J	<0.00082 U	<0.00068 U	--	<0.00075 U
Ethylbenzene	mg/kg	1.57	35.4	<0.00097 U	<0.00059 UJ	--	<0.00084 UJ	<0.00062 U	<0.00061 U	<0.00067 U	<0.0013 U	<0.0019 UJ	<0.0011 UJ	<0.00089 UJ	<0.00076 U	<0.0037 U	<0.00067 U	<0.00085 U	<0.00073 U	<0.00061 U	--	<0.00067 U
Freon 113	mg/kg	NS	910	<0.00065 U	<0.00040 UJ	--	<0.00056 U	<0.00042 U	<0.00041 U	<0.00045 U	<0.00089 U	<0.0013 U	<0.00074 U	<0.00060 U	<0.00051 U	<0.0025 U	<0.00045 U	<0.00057 U	<0.00049 U	<0.00041 U	--	<0.00045 U
Freon 12	mg/kg	3.0863	530	<0.00076 U	<0.00046 UJ	--	<0.00065 U	<0.00048 U	<0.00047 U	<0.00052 U	<0.0010 U	<0.0014 U	<0.00086 U	<0.00069 U	<0.00059 U	<0.0029 U	<0.00052 U	<0.00066 U	<0.00057 U	<0.00047 U	--	<0.00052 U
Isopropylbenzene	mg/kg	NS	268	<0.00086 U	<0.00052 UJ	--	<0.00074 UJ	<0.00055 U	<0.00053 U	<0.00059 U	<0.0012 U	<0.0016 UJ	<0.00097 UJ	<0.00078 UJ	<0.00067 U	<0.0032 UJ	<0.00059 U	<0.00075 UJ	<0.00065 U	<0.00053 U	--	<0.00059 U
Methyl acetate	mg/kg	NS	29,000	<0.0040 U	<0.0024 UJ	--	<0.0034 U	<0.0025 U	<0.0025 U	<0.0027 U	<0.0054 U	<0.0076 U	<0.0045 U	<0.0037 U	<0.0031 U	<0.015 U	<0.0028 U	<0.0035 U	<0.0030 U	<0.0025 U	--	<0.0027 U
Methylcyclohexane	mg/kg	NS	67.6	<0.00061 U	<0.00037 UJ	--	<0.00052 U	<0.00039 U	<0.00038 U	0.00055 J	<0.00083 U	0.007 J	<0.00069 U	0.0013 J	<0.00048 U	<0.0023 U	<0.00042 U	0.0018 J	<0.00046 U	<0.00038 U	--	0.00085 J
Methyl-tert-butyl-ether	mg/kg	0.027	282	<0.00049 U	<0.00030 UJ	--	<0.00042 U	<0.00031 U	<0.00031 U	<0.00034 U	<0.00067 U	<0.00095 U	<0.00056 U	<0.00045 U	<0.00039 U	<0.0019 U	<0.00034 U	<0.00043 U	<0.00037 U	<0.00031 U	--	<0.00034 U
Styrene	mg/kg	0.22	867	<0.00092 U	<0.00056 UJ	--	<0.00079 UJ	<0.00058 U	<0.00057 U	<0.00063 U	<0.0012 U	<0.0018 UJ	<0.0010 UJ	<0.00084 UJ	<0.00071 U	<0.0035 U	<0.00063 U	<0.00080 U	<0.00069 U	<0.00057 U	--	<0.00063 U
Tetrachloroethene	mg/kg	0.0045	145	<0.00086 U	<0.00052 UJ	--	<0.00074 UJ	<0.00055 U	<0.00053 U	<0.00059 U	<0.0012 U	<0.0016 UJ	<0.00097 UJ	<0.00078 UJ	<0.00067 U	<0.0032 U	<0.00059 U	<0.00075 U	<0.00065 U	<0.00053 U	--	<0.00059 U
Toluene	mg/kg	1.1072	818	<0.0010 U	<0.00061 UJ	--	<0.00086 UJ	<0.00064 U	<0.00062 U	<0.00068 U	<0.0014 U	0.005 J	<0.0011 UJ	<0.00092 UJ	<0.00078 U	<0.0038 U	<0.00070 U	0.0012 J	<0.00076 U	<0.00062 U	--	<0.00069 U
trans-1,2-Dichloroethene	mg/kg	0.0626	1,850	<0.00057 U	<0.00035 UJ	--	<0.00049 U	<0.00036 U	<0.00035 U	<0.00039 U	<0.00077 U	<0.0011 U	<0.00064 U	<0.00052 U	<0.00044 U	<0.0021 U	<0.00039 U	<0.00050 U	<0.00043 U	<0.00035 U	--	<0.00039 U
trans-1,3-Dichloropropene	mg/kg	NS	1,510	<0.00097 U	<0.00059 UJ	--	<0.00084 UJ	<0.00062 U	<0.00061 U	<0.00067 U	<0.0013 U	<0.0019 U	<0.0011 UJ	<0.00089 UJ	<0.00076 U	<0.0037 U	<0.00067 U	<0.00085 U	<0.00073 U	<0.00061 U	--	<0.00067 U
Trichloroethene	mg/kg	0.0036	8.41	<0.00033 U	<0.00020 UJ	--	<0.00029 U	<0.00021 U	<0.00021 U	<0.00023 U	<0.00046 U	<0.00064 U	<0.00038 U	<0.00031 U	<0.00026 U	<0.0013 U	<0.00023 U	<0.00029 U	<0.00025 U	<0.00021 U	--	<0.00023 U
Trichlorofluoromethane	mg/kg	4.4775	1,230	<0.0015 U	<0.00092 UJ	--	<0.0013 U	<0.00096 U	<0.00094 U	<0.0010 U	<0.0021 U	<0.0029 U	<0.0017 U	<0.0014 U	<0.0012 U	<0.0057 U	<0.0010 U	<0.0013 U	<0.0011 U	<0.00094 U	--	<0.0010 U
Vinyl Chloride	mg/kg	0.0001	2.08	<0.0019 U	<0.0012 UJ	--	<0.0017 U	<0.0012 U	<0.0012 U	<0.0013 U	<0.0027 U	<0.0037 U	<0.0022 U	<0.0018 U	<0.0015 U	<0.0074 U	<0.0013 U	<0.0017 U	<0.0015 U	<0.0012 U	--	<0.0013 U
Xylenes, Total	mg/kg	3.96	260	<0.00089 U	<0.00054 UJ	--	<0.00076 UJ	<0.00057 U	<0.00055 U	<0.00061 U	<0.0012 U	<0.0017 UJ	<0.0010 UJ	<0.00081 UJ	<0.00069 U	<0.0033 U	<0.00061 U	<0.00078 U	<0.00067 U	<0.00055 U	--	<0.00061 U
PCBs																						
PCB, Total [4]	mg/kg	0.0094	0.967	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1016	mg/kg	NS	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1221	mg/kg	NS	0.883	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1232	mg/kg	NS	0.792	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1242	mg/kg	NS	0.972	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1248	mg/kg	NS	0.975	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1254	mg/kg	NS	0.988	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1260	mg/kg	NS	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	FT-SB14			FT-SB15		FT-SB16		FT-SB17		FT-SB18		FT-SB19		FT-SB20		FT-SB21			
Sample / Duplicate:				FT-SB14	FT-SB14	FT-SB14	FT-SB15	FT-SB15	FT-SB16	FT-SB16 DUP	FT-SB17	FT-SB17	FT-SB18	FT-SB18	FT-SB19	FT-SB19	FT-SB20	FT-SB20	FT-SB21	FT-SB21	FT-SB21	FT-SB21 DUP
Field Sample ID:				FT-SB14-SS-120508	FT-SB14-0810-120508	MSS-FT-SB14-0810-120508	FT-SB15-SS-112508	FT-SB15-0708-112508	FT-SB16-SS-112508	FT-SBDUP003-112508	FT-SB17-SS-101408	FT-SB17-1213-101408	FT-SB18-SS-112508	FT-SB18-0506-112508	FT-SB19-SS-112508	FT-SB19-0506-112508	FT-SB20-SS-112508	FT-SB20-0809-112508	FT-SB21-SS-120508	FT-SB21-0810-120508	MSS-FT-SB21-0810-120508	FT-SBDUP005-120508
Sample Depth (feet):				0 - 0.5	8 - 10	8 - 10	0 - 0.5	7 - 8	0 - 0.5	0 - 0.5	0 - 0.5	12 - 13	0 - 0.5	5 - 6	0 - 0.5	5 - 6	0 - 0.5	8 - 9	0 - 0.5	8 - 10	8 - 10	8 - 10
Sample Date:				12/05/2008	12/05/2008	12/05/2008	11/25/2008	11/25/2008	11/25/2008	11/25/2008	10/14/2008	10/14/2008	11/25/2008	11/25/2008	11/25/2008	11/25/2008	11/25/2008	11/25/2008	12/05/2008	12/05/2008	12/05/2008	12/05/2008
PAHs																						
2-Methylnaphthalene	mg/kg	NS	3,010	0.069 J	<0.022 U	--	0.059 J	<0.023 U	<0.022 U	<0.023 U	0.850 J	<0.040 U	0.310 J	0.160 J	0.023 J	<0.069 U	0.210 J	<0.026 U	0.260 J	<0.021 U	--	<0.021 U
Acenaphthene	mg/kg	NS	45,200	0.024 J	<0.012 U	--	0.023 J	<0.012 U	0.026 J	0.040 J	0.630 J	<0.022 U	0.220 J	0.230 J	0.032 J	<0.037 U	0.100 J	<0.014 U	0.180 J	<0.011 U	--	<0.011 U
Acenaphthylene	mg/kg	NS	NS	0.070 J	<0.020 U	--	0.100 J	<0.020 U	<0.019 U	0.021 J	0.400 J	<0.036 U	0.040 J	<0.019 U	0.041 J	<0.061 U	0.030 J	<0.024 U	0.300 J	<0.018 U	--	<0.018 U
Anthracene	mg/kg	196.9492	100,000	0.120 J	<0.020 U	--	0.170 J	<0.020 U	0.150 J	0.150 J	3.400	<0.036 U	0.580	0.570	0.200 J	0.098 J	0.460	<0.024 U	0.940	<0.018 U	--	<0.018 U
Benzo(a)anthracene	mg/kg	NS	20.8	0.290 J	<0.023 U	--	1.200	<0.024 U	0.790	0.730	15.000	<0.042 U	2.400	1.500	0.800	0.260 J	1.900 J	0.072 J	3.200	<0.022 U	--	<0.022 U
Benzo(a)pyrene	mg/kg	0.47	2.11	0.320 J	<0.023 U	--	*1.000*	<0.024 U	*0.770*	*0.730*	***10.000***	<0.042 U	***2.700***	*1.400*	*0.820*	0.210 J	*1.600*	0.068 J	***2.500***	<0.022 U	--	<0.022 U
Benzo(b)fluoranthene	mg/kg	0.4793	21.1	0.470 K	<0.031 U	--	*1.800 JK*	<0.031 U	*1.300 JK*	*1.100 JK*	*19.000 JK*	<0.056 U	*3.900 JK*	*2.100 JK*	*1.200 JK*	0.300 JK	*2.600 JK*	0.086 JK	*4.200 K*	<0.029 U	--	<0.028 U
Benzo(g,h,i)perylene	mg/kg	NS	NS	0.230 J	<0.019 U	--	0.750	<0.019 U	0.680	0.650	6.200	<0.034 U	2.300	1.000	0.710	0.510 J	1.200	0.080 J	1.400	<0.017 U	--	<0.017 U
Benzo(k)fluoranthene	mg/kg	NS	211	<0.048 UK	<0.047 U	--	<0.046 UKJ	<0.048 U	<0.046 UKJ	<0.048 UKJ	<0.230 UKJ	<0.085 U	<0.049 UKJ	<0.045 UKJ	<0.044 UKJ	<0.140 UKJ	<0.049 UKJ	<0.055 UKJ	<0.046 UK	<0.044 U	--	<0.043 U
Chrysene	mg/kg	0.1446	2,110	*0.330 J*	<0.031 U	--	*1.200*	<0.032 U	*0.830*	*0.730*	*17.000*	<0.057 U	*2.700*	*1.600*	*0.800*	*0.240 J*	*1.900*	0.080 J	*3.200*	<0.029 U	--	<0.029 U
Dibenz(a,h)anthracene	mg/kg	NS	2.11	0.076 J	<0.022 U	--	0.250 J	<0.023 U	0.190 J	0.190 J	**2.500**	<0.040 U	0.720	0.370	0.210 J	0.091 J	0.410	<0.026 U	0.500	<0.021 U	--	<0.021 U
Fluoranthene	mg/kg	88.8778	30,100	0.470	<0.042 U	--	1.900	<0.043 U	1.400	1.300	18.000	<0.076 U	5.200	3.400	1.600	0.440 J	4.000 J	0.099 J	6.200	<0.039 U	--	<0.039 U
Fluorene	mg/kg	14.8299	30,100	0.058 J	<0.021 U	--	0.053 J	<0.021 U	0.027 J	0.041 J	0.950 J	<0.038 U	0.170 J	0.190 J	0.064 J	<0.065 U	0.150 J	<0.025 U	0.250 J	<0.020 U	--	<0.020 U
Indeno(1,2,3-cd)pyrene	mg/kg	NS	21.1	0.180 J	<0.026 U	--	0.700	<0.026 U	0.570	0.520	5.900	<0.047 U	1.900	0.930	0.560	0.320 J	1.100	0.044 J	1.300	<0.024 U	--	<0.024 U
Naphthalene	mg/kg	0.6582	24.1	0.077 J	<0.036 U	--	0.077 J	<0.037 U	<0.035 U	<0.038 U	*1.200 J*	<0.066 U	0.190 J	0.130 J	0.073 J	<0.110 U	0.150 J	<0.043 U	0.160 J	<0.034 U	--	<0.034 U
Phenanthrene	mg/kg	NS	NS	0.350 J	0.059 J	--	0.830	<0.020 U	0.500	0.580	12.000	0.100 J	2.600	2.600	0.700	0.360 J	1.800	0.130 J	3.100	<0.018 U	--	<0.018 U
Pyrene	mg/kg	54.5455	22,600	0.380 J	0.064 J	--	1.500 B	<0.014 UJB	1.100 B	1.100 B	16.000	0.054 J	4.300 B	2.600 B	0.980 B	0.430 JB	3.000 JB	<0.017 UJB	4.600	0.024 J	--	0.015 J
SVOCs																						
1,2,4-Trichlorobenzene	mg/kg	0.408	113	<0.0011 U	<0.00065 UJ	--	<0.00091 UJ	<0.00068 U	<0.00066 U	<0.00072 U	<0.0014 U	<0.0020 UJ	<0.0012 UJ	<0.00097 UJ	<0.00083 U	<0.0040 UJ	<0.00074 U	<0.00093 UJ	<0.00080 U	<0.00066 U	--	<0.00073 U
2,2-Oxybis(1-chloropropane)	mg/kg	NS	1,020	<0.028 U	<0.027 U	--	<0.027 U	<0.027 U	<0.026 U	<0.028 U	<0.130 U	<0.049 U	<0.028 U	<0.026 U	<0.026 U	<0.083 U	<0.028 U	<0.032 U	<0.027 U	<0.025 U	--	<0.025 U
2,4-Dinitrotoluene	mg/kg	0.0001	7.37	<0.080 U	<0.077 U	--	<0.076 U	<0.078 U	<0.076 U	<0.080 U	<0.380 U	<0.140 U	<0.081 U	<0.074 U	<0.073 U	<0.240 U	<0.081 U	<0.092 U	<0.076 U	<0.072 U	--	<0.072 U
2,6-Dinitrotoluene	mg/kg	0.0001	1.54	<0.034 U	<0.033 U	--	<0.032 U	<0.033 U	<0.032 U	<0.034 U	<0.160 U	<0.059 U	<0.034 U	<0.031 U	<0.031 U	<0.100 U	<0.034 U	<0.039 U	<0.032 U	<0.030 U	--	<0.030 U
2-Chloronaphthalene	mg/kg	NS	60,300	<0.012 U	<0.012 U	--	<0.012 U	<0.012 U	<0.011 U	<0.012 U	<0.058 U	<0.021 U	<0.012 U	<0.011 U	<0.011 U	<0.036 U	<0.012 U	<0.014 U	<0.012 U	<0.011 U	--	<0.011 U
2-Nitroaniline	mg/kg	NS	8,010	<0.061 U	<0.058 U	--	<0.058 U	<0.059 U	<0.057 U	<0.061 U	<0.290 U	<0.110 U	<0.061 U	<0.056 U	<0.056 U	<0.180 U	<0.061 U	<0.069 U	<0.058 U	<0.054 U	--	<0.054 U
3,3-Dichlorobenzidine	mg/kg	NS	5.11	<0.110 U	<0.100 U	--	<0.100 U	<0.110 U	<0.100 U	<0.110 U	<0.520 U	<0.190 U	<0.110 U	<0.100 U	<0.100 U	<0.320 U	<0.110 UJ	<0.120 U	<0.100 U	<0.098 U	--	<0.098 U
3-Nitroaniline	mg/kg	NS	NS	<0.088 U	<0.085 U	--	<0.084 U	<0.087 U	<0.084 U	<0.088 U	<0.420 U	<0.150 U	<0.089 U	<0.082 U	<0.081 U	<0.260 U	<0.090 U	<0.100 U	<0.084 U	<0.079 U	--	<0.079 U
4-Bromodiphenyl ether	mg/kg	NS	26.9	<0.023 U	<0.022 U	--	<0.022 U	<0.023 U	<0.022 U	<0.023 U	<0.110 U	<0.040 U	<0.023 U	<0.021 U	<0.021 U	<0.069 U	<0.023 U	<0.026 U	<0.022 U	<0.021 U	--	<0.021 U
4-Chloroaniline	mg/kg	NS	11.5	<0.099 U	<0.095 U	--	<0.095 U	<0.097 U	<0.094 U	<0.099 U	<0.470 U	<0.170 U	<0.100 U	<0.092 U	<0.091 U	<0.300 U	<0.100 U	<0.110 U	<0.095 U	<0.089 U	--	<0.089 U
4-Chlorodiphenyl ether	mg/kg	NS	NS	<0.025 U	<0.024 U	--	<0.024 U	<0.025 U	<0.024 U	<0.025 U	<0.120 U	<0.045 U	<0.026 U	<0.023 U	<0.023 U	<0.076 U	<0.026 U	<0.029 U	<0.024 U	<0.023 U	--	<0.023 U
4-Nitroaniline	mg/kg	NS	115	<0.088 U	<0.084 U	--	<0.084 U	<0.086 U	<0.083 U	<0.088 U	<0.420 U	<0.150 U	<0.089 U	<0.081 U	<0.081 U	<0.260 U	<0.089 U	<0.100 U	<0.084 U	<0.079 U	--	<0.079 U
Acetophenone	mg/kg	NS	2,520	<0.024 U	<0.023 U	--	<0.023 U	<0.024 U	<0.023 U	<0.024 U	<0.120 U	<0.042 U	<0.024 U	<0.022 U	<0.022 U	<0.072 U	<0.025 U	<0.028 U	<0.023 U	<0.022 U	--	<0.022 U
Benzaldehyde	mg/kg	NS	818	<0.081 U	<0.078 U	--	<0.078 U	<0.080 U	<0.077 U	<0.081 U	<0.390 U	<0.140 U	<0.082 U	<0.075 U	<0.075 U	0.480 J	<0.082 U	<0.093 U	<0.077 U	<0.073 U	--	<0.073 U
Biphenyl	mg/kg	NS	288	<0.061 U	<0.058 U	--	<0.058 U	<0.059 U	<0.057 U	<0.061 U	<0.290 U	<0.110 U	<0.061 U	<0.056 U	<0.056 U	<0.180 U	<0.061 U	<0.069 U	<0.058 U	<0.054 U	--	<0.054 U
Bis(2-Chloroethoxy)methane	mg/kg	NS	2,460	<0.028 U	<0.027 U	--	<0.027 U	<0.027 U	<0.026 U	<0.028 U	<0.130 U	<0.049 U	<0.028 U	<0.026 U	<0.026 U	<0.083 U	<0.028 U	<0.032 U	<0.027 U	<0.025 U	--	<0.025 U
Bis(2-Chloroethyl)ether	mg/kg	NS	1.29	<0.020 U	<0.019 U	--	<0.019 U	<0.020 U	<0.019 U	<0.020 U	<0.096 U	<0.035 U	<0.020 U	<0.019 U	<0.018 U	<0.060 U	<0.020 U	<0.023 U	<0.019 U	<0.018 U	--	<0.018 U
Bis(2-Ethylhexyl)phthalate	mg/kg	2.88	164	0.110 J	0.100 J	--	<0.053 UJB	<0.055 UJB	<0.053 U	<0.056 UJB	0.720 J	<0.098 U	<0.056 UJB	<0.051 U	<0.051 UJB	<0.170 UJB	<0.057 UJB	<0.064 UJB	0.130 J	0.086 J	--	0.087 J
Butyl benzyl phthalate	mg/kg	NS	1,210	<0.052 U	<0.050 U	--	<0.050 U	<0.051 U	<0.049 U	<0.052 U	<0.250 U	<0.091 U	<0.053 U	<0.048 U	<0.048 U	<0.160 U	<0.053 U	<0.060 U	<0.050 U	<0.047 U	--	<0.047 U
Caprolactam	mg/kg	NS	100,000	<0.130 U	<0.120 U	--	<0.120 U	<0.130 U	<0.120 U	<0.130 U	<0.610 U	<0.230 U	<0.130 U	<0.120 U	<0.120 U	<0.380 U	<0.130 U	<0.150 U	<0.120 U	<0.120 U	--	<0.120 U
Carbazole	mg/kg	NS	NS	0.051 J	<0.042 U	--	0.072 J	<0.043 U	<0.041 U	<0.044 U	1.600 J	<0.076 U	0.170 J	0.290 J	0.055 J	<0.130 U	0.110 J	<0.050 U	0.250 J	<0.039 U	--	<0.039 U
Dibenzofuran	mg/kg	NS	1,040	0.041 J	<0.023 U	--	0.050 J	<0.024 U	<0.023 U	<0.024 U	0.880 J	<0.042 U	0.180 J	0.180 J	0.033 J	<0.072 U	0.140 J	<0.028 U	0.190 J	<0.022 U	--	<0.022 U
Diethyl phthalate	mg/kg	NS	100,000	<0.031 U	<0.030 U	--	<0.030 U	<0.031 U	<0.030 U	<0.031 U	<0.150 U	<0.055 U	<0.032 U	<0.029 U	<0.029 U	<0.094 U	<0.032 U	<0.036 U	<0.030 U	<0.028 U	--	<0.028 U
Dimethyl phthalate	mg/kg	NS	7,390	<0.028 U	<0.027 U	--	<0.027 U	<0.027 U	<0.026 U	<0.028 U	<0.130 U	<0.049 U	<0.028 U	<0.026 U	<0.026 U	<0.083 U	<0.028 U	<0.032 U	<0.027 U	<0.025 U	--	<0.025 U
Di-n-butyl phthalate	mg/kg	5.0333	82,100	<0.035 U	<0.034 U	--	<0.034 U	<0.034 U	<0.033 U	<0.035 U	<0.170 U	<0.062 U	<0.035 U	<0.032 U	<0.032 U	<0.100 U	<0.036 U	<0.040 U	<0.033 U	<0.032 U	--	<0.031 U
Di-n-octyl phthalate	mg/kg	NS	8,210	<0.017 U	<0.017 U	--	<0.017 U	<0.017 U	<0.016 U	<0.017 U	<0.083 U	<0.031 U	<0.018 U	<0.016 U	<0.016 U	<0.052 U	<0.018 U	<0.020 U	<0.017 U	<0.016 U	--	<0.016 U
Hexachlorobenzene	mg/kg	0.0252	1.15	<0.035 U	<0.034 U	--	<0.034 U	<0.034 U	<0.033 U	<0.035 U	<0.170 U	<0.062 U	<0.035 U	<0.032 U	<0.032 U	<0.100 U	<0.036 U	<0.040 U	<0.033 U	<0.032 U	--	<0.031 U
Hexachlorobutadiene	mg/kg	NS	7.19	<0.00080 U	<0.00049 UJ	--	<0.00069 UJ	<0.00051 U	<0.00050 U	<0.00055 U	<0.0011 U	<0.0015 UJ	<0.00091 UJ	<0.00073 UJ	<0.00062 U	<0.0030 UJ	<0.00055 U	<0.00070 UJ	<0.00060 U	<0.00050 U	--	<0.00055 U
Hexachlorocyclopentadiene	mg/kg	NS	10.8	<0.061 U	<0.058 U	--	<0.058 U	<0.059 U	<0.057 U	<0.061 U	<0.290 U	<0.110 U	<0.061 U	<0.056 U	<0.056 U	<0.180 U	<0.061 U	<0.069 U	<0.058 U	<0.054 U	--	<0.054 U
Hexachloroethane	mg/kg	NS	11.1	<0.026 U	<0.025 U	--	<0.025 U	<0.025 U	<0.024 U	<0.026 U	<0.120 U	<0.045 U	<0.026 U	<0.024 U	<0.024 U	<0.077 U	<0.026 U	<0.030 U	<0.025 U	<0.023 U	--	<0.023 U
Isophorone	mg/kg	NS	2,420	<0.021 U	<0.020 U	--	<0.020 U	<0.020 U	<0.019 U	<0.021 U	<0.098 U	<0.036 U	<0.021 U	<0.019 U	<0.019 U	<0.061 U	<0.021 U	<0.024 U	<0.020 U	<0.018 U	--	<0.018 U
Nitrobenzene	mg/kg	NS	32.4	<0.027 U	<0.026 U	--	<0.025 U	<0.026 U	<0.025 U	<0.027 U	<0.130 U	<0.047 U	<0.027 U	<0.025 U	<0.024 U	<0.079 U	<0.027 U	<0.031 U	<0.025 U	<0.024 U	--	<0.024 U
N-nitrosodi-n-propylamine	mg/kg	NS	0.328	<0.038 U	<0.036 U	--	<0.036 U	<0.037 U	<0.035 U	<0.038 U	<0.180 U	<0.066 U	<0.038 U	<0.035 U	<0.034 U	<0.110 U	<0.038 U	<0.043 U	<0.036 U	<0.034 U	--	<0.034 U
N-Nitrosodiphenylamine	mg/kg	0.0764	469	<0.025 U	<0.024 U	--	<0.024 U	<0.025 U	<0.024 U	<0.025 U	<0.120 U	<0.045 U	<0.026 U	<0.023 U	<0.023 U	<0.076 U	<0.026 U	<0.029 U	<0.024 U	<0.023 U	--	<0.023 U
Pyridine	mg/kg	0.0069	1,170	<0.160 U	<0.150 U	--	<0.150 U	<0.150 U	<0.150 U	<0.160 U	<0.750 U	<0.280 U	<0.160 U	<0.150 U	<0.140 U	<0.470 U	<0.160 U	<0.180 U	<0.150 U	<0.140 U	--	<0.140 U

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	FT-SB14			FT-SB15		FT-SB16		FT-SB17		FT-SB18		FT-SB19		FT-SB20		FT-SB21			
Sample / Duplicate:				FT-SB14	FT-SB14	FT-SB14	FT-SB15	FT-SB15	FT-SB16	FT-SB16 DUP	FT-SB17	FT-SB17	FT-SB18	FT-SB18	FT-SB19	FT-SB19	FT-SB20	FT-SB20	FT-SB21	FT-SB21	FT-SB21	FT-SB21 DUP
Field Sample ID:				FT-SB14-SS-120508	FT-SB14-0810-120508	MSS-FT-SB14-0810-120508	FT-SB15-SS-112508	FT-SB15-0708-112508	FT-SB16-SS-112508	FT-SBDUP003-112508	FT-SB17-SS-101408	FT-SB17-1213-101408	FT-SB18-SS-112508	FT-SB18-0506-112508	FT-SB19-SS-112508	FT-SB19-0506-112508	FT-SB20-SS-112508	FT-SB20-0809-112508	FT-SB21-SS-120508	FT-SB21-0810-120508	MSS-FT-SB21-0810-120508	FT-SBDUP005-120508
Sample Depth (feet):				0 - 0.5	8 - 10	8 - 10	0 - 0.5	7 - 8	0 - 0.5	0 - 0.5	0 - 0.5	12 - 13	0 - 0.5	5 - 6	0 - 0.5	5 - 6	0 - 0.5	8 - 9	0 - 0.5	8 - 10	8 - 10	8 - 10
Sample Date:				12/05/2008	12/05/2008	12/05/2008	11/25/2008	11/25/2008	11/25/2008	11/25/2008	10/14/2008	10/14/2008	11/25/2008	11/25/2008	11/25/2008	11/25/2008	11/25/2008	11/25/2008	12/05/2008	12/05/2008	12/05/2008	12/05/2008
Phenols																						
2,4,5-Trichlorophenol	mg/kg	NS	82,100	<0.012 U	<0.012 U	--	<0.012 U	<0.012 U	<0.011 U	<0.012 U	<0.058 U	<0.021 U	<0.012 U	<0.011 U	<0.011 U	<0.036 U	<0.012 U	<0.014 U	<0.012 U	<0.011 U	--	<0.011 U
2,4,6-Trichlorophenol	mg/kg	NS	209	<0.012 U	<0.012 U	--	<0.012 U	<0.012 U	<0.011 U	<0.012 U	<0.058 U	<0.021 U	<0.012 U	<0.011 U	<0.011 U	<0.036 U	<0.012 U	<0.014 U	<0.012 U	<0.011 U	--	<0.011 U
2,4-Dichlorophenol	mg/kg	NS	2,460	<0.012 U	<0.012 U	--	<0.012 U	<0.012 U	<0.011 U	<0.012 U	<0.058 U	<0.021 U	<0.012 U	<0.011 U	<0.011 U	<0.036 U	<0.012 U	<0.014 U	<0.012 U	<0.011 U	--	<0.011 U
2,4-Dimethylphenol	mg/kg	NS	16,400	<0.080 U	<0.077 U	--	<0.076 U	<0.078 U	<0.076 U	<0.080 U	<0.380 U	<0.140 U	<0.081 U	<0.074 U	<0.073 U	<0.240 U	<0.081 U	<0.092 U	<0.076 U	<0.072 U	--	<0.072 U
2,4-Dinitrophenol	mg/kg	NS	1,640	<0.400 U	<0.390 U	--	<0.390 U	<0.400 U	<0.380 U	<0.400 U	<1.900 U	<0.710 U	<0.410 U	<0.370 U	<0.370 U	<1.200 U	<0.410 U	<0.460 U	<0.380 U	<0.360 U	--	<0.360 U
2-Chlorophenol	mg/kg	NS	5,840	<0.025 U	<0.024 U	--	<0.024 U	<0.025 U	<0.024 U	<0.025 U	<0.120 U	<0.045 U	<0.026 U	<0.023 U	<0.023 U	<0.076 U	<0.026 U	<0.029 U	<0.024 U	<0.023 U	--	<0.023 U
2-Methylphenol	mg/kg	NS	41,000	<0.016 U	<0.015 U	--	<0.015 U	<0.015 U	<0.015 U	<0.016 U	<0.075 U	<0.028 U	<0.016 U	<0.015 U	<0.014 U	<0.047 U	<0.016 U	<0.018 U	<0.015 U	<0.014 U	--	<0.014 U
2-Nitrophenol	mg/kg	NS	NS	<0.012 U	<0.012 U	--	<0.012 U	<0.012 U	<0.011 U	<0.012 U	<0.058 U	<0.021 U	<0.012 U	<0.011 U	<0.011 U	<0.036 U	<0.012 U	<0.014 U	<0.012 U	<0.011 U	--	<0.011 U
4-Chloro-3-methylphenol	mg/kg	NS	82,100	<0.080 U	<0.077 U	--	<0.076 U	<0.078 U	<0.076 U	<0.080 U	<0.380 U	<0.140 U	<0.081 U	<0.074 U	<0.073 U	<0.240 U	<0.081 U	<0.092 U	<0.076 U	<0.072 U	--	<0.072 U
4-Methylphenol	mg/kg	NS	82,100	<0.040 U	<0.038 U	--	<0.038 U	<0.039 U	<0.038 U	<0.040 U	0.190 J	<0.070 U	<0.040 U	<0.037 U	<0.037 U	<0.120 U	<0.041 U	<0.046 U	<0.038 U	<0.036 U	--	<0.036 U
4-Nitrophenol	mg/kg	NS	NS	<0.120 U	<0.110 U	--	<0.110 U	<0.120 U	<0.110 U	<0.120 U	<0.560 U	<0.210 U	<0.120 U	<0.110 U	<0.110 U	<0.350 U	<0.120 U	<0.130 U	<0.110 U	<0.110 U	--	<0.110 U
4,6-Dinitro-2-methylphenol	mg/kg	NS	65.7	<0.400 U	<0.380 U	--	<0.380 U	<0.390 U	<0.380 U	<0.400 U	<1.900 U	<0.700 U	<0.400 U	<0.370 U	<0.370 U	<1.200 U	<0.410 U	<0.460 U	<0.380 U	<0.360 U	--	<0.360 U
Pentachlorophenol	mg/kg	0.0028	3.97	<0.400 U	<0.380 U	--	<0.380 U	<0.390 U	<0.380 U	<0.400 U	<1.900 U	<0.700 U	<0.400 U	<0.370 U	<0.370 U	<1.200 U	<0.410 U	<0.460 U	<0.380 U	<0.360 U	--	<0.360 U
Phenol	mg/kg	2.2946	100,000	<0.022 U	<0.021 U	--	<0.021 U	<0.021 U	<0.021 U	<0.022 U	<0.100 U	<0.038 U	<0.022 U	<0.020 U	<0.020 U	<0.065 U	<0.022 U	<0.025 U	<0.021 U	<0.020 U	--	<0.020 U
Metals																						
Aluminum, Total	mg/kg	600	100,000	*7,100*	*9,200*	--	*3,100*	*6,800*	*3,700*	*3,700*	*2,500*	*7,700*	*5,000*	*7,400*	*5,000*	*10,000*	*4,600*	*1,300*	*4,600*	*1,600*	--	*1,900*
Antimony, Total	mg/kg	0.542	467	*0.780 J-*	0.071 BJ-	--	*2.300 J-*	<0.017 UJ	0.110 BJ-	0.160 BJ-	0.160 BJ-	<0.030 UJ	0.400 J-	0.087 BJ-	0.049 BJ-	*1.100 J-*	0.340 J-	0.022 BJ-	*1.600 J-*	0.017 BJ-	--	0.018 BJ-
Arsenic, Total [1]	mg/kg	0.584	8.3	*2.700*	*2.700*	--	*4.400*	*3.000*	*3.200*	*3.200*	*5.900*	*2.900*	***9.900***	*5.000*	*2.900*	***58.000***	*4.200*	*3.600*	***10.000***	*1.900*	--	*1.900*
Barium, Total	mg/kg	164.8	100,000	52.000	37.000	--	33.000	43.000	28.000	27.000	63.000	65.000	87.000	130.000	41.000	*270.000*	45.000	8.600	55.000	7.600	--	7.600
Beryllium, Total	mg/kg	6.32	2,300	0.300	0.470	--	0.270	0.470	0.220	0.270	0.780	0.470	1.500	1.300	0.270	3.900	0.440	0.090 B	0.720	0.110	--	0.076 B
Cadmium, Total	mg/kg	0.752	985	*0.860*	0.430	--	0.590	0.380	0.330	0.370	0.400	0.590	*1.100*	*0.980*	0.330	*2.200*	0.610	0.096 B	*1.100*	0.130	--	0.110
Calcium, Total	mg/kg	NS	NS	75,000	86,000	--	69,000	85,000	87,000	79,000	11,000	31,000	33,000	56,000	110,000	57,000	71,000	39,000	39,000	46,000	--	45,000
Chromium, Hexavalent	mg/kg	NS	6.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium, Total [3]	mg/kg	360,000	NS	9.800	18.000	--	15.000	17.000	11.000	9.900	8.500	17.000	12.000	8.900	10.000	15.000	12.000	6.600	15.000	21.000	--	19.000
Chromium, Trivalent	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt, Total	mg/kg	3.6073	347	2.700	*6.900*	--	*4.500*	*6.500*	*4.500*	*4.000*	*4.300*	*6.800*	*4.500*	2.900	3.600	1.100	*4.200*	2.200	*4.800*	1.800	--	1.700
Copper, Total	mg/kg	91.6	46,700	12.000	15.000	--	32.000	13.000	18.000	17.000	22.000	24.000	72.000	*110.000*	17.000	60.000	33.000	2.200	71.000	1.800	--	1.900
Iron, Total	mg/kg	NS	100,000	6,300	14,000	--	12,000	11,000	9,600	10,000	6,600	10,000	32,000	19,000	11,000	7,100	16,000	7,200	31,000	3,500	--	3,500
Lead, Total	mg/kg	27	800	*470.000*	7.200	--	*37.000*	7.500	*43.000*	*42.000*	*46.000*	10.000	*170.000*	*100.000*	*31.000*	*79.000*	*73.000*	6.400	*150.000*	3.400	--	3.300
Magnesium, Total	mg/kg	NS	NS	29,000	38,000	--	36,000	43,000	48,000	44,000	4,600	11,000	16,000	22,000	49,000	30,000	44,000	27,000	17,000	19,000	--	19,000
Manganese, Total	mg/kg	39.1244	25,900	*210.000*	*330.000*	--	*350.000*	*290.000*	*350.000*	*310.000*	*73.000*	*270.000*	*300.000*	*700.000*	*300.000*	*780.000*	*260.000*	*130.000*	*500.000*	*150.000*	--	*150.000*
Mercury, Total	mg/kg	0.208	3.13	0.047	0.0083 BJ-	--	0.071	0.016 B	*0.350 J*	*0.470 J*	0.077	0.044	*0.300*	0.110	0.030	0.094	0.120	<0.0077 U	0.110	<0.0060 U	--	<0.0060 U
Nickel, Total	mg/kg	13.0612	22,500	9.600	*19.000*	--	12.000	*17.000*	13.000	11.000	12.000	*18.000*	*14.000*	8.700	11.000	5.500	*14.000*	5.000	*17.000*	4.600	--	4.200
Potassium, Total	mg/kg	NS	NS	3,400	2,700	--	750	1,700	810	820	410	1,400	730	890	760	1,100	1,000	140 B	870	250 B	--	270 B
Selenium, Total	mg/kg	0.52	5,840	0.260 B	0.230 B	--	*0.670*	0.490 B	0.460 B	0.510 B	*2.100*	*1.900*	*1.100*	*1.300*	0.420 B	*11.000*	*0.740*	0.280 B	*1.100*	0.160 B	--	<0.140 U
Silver, Total	mg/kg	0.8491	5,840	0.120	0.054 B	--	0.065 B	0.058 B	0.074 B	0.077 B	0.058 B	0.046 B	0.140	0.120	0.057 B	0.310 B	0.110 B	0.035 B	0.110 B	0.022 B	--	<0.022 U
Sodium, Total	mg/kg	NS	NS	720	180 B	--	160 B	160 B	170 B	190 B	150 B	280 B	360 B	280 B	170 B	730 B	200 B	110 B	280 B	120 B	--	120 B
Thallium, Total	mg/kg	0.284	11.7	0.050 B	0.180	--	0.160	0.160	0.140	0.120	0.230	0.160 B	*0.400*	*0.400*	0.100 B	0.022 B	0.160	0.015 B	*0.380*	0.022 B	--	0.024 B
Vanadium, Total	mg/kg	60	5,840	16.000	23.000	--	10.000	23.000	15.000	14.000	8.500	25.000	18.000	12.000	14.000	11.000	16.000	37.000	14.000	12.000	--	8.500
Zinc, Total	mg/kg	NS	100,000	66.000	51.000 J-	--	87.000	44.000	68.000	63.000	43.000	63.000	210.000	210.000	43.000	69.000	95.000	25.000	160.000	14.000	--	13.000
Inorganic - Cyanide																						
Cyanide, Amenable	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Reactive	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Total	mg/kg	4.04	195	0.17 B	0.14 JB	--	1.3	0.5 B	0.23 B	<0.12 U	1.1	0.34 B	0.89	2	0.33 B	*14*	0.16 B	0.14 B	1.1	0.15 B	--	<0.11 U
Other																						
Sulfide, Reactive	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organic Matter	%	NS	NS	--	--	0.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	--
Percent Moisture	%	NS	NS	17	14	14	14	16	13	17	14	53	18	10	10	72	19	28	13	8.1	8.4	7.9

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	FT-SB22			FT-SB27		FT-SB28		FT-SB 29		FT-SB30		FT-SB 31		FT-SB32		FT-SB33	
Sample / Duplicate:				FT-SB22	FT-SB22	FT-SB22 DUP	FT-SB27	FT-SB27	FT-SB28	FT-SB28	FT-SB 29	FT-SB 29	FT-SB30	FT-SB30	FT-SB 31	FT-SB 31	FT-SB32	FT-SB32	FT-SB33	FT-SB33
Field Sample ID:				FT-SB22-SS-112508	FT-SB22-0809-112508	FT-SBDUP002-112508	FT-SB27-0-0.5(20130509)	FT-SB27-1-1.5(20130509)	FT-SB28 (0-0.5) 06092015	FT-SB28 (4-6) 06092015	FT-SB 29 (0-0.5) 06092015	FT-SB 29 (4-6) 06092015	FT-SB30 (0-0.5) 06082015	FT-SB30 (4-6) 06082015	FT-SB 31 (0-0.5) 06092015	FT-SB 31 (4-6) 06092015	FT-SB32 (0-0.5) 06082015	FT-SB32 (4-6) 06082015	FT-SB33 (0-0.5) 06082015	FT-SB33 (4-5) 06082015
Sample Depth (feet):				0 - 0.5	8 - 9	8 - 9	0 - 0.5	1 - 1.5	0 - 0.5	4 - 6	0 - 0.5	4 - 6	0 - 0.5	4 - 6	0 - 0.5	4 - 6	0 - 0.5	4 - 6	0 - 0.5	4 - 5
Sample Date:				11/25/2008	11/25/2008	11/25/2008	05/09/2013	05/09/2013	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/08/2015	06/08/2015	06/09/2015	06/09/2015	06/08/2015	06/08/2015	06/08/2015	06/08/2015
VOCs																				
1,1,1-Trichloroethane	mg/kg	0.1402	640	<0.00054 U	<0.00048 U	<0.00053 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/kg	0.0002	3.6	<0.00063 UJ	<0.00057 U	<0.00062 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/kg	0.0032	7.01	<0.00091 U	<0.00082 U	<0.00090 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/kg	0.4834	22.2	<0.00022 U	<0.00020 U	<0.00021 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	mg/kg	0.005	1,190	<0.00061 U	<0.00055 U	<0.00060 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	mg/kg	0.0002	0.092	<0.00062 UJ	<0.00056 U	<0.00061 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/kg	0.0000282	0.221	<0.00054 U	<0.00048 U	<0.00053 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/kg	1.168	376	<0.00047 UJ	<0.00042 U	<0.00046 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/kg	0.0028	2.87	<0.00072 U	<0.00065 U	<0.00071 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/kg	0.0033	1.78	<0.00057 U	<0.00051 U	<0.00056 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/kg	1.1528	297	<0.00050 UJ	<0.00045 U	<0.00049 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/kg	0.144	16.4	<0.00081 UJ	<0.00073 U	<0.00080 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone (MEK)	mg/kg	1.6661	28,400	<0.0019 U	<0.0017 U	<0.0019 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/kg	NS	1,760	<0.0051 U	<0.0046 U	<0.0050 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-Pentanone (MIBK)	mg/kg	0.2252	3,360	<0.0045 U	<0.0041 U	<0.0045 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	mg/kg	3.6766	100,000	<0.0056 U	<0.0050 U	<0.0055 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	mg/kg	0.0051	7.07	<0.00049 U	<0.00044 U	<0.00048 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/kg	0.0003	1.83	<0.00023 U	<0.00021 U	<0.00022 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/kg	0.0023	113	<0.00024 U	<0.00021 U	<0.00023 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/kg	0.0051	43	<0.00052 U	<0.00047 U	<0.00051 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Disulfide	mg/kg	0.5919	738	<0.00043 U	<0.00039 U	<0.00043 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/kg	0.0039	4.03	<0.00065 U	<0.00059 U	<0.00064 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/kg	0.1358	761	<0.00056 U	<0.00050 U	<0.00055 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	mg/kg	0.2266	2,120	<0.00092 U	<0.00083 U	<0.00091 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/kg	0.0033	1.98	<0.00030 U	<0.00027 U	<0.00030 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/kg	0.0155	669	<0.00080 U	<0.00072 U	<0.00079 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/kg	0.0412	2,340	<0.00058 U	<0.00052 U	<0.00057 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/kg	NS	1,210	<0.0013 U	<0.0012 U	<0.0013 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	mg/kg	NS	117	<0.00041 U	<0.00037 U	<0.00041 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/kg	0.032	38.9	<0.00059 U	<0.00053 U	<0.00058 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichloromethane	mg/kg	0.0026	1,150	<0.00078 U	0.001 J	<0.00077 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/kg	1.57	35.4	<0.00069 UJ	<0.00062 U	<0.00068 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Freon 113	mg/kg	NS	910	<0.00047 U	<0.00042 U	<0.00046 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Freon 12	mg/kg	3.0863	530	<0.00054 U	<0.00048 U	<0.00053 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene	mg/kg	NS	268	<0.00061 UJ	<0.00055 U	<0.00060 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl acetate	mg/kg	NS	29,000	<0.0028 U	<0.0026 U	<0.0028 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylcyclohexane	mg/kg	NS	67.6	<0.00043 U	<0.00039 U	<0.00043 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl-tert-butyl-ether	mg/kg	0.027	282	<0.00035 U	<0.00032 U	<0.00035 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	mg/kg	0.22	867	<0.00065 U	<0.00059 U	<0.00064 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	mg/kg	0.0045	145	<0.00061 U	<0.00055 U	<0.00060 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	mg/kg	1.1072	818	<0.00071 U	<0.00064 U	<0.00070 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/kg	0.0626	1,850	<0.00040 U	<0.00036 U	<0.00040 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/kg	NS	1,510	<0.00069 U	<0.00062 U	<0.00068 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/kg	0.0036	8.41	<0.00024 U	<0.00021 U	<0.00023 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/kg	4.4775	1,230	<0.0011 U	<0.00097 U	<0.0011 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/kg	0.0001	2.08	<0.0014 U	<0.0012 U	<0.0014 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/kg	3.96	260	<0.00063 U	<0.00057 U	<0.00062 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCBs																				
PCB, Total [4]	mg/kg	0.0094	0.967	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1016	mg/kg	NS	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1221	mg/kg	NS	0.883	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1232	mg/kg	NS	0.792	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1242	mg/kg	NS	0.972	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1248	mg/kg	NS	0.975	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1254	mg/kg	NS	0.988	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1260	mg/kg	NS	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	FT-SB22			FT-SB27		FT-SB28		FT-SB 29		FT-SB30		FT-SB 31		FT-SB32		FT-SB33	
Sample / Duplicate:				FT-SB22	FT-SB22	FT-SB22 DUP	FT-SB27	FT-SB27	FT-SB28	FT-SB28	FT-SB 29	FT-SB 29	FT-SB30	FT-SB30	FT-SB 31	FT-SB 31	FT-SB32	FT-SB32	FT-SB33	FT-SB33
Field Sample ID:				FT-SB22-SS-112508	FT-SB22-0809-112508	FT-SBDUP002-112508	FT-SB27-0-0.5(20130509)	FT-SB27-1-1.5(20130509)	FT-SB28 (0-0.5) 06092015	FT-SB28 (4-6) 06092015	FT-SB 29 (0-0.5) 06092015	FT-SB 29 (4-6) 06092015	FT-SB30 (0-0.5) 06082015	FT-SB30 (4-6) 06082015	FT-SB 31 (0-0.5) 06092015	FT-SB 31 (4-6) 06092015	FT-SB32 (0-0.5) 06082015	FT-SB32 (4-6) 06082015	FT-SB33 (0-0.5) 06082015	FT-SB33 (4-5) 06082015
Sample Depth (feet):				0 - 0.5	8 - 9	8 - 9	0 - 0.5	1 - 1.5	0 - 0.5	4 - 6	0 - 0.5	4 - 6	0 - 0.5	4 - 6	0 - 0.5	4 - 6	0 - 0.5	4 - 6	0 - 0.5	4 - 5
Sample Date:				11/25/2008	11/25/2008	11/25/2008	05/09/2013	05/09/2013	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/08/2015	06/08/2015	06/09/2015	06/09/2015	06/08/2015	06/08/2015	06/08/2015	06/08/2015
PAHs																				
2-Methylnaphthalene	mg/kg	NS	3,010	0.110 J	0.036 J	0.052 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	mg/kg	NS	45,200	0.490	0.170 J	0.200 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	mg/kg	NS	NS	<0.020 U	<0.018 U	<0.018 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	mg/kg	196.9492	100,000	1.400	0.450	0.530	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	mg/kg	NS	20.8	1.800	0.480	0.590	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	mg/kg	0.47	2.11	*1.300*	0.340 J	0.430	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	mg/kg	0.4793	21.1	*2.100 JK*	*0.550 JK*	*0.690 JK*	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	mg/kg	NS	NS	0.950	0.200 J	0.250 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	mg/kg	NS	211	<0.047 UKJ	<0.043 UKJ	<0.043 UKJ	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	mg/kg	0.1446	2,110	*1.800*	*0.460*	*0.550*	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	mg/kg	NS	2.11	0.350 J	0.095 J	0.083 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	mg/kg	88.8778	30,100	4.400	1.200	1.500	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	mg/kg	14.8299	30,100	0.780	0.290 J	0.340 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	mg/kg	NS	21.1	0.850	0.190 J	0.240 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/kg	0.6582	24.1	0.160 J	0.044 J	0.070 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	mg/kg	NS	NS	4.200	1.300	1.600	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	mg/kg	54.5455	22,600	3.500 B	0.900 B	1.100 B	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SVOCs																				
1,2,4-Trichlorobenzene	mg/kg	0.408	113	<0.00076 UJ	<0.00068 U	<0.00075 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,2-Oxybis(1-chloropropane)	mg/kg	NS	1,020	<0.027 U	<0.025 U	<0.025 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	mg/kg	0.0001	7.37	<0.078 U	<0.072 U	<0.071 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	mg/kg	0.0001	1.54	<0.033 U	<0.030 U	<0.030 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	mg/kg	NS	60,300	<0.012 U	<0.011 U	<0.011 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	mg/kg	NS	8,010	<0.059 U	<0.054 U	<0.054 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3,3-Dichlorobenzidine	mg/kg	NS	5.11	<0.110 U	<0.098 U	<0.097 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	mg/kg	NS	NS	<0.086 U	<0.079 U	<0.078 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromodiphenyl ether	mg/kg	NS	26.9	<0.022 U	<0.021 U	<0.020 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	mg/kg	NS	11.5	<0.096 U	<0.089 U	<0.088 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorodiphenyl ether	mg/kg	NS	NS	<0.025 U	<0.023 U	<0.023 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	mg/kg	NS	115	<0.085 U	<0.079 U	<0.078 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetophenone	mg/kg	NS	2,520	<0.024 U	<0.022 U	<0.021 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzaldehyde	mg/kg	NS	818	<0.079 U	<0.073 U	<0.072 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Biphenyl	mg/kg	NS	288	<0.059 U	<0.054 U	<0.054 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethoxy)methane	mg/kg	NS	2,460	<0.027 U	<0.025 U	<0.025 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethyl)ether	mg/kg	NS	1.29	<0.020 U	<0.018 U	<0.018 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Ethylhexyl)phthalate	mg/kg	2.88	164	<0.054 UJB	<0.050 UJB	<0.049 UJB	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl phthalate	mg/kg	NS	1,210	<0.051 U	<0.047 U	<0.046 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Caprolactam	mg/kg	NS	100,000	<0.120 U	<0.110 U	<0.110 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	mg/kg	NS	NS	0.370 J	0.120 J	0.140 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	mg/kg	NS	1,040	0.410	0.150 J	0.180 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl phthalate	mg/kg	NS	100,000	<0.031 U	<0.028 U	<0.028 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl phthalate	mg/kg	NS	7,390	<0.027 U	<0.025 U	<0.025 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butyl phthalate	mg/kg	5.0333	82,100	<0.034 U	<0.031 U	<0.031 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate	mg/kg	NS	8,210	<0.017 U	<0.016 U	<0.015 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	mg/kg	0.0252	1.15	<0.034 U	<0.031 U	<0.031 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	mg/kg	NS	7.19	<0.00057 U	<0.00051 U	<0.00056 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	mg/kg	NS	10.8	<0.059 U	<0.054 U	<0.054 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	mg/kg	NS	11.1	<0.025 U	<0.023 U	<0.023 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isophorone	mg/kg	NS	2,420	<0.020 U	<0.018 U	<0.018 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	mg/kg	NS	32.4	<0.026 U	<0.024 U	<0.024 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-nitrosodi-n-propylamine	mg/kg	NS	0.328	<0.036 U	<0.034 U	<0.033 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	mg/kg	0.0764	469	<0.025 U	<0.023 U	<0.023 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyridine	mg/kg	0.0069	1,170	<0.150 U	<0.140 U	<0.140 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	FT-SB22			FT-SB27		FT-SB28		FT-SB 29		FT-SB30		FT-SB 31		FT-SB32		FT-SB33	
Sample / Duplicate:				FT-SB22	FT-SB22	FT-SB22 DUP	FT-SB27	FT-SB27	FT-SB28	FT-SB28	FT-SB 29	FT-SB 29	FT-SB30	FT-SB30	FT-SB 31	FT-SB 31	FT-SB32	FT-SB32	FT-SB33	FT-SB33
Field Sample ID:				FT-SB22-SS-112508	FT-SB22-0809-112508	FT-SBDUP002-112508	FT-SB27-0-0.5(20130509)	FT-SB27-1-1.5(20130509)	FT-SB28 (0-0.5) 06092015	FT-SB28 (4-6) 06092015	FT-SB 29 (0-0.5) 06092015	FT-SB 29 (4-6) 06092015	FT-SB30 (0-0.5) 06082015	FT-SB30 (4-6) 06082015	FT-SB 31 (0-0.5) 06092015	FT-SB 31 (4-6) 06092015	FT-SB32 (0-0.5) 06082015	FT-SB32 (4-6) 06082015	FT-SB33 (0-0.5) 06082015	FT-SB33 (4-5) 06082015
Sample Depth (feet):				0 - 0.5	8 - 9	8 - 9	0 - 0.5	1 - 1.5	0 - 0.5	4 - 6	0 - 0.5	4 - 6	0 - 0.5	4 - 6	0 - 0.5	4 - 6	0 - 0.5	4 - 6	0 - 0.5	4 - 5
Sample Date:				11/25/2008	11/25/2008	11/25/2008	05/09/2013	05/09/2013	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/08/2015	06/08/2015	06/09/2015	06/09/2015	06/08/2015	06/08/2015	06/08/2015	06/08/2015
Phenols																				
2,4,5-Trichlorophenol	mg/kg	NS	82,100	<0.012 U	<0.011 U	<0.011 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	mg/kg	NS	209	<0.012 U	<0.011 U	<0.011 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	mg/kg	NS	2,460	<0.012 U	<0.011 U	<0.011 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	mg/kg	NS	16,400	<0.078 U	<0.072 U	<0.071 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	mg/kg	NS	1,640	<0.390 U	<0.360 U	<0.360 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	mg/kg	NS	5,840	<0.025 U	<0.023 U	<0.023 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylphenol	mg/kg	NS	41,000	<0.015 U	<0.014 U	<0.014 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	mg/kg	NS	NS	<0.012 U	<0.011 U	<0.011 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	mg/kg	NS	82,100	<0.078 U	<0.072 U	<0.071 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	mg/kg	NS	82,100	<0.039 U	<0.036 U	<0.035 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	mg/kg	NS	NS	<0.110 U	<0.110 U	<0.100 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	mg/kg	NS	65.7	<0.390 U	<0.360 U	<0.350 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	mg/kg	0.0028	3.97	<0.390 U	<0.360 U	<0.350 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	mg/kg	2.2946	100,000	<0.021 U	<0.020 U	<0.019 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals																				
Aluminum, Total	mg/kg	600	100,000	*6,700*	*2,400*	*2,200*	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Antimony, Total	mg/kg	0.542	467	0.045 BJ-	0.021 BJ-	0.016 BJ-	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic, Total [1]	mg/kg	0.584	8.3	*4.200*	*1.700*	*1.400*	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Barium, Total	mg/kg	164.8	100,000	65.000 J-	15.000	16.000	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Beryllium, Total	mg/kg	6.32	2,300	0.460	0.120	0.120	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium, Total	mg/kg	0.752	985	0.540	0.100 B	0.100 B	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Calcium, Total	mg/kg	NS	NS	62,000	56,000	65,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium, Hexavalent	mg/kg	NS	6.36	--	--	--	--	--	1.2	<0.18 U	<0.71 U	<0.19 U	<0.17 U	<0.19 U	<0.20 U	<0.18 U	<0.19 U	<0.20 U	<0.17 U	<0.17 U
Chromium, Total [3]	mg/kg	360,000	NS	20.000 J-	5.300	5.000	--	--	100.000	25.000	11.000 B	14.000 B	11.000	7.900	12.000	6.700	11.000	28.000	12.000	13.000
Chromium, Trivalent	mg/kg	NS	100,000	--	--	--	--	--	99	25	11	14	11	7.9	12	6.7	11	28	12	13
Cobalt, Total	mg/kg	3.6073	347	*6.600 J-*	2.300	2.100	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper, Total	mg/kg	91.6	46,700	23.000 J-	3.600	3.600	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron, Total	mg/kg	NS	100,000	13,000	5,500	4,600	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead, Total	mg/kg	27	800	*93.000*	3.500	3.000	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Magnesium, Total	mg/kg	NS	NS	32,000	26,000	29,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese, Total	mg/kg	39.1244	25,900	*430.000*	*280.000*	*210.000*	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury, Total	mg/kg	0.208	3.13	0.051	0.011 B	0.011 B	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nickel, Total	mg/kg	13.0612	22,500	*18.000 J-*	5.600	5.200	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Potassium, Total	mg/kg	NS	NS	1,500	380	410	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium, Total	mg/kg	0.52	5,840	0.510 B	0.300 B	0.310 B	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver, Total	mg/kg	0.8491	5,840	0.097 BJ-	0.031 B	0.030 B	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sodium, Total	mg/kg	NS	NS	150 B	160 B	180 B	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium, Total	mg/kg	0.284	11.7	0.190	0.032 B	0.030 B	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium, Total	mg/kg	60	5,840	22.000	7.700	7.500	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc, Total	mg/kg	NS	100,000	97.000	20.000	18.000	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Inorganic - Cyanide																				
Cyanide, Amenable	mg/kg	4.04	195	--	--	--	<0.54 UJ	*11*	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Reactive	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Total	mg/kg	4.04	195	0.32 B	0.31 BJ-	<0.11 U	***430 JH***	*11*	--	--	--	--	--	--	--	--	--	--	--	--
Other																				
Sulfide, Reactive	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organic Matter	%	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent Moisture	%	NS	NS	15	7.7	7	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	FT-SB 34		FT-SB35		FT-SB36			FT-SB37			FT-TT01		FT-TT02	FT-TT03	FT-TT04	FT-TT05	FT-TT06	FT-TT07
Sample / Duplicate:				FT-SB 34	FT-SB 34	FT-SB35	FT-SB35	FT-SB36	FT-SB36	FT-SB36	FT-SB37	FT-SB37	FT-SB 37	FT-TT01	FT-TT01 DUP	FT-TT02	FT-TT03	FT-TT04	FT-TT05	FT-TT06	FT-TT07
Field Sample ID:				FT-SB 34 (0-0.5) 06092015	FT-SB 34 (4-6) 06092015	FT-SB35 (0-0.5) 06082015	FT-SB35 (4-6) 06082015	FT-SB36 (0-0.5) 06082015	FT-SB36 (4-6) 06082015	FT-SB36 (8-10) 06082015	FT-SB37 (0-0.5) 06082015	FT-SB37 (4-6) 06082015	FT-SB 37 (7.4-7.5) 06092015	FT-TT01-0607-101608	FT-TTDUP003-101608	FT-TT02-1011-101608	FT-TT03-0304-101608	FT-TT04-0708-101508	FT-TT05-0910-101508	FT-TT06-0910-101408	FT-TT07-1213-101508
Sample Depth (feet):				0 - 0.5	4 - 6	0 - 0.5	4 - 6	0 - 0.5	4 - 6	8 - 10	0 - 0.5	4 - 6	7.4 - 7.5	6 - 7	6 - 7	10 - 11	3 - 4	7 - 8	9 - 10	9 - 10	12 - 13
Sample Date:				06/09/2015	06/09/2015	06/08/2015	06/08/2015	06/08/2015	06/08/2015	06/08/2015	06/08/2015	06/08/2015	06/09/2015	10/16/2008	10/16/2008	10/16/2008	10/16/2008	10/15/2008	10/15/2008	10/14/2008	10/15/2008
VOCs																					
1,1,1-Trichloroethane	mg/kg	0.1402	640	--	--	--	--	--	--	--	--	--	--	<0.00059 U	<0.00060 U	<0.00076 U	<0.00060 U	<0.00060 U	<0.00057 U	<0.0017 U	<0.00064 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0002	3.6	--	--	--	--	--	--	--	--	--	--	<0.00070 U	<0.00070 U	<0.00089 U	<0.00070 U	<0.00070 U	<0.00067 U	<0.0019 U	<0.00075 U
1,1,2-Trichloroethane	mg/kg	0.0032	7.01	--	--	--	--	--	--	--	--	--	--	<0.0010 U	<0.0010 U	<0.0013 U	<0.0010 U	<0.0010 U	<0.00096 U	<0.0028 U	<0.0011 U
1,1-Dichloroethane	mg/kg	0.4834	22.2	--	--	--	--	--	--	--	--	--	--	<0.00024 U	<0.00024 U	<0.00031 U	<0.00024 U	<0.00024 U	<0.00023 U	<0.00067 U	<0.00026 U
1,1-Dichloroethene	mg/kg	0.005	1,190	--	--	--	--	--	--	--	--	--	--	<0.00068 U	<0.00068 U	<0.00086 U	<0.00068 U	<0.00068 U	<0.00065 U	<0.0019 U	<0.00072 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0002	0.092	--	--	--	--	--	--	--	--	--	--	<0.00069 U	<0.00069 U	<0.00087 U	<0.00069 U	<0.00069 U	<0.00066 U	<0.0019 U	<0.00074 U
1,2-Dibromoethane	mg/kg	0.0000282	0.221	--	--	--	--	--	--	--	--	--	--	<0.00059 U	<0.00060 U	<0.00076 U	<0.00060 U	<0.00060 U	<0.00057 U	<0.0017 U	<0.00064 U
1,2-Dichlorobenzene	mg/kg	1.168	376	--	--	--	--	--	--	--	--	--	--	<0.00051 U	<0.00052 U	<0.00065 U	<0.00052 UJ	<0.00052 U	<0.00049 U	<0.0014 U	<0.00055 U
1,2-Dichloroethane	mg/kg	0.0028	2.87	--	--	--	--	--	--	--	--	--	--	<0.00080 U	<0.00080 U	<0.0010 U	<0.00081 U	<0.00081 U	<0.00077 U	<0.0022 U	<0.00086 U
1,2-Dichloropropane	mg/kg	0.0033	1.78	--	--	--	--	--	--	--	--	--	--	<0.00063 U	<0.00063 U	<0.00080 U	<0.00063 U	<0.00063 U	<0.00060 U	<0.0017 U	<0.00068 U
1,3-Dichlorobenzene	mg/kg	1.1528	297	--	--	--	--	--	--	--	--	--	--	<0.00055 U	<0.00055 U	<0.00070 U	<0.00055 UJ	<0.00055 U	<0.00053 U	<0.0015 U	<0.00059 U
1,4-Dichlorobenzene	mg/kg	0.144	16.4	--	--	--	--	--	--	--	--	--	--	<0.00089 U	<0.00089 U	<0.0011 U	<0.00090 U	<0.00090 U	<0.00085 U	<0.0025 U	<0.00096 U
2-Butanone (MEK)	mg/kg	1.6661	28,400	--	--	--	--	--	--	--	--	--	--	<0.0021 U	<0.0021 U	0.014 J	<0.0021 U	<0.0021 U	<0.0020 U	0.047 J	<0.0022 U
2-Hexanone	mg/kg	NS	1,760	--	--	--	--	--	--	--	--	--	--	<0.0056 U	<0.0056 U	<0.0071 U	<0.0056 UJ	<0.0056 U	<0.0054 U	<0.016 U	<0.0060 U
4-Methyl-2-Pentanone (MIBK)	mg/kg	0.2252	3,360	--	--	--	--	--	--	--	--	--	--	<0.0050 U	<0.0050 U	<0.0063 U	<0.0050 U	<0.0050 U	<0.0048 U	<0.014 U	<0.0054 U
Acetone	mg/kg	3.6766	100,000	--	--	--	--	--	--	--	--	--	--	<0.0062 U	<0.0062 U	0.078 B	<0.0062 U	<0.0062 U	<0.0059 UJB	0.200 B	<0.0066 UJB
Benzene	mg/kg	0.0051	7.07	--	--	--	--	--	--	--	--	--	--	<0.00054 U	<0.00054 U	<0.00068 U	<0.00054 UJ	<0.00054 U	<0.00051 U	<0.0015 U	<0.00058 U
Bromodichloromethane	mg/kg	0.0003	1.83	--	--	--	--	--	--	--	--	--	--	<0.00025 U	<0.00025 U	<0.00032 U	<0.00025 U	<0.00025 U	<0.00024 U	<0.00070 U	<0.00027 U
Bromoform	mg/kg	0.0023	113	--	--	--	--	--	--	--	--	--	--	<0.00026 U	<0.00026 U	<0.00033 U	<0.00026 U	<0.00027 U	<0.00025 U	<0.00073 U	<0.00028 U
Bromomethane	mg/kg	0.0051	43	--	--	--	--	--	--	--	--	--	--	<0.00057 U	<0.00057 U	<0.00073 U	<0.00058 U	<0.00058 U	<0.00055 U	<0.0016 U	<0.00061 U
Carbon Disulfide	mg/kg	0.5919	738	--	--	--	--	--	--	--	--	--	--	<0.00048 U	<0.00048 U	<0.00061 U	<0.00048 U	<0.00048 U	<0.00046 U	0.039	<0.00052 U
Carbon Tetrachloride	mg/kg	0.0039	4.03	--	--	--	--	--	--	--	--	--	--	<0.00072 U	<0.00072 U	<0.00092 U	<0.00072 U	<0.00073 U	<0.00069 U	<0.0020 U	<0.00077 U
Chlorobenzene	mg/kg	0.1358	761	--	--	--	--	--	--	--	--	--	--	<0.00062 U	<0.00062 U	<0.00078 U	<0.00062 UJ	<0.00062 U	<0.00059 U	<0.0017 U	<0.00066 U
Chloroethane	mg/kg	0.2266	2,120	--	--	--	--	--	--	--	--	--	--	<0.0010 U	<0.0010 U	<0.0013 U	<0.0010 U	<0.0010 U	<0.00097 U	<0.0028 U	<0.0011 U
Chloroform	mg/kg	0.0033	1.98	--	--	--	--	--	--	--	--	--	--	<0.00033 U	<0.00033 U	<0.00042 U	<0.00033 U	<0.00033 U	<0.00032 U	<0.00092 U	<0.00036 U
Chloromethane	mg/kg	0.0155	669	--	--	--	--	--	--	--	--	--	--	<0.00088 U	<0.00088 U	<0.0011 U	<0.00089 U	<0.00089 U	<0.00084 U	<0.0024 U	<0.00095 U
cis-1,2-Dichloroethene	mg/kg	0.0412	2,340	--	--	--	--	--	--	--	--	--	--	<0.00064 U	<0.00064 U	<0.00081 U	<0.00064 UJ	<0.00065 U	<0.00061 U	<0.0018 U	<0.00069 U
cis-1,3-Dichloropropene	mg/kg	NS	1,210	--	--	--	--	--	--	--	--	--	--	<0.0015 U	<0.0015 U	<0.0019 U	<0.0015 U	<0.0015 U	<0.0014 U	<0.0041 U	<0.0016 U
Cyclohexane	mg/kg	NS	117	--	--	--	--	--	--	--	--	--	--	<0.00046 U	<0.00046 U	<0.00058 U	<0.00046 U	<0.00046 U	<0.00044 U	<0.0013 U	<0.00049 U
Dibromochloromethane	mg/kg	0.032	38.9	--	--	--	--	--	--	--	--	--	--	<0.00065 U	<0.00065 U	<0.00083 U	<0.00066 U	<0.00066 U	<0.00062 U	<0.0018 U	<0.00070 U
Dichloromethane	mg/kg	0.0026	1,150	--	--	--	--	--	--	--	--	--	--	<0.00086 U	<0.00086 U	<0.0011 U	<0.00086 U	<0.00087 U	<0.00082 U	<0.0024 U	<0.00092 U
Ethylbenzene	mg/kg	1.57	35.4	--	--	--	--	--	--	--	--	--	--	<0.00077 U	<0.00077 U	<0.00097 U	<0.00077 UJ	<0.00077 U	<0.00073 U	<0.0021 U	<0.00082 U
Freon 113	mg/kg	NS	910	--	--	--	--	--	--	--	--	--	--	<0.00051 U	<0.00052 U	<0.00065 U	<0.00052 U	<0.00052 U	<0.00049 U	<0.0014 U	<0.00055 U
Freon 12	mg/kg	3.0863	530	--	--	--	--	--	--	--	--	--	--	<0.00059 U	<0.00060 U	<0.00076 U	<0.00060 U	<0.00060 U	<0.00057 U	<0.0017 U	<0.00064 U
Isopropylbenzene	mg/kg	NS	268	--	--	--	--	--	--	--	--	--	--	<0.00068 U	<0.00068 U	<0.00086 U	<0.00068 U	<0.00068 U	<0.00065 U	<0.0019 U	<0.00072 U
Methyl acetate	mg/kg	NS	29,000	--	--	--	--	--	--	--	--	--	--	<0.0031 U	<0.0032 U	<0.0040 U	<0.0032 U	<0.0032 U	<0.0030 U	<0.0087 U	<0.0034 U
Methylcyclohexane	mg/kg	NS	67.6	--	--	--	--	--	--	--	--	--	--	<0.00048 U	<0.00048 U	<0.00061 U	<0.00048 U	<0.00048 U	<0.00046 U	0.0017 J	<0.00052 U
Methyl-tert-butyl-ether	mg/kg	0.027	282	--	--	--	--	--	--	--	--	--	--	<0.00039 U	<0.00039 U	<0.00049 U	<0.00039 U	<0.00039 U	<0.00037 U	<0.0011 U	<0.00042 U
Styrene	mg/kg	0.22	867	--	--	--	--	--	--	--	--	--	--	<0.00072 U	<0.00072 U	<0.00092 U	<0.00072 UJ	<0.00073 U	<0.00069 U	<0.0020 U	<0.00077 U
Tetrachloroethene	mg/kg	0.0045	145	--	--	--	--	--	--	--	--	--	--	<0.00068 U	<0.00068 U	<0.00086 U	<0.00068 U	<0.00068 U	<0.00065 U	<0.0019 U	<0.00072 U
Toluene	mg/kg	1.1072	818	--	--	--	--	--	--	--	--	--	--	<0.00079 U	<0.00079 U	<0.0010 U	<0.00079 UJ	<0.00080 U	<0.00076 U	<0.0022 U	<0.00085 U
trans-1,2-Dichloroethene	mg/kg	0.0626	1,850	--	--	--	--	--	--	--	--	--	--	<0.00045 U	<0.00045 U	<0.00057 U	<0.00045 UJ	<0.00045 U	<0.00043 U	<0.0012 U	<0.00048 U
trans-1,3-Dichloropropene	mg/kg	NS	1,510	--	--	--	--	--	--	--	--	--	--	<0.00077 U	<0.00077 U	<0.00097 U	<0.00077 U	<0.00077 U	<0.00073 U	<0.0021 U	<0.00082 U
Trichloroethene	mg/kg	0.0036	8.41	--	--	--	--	--	--	--	--	--	--	<0.00026 U	<0.00026 U	<0.00033 U	<0.00026 U	<0.00027 U	<0.00025 U	<0.00073 U	<0.00028 U
Trichlorofluoromethane	mg/kg	4.4775	1,230	--	--	--	--	--	--	--	--	--	--	<0.0012 U	<0.0012 U	<0.0015 U	<0.0012 U	<0.0012 U	<0.0011 U	<0.0033 U	<0.0013 U
Vinyl Chloride	mg/kg	0.0001	2.08	--	--	--	--	--	--	--	--	--	--	<0.0015 U	<0.0015 U	<0.0019 U	<0.0015 U	<0.0015 U	<0.0015 U	<0.0043 U	<0.0016 U
Xylenes, Total	mg/kg	3.96	260	--	--	--	--	--	--	--	--	--	--	<0.00070 U	<0.00070 U	<0.00089 U	<0.00070 UJ	<0.00070 U	<0.00067 U	<0.0019 U	<0.00075 U
PCBs																					
PCB, Total [4]	mg/kg	0.0094	0.967	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1016	mg/kg	NS	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1221	mg/kg	NS	0.883	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1232	mg/kg	NS	0.792	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1242	mg/kg	NS	0.972	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1248	mg/kg	NS	0.975	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1254	mg/kg	NS	0.988	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1260	mg/kg	NS	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	FT-SB 34		FT-SB35		FT-SB36			FT-SB37			FT-TT01		FT-TT02	FT-TT03	FT-TT04	FT-TT05	FT-TT06	FT-TT07
Sample / Duplicate:				FT-SB 34	FT-SB 34	FT-SB35	FT-SB35	FT-SB36	FT-SB36	FT-SB36	FT-SB37	FT-SB37	FT-SB 37	FT-TT01	FT-TT01 DUP	FT-TT02	FT-TT03	FT-TT04	FT-TT05	FT-TT06	FT-TT07
Field Sample ID:				FT-SB 34 (0-0.5) 06092015	FT-SB 34 (4-6) 06092015	FT-SB35 (0-0.5) 06082015	FT-SB35 (4-6) 06082015	FT-SB36 (0-0.5) 06082015	FT-SB36 (4-6) 06082015	FT-SB36 (8-10) 06082015	FT-SB37 (0-0.5) 06082015	FT-SB37 (4-6) 06082015	FT-SB 37 (7.4-7.5) 06092015	FT-TT01-0607-101608	FT-TTDUP003-101608	FT-TT02-1011-101608	FT-TT03-0304-101608	FT-TT04-0708-101508	FT-TT05-0910-101508	FT-TT06-0910-101408	FT-TT07-1213-101508
Sample Depth (feet):				0 - 0.5	4 - 6	0 - 0.5	4 - 6	0 - 0.5	4 - 6	8 - 10	0 - 0.5	4 - 6	7.4 - 7.5	6 - 7	6 - 7	10 - 11	3 - 4	7 - 8	9 - 10	9 - 10	12 - 13
Sample Date:				06/09/2015	06/09/2015	06/08/2015	06/08/2015	06/08/2015	06/08/2015	06/08/2015	06/08/2015	06/08/2015	06/09/2015	10/16/2008	10/16/2008	10/16/2008	10/16/2008	10/15/2008	10/15/2008	10/14/2008	10/15/2008
PAHs																					
2-Methylnaphthalene	mg/kg	NS	3,010	--	--	--	--	--	--	--	--	--	--	<0.022 U	<0.022 U	<0.028 U	0.230 J	0.089 J	<0.021 U	<0.880 U	0.670 J
Acenaphthene	mg/kg	NS	45,200	--	--	--	--	--	--	--	--	--	--	<0.012 U	<0.012 U	<0.015 U	0.210 J	0.089 J	<0.011 U	<0.480 U	1.100 J
Acenaphthylene	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	<0.019 U	<0.019 U	<0.025 U	0.066 J	0.055 J	<0.019 U	<0.790 U	0.330 J
Anthracene	mg/kg	196.9492	100,000	--	--	--	--	--	--	--	--	--	--	<0.019 U	<0.019 U	<0.025 U	0.790	0.230 J	<0.019 U	<0.790 U	2.200
Benzo(a)anthracene	mg/kg	NS	20.8	--	--	--	--	--	--	--	--	--	--	<0.023 UJB	<0.023 U	<0.029 U	2.200 B	0.880 B	<0.022 U	<0.930 U	4.200 B
Benzo(a)pyrene	mg/kg	0.47	2.11	--	--	--	--	--	--	--	--	--	--	0.044 J	<0.023 U	<0.029 U	*1.700*	*0.910*	<0.022 U	<0.930 U	***3.400***
Benzo(b)fluoranthene	mg/kg	0.4793	21.1	--	--	--	--	--	--	--	--	--	--	<0.030 UJBK	<0.030 U	<0.038 U	*2.700 JBK*	*1.500 JBK*	<0.029 U	<1.200 U	*5.700 JBK*
Benzo(g,h,i)perylene	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	0.038 J	<0.018 U	<0.023 U	1.100	0.580	<0.018 U	<0.740 U	2.100
Benzo(k)fluoranthene	mg/kg	NS	211	--	--	--	--	--	--	--	--	--	--	<0.046 UKJ	<0.046 U	<0.058 U	<0.046 UKJ	<0.046 UKJ	<0.044 U	<1.900 U	<0.200 UKJ
Chrysene	mg/kg	0.1446	2,110	--	--	--	--	--	--	--	--	--	--	<0.031 UJB	<0.031 U	<0.039 U	*2.200 B*	*0.910 B*	<0.030 U	<1.300 U	*4.600 B*
Dibenz(a,h)anthracene	mg/kg	NS	2.11	--	--	--	--	--	--	--	--	--	--	<0.022 U	<0.022 U	<0.028 U	0.280 J	0.130 J	<0.021 U	<0.880 U	0.530 J
Fluoranthene	mg/kg	88.8778	30,100	--	--	--	--	--	--	--	--	--	--	<0.041 UJB	<0.041 U	<0.052 U	4.400 JB	1.600 B	<0.039 U	<1.700 U	9.200 B
Fluorene	mg/kg	14.8299	30,100	--	--	--	--	--	--	--	--	--	--	<0.021 U	<0.021 U	<0.026 U	0.230 J	0.065 J	<0.020 U	<0.840 U	1.200 J
Indeno(1,2,3-cd)pyrene	mg/kg	NS	21.1	--	--	--	--	--	--	--	--	--	--	0.026 J	<0.025 U	<0.032 U	0.960	0.490	<0.024 U	<1.000 U	1.900
Naphthalene	mg/kg	0.6582	24.1	--	--	--	--	--	--	--	--	--	--	<0.035 U	<0.036 U	<0.045 U	0.150 J	0.070 J	<0.034 U	<1.400 U	0.600 J
Phenanthrene	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	<0.019 UJB	<0.019 U	<0.025 U	3.400 JB	0.880 B	<0.019 U	<0.790 U	8.500 B
Pyrene	mg/kg	54.5455	22,600	--	--	--	--	--	--	--	--	--	--	<0.014 UJB	<0.014 U	<0.018 U	4.000 JB	1.900 B	<0.013 U	0.710 J	8.100 B
SVOCs																					
1,2,4-Trichlorobenzene	mg/kg	0.408	113	--	--	--	--	--	--	--	--	--	--	<0.00084 U	<0.00084 U	<0.0011 U	<0.00084 UJ	<0.00084 U	<0.00080 U	<0.0023 U	<0.00090 U
2,2-Oxybis(1-chloropropane)	mg/kg	NS	1,020	--	--	--	--	--	--	--	--	--	--	<0.026 U	<0.026 U	<0.033 U	<0.026 U	<0.027 U	<0.025 U	<1.100 U	<0.110 U
2,4-Dinitrotoluene	mg/kg	0.0001	7.37	--	--	--	--	--	--	--	--	--	--	<0.076 U	<0.076 U	<0.096 U	<0.076 U	<0.076 U	<0.072 U	<3.100 U	<0.320 U
2,6-Dinitrotoluene	mg/kg	0.0001	1.54	--	--	--	--	--	--	--	--	--	--	<0.032 U	<0.032 U	<0.041 U	<0.032 U	<0.032 U	<0.031 U	<1.300 U	<0.140 U
2-Chloronaphthalene	mg/kg	NS	60,300	--	--	--	--	--	--	--	--	--	--	<0.011 U	<0.011 U	<0.015 U	<0.012 U	<0.012 U	<0.011 U	<0.460 U	<0.049 U
2-Nitroaniline	mg/kg	NS	8,010	--	--	--	--	--	--	--	--	--	--	<0.057 U	<0.057 U	<0.073 U	<0.058 U	<0.058 U	<0.055 U	<2.300 U	<0.250 U
3,3-Dichlorobenzidine	mg/kg	NS	5.11	--	--	--	--	--	--	--	--	--	--	<0.100 U	<0.100 U	<0.130 U	<0.100 UJ	<0.100 U	<0.099 U	<4.200 U	<0.440 U
3-Nitroaniline	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	<0.084 U	<0.084 U	<0.110 U	<0.084 U	<0.084 U	<0.080 U	<3.400 U	<0.360 U
4-Bromodiphenyl ether	mg/kg	NS	26.9	--	--	--	--	--	--	--	--	--	--	<0.022 U	<0.022 U	<0.028 U	<0.022 U	<0.022 U	<0.021 U	<0.880 U	<0.093 U
4-Chloroaniline	mg/kg	NS	11.5	--	--	--	--	--	--	--	--	--	--	<0.094 U	<0.094 U	<0.120 U	<0.094 U	<0.094 U	<0.090 U	<3.800 U	<0.400 U
4-Chlorodiphenyl ether	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	<0.024 U	<0.024 U	<0.031 U	<0.024 U	<0.024 U	<0.023 U	<0.970 U	<0.100 U
4-Nitroaniline	mg/kg	NS	115	--	--	--	--	--	--	--	--	--	--	<0.083 U	<0.083 U	<0.110 U	<0.083 U	<0.084 U	<0.079 U	<3.400 U	<0.360 U
Acetophenone	mg/kg	NS	2,520	--	--	--	--	--	--	--	--	--	--	<0.023 U	<0.023 U	<0.029 U	<0.023 U	<0.023 U	<0.022 U	<0.930 U	<0.098 U
Benzaldehyde	mg/kg	NS	818	--	--	--	--	--	--	--	--	--	--	<0.077 U	<0.077 U	<0.097 U	<0.077 U	<0.077 U	<0.073 U	<3.100 U	<0.330 U
Biphenyl	mg/kg	NS	288	--	--	--	--	--	--	--	--	--	--	<0.057 U	<0.057 U	<0.073 U	<0.058 U	<0.058 U	<0.055 U	<2.300 U	<0.250 U
Bis(2-Chloroethoxy)methane	mg/kg	NS	2,460	--	--	--	--	--	--	--	--	--	--	<0.026 U	<0.026 U	<0.033 U	<0.026 U	<0.027 U	<0.025 U	<1.100 U	<0.110 U
Bis(2-Chloroethyl)ether	mg/kg	NS	1.29	--	--	--	--	--	--	--	--	--	--	<0.019 U	<0.019 U	<0.024 U	<0.019 U	<0.019 U	<0.018 U	<0.770 U	<0.082 U
Bis(2-Ethylhexyl)phthalate	mg/kg	2.88	164	--	--	--	--	--	--	--	--	--	--	<0.053 U	<0.053 U	<0.067 U	0.076 J	<0.053 U	<0.050 U	<2.100 U	<0.230 U
Butyl benzyl phthalate	mg/kg	NS	1,210	--	--	--	--	--	--	--	--	--	--	<0.049 U	<0.049 U	<0.062 U	<0.049 U	<0.050 U	<0.047 U	<2.000 U	<0.210 U
Caprolactam	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	<0.120 U	<0.120 U	<0.150 U	<0.120 U	<0.120 U	<0.120 U	<4.900 U	<0.520 U
Carbazole	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	<0.041 U	<0.041 U	<0.052 U	0.390	0.051 J	<0.039 U	<1.700 U	0.960 J
Dibenzofuran	mg/kg	NS	1,040	--	--	--	--	--	--	--	--	--	--	<0.023 U	<0.023 U	<0.029 U	0.190 J	0.066 J	<0.022 U	<0.930 U	0.830 J
Diethyl phthalate	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	<0.030 U	<0.030 U	<0.038 U	<0.030 U	<0.030 U	<0.028 U	<1.200 U	<0.130 U
Dimethyl phthalate	mg/kg	NS	7,390	--	--	--	--	--	--	--	--	--	--	0.071 J	0.110 J	<0.033 U	0.130 J	<0.027 U	<0.025 U	<1.100 U	0.110 J
Di-n-butyl phthalate	mg/kg	5.0333	82,100	--	--	--	--	--	--	--	--	--	--	<0.033 U	<0.033 U	<0.042 U	<0.033 U	<0.033 U	<0.032 U	<1.300 U	<0.140 U
Di-n-octyl phthalate	mg/kg	NS	8,210	--	--	--	--	--	--	--	--	--	--	<0.016 U	<0.016 U	<0.021 U	<0.017 U	<0.017 U	<0.016 U	<0.670 U	<0.071 U
Hexachlorobenzene	mg/kg	0.0252	1.15	--	--	--	--	--	--	--	--	--	--	<0.033 U	<0.033 U	<0.042 U	<0.033 U	<0.033 U	<0.032 U	<1.300 U	<0.140 U
Hexachlorobutadiene	mg/kg	NS	7.19	--	--	--	--	--	--	--	--	--	--	<0.00063 U	<0.00063 U	<0.00080 U	<0.00063 U	<0.00063 U	<0.00060 U	<0.0017 U	<0.00068 U
Hexachlorocyclopentadiene	mg/kg	NS	10.8	--	--	--	--	--	--	--	--	--	--	<0.057 U	<0.057 U	<0.073 U	<0.058 UJ	<0.058 U	<0.055 U	<2.300 U	<0.250 U
Hexachloroethane	mg/kg	NS	11.1	--	--	--	--	--	--	--	--	--	--	<0.024 U	<0.024 U	<0.031 U	<0.025 U	<0.025 U	<0.023 U	<0.990 U	<0.100 U
Isophorone	mg/kg	NS	2,420	--	--	--	--	--	--	--	--	--	--	<0.019 U	<0.019 U	<0.025 U	<0.020 U	<0.020 U	<0.019 U	<0.790 U	<0.084 U
Nitrobenzene	mg/kg	NS	32.4	--	--	--	--	--	--	--	--	--	--	<0.025 U	<0.025 U	<0.032 U	<0.025 U	<0.025 U	<0.024 U	<1.000 U	<0.110 U
N-nitrosodi-n-propylamine	mg/kg	NS	0.328	--	--	--	--	--	--	--	--	--	--	<0.035 U	<0.036 U	<0.045 U	<0.036 U	<0.036 U	<0.034 U	<1.400 U	<0.150 U
N-Nitrosodiphenylamine	mg/kg	0.0764	469	--	--	--	--	--	--	--	--	--	--	<0.024 U	<0.024 U	<0.031 U	<0.024 U	<0.024 U	<0.023 U	<0.970 U	<0.100 U
Pyridine	mg/kg	0.0069	1,170	--	--	--	--	--	--	--	--	--	--	<0.150 U	<0.150 U	<0.190 U	<0.150 U	<0.150 U	<0.140 U	<6.000 U	<0.640 U

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	FT-SB 34		FT-SB35		FT-SB36			FT-SB37			FT-TT01		FT-TT02	FT-TT03	FT-TT04	FT-TT05	FT-TT06	FT-TT07
Sample / Duplicate:				FT-SB 34	FT-SB 34	FT-SB35	FT-SB35	FT-SB36	FT-SB36	FT-SB36	FT-SB37	FT-SB37	FT-SB 37	FT-TT01	FT-TT01 DUP	FT-TT02	FT-TT03	FT-TT04	FT-TT05	FT-TT06	FT-TT07
Field Sample ID:				FT-SB 34 (0-0.5) 06092015	FT-SB 34 (4-6) 06092015	FT-SB35 (0-0.5) 06082015	FT-SB35 (4-6) 06082015	FT-SB36 (0-0.5) 06082015	FT-SB36 (4-6) 06082015	FT-SB36 (8-10) 06082015	FT-SB37 (0-0.5) 06082015	FT-SB37 (4-6) 06082015	FT-SB 37 (7.4-7.5) 06092015	FT-TT01-0607-101608	FT-TTDUP003-101608	FT-TT02-1011-101608	FT-TT03-0304-101608	FT-TT04-0708-101508	FT-TT05-0910-101508	FT-TT06-0910-101408	FT-TT07-1213-101508
Sample Depth (feet):				0 - 0.5	4 - 6	0 - 0.5	4 - 6	0 - 0.5	4 - 6	8 - 10	0 - 0.5	4 - 6	7.4 - 7.5	6 - 7	6 - 7	10 - 11	3 - 4	7 - 8	9 - 10	9 - 10	12 - 13
Sample Date:				06/09/2015	06/09/2015	06/08/2015	06/08/2015	06/08/2015	06/08/2015	06/08/2015	06/08/2015	06/08/2015	06/09/2015	10/16/2008	10/16/2008	10/16/2008	10/16/2008	10/15/2008	10/15/2008	10/14/2008	10/15/2008
Phenols																					
2,4,5-Trichlorophenol	mg/kg	NS	82,100	--	--	--	--	--	--	--	--	--	--	<0.011 U	<0.011 U	<0.015 U	<0.012 U	<0.012 U	<0.011 U	<0.460 U	<0.049 U
2,4,6-Trichlorophenol	mg/kg	NS	209	--	--	--	--	--	--	--	--	--	--	<0.011 U	<0.011 U	<0.015 U	<0.012 U	<0.012 U	<0.011 U	<0.460 U	<0.049 U
2,4-Dichlorophenol	mg/kg	NS	2,460	--	--	--	--	--	--	--	--	--	--	<0.011 U	<0.011 U	<0.015 U	<0.012 U	<0.012 U	<0.011 U	<0.460 U	<0.049 U
2,4-Dimethylphenol	mg/kg	NS	16,400	--	--	--	--	--	--	--	--	--	--	<0.076 U	<0.076 U	<0.096 U	<0.076 U	<0.076 U	<0.072 U	<3.100 U	<0.320 U
2,4-Dinitrophenol	mg/kg	NS	1,640	--	--	--	--	--	--	--	--	--	--	<0.380 U	<0.380 U	<0.480 U	<0.380 U	<0.380 U	<0.360 U	<15.000 U	<1.600 U
2-Chlorophenol	mg/kg	NS	5,840	--	--	--	--	--	--	--	--	--	--	<0.024 U	<0.024 U	<0.031 U	<0.024 U	<0.024 U	<0.023 U	<0.970 U	<0.100 U
2-Methylphenol	mg/kg	NS	41,000	--	--	--	--	--	--	--	--	--	--	<0.015 U	<0.015 U	<0.019 U	<0.015 U	<0.015 U	<0.014 U	<0.600 U	<0.064 U
2-Nitrophenol	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	<0.011 U	<0.011 U	<0.015 U	<0.012 U	<0.012 U	<0.011 U	<0.460 U	<0.049 U
4-Chloro-3-methylphenol	mg/kg	NS	82,100	--	--	--	--	--	--	--	--	--	--	<0.076 U	<0.076 U	<0.096 U	<0.076 U	<0.076 U	<0.072 U	<3.100 U	<0.320 U
4-Methylphenol	mg/kg	NS	82,100	--	--	--	--	--	--	--	--	--	--	<0.038 U	<0.038 U	<0.048 U	<0.038 U	<0.038 U	<0.036 U	<1.500 U	<0.160 U
4-Nitrophenol	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	<0.110 U	<0.110 U	<0.140 U	<0.110 U	<0.110 U	<0.110 U	<4.500 U	<0.480 U
4,6-Dinitro-2-methylphenol	mg/kg	NS	65.7	--	--	--	--	--	--	--	--	--	--	<0.380 U	<0.380 U	<0.480 U	<0.380 UJ	<0.380 U	<0.360 U	<15.000 U	<1.600 U
Pentachlorophenol	mg/kg	0.0028	3.97	--	--	--	--	--	--	--	--	--	--	<0.380 U	<0.380 U	<0.480 U	<0.380 U	<0.380 U	<0.360 U	<15.000 U	<1.600 U
Phenol	mg/kg	2.2946	100,000	--	--	--	--	--	--	--	--	--	--	<0.021 U	<0.021 U	<0.026 U	<0.021 U	<0.021 U	<0.020 U	<0.840 U	<0.088 U
Metals																					
Aluminum, Total	mg/kg	600	100,000	--	--	--	--	--	--	--	--	--	--	*10.000*	*6.500*	*3.900*	*5.000*	*4.100*	*2.500*	*2.100*	*3.900*
Antimony, Total	mg/kg	0.542	467	--	--	--	--	--	--	--	--	--	--	0.066 BJ-	0.089 BJ-	0.021 BJ-	0.480 J	0.059 BJ-	<0.015 UJ	*0.940 J-*	0.500 J-
Arsenic, Total [1]	mg/kg	0.584	8.3	--	--	--	--	--	--	--	--	--	--	*4.900*	*6.200*	*2.200*	*6.000*	*4.600*	*3.500*	***340.000***	***96.000***
Barium, Total	mg/kg	164.8	100,000	--	--	--	--	--	--	--	--	--	--	99.000	82.000	26.000	71.000 J	56.000	18.000	*180.000*	*250.000*
Beryllium, Total	mg/kg	6.32	2,300	--	--	--	--	--	--	--	--	--	--	0.620	0.610	0.260	0.610	0.610	0.160	0.360	1.100
Cadmium, Total	mg/kg	0.752	985	--	--	--	--	--	--	--	--	--	--	*0.870*	*1.600*	0.260	*0.770*	0.450	0.140	*1.800*	*1.100*
Calcium, Total	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	35,000	33,000	21,000	52,000	79,000	45,000	29,000	41,000
Chromium, Hexavalent	mg/kg	NS	6.36	0.46	<0.19 U	<0.17 U	<0.16 U	<0.18 U	<1.3 U	2.6	<0.56 U	<0.60 U	<0.18 U	--	--	--	--	--	--	--	--
Chromium, Total [3]	mg/kg	360,000	NS	160.000 B	17.000	14.000	7.500	28.000	34.000	3,200	15.000	320.000	8.600	7.500	12.000	8.500	10.000 J+	11.000	7.900	1,100	230.000
Chromium, Trivalent	mg/kg	NS	100,000	160	17	14	7.5	28	34	3,200	15	320	8.6	--	--	--	--	--	--	--	--
Cobalt, Total	mg/kg	3.6073	347	--	--	--	--	--	--	--	--	--	--	2.400	*3.900*	2.700	3.400	*5.700*	3.500	*7.500*	*5.600*
Copper, Total	mg/kg	91.6	46,700	--	--	--	--	--	--	--	--	--	--	*180.000*	*280.000*	8.500	42.000 J	26.000	3.800	*200.000*	*100.000*
Iron, Total	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	37,000	33,000	8,700	24,000	12,000	6,400	6,800	18,000
Lead, Total	mg/kg	27	800	--	--	--	--	--	--	--	--	--	--	*120.000*	*100.000*	6.200	*90.000 J*	*35.000*	3.500	*440.000*	*330.000*
Magnesium, Total	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	13,000	12,000	9,200	16,000 J+	40,000	21,000	2,300	20,000
Manganese, Total	mg/kg	39.1244	25,900	--	--	--	--	--	--	--	--	--	--	*1.100*	*1.300*	*410.000*	*310.000*	*330.000*	*250.000*	*100.000*	*420.000*
Mercury, Total	mg/kg	0.208	3.13	--	--	--	--	--	--	--	--	--	--	*0.560*	0.052	0.026	*0.310 J-*	0.051	0.010 B	0.180	*0.370*
Nickel, Total	mg/kg	13.0612	22,500	--	--	--	--	--	--	--	--	--	--	7.700 J	13.000 J	9.800 J	10.000 JJ	*15.000 J*	7.100 J	*18.000*	*17.000 J*
Potassium, Total	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	4,100	2,100	630	2,100	890	440	460 B	550
Selenium, Total	mg/kg	0.52	5,840	--	--	--	--	--	--	--	--	--	--	*1.100 J*	*1.600 J*	*0.840 J*	*0.880 J*	*0.740 J*	<0.150 UJB	*1.300*	*1.500 J*
Silver, Total	mg/kg	0.8491	5,840	--	--	--	--	--	--	--	--	--	--	0.340	0.400	<0.030 U	0.190 J-	0.057 B	<0.022 U	0.047 B	0.160
Sodium, Total	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	450 B	250 B	110 B	240 B	230 B	120 B	160 B	220 B
Thallium, Total	mg/kg	0.284	11.7	--	--	--	--	--	--	--	--	--	--	*0.400*	*0.490*	0.070 B	*0.370*	0.190	0.110	*0.750*	*0.420*
Vanadium, Total	mg/kg	60	5,840	--	--	--	--	--	--	--	--	--	--	9.900	14.000	41.000	16.000	16.000	14.000	37.000	13.000
Zinc, Total	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	270.000	340.000	24.000	240.000	74.000	20.000	65.000	200.000
Inorganic - Cyanide																					
Cyanide, Amenable	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Reactive	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Total	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	*15*	*18*	0.16 B	2 J	0.15 B	<0.11 U	<0.24 U	0.75
Other																					
Sulfide, Reactive	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organic Matter	%	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent Moisture	%	NS	NS	--	--	--	--	--	--	--	--	--	--	13	13	31	13	13	8.7	57	19

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	**MCAT-A-014**	**MCAT-A-022**	**MCAT-A-025**	**MCAT-A-SLO1**	**MW01**			**MW02**			**MW03**		**MW04**			**MW05**		
Sample / Duplicate:				MCAT-A-014	MCAT-A-022	MCAT-A-025	MCAT-A-SLO1	MW01	MW01	MW01 DUP	MW02	MW02	MW02 DUP	MW03	MW03	MW04	MW04	MW04	MW05	MW05	MW05
Field Sample ID:				MCS-MCAT-A-014-E1QZ6-SO	MCS-MCAT-A-022-E1QZ7	MCS-MCAT-A-025-E1R00	MCS-MCAT-A-SLO1-E1QZ8	MW01-SS-012609	MW01-0304-012609	MWDUP005-012609	MW02-SS-011909	MW02-0405-011909	MWDUP003-011909	MW03-SS-011209	MW03-0607-011209	MW04-SS-121608	MSS-MW04-0406-121608	MW04-0406-121608	MW05-SS-012609	MSS-MW05-4555-012309	MW05-0455-012609
Sample Depth (feet):				0	0	0	0	0 - 1	3 - 4	3 - 4	0 - 0.5	4 - 5	4 - 5	2 - 2.5	6 - 7	0 - 0.5	4 - 6	4 - 6	0 - 0.5	4 - 5.5	4.5 - 5.5
Sample Date:				12/17/2001	12/17/2001	12/17/2001	12/17/2001	01/26/2009	01/26/2009	01/26/2009	01/19/2009	01/19/2009	01/19/2009	01/12/2009	01/12/2009	12/16/2008	12/16/2008	12/16/2008	01/26/2009	01/23/2009	01/26/2009
VOCs																					
1,1,1-Trichloroethane	mg/kg	0.1402	640	--	--	--	<150.000 U	<0.0016 UJ	<0.00047 U	<0.00046 U	<0.00073 U	0.0049 J	0.034 J	<0.00046 U	<0.00059 U	<0.00050 U	--	<0.00065 U	<0.0012 U	--	<0.0011 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0002	3.6	--	--	--	<150.000 U	<0.0019 UJ	<0.00055 U	<0.00054 U	<0.00086 UJ	<0.0011 UJ	<0.00078 UJ	<0.00054 U	<0.00069 U	<0.00059 UJ	--	<0.00077 UJ	<0.0014 UJ	--	<0.0012 U
1,1,2-Trichloroethane	mg/kg	0.0032	7.01	--	--	--	<150.000 U	<0.0028 UJ	<0.00080 U	<0.00078 U	<0.0012 U	<0.0015 UJ	<0.0011 UJ	<0.00078 U	<0.00099 U	<0.00085 UJ	--	<0.0011 UJ	<0.0020 UJ	--	<0.0018 U
1,1-Dichloroethane	mg/kg	0.4834	22.2	--	--	--	<150.000 U	<0.00067 UJ	<0.00019 U	<0.00019 U	<0.0003 U	<0.00036 U	0.0041 J	<0.00019 U	<0.00024 U	<0.00020 U	--	<0.00026 U	<0.00048 U	--	<0.00042 U
1,1-Dichloroethene	mg/kg	0.005	1,190	--	--	--	<150.000 U	<0.0019 UJ	<0.00053 U	<0.00052 U	<0.00083 U	<0.001 U	<0.00076 U	<0.00052 U	<0.00067 U	<0.00057 U	--	<0.00074 U	0.0034 J	--	0.0046 J
1,2-Dibromo-3-chloropropane	mg/kg	0.0002	0.092	--	--	--	<150.000 U	<0.0019 UJ	<0.00054 U	<0.00053 U	<0.00084 UJ	<0.001 UJ	<0.00077 UJ	<0.00053 U	<0.00068 U	<0.00058 UJ	--	<0.00075 UJ	<0.0014 UJ	--	<0.0012 U
1,2-Dibromoethane	mg/kg	0.0000282	0.221	--	--	--	<150.000 U	<0.0016 UJ	<0.00047 U	<0.00046 U	<0.00073 U	<0.0009 UJ	<0.00067 UJ	<0.00046 U	<0.00059 U	<0.00050 UJ	--	<0.00065 UJ	<0.0012 UJ	--	<0.0011 U
1,2-Dichlorobenzene	mg/kg	1.168	376	--	--	--	<150.000 U	<0.0014 UJ	<0.00041 U	<0.00040 U	<0.00063 UJ	0.00085 J	0.0024 J	<0.00040 U	<0.00051 U	<0.00043 UJ	--	<0.00056 UJ	<0.0010 UJ	--	<0.00091 U
1,2-Dichloroethane	mg/kg	0.0028	2.87	--	--	--	<150.000 U	<0.0022 UJ	<0.00063 U	<0.00062 U	<0.00099 U	<0.0012 U	<0.0009 U	<0.00062 U	<0.00079 U	<0.00067 U	--	<0.00088 U	<0.0016 U	--	<0.0014 U
1,2-Dichloropropane	mg/kg	0.0033	1.78	--	--	--	<150.000 U	<0.0017 UJ	<0.00050 U	<0.00049 U	<0.00077 U	<0.00095 U	<0.00071 U	<0.00049 U	<0.00062 U	<0.00053 U	--	<0.00069 U	<0.0013 U	--	<0.0011 U
1,3-Dichlorobenzene	mg/kg	1.1528	297	--	--	--	<150.000 U	<0.0015 UJ	<0.00043 U	<0.00043 U	<0.00068 UJ	<0.00083 UJ	0.0023 J	<0.00043 U	<0.00054 U	<0.00046 UJ	--	<0.00060 UJ	<0.0011 UJ	--	<0.00097 U
1,4-Dichlorobenzene	mg/kg	0.144	16.4	--	--	--	<150.000 U	<0.0025 UJ	<0.00070 U	<0.00069 U	<0.0011 UJ	<0.0013 UJ	0.0017 J	<0.00069 U	<0.00088 U	<0.00075 UJ	--	<0.00098 UJ	<0.0018 UJ	--	<0.0016 U
2-Butanone (MEK)	mg/kg	1.6661	28,400	--	--	--	<150.000 U	<0.0058 UJ	<0.0017 U	<0.0016 U	0.0049 J	<0.0032 U	<0.0023 U	<0.0016 U	<0.0021 U	<0.0018 U	--	<0.0023 U	<0.0042 U	--	<0.0037 U
2-Hexanone	mg/kg	NS	1,760	--	--	--	<150.000 U	<0.015 UJ	<0.0044 U	<0.0043 U	<0.0069 U	<0.0085 U	<0.0063 U	<0.0043 U	<0.0055 U	<0.0047 U	--	<0.0061 U	<0.011 U	--	<0.0099 U
4-Methyl-2-Pentanone (MIBK)	mg/kg	0.2252	3,360	--	--	--	<150.000 U	<0.014 UJ	<0.0039 U	<0.0039 U	<0.0061 U	<0.0075 UJ	<0.0056 UJ	<0.0039 U	<0.0049 U	<0.0042 UJ	--	<0.0055 UJ	<0.010 UJ	--	<0.0088 U
Acetone	mg/kg	3.6766	100,000	--	--	--	<150.000 U	<0.017 UJ	<0.0049 U	<0.0048 U	0.014 J	<0.0093 U	0.024 J	<0.0048 U	0.034	0.0087 J	--	0.0097 J	<0.012 UJB	--	<0.011 U
Benzene	mg/kg	0.0051	7.07	--	--	--	***1,200 VS***	0.0035 J	<0.00042 U	<0.00042 U	0.0012 J	<0.00081 U	0.0011 J	<0.00042 U	0.0038 J	<0.00045 U	--	0.00059 J	*0.0071 J*	--	<0.00095 U
Bromodichloromethane	mg/kg	0.0003	1.83	--	--	--	<150.000 U	<0.00070 UJ	<0.00020 U	<0.00020 U	<0.00031 U	<0.00038 UJ	<0.00028 UJ	<0.00020 U	<0.00025 U	<0.00021 UJ	--	<0.00028 UJ	<0.00051 UJ	--	<0.00045 U
Bromoform	mg/kg	0.0023	113	--	--	--	<150.000 U	<0.00073 UJ	<0.00021 U	<0.00020 U	<0.00032 U	<0.0004 UJ	<0.00029 UJ	<0.00020 U	<0.00026 U	<0.00022 UJ	--	<0.00029 UJ	<0.00053 UJ	--	<0.00047 U
Bromomethane	mg/kg	0.0051	43	--	--	--	<150.000 U	<0.0016 UJ	<0.00045 U	<0.00044 U	<0.0007 U	<0.00087 U	<0.00064 U	<0.00044 U	<0.00056 U	<0.00048 U	--	<0.00063 U	<0.0011 U	--	<0.0010 U
Carbon Disulfide	mg/kg	0.5919	738	--	--	--	<150.000 U	<0.0013 UJ	<0.00038 U	<0.00037 U	<0.00059 U	<0.00073 U	<0.00054 U	<0.00037 U	<0.00047 U	<0.00040 U	--	<0.00053 U	<0.00097 U	--	<0.00085 U
Carbon Tetrachloride	mg/kg	0.0039	4.03	--	--	--	<150.000 U	<0.0020 UJ	<0.00057 U	<0.00056 U	<0.00089 U	<0.0011 U	0.0028 J	<0.00056 U	<0.00071 U	<0.00061 U	--	<0.00079 U	<0.0014 U	--	<0.0013 U
Chlorobenzene	mg/kg	0.1358	761	--	--	--	<150.000 U	<0.0017 UJ	<0.00049 U	<0.00048 U	<0.00076 U	<0.00093 UJ	<0.00069 UJ	<0.00048 U	<0.00061 U	<0.00052 UJ	--	<0.00068 UJ	<0.0012 UJ	--	<0.0011 U
Chloroethane	mg/kg	0.2266	2,120	--	--	--	<150.000 U	<0.0028 UJ	<0.00080 U	<0.00079 U	<0.0013 U	<0.0015 U	<0.0011 U	<0.00079 U	<0.0010 U	<0.00086 U	--	<0.0011 U	<0.0020 U	--	<0.0018 U
Chloroform	mg/kg	0.0033	1.98	--	--	--	<150.000 U	<0.00092 UJ	<0.00026 U	<0.00026 U	<0.00041 U	<0.0005 U	*0.0069 J*	<0.00026 U	<0.00033 U	<0.00028 U	--	<0.00036 U	<0.00067 U	--	<0.00059 U
Chloromethane	mg/kg	0.0155	669	--	--	--	<150.000 U	<0.0024 UJ	<0.00070 U	<0.00068 U	<0.0011 U	<0.0013 U	<0.00099 U	<0.00068 U	0.0029 J	<0.00074 U	--	<0.00097 U	<0.0018 U	--	<0.0016 U
cis-1,2-Dichloroethene	mg/kg	0.0412	2,340	--	--	--	<150.000 U	<0.0018 UJ	<0.00051 U	<0.00050 U	<0.00079 U	<0.00097 U	<0.00072 U	<0.00050 U	<0.00063 U	<0.00054 U	--	<0.00070 U	<0.0013 U	--	<0.0011 U
cis-1,3-Dichloropropene	mg/kg	NS	1,210	--	--	--	<150.000 U	<0.0041 UJ	<0.0012 U	<0.0011 U	<0.0018 U	<0.0022 UJ	<0.0017 UJ	<0.0011 U	<0.0015 U	<0.0012 UJ	--	<0.0016 UJ	<0.0030 UJ	--	<0.0026 U
Cyclohexane	mg/kg	NS	117	--	--	--	<150.000 U	0.0022 J	<0.00036 U	<0.00036 U	0.00079 J	<0.00069 U	0.0026 J	<0.00036 U	0.0068	<0.00039 U	--	0.0025 J	0.017	--	<0.00081 U
Dibromochloromethane	mg/kg	0.032	38.9	--	--	--	<150.000 U	<0.0018 UJ	<0.00052 U	<0.00051 U	<0.0008 U	<0.00099 UJ	<0.00073 UJ	<0.00051 U	<0.00064 U	<0.00055 UJ	--	<0.00072 UJ	<0.0013 UJ	--	<0.0012 U
Dichloromethane	mg/kg	0.0026	1,150	--	--	--	<150.000 U	<0.0024 UJ	<0.00068 U	<0.00067 U	<0.0011 U	<0.0013 U	<0.00096 U	<0.00067 U	<0.00085 U	<0.00072 U	--	<0.00094 U	<0.0017 U	--	<0.0015 U
Ethylbenzene	mg/kg	1.57	35.4	--	--	--	***66.000 VS***	<0.0021 UJ	<0.00061 U	<0.00060 U	<0.00094 U	<0.0012 UJ	<0.00086 UJ	<0.00060 U	<0.00076 U	<0.00065 UJ	--	<0.00084 UJ	<0.0015 UJ	--	<0.0014 U
Freon 113	mg/kg	NS	910	--	--	--	<150.000 U	<0.0014 UJ	<0.00041 U	<0.00040 U	<0.00063 U	<0.00078 U	<0.00058 U	<0.00040 U	<0.00051 U	<0.00043 U	--	<0.00056 U	<0.0010 U	--	<0.00091 U
Freon 12	mg/kg	3.0863	530	--	--	--	<150.000 U	<0.0016 UJ	<0.00047 U	<0.00046 U	<0.00073 U	<0.0009 U	<0.00067 U	<0.00046 U	<0.00059 U	<0.00050 U	--	<0.00065 U	<0.0012 U	--	<0.0011 U
Isopropylbenzene	mg/kg	NS	268	--	--	--	<150.000 U	<0.0019 UJ	<0.00053 U	<0.00052 U	<0.00083 UJ	<0.001 UJ	0.00094 J	<0.00052 U	<0.00067 U	<0.00057 UJ	--	<0.00074 UJ	<0.0014 UJ	--	<0.0012 U
Methyl acetate	mg/kg	NS	29,000	--	--	--	<150.000 U	<0.0087 UJ	<0.0025 U	<0.0024 U	<0.0039 U	<0.0048 U	<0.0035 U	<0.0024 U	<0.0031 U	<0.0026 U	--	<0.0034 U	<0.0063 U	--	<0.0056 U
Methylcyclohexane	mg/kg	NS	67.6	--	--	--	<150.000 U	0.0023 J	<0.00038 U	<0.00037 U	0.00094 J	<0.00073 U	0.0028 J	<0.00037 U	0.0083	<0.00040 U	--	0.0007 J	0.017	--	<0.00085 U
Methyl-tert-butyl-ether	mg/kg	0.027	282	--	--	--	<150.000 U	<0.0011 UJ	<0.00031 U	<0.00030 U	<0.00048 U	<0.00059 U	<0.00044 U	<0.00030 U	<0.00038 U	<0.00033 U	--	<0.00043 U	<0.00078 U	--	<0.00069 U
Styrene	mg/kg	0.22	867	--	--	--	*36.000 VS*	<0.0020 UJ	<0.00057 U	<0.00056 U	<0.00089 U	<0.0011 UJ	<0.00081 UJ	<0.00056 U	0.012	<0.00061 UJ	--	<0.00079 UJ	<0.0014 UJ	--	<0.0013 U
Tetrachloroethene	mg/kg	0.0045	145	--	--	--	<150.000 U	*0.0066 J*	0.0012 J	0.00081 J	0.0013 J	0.0021 J	0.0035 J	<0.00052 U	<0.00067 U	<0.00057 UJ	--	<0.00074 UJ	*0.0082 J*	--	0.0021 J
Toluene	mg/kg	1.1072	818	--	--	--	***1,600 VS***	0.007 J	<0.00062 U	<0.00061 U	0.002 J	<0.0012 UJ	0.0018 J	<0.00061 U	0.0053 J	<0.00066 UJ	--	0.0017 J	0.035 J	--	<0.0014 U
trans-1,2-Dichloroethene	mg/kg	0.0626	1,850	--	--	--	<150.000 U	<0.0012 UJ	<0.00035 U	<0.00035 U	<0.00055 U	<0.00067 U	<0.0005 U	<0.00035 U	<0.00044 U	<0.00038 U	--	<0.00049 U	<0.00090 U	--	<0.00079 U
trans-1,3-Dichloropropene	mg/kg	NS	1,510	--	--	--	<150.000 U	<0.0021 UJ	<0.00061 U	<0.00060 U	<0.00094 U	<0.0012 UJ	<0.00086 UJ	<0.00060 U	<0.00076 U	<0.00065 UJ	--	<0.00084 UJ	<0.0015 UJ	--	<0.0014 U
Trichloroethene	mg/kg	0.0036	8.41	--	--	--	<150.000 U	<0.00073 UJ	<0.00021 U	<0.00020 U	<0.00032 U	<0.0004 U	<0.00029 U	<0.00020 U	<0.00026 U	<0.00022 U	--	<0.00029 U	<0.00053 U	--	<0.00047 U
Trichlorofluoromethane	mg/kg	4.4775	1,230	--	--	--	<150.000 U	<0.0033 UJ	<0.00094 U	<0.00092 U	<0.0015 U	<0.0018 U	<0.0013 U	<0.00092 U	<0.0012 U	<0.0010 U	--	<0.0013 U	<0.0024 U	--	<0.0021 U
Vinyl Chloride	mg/kg	0.0001	2.08	--	--	--	<150.000 U	<0.0042 UJ	<0.0012 U	<0.0012 U	<0.0019 U	<0.0023 U	<0.0017 U	<0.0012 U	<0.0015 U	<0.0013 U	--	<0.0017 U	<0.0031 U	--	<0.0027 U
Xylenes, Total	mg/kg	3.96	260	--	--	--	***2,400 VS***	<0.0019 UJ	<0.00055 U	<0.00054 U	0.0015 J	<0.0011 UJ	0.0036 J	<0.00054 U	0.0042 J	<0.00059 UJ	--	<0.00077 UJ	0.011 J	--	<0.0012 U
PCBs																					
PCB, Total [4]	mg/kg	0.0094	0.967	--	--	--	--	*0.350 J*	<0.0032 U	<0.0031 U	*0.024 J*	<0.0036 U	<0.0036 UJ	--	--	--	--	--	*0.075*	--	<0.0034 U
PCB-1016	mg/kg	NS	28	--	--	--	<10.000 U	<0.014 UJ	<0.0061 U	<0.0060 U	<0.0062 U	<0.0069 U	<0.0069 UJ	--	--	--	--	--	<0.0077 U	--	<0.0064 U
PCB-1221	mg/kg	NS	0.883	--	--	--	<21.000 U	<0.042 U	<0.019 U	<0.018 U	<0.019 U	<0.021 U	<0.021 U	--	--	--	--	--	<0.024 U	--	<0.020 U
PCB-1232	mg/kg	NS	0.792	--	--	--	<10.000 U	<0.014 U	<0.0061 U	<0.0060 U	<0.0063 U	<0.007 U	<0.0069 U	--	--	--	--	--	<0.0078 U	--	<0.0065 U
PCB-1242	mg/kg	NS	0.972	--	--	--	<10.000 U	<0.024 U	<0.011 U	<0.011 U	<0.011 U	<0.012 U	<0.012 U	--	--	--	--	--	<0.014 U	--	<0.012 U
PCB-1248	mg/kg	NS	0.975	--	--	--	<10.000 U	<0.015 U	<0.0067 U	<0.0066 U	<0.0069 U	<0.0076 U	<0.0076 U	--	--	--	--	--	<0.0085 U	--	<0.0071 U
PCB-1254	mg/kg	NS	0.988	--	--	--	<10.000 U	<0.015 U	<0.0066 U	<0.0065 U	<0.0068 U	<0.0075 U	<0.0074 U	--	--	--	--	--	<0.0084 U	--	<0.0070 U
PCB-1260	mg/kg	NS	1	--	--	--	<10.000 U	0.350 J	<0.0032 U	<0.0031 U	0.024 J	<0.0036 U	<0.0036 U	--	--	--	--	--	0.075	--	<0.0034 U

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	MCAT-A-014	MCAT-A-022	MCAT-A-025	MCAT-A-SLO1	MW01			MW02			MW03		MW04			MW05		
Sample / Duplicate:				MCAT-A-014	MCAT-A-022	MCAT-A-025	MCAT-A-SLO1	MW01	MW01	MW01 DUP	MW02	MW02	MW02 DUP	MW03	MW03	MW04	MW04	MW04	MW05	MW05	MW05
Field Sample ID:				MCS-MCAT-A-014-E1QZ6-SO	MCS-MCAT-A-022-E1QZ7	MCS-MCAT-A-025-E1R00	MCS-MCAT-A-SLO1-E1QZ8	MW01-SS-012609	MW01-0304-012609	MWDUP005-012609	MW02-SS-011909	MW02-0405-011909	MWDUP003-011909	MW03-SS-011209	MW03-0607-011209	MW04-SS-121608	MSS-MW04-0406-121608	MW04-0406-121608	MW05-SS-012609	MSS-MW05-4555-012309	MW05-0455-012609
Sample Depth (feet):				0	0	0	0	0 - 1	3 - 4	3 - 4	0 - 0.5	4 - 5	4 - 5	2 - 2.5	6 - 7	0 - 0.5	4 - 6	4 - 6	0 - 0.5	4 - 5.5	4.5 - 5.5
Sample Date:				12/17/2001	12/17/2001	12/17/2001	12/17/2001	01/26/2009	01/26/2009	01/26/2009	01/19/2009	01/19/2009	01/19/2009	01/12/2009	01/12/2009	12/16/2008	12/16/2008	12/16/2008	01/26/2009	01/23/2009	01/26/2009
PAHs																					
2-Methylnaphthalene	mg/kg	NS	3,010	**11,000**	**36,000**	**5,800 J**	**28,000**	0.310 J	<0.023 U	<0.022 U	0.740 J	0.240 J	0.330 J	0.200 J	0.220 J	1.600	--	0.390	0.420 J	--	0.100 J
Acenaphthene	mg/kg	NS	45,200	750.000 J	1,300 J	470.000 J	1,100 J	0.510 J	<0.012 U	<0.012 U	4.700 J	0.150 J	0.200 J	0.620	0.740	1.800	--	0.340 J	0.170 J	--	<0.013 U
Acenaphthylene	mg/kg	NS	NS	5,100	12,000 J	3,000 J	9,800 J	0.980 J	<0.020 U	<0.020 U	2.500 J	0.130 J	0.120 J	0.074 J	<0.019 U	0.630 J	--	0.110 J	0.082 J	--	<0.021 U
Anthracene	mg/kg	196.9492	100,000	*4,500*	*9,700 J*	*1,800 J*	*10,000 J*	1.100 J	0.031 J	<0.020 U	12.000 J	0.350 J	0.570 J	2.500	1.400	1.800	--	0.140 J	0.290 J	--	<0.021 U
Benzo(a)anthracene	mg/kg	NS	20.8	**4,400**	**11,000 J**	**1,500 J**	**7,700 J**	4.600 J	<0.024 U	<0.023 U	**46.000 J**	1.800 J	2.300 J	5.600	2.200	8.400	--	0.250 J	1.800	--	0.072 J
Benzo(a)pyrene	mg/kg	0.47	2.11	***2,800***	***7,500 J***	***910.000 J***	***5,100 J***	***4,100***	<0.024 U	<0.023 U	***40.000 J***	*1,800 J*	*1,900 J*	***4,400***	*2,000*	***7,700***	--	0.230 J	***2,300***	--	0.071 J
Benzo(b)fluoranthene	mg/kg	0.4793	21.1	***2,500***	***5,800 J***	***830.000 J***	***4,000 J***	*9,000 JK*	<0.031 U	<0.031 U	***67.000 JK***	*3,200 JK*	*3,400 JK*	*7,600 JK*	*3,000 JK*	*13,000 JK*	--	0.440 JK	*4,600 JK*	--	0.150 JK
Benzo(g,h,i)perylene	mg/kg	NS	NS	520.000 J	1,400 J	540.000 J	1,400 J	2.300	<0.019 U	<0.019 U	28.000 J	1.300 J	1.200 J	2.000	1.200	6.200	--	0.230 J	1.600	--	0.062 J
Benzo(k)fluoranthene	mg/kg	NS	211	**1,400**	**7,000 J**	**860.000 J**	**4,700 J**	<0.053 UKJ	<0.048 U	<0.047 U	<1.200 UKJ	<0.054 UKJ	<0.054 UKJ	<0.049 UKJ	<0.045 UKJ	<0.200 UKJ	--	<0.048 UKJ	<0.061 UKJ	--	<0.051 UKJ
Chrysene	mg/kg	0.1446	2,110	***4,300***	***12,000 J***	*1,500 J*	***8,300 J***	*5,900*	<0.032 U	<0.032 U	*43.000 J*	*1,900 J*	*2,300 J*	*5,300*	*2,000*	*8,800*	--	*0,300 J*	*2,300*	--	0.084 J
Dibenz(a,h)anthracene	mg/kg	NS	2.11	**100.000 J**	<2,700 U	<1,300 U	<3,200 U	1.100 J	<0.023 U	<0.022 U	**9.700 J**	0.480 J	0.450 J	0.670	0.360 J	1.900	--	0.056 J	0.430 J	--	0.120 J
Fluoranthene	mg/kg	88.8778	30,100	*9,600 J*	*25,000 J*	*3,200 J*	*17,000 J*	6.700	<0.043 U	<0.042 U	*120.000 J*	2.800 J	5.100 J	8.300	5.200	16.000	--	0.380 J	2.200	--	0.083 J
Fluorene	mg/kg	14.8299	30,100	*880.000 J*	*17,000 J*	*2,700 J*	*14,000 J*	0.600 J	<0.021 U	<0.021 U	11.000 J	0.240 J	0.350 J	0.830	0.730	0.880 J	--	0.120 J	0.170 J	--	<0.023 U
Indeno(1,2,3-cd)pyrene	mg/kg	NS	21.1	**700.000 J**	**2,800 J**	**680.000 J**	**1,900 J**	2.300 J	<0.026 U	<0.026 U	**23.000 J**	1.100 J	1.000 J	1.800	0.970	5.100	--	0.170 J	1.300	--	0.044 J
Naphthalene	mg/kg	0.6582	24.1	***33,000***	***120,000***	***22,000***	***94000.010***	0.400 J	<0.037 U	<0.036 U	*4.100 J*	0.250 J	0.290 J	0.350 J	0.240 J	0.220 J	--	0.057 J	0.430 J	--	<0.039 U
Phenanthrene	mg/kg	NS	NS	20,000	45,000	6,600	32,000	2.600	<0.020 U	<0.020 U	81.000 J	1.700 J	3.300 J	7.600	6.800	5.600	--	0.270 J	1.700	--	0.046 J
Pyrene	mg/kg	54.5455	22,600	*6,800*	*19,000 J*	*2,500 J*	*12,000 J*	5.800	<0.014 U	<0.014 U	*88.000 J*	2.100 J	3.600 J	8.700	4.800	13.000	--	0.360 J	1.800	--	0.075 J
SVOCs																					
1,2,4-Trichlorobenzene	mg/kg	0.408	113	--	--	--	<150.000 U	<0.0023 UJ	<0.00066 U	<0.00065 U	<0.001 UJB	<0.0013 UJB	0.0075 JB	<0.00065 U	<0.00082 U	<0.00070 UJ	--	<0.00092 UJ	<0.0017 UJ	--	<0.0015 U
2,2-Oxybis(1-chloropropane)	mg/kg	NS	1,020	<1,000 U	<2,700 U	<1,300 U	<3,200 U	<0.031 U	<0.052 U	<0.027 U	<0.560 UJ	<0.031 U	<0.031 U	<0.028 U	<0.026 U	<0.110 U	--	<0.027 U	<0.035 U	--	<0.029 U
2,4-Dinitrotoluene	mg/kg	0.0001	7.37	<1,000 U	<2,700 U	<1,300 U	<3,200 U	<0.088 UJ	<0.078 U	<0.077 U	<1.600 UJ	<0.090 U	<0.089 U	<0.080 U	<0.074 U	<0.320 U	--	<0.079 U	<0.100 U	--	<0.083 U
2,6-Dinitrotoluene	mg/kg	0.0001	1.54	<1,000 U	<2,700 U	<1,300 U	<3,200 U	<0.037 UJ	<0.033 U	<0.033 U	<0.690 UJ	<0.038 U	<0.038 U	<0.034 U	<0.032 U	<0.140 U	--	<0.033 U	<0.043 U	--	<0.035 U
2-Chloronaphthalene	mg/kg	NS	60,300	<1,000 U	<2,700 U	<1,300 U	<3,200 U	<0.013 UJ	<0.012 U	<0.012 U	<0.240 UJ	<0.014 U	<0.013 U	<0.012 U	<0.011 U	<0.049 U	--	<0.012 U	<0.015 U	--	<0.013 U
2-Nitroaniline	mg/kg	NS	8,010	<2,500 U	<6,700 U	<3,200 U	<7,900 U	<0.067 UJ	<0.059 U	<0.058 U	<1.200 UJ	<0.068 U	<0.067 U	<0.061 U	<0.056 U	<0.240 U	--	<0.060 U	<0.076 U	--	<0.063 U
3,3-Dichlorobenzidine	mg/kg	NS	5.11	<1,000 U	<2,700 U	<1,300 U	<3,200 U	<0.480 U	<0.200 U	<0.110 U	<2.800 UJ	<0.120 U	<0.120 U	<0.110 U	<0.100 U	<0.440 U	--	<0.110 U	<0.140 U	--	<0.110 U
3-Nitroaniline	mg/kg	NS	NS	<2,500 U	<6,700 U	<3,200 U	<7,900 U	<0.097 UJ	<0.087 U	<0.085 U	<1.800 UJ	<0.099 U	<0.099 U	<0.089 U	<0.082 U	<0.360 U	--	<0.087 U	<0.110 U	--	<0.092 U
4-Bromodiphenyl ether	mg/kg	NS	26.9	<1,000 U	<2,700 U	<1,300 U	<3,200 U	<0.025 UJ	<0.023 U	<0.022 U	<0.470 UJ	<0.026 U	<0.026 U	<0.023 U	<0.021 U	<0.093 U	--	<0.023 U	<0.029 U	--	<0.024 U
4-Chloroaniline	mg/kg	NS	11.5	<1,000 U	<2,700 U	<1,300 U	<3,200 U	<0.440 U	<0.190 U	<0.096 U	<2.500 UJ	<0.110 U	<0.110 U	<0.100 U	<0.092 U	<0.400 U	--	<0.098 U	<0.120 U	--	<0.100 U
4-Chlorodiphenyl ether	mg/kg	NS	NS	<1,000 U	<2,700 U	<1,300 U	<3,200 U	<0.028 UJ	<0.025 U	<0.025 U	<0.510 UJ	<0.029 U	<0.028 U	<0.026 U	<0.024 U	<0.100 U	--	<0.025 U	<0.032 U	--	<0.027 U
4-Nitroaniline	mg/kg	NS	115	<2,500 U	<6,700 U	<3,200 U	<7,900 U	<0.097 UJ	<0.086 U	<0.085 U	<1.800 UJ	<0.099 U	<0.098 U	<0.088 U	<0.082 U	<0.350 U	--	<0.087 U	<0.110 U	--	<0.092 U
Acetophenone	mg/kg	NS	2,520	<1,000 U	<2,700 U	<1,300 U	<3,200 U	<0.027 UJ	<0.024 U	<0.023 U	<0.490 UJ	<0.027 U	<0.027 U	<0.024 U	<0.023 U	<0.098 U	--	<0.024 U	<0.030 U	--	<0.025 U
Benzaldehyde	mg/kg	NS	818	<1,000 UJ	<2,700 UJ	<1,300 UJ	<3,200 UJ	<0.089 UJ	<0.080 U	<0.078 U	<1.600 UJ	<0.091 U	<0.090 U	<0.082 U	<0.076 U	<0.330 U	--	<0.080 U	<0.100 U	--	<0.085 U
Biphenyl	mg/kg	NS	288	**1,800**	**4,700 J**	**770.000 J**	**3,900 J**	<0.067 UJ	<0.059 U	<0.058 U	<1.200 UJ	<0.068 U	<0.067 U	0.066 J	0.073 J	<0.240 U	--	<0.060 U	0.087 J	--	<0.063 U
Bis(2-Chloroethoxy)methane	mg/kg	NS	2,460	<1,000 U	<2,700 U	<1,300 U	<3,200 U	<0.031 UJ	<0.027 U	<0.027 U	<0.560 UJ	<0.031 U	<0.031 U	<0.028 U	<0.026 U	<0.110 U	--	<0.027 U	<0.035 U	--	<0.029 U
Bis(2-Chloroethyl)ether	mg/kg	NS	1.29	<1,000 U	<2,700 U	<1,300 U	<3,200 U	<0.022 UJ	<0.020 U	<0.019 U	<0.410 UJ	<0.023 U	<0.022 U	<0.020 U	<0.019 U	<0.081 U	--	<0.020 U	<0.025 U	--	<0.021 U
Bis(2-Ethylhexyl)phthalate	mg/kg	2.88	164	<1,000 U	<2,700 U	<1,300 U	<3,200 U	0.600 JB	<0.100 UJB	<0.054 UJB	<1.100 UJ	<0.063 UJB	<0.062 UJB	<0.056 U	0.200 J	<0.220 U	--	<0.055 U	<0.070 UJB	--	<0.058 UJB
Butyl benzyl phthalate	mg/kg	NS	1,210	<1,000 U	<2,700 U	<1,300 U	<3,200 U	0.390 J	<0.051 U	<0.050 U	<1.100 UJ	0.100 J	0.120 J	0.360 J	<0.048 U	<0.210 U	--	<0.051 U	<0.065 U	--	<0.054 U
Caprolactam	mg/kg	NS	100,000	<1,000 U	<2,700 U	<1,300 U	<3,200 U	<0.140 UJ	<0.130 U	<0.120 U	<2.600 UJ	<0.140 U	<0.140 U	<0.130 U	<0.120 U	<0.520 U	--	<0.130 U	<0.160 U	--	<0.130 U
Carbazole	mg/kg	NS	NS	2,900	6,400 J	1,000 J	4,800 J	0.320 J	<0.043 U	<0.042 U	5.500 J	0.160 J	0.190 J	0.420	0.200 J	0.780 J	--	0.120 J	0.140 J	--	<0.046 U
Dibenzofuran	mg/kg	NS	1,040	**5,000**	**12,000 J**	**1,900 J**	**11,000 J**	0.180 J	<0.024 U	<0.023 U	5.900 J	0.140 J	0.260 J	0.460	0.330 J	1.700	--	0.350 J	0.280 J	--	<0.025 U
Diethyl phthalate	mg/kg	NS	100,000	<1,000 U	<2,700 U	<1,300 U	<3,200 U	<0.035 UJ	<0.031 U	<0.030 U	<0.800 UJ	<0.035 U	<0.035 U	<0.032 U	<0.029 U	<0.130 U	--	<0.031 U	<0.040 U	--	<0.033 U
Dimethyl phthalate	mg/kg	NS	7,390	<1,000 U	<2,700 U	<1,300 U	<3,200 U	<0.031 UJ	<0.027 U	<0.027 U	<0.700 UJ	<0.031 U	<0.031 U	<0.028 U	<0.026 U	<0.110 U	--	<0.027 U	<0.035 U	--	<0.029 U
Di-n-butyl phthalate	mg/kg	5.0333	82,100	<1,000 U	<2,700 U	<1,300 U	<3,200 U	<0.039 UJ	<0.034 U	<0.034 U	<0.890 UJ	<0.040 U	<0.039 U	0.100 J	<0.033 U	0.320 J	--	<0.035 U	<0.044 U	--	<0.037 U
Di-n-octyl phthalate	mg/kg	NS	8,210	<1,000 U	<2,700 U	<1,300 U	<3,200 U	<0.019 UJ	<0.017 U	<0.017 U	<0.440 UJ	<0.020 U	<0.019 U	<0.018 U	<0.016 U	<0.070 U	--	<0.017 U	<0.022 U	--	<0.018 U
Hexachlorobenzene	mg/kg	0.0252	1.15	<1,000 U	<2,700 U	<1,300 U	<3,200 U	<0.039 UJ	<0.034 U	<0.034 U	<0.710 UJ	<0.040 U	<0.039 U	<0.035 U	<0.033 U	<0.140 U	--	<0.035 U	<0.044 U	--	<0.037 U
Hexachlorobutadiene	mg/kg	NS	7.19	<1,000 U	<2,700 U	<1,300 U	<3,200 U	<0.0017 UJ	<0.00050 U	<0.00049 U	0.0016 J	0.001 J	0.006 J	<0.00049 U	<0.00062 U	<0.00053 UJ	--	<0.00069 UJ	<0.0013 UJ	--	<0.0011 U
Hexachlorocyclopentadiene	mg/kg	NS	10.8	<1,000 U	<2,700 U	<1,300 U	<3,200 U	<0.067 UJ	<0.059 U	<0.058 U	<1.500 UJ	<0.068 U	<0.067 U	<0.061 U	<0.056 U	<0.240 U	--	<0.060 U	<0.076 U	--	<0.063 U
Hexachloroethane	mg/kg	NS	11.1	<1,000 U	<2,700 U	<1,300 U	<3,200 U	<0.028 UJ	<0.025 U	<0.025 U	<0.520 UJ	<0.029 U	<0.029 U	<0.026 U	<0.024 U	<0.100 U	--	<0.025 U	<0.032 U	--	<0.027 U
Isophorone	mg/kg	NS	2,420	<1,000 U	<2,700 U	<1,300 U	<3,200 U	<0.023 UJ	<0.020 U	<0.020 U	<0.520 UJ	<0.023 U	<0.023 U	<0.021 U	<0.019 U	<0.083 U	--	<0.020 U	<0.026 U	--	<0.021 U
Nitrobenzene	mg/kg	NS	32.4	<1,000 U	<2,700 U	<1,300 U	<3,200 U	<0.029 UJ	<0.026 U	<0.026 U	<0.540 UJ	<0.030 U	<0.030 U	<0.027 U	<0.025 U	<0.110 U	--	<0.026 U	<0.033 U	--	<0.028 U
N-nitrosodi-n-propylamine	mg/kg	NS	0.328	<1,000 U	<2,700 U	<1,300 U	<3,200 U	<0.041 UJ	<0.037 U	<0.036 U	<0.760 UJ	<0.042 U	<0.042 U	<0.038 U	<0.035 U	<0.150 U	--	<0.037 U	<0.047 U	--	<0.039 U
N-Nitrosodiphenylamine	mg/kg	0.0764	469	<1,000 U	<2,700 U	<1,300 U	<3,200 U	<0.110 U	<0.048 U	<0.025 U	<0.640 UJ	<0.029 UJ	0.028 UR	<0.026 U	<0.024 U	<0.100 U	--	<0.025 U	<0.032 U	--	<0.027 U
Pyridine	mg/kg	0.0069	1,170	--	--	--	--	<0.690 U	<0.150 U	<0.150 U	<4.000 UJ	<0.180 U	<0.180 U	<0.160 U	<0.150 U	<0.630 U	--	<0.160 U	<0.200 U	--	<0.160 U

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	MCAT-A-014	MCAT-A-022	MCAT-A-025	MCAT-A-SLO1	MW01			MW02			MW03		MW04			MW05		
Sample / Duplicate:				MCAT-A-014	MCAT-A-022	MCAT-A-025	MCAT-A-SLO1	MW01	MW01	MW01 DUP	MW02	MW02	MW02 DUP	MW03	MW03	MW04	MW04	MW04	MW05	MW05	MW05
Field Sample ID:				MCS-MCAT-A-014-E1QZ6-SO	MCS-MCAT-A-022-E1QZ7	MCS-MCAT-A-025-E1R00	MCS-MCAT-A-SLO1-E1QZ8	MW01-SS-012609	MW01-0304-012609	MWDUP005-012609	MW02-SS-011909	MW02-0405-011909	MWDUP003-011909	MW03-SS-011209	MW03-0607-011209	MW04-SS-121608	MSS-MW04-0406-121608	MW04-0406-121608	MW05-SS-012609	MSS-MW05-4555-012309	MW05-0455-012609
Sample Depth (feet):				0	0	0	0	0 - 1	3 - 4	3 - 4	0 - 0.5	4 - 5	4 - 5	2 - 2.5	6 - 7	0 - 0.5	4 - 6	4 - 6	0 - 0.5	4 - 5.5	4.5 - 5.5
Sample Date:				12/17/2001	12/17/2001	12/17/2001	12/17/2001	01/26/2009	01/26/2009	01/26/2009	01/19/2009	01/19/2009	01/19/2009	01/12/2009	01/12/2009	12/16/2008	12/16/2008	12/16/2008	01/26/2009	01/23/2009	01/26/2009
Phenols																					
2,4,5-Trichlorophenol	mg/kg	NS	82,100	<2,500 U	<6,700 U	<3,200 U	<7,900 U	<0.013 UJ	<0.012 U	<0.012 U	<0.240 UJ	<0.014 U	<0.013 U	<0.012 U	<0.011 U	<0.049 U	--	<0.012 U	<0.015 U	--	<0.013 U
2,4,6-Trichlorophenol	mg/kg	NS	209	<1,000 U	<2,700 U	<1,300 U	<3,200 U	<0.013 UJ	<0.012 U	<0.012 U	<0.240 UJ	<0.014 U	<0.013 U	<0.012 U	<0.011 U	<0.049 U	--	<0.012 U	<0.015 U	--	<0.013 U
2,4-Dichlorophenol	mg/kg	NS	2,460	<1,000 U	<2,700 U	<1,300 U	<3,200 U	<0.013 UJ	<0.012 U	<0.012 U	<0.240 UJ	<0.014 U	<0.013 U	<0.012 U	<0.011 U	<0.049 U	--	<0.012 U	<0.015 U	--	<0.013 U
2,4-Dimethylphenol	mg/kg	NS	16,400	1,500	1,700 J	960.000 J	1,900 J	<0.088 UJ	<0.078 U	<0.077 U	<1.600 UJ	<0.090 U	0.200 J	<0.080 U	0.140 J	<0.320 U	--	<0.079 U	<0.100 U	--	<0.083 U
2,4-Dinitrophenol	mg/kg	NS	1,640	<2,500 U	<6,700 U	<3,200 U	<7,900 U	<0.440 UJ	<0.400 U	<0.390 U	<10.000 UJ	<0.450 U	<0.450 U	<0.410 U	<0.380 U	<1.600 U	--	<0.400 U	<0.510 U	--	<0.420 U
2-Chlorophenol	mg/kg	NS	5,840	<1,000 U	<2,700 U	<1,300 U	<3,200 U	<0.028 UJ	<0.025 U	<0.025 U	<0.510 UJ	<0.029 U	<0.028 U	<0.026 U	<0.024 U	<0.100 U	--	<0.025 U	<0.032 U	--	<0.027 U
2-Methylphenol	mg/kg	NS	41,000	1,000	840.000 J	550.000 J	1,200 J	0.021 J	<0.015 U	<0.015 U	<0.320 UJ	<0.018 U	0.035 J	<0.016 U	<0.015 U	<0.063 U	--	<0.016 U	<0.020 U	--	<0.016 U
2-Nitrophenol	mg/kg	NS	NS	<1,000 U	<2,700 U	<1,300 U	<3,200 U	<0.013 UJ	<0.012 U	<0.012 U	<0.310 UJ	<0.014 U	<0.013 U	<0.012 U	<0.011 U	<0.049 U	--	<0.012 U	<0.015 U	--	<0.013 U
4-Chloro-3-methylphenol	mg/kg	NS	82,100	<1,000 U	<2,700 U	<1,300 U	<3,200 U	<0.088 UJ	<0.078 U	<0.077 U	<1.600 UJ	<0.090 U	<0.089 U	<0.080 U	<0.074 U	<0.320 U	--	<0.079 U	<0.100 U	--	<0.083 U
4-Methylphenol	mg/kg	NS	82,100	2,000	850.000 J	1,100 J	2,000 J	0.053 J	<0.075 U	<0.039 U	<0.810 UJ	<0.045 U	0.091 J	<0.040 U	0.084 J	<0.160 U	--	<0.039 U	<0.050 U	--	<0.042 U
4-Nitrophenol	mg/kg	NS	NS	<2,500 U	<6,700 U	<3,200 U	<7,900 U	<0.130 UJ	<0.120 U	<0.110 U	<3.000 UJ	<0.130 U	<0.130 U	<0.120 U	<0.110 U	<0.470 U	--	<0.120 U	<0.150 U	--	<0.120 U
4,6-Dinitro-2-methylphenol	mg/kg	NS	65.7	<2,500 U	<6,700 U	<3,200 U	<7,900 U	<0.440 UJ	<0.390 U	<0.390 U	<10.000 UJ	<0.450 U	<0.450 U	<0.400 U	<0.370 U	<1.600 U	--	<0.390 U	<0.500 U	--	<0.420 U
Pentachlorophenol	mg/kg	0.0028	3.97	<2,500 U	<6,700 U	<3,200 U	<7,900 U	<0.440 UJ	<0.390 U	<0.390 U	<10.000 UJ	<0.450 U	<0.450 U	<0.400 U	<0.370 U	<1.600 U	--	<0.390 U	<0.500 U	--	<0.420 U
Phenol	mg/kg	2.2946	100,000	*830.000 J*	<2,700 U	*580.000 J*	*1,100 J*	0.039 J	<0.021 U	<0.021 U	<0.440 UJ	<0.025 U	0.051 J	<0.022 U	0.210 J	<0.088 U	--	<0.022 U	<0.027 U	--	<0.023 U
Metals																					
Aluminum, Total	mg/kg	600	100,000	--	--	--	--	*2,000*	*10,000*	*10,000*	*4,700*	*4,100*	*2,900*	*10,000 J*	*7,400 J*	*4,600*	--	*6,900*	*5,400*	--	*32,000*
Antimony, Total	mg/kg	0.542	467	--	--	--	--	*0.660 J-*	0.026 BJ-	0.022 BJ-	0.110 JB	0.450 J	0.500 J	0.099 JB	0.130 JB	0.081 JB	--	0.380 J	*0.790 J-*	--	0.064 BJ-
Arsenic, Total [1]	mg/kg	0.584	8.3	--	--	--	--	***8.700***	*3.600*	*3.100*	*3.900*	***13.000***	***8.500***	*3.100*	*4.700*	*3.000*	--	*8.300*	***9.100***	--	*2.900*
Barium, Total	mg/kg	164.8	100,000	--	--	--	--	67.000 J-	44.000	52.000	44.000 J+	100.000	78.000	89.000 J+	92.000	55.000 J+	--	93.000	110.000	--	*260.000*
Beryllium, Total	mg/kg	6.32	2,300	--	--	--	--	0.380	0.430	0.510	0.270	0.460	0.700	0.310	0.930	0.380	--	0.860	0.790	--	4.000
Cadmium, Total	mg/kg	0.752	985	--	--	--	--	*1.100*	0.620	0.670	0.710	0.320	0.490	0.580	0.670	0.510	--	*1.100*	*9.900*	--	*2.200*
Calcium, Total	mg/kg	NS	NS	--	--	--	--	38,000	90,000	89,000	120,000	11,000	13,000	96,000 J	81,000 J	140,000	--	34,000	27,000	--	150,000
Chromium, Hexavalent	mg/kg	NS	6.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium, Total [3]	mg/kg	360,000	NS	--	--	--	--	54.000 J-	16.000	21.000	12.000	8.500	6.500	13.000	15.000	14.000 J-	--	7.200	54.000	--	3.200
Chromium, Trivalent	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt, Total	mg/kg	3.6073	347	--	--	--	--	*5.200*	*7.300*	*8.300*	2.900	*6.500*	*5.000*	3.400	*4.700*	2.900	--	*4.800*	*5.900*	--	1.200
Copper, Total	mg/kg	91.6	46,700	--	--	--	--	64.000 J	16.000 J	18.000 J	17.000 J	32.000 J	31.000 J	18.000 J	23.000 J	18.000 J-	--	42.000	*96.000 J*	--	9.500 J
Iron, Total	mg/kg	NS	100,000	--	--	--	--	31,000	15,000	15,000	8,600	27,000	13,000	9,600 J	10,000 J	7,100	--	45,000	69,000	--	11,000
Lead, Total	mg/kg	27	800	--	--	--	--	*150.000 J*	7.200 J	7.300 J	*69.000 J*	*40.000*	*53.000*	***830.000 J***	*170.000 J*	*49.000 J-*	--	***1,200***	*160.000 J*	--	16.000 J
Magnesium, Total	mg/kg	NS	NS	--	--	--	--	21,000	42,000	42,000	48,000	3,300	5,100	40,000 J	34,000 J	55,000	--	13,000	14,000	--	63,000
Manganese, Total	mg/kg	39.1244	25,900	--	--	--	--	*400.000 J*	*410.000 J*	*430.000 J*	*300.000*	*500.000*	*350.000*	*310.000 J*	*310.000 J*	*310.000*	--	*430.000*	*560.000 J*	--	*1,100 J*
Mercury, Total	mg/kg	0.208	3.13	--	--	--	--	0.200	0.012 B	0.014 B	0.120	*0.370*	*0.630*	0.130 J+	0.041	0.050	--	0.120	0.120	--	0.026
Nickel, Total	mg/kg	13.0612	22,500	--	--	--	--	*54.000 J*	*17.000*	*19.000*	12.000 JL	12.000 JL	10.000 JL	10.000	*15.000*	13.000 J-	--	12.000	*30.000*	--	0.170 B
Potassium, Total	mg/kg	NS	NS	--	--	--	--	280 B	2,500	2,400	810	610	470	3,400	1,500	950	--	730	1,400 B	--	2,200
Selenium, Total	mg/kg	0.52	5,840	--	--	--	--	*1.600*	0.480 B	0.360 B	0.490 B	*1.900*	*1.400*	0.380 B	*0.590*	*0.600 B*	--	*1.200*	*2.000*	--	*3.900*
Silver, Total	mg/kg	0.8491	5,840	--	--	--	--	0.078 B	0.078 B	0.083 B	0.099 B	0.036 B	0.058 B	0.069 B	0.110	0.070 BJ-	--	0.072 B	0.260	--	0.260
Sodium, Total	mg/kg	NS	NS	--	--	--	--	<79 UB	<70 UB	<69 UB	250 B	240 B	180 B	1,100	760	280 B	--	190 B	<450 U	--	780 B
Thallium, Total	mg/kg	0.284	11.7	--	--	--	--	0.170	0.210	0.210	0.120	0.150	0.220	0.064 B	0.110	0.096 B	--	*0.370*	0.150	--	0.050 B
Vanadium, Total	mg/kg	60	5,840	--	--	--	--	7.400	23.000	27.000	11.000	15.000	9.800	20.000 J+	19.000	12.000	--	13.000	11.000	--	7.300
Zinc, Total	mg/kg	NS	100,000	--	--	--	--	290.000 J	54.000 J	50.000 J	72.000 J+	100.000	180.000	120.000	120.000	62.000 J-	--	80.000	340.000 J	--	50.000 J
Inorganic - Cyanide																					
Cyanide, Amenable	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Reactive	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Total	mg/kg	4.04	195	--	--	--	--	*18 J-*	1.8	3	0.23 B	0.9	2.1	0.58 JB	0.5 JB	*9.5*	--	0.39 B	1.6	--	*16 q*
Other																					
Sulfide, Reactive	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organic Matter	%	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	26.1	--	--	3.5	--
Percent Moisture	%	NS	NS	--	--	--	--	25	16	14	18	27	26	18	11	18	23.6	16	34	31.7	21

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	MW06		MW07			MW08			MW09			MW10		MW11		MW12	
Sample / Duplicate:				MW06	MW06	MW07	MW07 DUP	MW07	MW08	MW08	MW08	MW09	MW09	MW09	MW10	MW10	MW11	MW11	MW12	MW12
Field Sample ID:				MW06-SS-121508	MW06-0708-121508	MW07-SS-121808	MWDUP001-121808	MW07-0506-121808	MW08-SS-121608	MSS-MW08-0675-121608	MW08-0675-121608	MW09-SS-010609	MSS-MW09-0608-010609	MW09-0608-010609	MW10-SS-121708	MW10-0607-121708	MW11-SS-010809	MW11-0405-010809	MW12-SS-010609	MW12-0455-010609
Sample Depth (feet):				0 - 0.5	7 - 8	0 - 1	0 - 1	5 - 6	0 - 0.5	6 - 7.5	6 - 7.5	0 - 0.5	6 - 8	6 - 8	0 - 0.5	6 - 7	0 - 0.5	4 - 5	0 - 0.5	4 - 5.5
Sample Date:				12/15/2008	12/15/2008	12/18/2008	12/18/2008	12/18/2008	12/16/2008	12/16/2008	12/16/2008	01/06/2009	01/06/2009	01/06/2009	12/17/2008	12/17/2008	01/08/2009	01/08/2009	01/06/2009	01/06/2009
VOCs																				
1,1,1-Trichloroethane	mg/kg	0.1402	640	<0.00060 U	<0.00060 U	<0.0010 U	<0.0013 U	<0.00082 U	<0.00093 U	--	<0.00069 U	<0.00064 U	--	<0.00056 U	<0.00080 U	<0.00092 U	<0.0018 U	<0.00050 U	<0.00071 U	<0.00057 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0002	3.6	<0.00070 UJ	<0.00070 U	<0.0012 UJ	<0.0015 UJ	<0.00096 UJ	<0.0011 UJ	--	<0.00081 UJ	<0.00075 UJ	--	<0.00066 UJ	<0.00094 UJ	<0.0011 UJ	<0.0021 UJ	<0.00059 U	<0.00084 UJ	<0.00067 UJ
1,1,2-Trichloroethane	mg/kg	0.0032	7.01	<0.0010 UJ	<0.0010 U	<0.0017 UJ	<0.0021 UJ	<0.0014 UJ	<0.0016 UJ	--	<0.0012 UJ	<0.0011 UJ	--	<0.00095 UJ	<0.0014 UJ	<0.0016 UJ	<0.0030 UJ	<0.00084 U	<0.0012 UJ	<0.00096 U
1,1-Dichloroethane	mg/kg	0.4834	22.2	<0.00024 U	<0.00024 U	<0.00041 U	<0.00051 U	<0.00033 U	<0.00037 U	--	<0.00028 U	<0.00026 U	--	<0.00023 U	<0.00032 U	<0.00037 U	<0.00072 U	<0.00020 U	<0.00029 U	<0.00023 U
1,1-Dichloroethene	mg/kg	0.005	1,190	0.0037 J	<0.00068 U	<0.0012 U	<0.0014 U	<0.00093 U	<0.0011 U	--	<0.00078 U	<0.00073 U	--	*0.0058*	<0.00091 U	<0.0010 U	<0.0020 U	<0.00057 U	*0.0052 J*	*0.0063*
1,2-Dibromo-3-chloropropane	mg/kg	0.0002	0.092	<0.00069 UJ	<0.00069 U	<0.0012 UJ	<0.0015 UJ	<0.00094 UJ	<0.0011 UJ	--	<0.00079 UJ	<0.00074 UJ	--	<0.00065 UJ	<0.00092 UJ	<0.0011 UJ	<0.0021 UJ	<0.00058 U	<0.00082 UJ	<0.00066 UJ
1,2-Dibromoethane	mg/kg	0.0000282	0.221	<0.00060 UJ	<0.00060 U	<0.0010 UJ	<0.0013 UJ	<0.00082 UJ	<0.00093 UJ	--	<0.00069 UJ	<0.00064 UJ	--	<0.00056 UJ	<0.00080 UJ	<0.00092 UJ	<0.0018 UJ	<0.00050 U	<0.00071 UJ	<0.00057 U
1,2-Dichlorobenzene	mg/kg	1.168	376	<0.00052 UJ	<0.00052 U	<0.00089 UJ	<0.0011 UJ	<0.00071 UJ	<0.00080 UJ	--	<0.00060 UJ	<0.00055 UJ	--	<0.00049 UJ	<0.00069 UJ	<0.00080 UJ	<0.0015 UJ	<0.00043 U	<0.00062 UJ	<0.00049 UJ
1,2-Dichloroethane	mg/kg	0.0028	2.87	<0.00080 U	<0.00080 U	<0.0014 U	<0.0017 U	0.0016 J	<0.0012 U	--	<0.00093 U	<0.00086 U	--	<0.00076 U	<0.0011 U	<0.0012 U	<0.0024 U	<0.00067 U	<0.00096 U	<0.00077 U
1,2-Dichloropropane	mg/kg	0.0033	1.78	<0.00063 U	<0.00063 U	<0.0011 U	<0.0013 U	<0.00086 U	<0.00098 U	--	<0.00073 U	<0.00068 U	--	<0.00059 U	<0.00084 U	<0.00098 U	<0.0019 U	<0.00053 U	<0.00076 U	<0.00060 U
1,3-Dichlorobenzene	mg/kg	1.1528	297	<0.00055 UJ	<0.00055 U	<0.00095 UJ	<0.0012 UJ	<0.00075 UJ	<0.00085 UJ	--	<0.00064 UJ	<0.00059 UJ	--	<0.00052 UJ	<0.00074 UJ	<0.00085 UJ	<0.0016 UJ	<0.00046 U	<0.00066 UJ	<0.00052 UJ
1,4-Dichlorobenzene	mg/kg	0.144	16.4	<0.00090 UJ	<0.00089 U	<0.0015 UJ	<0.0019 UJ	<0.0012 UJ	<0.0014 UJ	--	<0.0010 UJ	<0.00096 UJ	--	<0.00084 UJ	<0.0012 UJ	<0.0014 UJ	<0.0027 UJ	<0.00075 U	<0.0011 UJ	<0.00085 UJ
2-Butanone (MEK)	mg/kg	1.6661	28,400	<0.0021 U	0.0033 J	<0.0036 U	<0.0044 U	0.011 J	<0.0033 U	--	0.013 J	<0.0023 U	--	<0.0020 U	<0.0028 U	<0.0032 U	<0.0063 U	<0.0018 U	<0.0025 U	<0.0020 U
2-Hexanone	mg/kg	NS	1,760	<0.0056 U	<0.0056 U	<0.0097 U	<0.012 U	<0.0077 U	<0.0087 U	--	<0.0065 U	<0.0060 U	--	<0.0053 U	<0.0075 U	<0.0087 U	<0.017 U	<0.0047 U	<0.0067 U	<0.0053 U
4-Methyl-2-Pentanone (MIBK)	mg/kg	0.2252	3,360	<0.0050 UJ	<0.0050 U	<0.0086 UJ	<0.011 UJ	<0.0068 UJ	<0.0078 UJ	--	<0.0058 UJ	<0.0054 UJ	--	<0.0047 UJ	<0.0067 UJ	<0.0077 UJ	<0.015 UJ	<0.0042 U	<0.0060 UJ	<0.0048 U
Acetone	mg/kg	3.6766	100,000	0.0069 J	0.017 J	<0.011 U	<0.013 U	0.057	0.012 J	--	0.048	<0.0066 U	--	<0.0058 U	<0.0083 U	0.018 J	<0.018 U	<0.0052 U	<0.0074 U	<0.0059 U
Benzene	mg/kg	0.0051	7.07	<0.00054 U	<0.00054 U	0.003 J	*0.0054 J*	*0.070*	*0.0081 J*	--	<0.00062 U	*0.015*	--	0.002 J	<0.00072 U	0.0013 J	0.0032 J	<0.00045 U	0.00088 J	<0.00051 U
Bromodichloromethane	mg/kg	0.0003	1.83	<0.00025 UJ	<0.00025 U	<0.00043 UJ	<0.00053 UJ	<0.00035 UJ	<0.00039 UJ	--	<0.00029 UJ	<0.00027 UJ	--	<0.00024 UJ	<0.00034 UJ	<0.00039 UJ	<0.00076 UJ	<0.00021 U	<0.00030 UJ	<0.00024 U
Bromoform	mg/kg	0.0023	113	<0.00026 UJ	<0.00026 U	<0.00045 UJ	<0.00056 UJ	<0.00036 UJ	<0.00041 UJ	--	<0.00030 UJ	<0.00028 UJ	--	<0.00025 UJ	<0.00035 UJ	<0.00041 UJ	<0.00079 UJ	<0.00022 U	<0.00032 UJ	<0.00025 U
Bromomethane	mg/kg	0.0051	43	<0.00057 U	<0.00057 U	<0.00099 U	<0.0012 U	<0.00079 U	<0.00089 U	--	<0.00066 U	<0.00062 U	--	<0.00054 U	<0.00077 U	<0.00089 U	<0.0017 U	<0.00048 U	<0.00069 U	<0.00055 U
Carbon Disulfide	mg/kg	0.5919	738	<0.00048 U	<0.00048 U	<0.00083 U	<0.0010 U	<0.00066 U	<0.00075 U	--	0.0014 J	0.00067 J	--	0.0016 J	<0.00065 U	0.0024 J	<0.0014 U	<0.00040 U	<0.00058 U	<0.00046 U
Carbon Tetrachloride	mg/kg	0.0039	4.03	<0.00072 U	<0.00072 U	<0.0012 U	<0.0015 U	<0.00099 U	<0.0011 U	--	<0.00083 U	<0.00078 U	--	<0.00068 U	<0.00097 U	<0.0011 U	<0.0022 U	<0.00060 U	<0.00087 U	<0.00069 U
Chlorobenzene	mg/kg	0.1358	761	<0.00062 UJ	<0.00062 U	<0.0011 UJ	<0.0013 UJ	<0.00085 UJ	<0.00096 UJ	--	<0.00071 UJ	<0.00067 UJ	--	<0.00058 UJ	<0.00083 UJ	<0.00096 UJ	<0.0019 UJ	<0.00052 U	<0.00074 UJ	<0.00059 U
Chloroethane	mg/kg	0.2266	2,120	<0.0010 U	<0.0010 U	<0.0018 U	<0.0022 U	<0.0014 U	<0.0016 U	--	<0.0012 U	<0.0011 U	--	<0.00096 U	<0.0014 U	<0.0016 U	<0.0031 U	<0.00085 U	<0.0012 U	<0.00097 U
Chloroform	mg/kg	0.0033	1.98	<0.00033 U	<0.00033 U	<0.00057 U	<0.00070 U	<0.00046 U	<0.00052 U	--	<0.00038 U	<0.00036 U	--	<0.00031 U	<0.00045 U	<0.00051 U	<0.0010 U	<0.00028 U	<0.00040 U	<0.00032 U
Chloromethane	mg/kg	0.0155	669	<0.00089 U	<0.00088 U	<0.0015 U	<0.0019 U	<0.0012 U	<0.0014 U	--	<0.0010 U	<0.00095 U	--	<0.00083 U	<0.0012 U	<0.0014 U	<0.0026 U	<0.00074 U	<0.0011 U	<0.00084 U
cis-1,2-Dichloroethene	mg/kg	0.0412	2,340	<0.00064 U	<0.00064 U	<0.0011 U	<0.0014 U	<0.00088 U	<0.0010 U	--	<0.00074 U	<0.00069 U	--	<0.00061 U	<0.00086 U	<0.00099 U	<0.0019 U	<0.00054 U	<0.00077 U	<0.00061 U
cis-1,3-Dichloropropene	mg/kg	NS	1,210	<0.0015 UJ	<0.0015 U	<0.0025 UJ	<0.0031 UJ	<0.0020 UJ	<0.0023 UJ	--	<0.0017 UJ	<0.0016 UJ	--	<0.0014 UJ	<0.0020 UJ	<0.0023 UJ	<0.0044 UJ	<0.0012 U	<0.0018 UJ	<0.0014 U
Cyclohexane	mg/kg	NS	117	<0.00046 U	0.00058 J	0.0098 J	0.023	0.0035 J	0.0076 J	--	<0.00053 U	0.0027 J	--	0.0017 J	<0.00061 U	0.0062 J	0.0044 J	<0.00038 U	<0.00055 U	<0.00044 U
Dibromochloromethane	mg/kg	0.032	38.9	<0.00066 UJ	<0.00065 U	<0.0011 UJ	<0.0014 UJ	<0.00090 UJ	<0.0010 UJ	--	<0.00075 UJ	<0.00070 UJ	--	<0.00062 UJ	<0.00088 UJ	<0.0010 UJ	<0.0020 UJ	<0.00055 U	<0.00078 UJ	<0.00062 U
Dichloromethane	mg/kg	0.0026	1,150	<0.00086 U	<0.00086 U	<0.0015 U	<0.0018 U	<0.0012 U	<0.0013 U	--	<0.00099 U	<0.00092 U	--	<0.00081 U	<0.0012 U	<0.0013 U	<0.0026 U	<0.00072 U	<0.0010 U	<0.00082 U
Ethylbenzene	mg/kg	1.57	35.4	<0.00077 UJ	<0.00077 U	<0.0013 UJ	<0.0016 UJ	0.034 J	<0.0012 UJ	--	<0.00089 UJ	<0.00083 UJ	--	<0.00072 UJ	<0.0010 UJ	<0.0012 UJ	<0.0023 UJ	<0.00064 U	<0.00092 UJ	<0.00073 U
Freon 113	mg/kg	NS	910	<0.00052 U	<0.00052 U	<0.00089 U	<0.0011 U	<0.00071 U	<0.00080 U	--	<0.00060 U	<0.00055 U	--	<0.00049 U	<0.00069 U	<0.00080 U	<0.0015 U	<0.00043 U	<0.00062 U	<0.00049 U
Freon 12	mg/kg	3.0863	530	<0.00060 U	<0.00060 U	<0.0010 U	<0.0013 U	<0.00082 U	<0.00093 U	--	<0.00069 U	<0.00064 U	--	<0.00056 U	<0.00080 U	<0.00092 U	<0.0018 U	<0.00050 U	<0.00071 U	<0.00057 U
Isopropylbenzene	mg/kg	NS	268	<0.00068 UJ	<0.00068 U	<0.0012 UJ	<0.0014 UJ	0.0028 J	<0.0011 UJ	--	<0.00078 UJ	<0.00073 UJ	--	<0.00064 UJ	<0.00091 UJ	<0.0010 UJ	<0.0020 UJ	<0.00057 U	<0.00081 UJ	<0.00065 UJ
Methyl acetate	mg/kg	NS	29,000	<0.0032 U	<0.0031 U	<0.0054 U	<0.0067 U	<0.0043 U	<0.0049 U	--	<0.0036 U	<0.0034 U	--	<0.0030 U	<0.0042 U	<0.0049 U	<0.0094 U	<0.0026 U	<0.0038 U	<0.0030 U
Methylcyclohexane	mg/kg	NS	67.6	<0.00048 U	<0.00048 U	0.0065 J	0.016	0.0016 J	0.0018 J	--	<0.00056 U	0.0031 J	--	0.001 J	<0.00065 U	0.010	0.0039 J	<0.00040 U	<0.00058 U	<0.00046 U
Methyl-tert-butyl-ether	mg/kg	0.027	282	<0.00039 U	<0.00039 U	<0.00067 U	<0.00083 U	<0.00053 U	<0.00061 U	--	<0.00045 U	<0.00042 U	--	<0.00037 U	<0.00052 U	<0.00060 U	<0.0012 U	<0.00033 U	<0.00047 U	<0.00037 U
Styrene	mg/kg	0.22	867	<0.00072 UJ	<0.00072 U	<0.0012 UJ	<0.0015 UJ	<0.00099 UJ	<0.0011 UJ	--	<0.00083 UJ	<0.00078 UJ	--	<0.00068 UJ	<0.00097 UJ	<0.0011 UJ	<0.0022 UJ	<0.00060 U	<0.00087 UJ	<0.00069 U
Tetrachloroethene	mg/kg	0.0045	145	<0.00068 UJ	<0.00068 U	<0.0012 UJ	<0.0014 UJ	<0.00093 UJ	<0.0011 UJ	--	<0.00078 UJ	<0.00073 UJ	--	<0.00064 UJ	<0.00091 UJ	<0.0010 UJ	<0.0020 UJ	<0.00057 U	<0.00081 UJ	<0.00065 U
Toluene	mg/kg	1.1072	818	0.0011 J	0.0015 J	0.031 J	0.086 J	0.046 J	0.050 J	--	<0.00091 UJ	0.016 J	--	0.0025 J	<0.0011 UJ	0.0058 J	0.028 J	<0.00066 U	0.0017 J	<0.00075 U
trans-1,2-Dichloroethene	mg/kg	0.0626	1,850	<0.00045 U	<0.00045 U	<0.00077 U	<0.00095 U	<0.00061 U	<0.00069 U	--	<0.00052 U	<0.00048 U	--	<0.00042 U	<0.00060 U	<0.00069 U	<0.0013 U	<0.00037 U	<0.00054 U	<0.00043 U
trans-1,3-Dichloropropene	mg/kg	NS	1,510	<0.00077 UJ	<0.00077 U	<0.0013 UJ	<0.0016 UJ	<0.0011 UJ	<0.0012 UJ	--	<0.00089 UJ	<0.00083 UJ	--	<0.00072 UJ	<0.0010 UJ	<0.0012 UJ	<0.0023 UJ	<0.00064 U	<0.00092 UJ	<0.00073 U
Trichloroethene	mg/kg	0.0036	8.41	<0.00026 U	<0.00026 U	<0.00045 U	<0.00056 U	<0.00036 U	<0.00041 U	--	<0.00030 U	<0.00028 U	--	<0.00025 U	<0.00035 U	<0.00041 U	<0.00079 U	<0.00022 U	<0.00032 U	<0.00025 U
Trichlorofluoromethane	mg/kg	4.4775	1,230	<0.0012 U	<0.0012 U	<0.0021 U	<0.0025 U	<0.0016 U	<0.0019 U	--	<0.0014 U	<0.0013 U	--	<0.0011 U	<0.0016 U	<0.0018 U	<0.0036 U	<0.0010 U	<0.0014 U	<0.0011 U
Vinyl Chloride	mg/kg	0.0001	2.08	<0.0015 U	<0.0015 U	<0.0026 U	<0.0033 U	<0.0021 U	<0.0024 U	--	<0.0018 U	<0.0017 U	--	<0.0014 U	<0.0021 U	<0.0024 U	<0.0046 U	<0.0013 U	<0.0018 U	<0.0015 U
Xylenes, Total	mg/kg	3.96	260	<0.00070 UJ	<0.00070 U	0.0077 J	0.020 J	0.048 J	0.0082 J	--	<0.00081 UJ	0.0056 J	--	0.002 J	<0.00094 UJ	0.007 J	<0.0021 UJ	<0.00059 U	<0.00084 UJ	<0.00067 U
PCBs																				
PCB, Total [4]	mg/kg	0.0094	0.967	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1016	mg/kg	NS	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1221	mg/kg	NS	0.883	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1232	mg/kg	NS	0.792	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1242	mg/kg	NS	0.972	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1248	mg/kg	NS	0.975	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1254	mg/kg	NS	0.988	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1260	mg/kg	NS	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	MW06		MW07			MW08			MW09			MW10		MW11		MW12	
Sample / Duplicate:				MW06	MW06	MW07	MW07 DUP	MW07	MW08	MW08	MW08	MW09	MW09	MW09	MW10	MW10	MW11	MW11	MW12	MW12
Field Sample ID:				MW06-SS-121508	MW06-0708-121508	MW07-SS-121808	MWDUP001-121808	MW07-0506-121808	MW08-SS-121608	MSS-MW08-0675-121608	MW08-0675-121608	MW09-SS-010609	MSS-MW09-0608-010609	MW09-0608-010609	MW10-SS-121708	MW10-0607-121708	MW11-SS-010809	MW11-0405-010809	MW12-SS-010609	MW12-0455-010609
Sample Depth (feet):				0 - 0.5	7 - 8	0 - 1	0 - 1	5 - 6	0 - 0.5	6 - 7.5	6 - 7.5	0 - 0.5	6 - 8	6 - 8	0 - 0.5	6 - 7	0 - 0.5	4 - 5	0 - 0.5	4 - 5.5
Sample Date:				12/15/2008	12/15/2008	12/18/2008	12/18/2008	12/18/2008	12/16/2008	12/16/2008	12/16/2008	01/06/2009	01/06/2009	01/06/2009	12/17/2008	12/17/2008	01/08/2009	01/08/2009	01/06/2009	01/06/2009
PAHs																				
2-Methylnaphthalene	mg/kg	NS	3,010	<0.440 U	0.430 J	0.280 J	0.470 J	0.680 J	0.670	--	0.450 J	2.000 J	--	0.460	0.360 J	2.400 J	0.160 J	0.064 J	0.440 J	0.360 J
Acenaphthene	mg/kg	NS	45,200	7.000 J	0.430 J	0.068 J	0.110 J	<0.260 U	0.440	--	0.430 J	2.000 J	--	0.460	0.330 J	2.900 J	<0.016 U	0.160 J	<0.015 U	0.350 J
Acenaphthylene	mg/kg	NS	NS	<0.390 U	<0.023 U	0.220 J	0.620 J	<0.430 U	0.240 J	--	<0.024 U	2.200 J	--	0.130 J	0.110 J	<0.100 UJ	0.049 J	<0.022 U	<0.024 U	0.110 J
Anthracene	mg/kg	196.9492	100,000	3.700 J	0.140 J	0.420 J	0.780 J	0.460 J	0.440	--	0.160 J	3.700 J	--	0.570	0.130 J	4.500 J	0.110 J	0.350 J	0.140 J	0.130 J
Benzo(a)anthracene	mg/kg	NS	20.8	12.000	0.073 J	2.500	4.600	0.750 J	2.400	--	0.098 J	11.000 J	--	1.200	0.260 J	5.300 J	0.620	1.000	0.200 J	0.140 J
Benzo(a)pyrene	mg/kg	0.47	2.11	***9.900***	0.059 J	*2.100*	***4.700***	*0.520 J*	*2.000*	--	0.100 J	***8.200 J***	--	*1.000*	0.250 J	***4.000 J***	*0.660*	*0.970*	0.220 J	0.120 J
Benzo(b)fluoranthene	mg/kg	0.4793	21.1	*17.000 JK*	0.100 JK	*4.100 JK*	*9.800 JK*	*1.300 J*	*4.200 JK*	--	0.150 JK	*16.000 KR*	--	*1.600 JK*	0.430 JK	*6.700 JK*	*1.400 JK*	*1.500 JK*	0.420 JK	0.210 JK
Benzo(g,h,i)perylene	mg/kg	NS	NS	6.800 J	0.039 J	1.700	3.700	0.660 J	1.600	--	0.070 J	7.300 J	--	0.730	0.190 J	2.400 J	0.500	0.560	0.170 J	0.068 J
Benzo(k)fluoranthene	mg/kg	NS	211	<0.920 UKJ	<0.055 UKJ	<0.190 UKJ	<0.210 UKJ	<1.000 U	<0.049 UKJ	--	<0.058 UKJ	<0.260 UKJ	--	<0.048 UKJ	<0.046 UKJ	<0.240 UKJ	<0.060 UKJ	<0.052 UKJ	<0.057 UKJ	<0.049 UKJ
Chrysene	mg/kg	0.1446	2,110	*11.000*	0.097 J	*2.600*	*5.500*	*1.100 J*	*2.900*	--	0.140 J	*13.000 J*	--	*1.200*	*0.310 J*	*5.300 J*	*0.870*	*0.940*	*0.250 J*	*0.180 J*
Dibenz(a,h)anthracene	mg/kg	NS	2.11	**2.400 J**	<0.026 U	0.580 J	1.400 J	<0.480 U	0.530	--	<0.027 U	**2.200**	--	0.260 J	0.046 J	0.740 JJ	0.190 J	0.160 J	0.056 J	<0.023 U
Fluoranthene	mg/kg	88.8778	30,100	20.000	0.130 J	3.400	4.700	1.400 J	4.200	--	0.140 J	27.000	--	2.400	0.450	15.000 J	0.760	1.700	0.290 J	0.290 J
Fluorene	mg/kg	14.8299	30,100	2.700 J	0.150 J	0.140 J	0.190 J	<0.450 U	0.250 J	--	0.150 J	2.100 J	--	0.310 J	0.120 J	2.600 J	0.028 J	0.140 J	0.140 J	0.130 J
Indeno(1,2,3-cd)pyrene	mg/kg	NS	21.1	6.100 J	<0.030 U	1.500 J	3.400	<0.550 U	1.400	--	0.061 J	5.800 J	--	0.600	0.160 J	2.100 J	0.490 J	0.500	0.140 J	0.057 J
Naphthalene	mg/kg	0.6582	24.1	<0.710 U	<0.043 U	0.400 J	*0.660 J*	*2.200 J*	0.370 J	--	<0.045 U	0.300 J	--	0.270 J	0.040 J	*0.920 JJ*	0.390 J	0.055 J	<0.044 U	0.300 J
Phenanthrene	mg/kg	NS	NS	7.700	0.096 J	1.800	2.100	1.600 J	1.400	--	0.085 J	24.000	--	2.300	0.190 J	16.000 J	0.430 J	1.500	0.150 J	0.120 J
Pyrene	mg/kg	54.5455	22,600	18.000 B	<0.017 UJB	3.000	4.600	1.100 J	2.800	--	0.150 J	24.000	--	2.100	0.410	11.000 J	0.700	2.000	0.330 J	0.220 J
SVOCs																				
1,2,4-Trichlorobenzene	mg/kg	0.408	113	<0.00084 UJ	<0.00084 U	<0.0014 UJ	<0.0018 UJ	<0.0011 UJ	<0.0013 UJ	--	<0.00097 UJ	<0.00090 UJ	--	<0.00079 UJ	<0.0011 UJ	<0.0013 UJ	<0.0025 UJ	<0.00070 U	<0.0010 UJ	<0.00080 UJ
2,2-Oxybis(1-chloropropane)	mg/kg	NS	1,020	<0.530 U	<0.032 U	<0.110 U	<0.120 U	<0.580 U	<0.028 U	--	<0.033 U	<0.030 U	--	<0.028 U	<0.027 U	<0.140 UJ	<0.035 U	<0.030 U	<0.033 U	<0.028 U
2,4-Dinitrotoluene	mg/kg	0.0001	7.37	<1.500 U	<0.091 U	<0.310 U	<0.340 U	<1.700 U	<0.082 U	--	<0.095 U	<0.430 U	--	<0.079 U	<0.076 U	<0.400 UJ	<0.099 U	<0.086 U	<0.094 U	<0.080 U
2,6-Dinitrotoluene	mg/kg	0.0001	1.54	<0.640 U	<0.039 U	<0.130 U	<0.140 U	<0.700 U	<0.035 U	--	<0.040 U	<0.180 U	--	<0.034 U	<0.032 U	<0.170 UJ	<0.042 U	<0.036 U	<0.040 U	<0.034 U
2-Chloronaphthalene	mg/kg	NS	60,300	<0.230 U	<0.014 U	<0.047 U	<0.051 U	<0.250 U	<0.012 U	--	<0.014 U	<0.065 U	--	<0.012 U	<0.012 U	<0.061 UJ	<0.015 U	<0.013 U	<0.014 U	<0.012 U
2-Nitroaniline	mg/kg	NS	8,010	<1.100 U	<0.069 U	<0.240 U	<0.260 U	<1.300 U	<0.062 U	--	<0.072 U	<0.320 U	--	<0.060 U	<0.058 U	<0.300 UJ	<0.075 U	<0.065 U	<0.072 U	<0.061 U
3,3-Dichlorobenzidine	mg/kg	NS	5.11	<2.100 U	<0.120 U	<0.420 U	<0.460 U	<2.300 U	<0.110 U	--	<0.130 U	<0.580 U	--	<0.110 U	<0.100 U	<0.550 UJ	<0.140 U	<0.120 U	<0.130 U	<0.110 U
3-Nitroaniline	mg/kg	NS	NS	<1.700 U	<0.100 U	<0.340 U	<0.380 U	<1.800 U	<0.090 U	--	<0.110 U	<0.470 U	--	<0.088 U	<0.084 U	<0.440 UJ	<0.110 U	<0.095 U	<0.100 U	<0.089 U
4-Bromodiphenyl ether	mg/kg	NS	26.9	<0.440 U	<0.026 U	<0.089 U	<0.098 U	<0.480 U	<0.023 U	--	<0.027 U	<0.120 U	--	<0.023 U	<0.022 U	<0.120 UJ	<0.029 U	<0.025 U	<0.027 U	<0.023 U
4-Chloroaniline	mg/kg	NS	11.5	<1.900 U	<0.110 U	<0.380 U	<0.420 U	<2.100 U	<0.100 U	--	<0.120 U	<0.530 U	--	<0.098 U	<0.095 U	<0.500 UJ	<0.120 U	<0.110 U	<0.120 U	<0.100 U
4-Chlorodiphenyl ether	mg/kg	NS	NS	<0.480 U	<0.029 U	<0.099 U	<0.110 U	<0.530 U	<0.026 U	--	<0.030 U	<0.140 U	--	<0.025 U	<0.024 U	<0.130 UJ	<0.032 U	<0.027 U	<0.030 U	<0.026 U
4-Nitroaniline	mg/kg	NS	115	<1.700 U	<0.100 U	<0.340 U	<0.370 U	<1.800 U	<0.090 U	--	<0.100 U	<0.470 U	--	<0.087 U	<0.084 U	<0.440 UJ	<0.110 U	<0.094 U	<0.100 U	<0.088 U
Acetophenone	mg/kg	NS	2,520	<0.460 U	<0.028 U	<0.094 U	<0.100 U	<0.500 U	0.027 J	--	<0.029 U	<0.130 U	--	<0.024 U	<0.023 U	<0.120 UJ	<0.030 U	<0.026 U	<0.029 U	<0.024 U
Benzaldehyde	mg/kg	NS	818	<1.500 U	<0.092 U	<0.310 U	<0.340 U	<1.700 U	<0.083 U	--	<0.096 U	<0.430 U	--	<0.081 U	<0.077 U	<0.410 UJ	<0.100 U	<0.087 U	<0.096 U	<0.081 U
Biphenyl	mg/kg	NS	288	<1.100 U	<0.069 U	<0.240 U	<0.260 U	<1.300 U	0.140 J	--	<0.072 U	<0.320 U	--	<0.060 U	<0.058 U	<0.300 UJ	<0.075 U	<0.065 U	<0.072 U	<0.061 U
Bis(2-Chloroethoxy)methane	mg/kg	NS	2,460	<0.530 U	<0.032 U	<0.110 U	<0.120 U	<0.580 U	<0.028 U	--	<0.033 U	<0.150 U	--	<0.028 U	<0.027 U	<0.140 UJ	<0.035 U	<0.030 U	<0.033 U	<0.028 U
Bis(2-Chloroethyl)ether	mg/kg	NS	1.29	<0.380 U	<0.023 U	<0.078 U	<0.085 U	<0.420 U	<0.021 U	--	<0.024 U	<0.110 U	--	<0.020 U	<0.019 U	<0.100 UJ	<0.025 U	<0.022 U	<0.024 U	<0.020 U
Bis(2-Ethylhexyl)phthalate	mg/kg	2.88	164	<1.100 U	<0.063 U	0.480 J	0.520 J	*110.000*	0.240 J	--	<0.066 U	<0.300 U	--	<0.055 U	0.061 J	<0.280 UJ	0.170 J	<0.060 U	<0.066 U	<0.056 U
Butyl benzyl phthalate	mg/kg	NS	1,210	<0.990 U	0.081 J	<0.200 U	<0.220 U	<1.100 U	0.250 J	--	0.097 J	<0.280 U	--	0.130 J	0.075 J	0.400 JJ	<0.065 U	0.096 J	<0.062 U	0.110 J
Caprolactam	mg/kg	NS	100,000	<2.400 U	<0.150 U	<0.500 U	<0.540 U	<2.700 U	<0.130 U	--	<0.150 U	<0.690 U	--	<0.130 U	<0.120 U	<0.640 UJ	<0.160 U	<0.140 U	<0.150 U	<0.130 U
Carbazole	mg/kg	NS	NS	<0.830 UJB	<0.050 UJB	0.420 J	0.440 J	1.400 J	0.210 J	--	<0.052 U	2.200 J	--	0.320 J	0.110 J	1.600 JJ	<0.054 U	0.057 J	<0.052 U	0.120 J
Dibenzofuran	mg/kg	NS	1,040	6.800 J	0.410 J	0.190 J	0.270 J	<0.500 U	0.560	--	0.430 J	2.600 J	--	0.490	0.330 J	2.800 J	0.072 J	0.070 J	0.410 J	0.350 J
Diethyl phthalate	mg/kg	NS	100,000	<0.600 U	<0.036 U	<0.120 U	<0.130 U	<0.650 U	<0.032 U	--	<0.037 U	<0.170 U	--	<0.031 U	<0.030 U	<0.160 UJ	<0.039 U	<0.034 U	<0.037 U	<0.032 U
Dimethyl phthalate	mg/kg	NS	7,390	<0.530 U	<0.032 U	<0.110 U	<0.120 U	<0.580 U	<0.028 U	--	<0.033 U	<0.150 U	--	<0.028 U	<0.027 U	<0.140 UJ	<0.035 U	<0.030 U	<0.033 U	<0.028 U
Di-n-butyl phthalate	mg/kg	5.0333	82,100	<0.670 U	<0.040 U	0.330 J	0.360 J	1.700 J	0.078 J	--	<0.042 U	<0.190 U	--	<0.035 U	<0.033 U	<0.180 UJ	<0.044 U	<0.038 U	<0.041 U	<0.035 U
Di-n-octyl phthalate	mg/kg	NS	8,210	<0.330 U	<0.020 U	<0.068 U	<0.074 U	3.400 J	<0.018 U	--	<0.021 U	<0.093 U	--	<0.017 U	<0.017 U	<0.087 UJ	<0.022 U	<0.019 U	<0.021 U	<0.017 U
Hexachlorobenzene	mg/kg	0.0252	1.15	<0.670 U	<0.040 U	<0.140 U	<0.150 U	<0.730 U	<0.036 U	--	<0.042 U	<0.190 U	--	<0.035 U	<0.033 U	<0.180 UJ	<0.044 U	<0.038 U	<0.041 U	<0.035 U
Hexachlorobutadiene	mg/kg	NS	7.19	<0.00073 UJ	<0.00063 U	<0.0011 UJ	<0.0013 UJ	<0.00086 UJ	<0.00098 UJ	--	<0.00073 UJ	<0.00068 UJ	--	<0.00059 UJ	<0.00084 UJ	<0.00098 UJ	<0.0019 UJ	<0.00053 U	<0.00076 UJ	<0.00060 UJ
Hexachlorocyclopentadiene	mg/kg	NS	10.8	<1.100 U	<0.069 U	<0.240 U	<0.260 U	<1.300 U	<0.062 U	--	<0.072 U	<0.320 U	--	<0.060 U	<0.058 U	<0.300 UJ	<0.075 U	<0.065 U	<0.072 U	<0.061 U
Hexachloroethane	mg/kg	NS	11.1	<0.490 U	<0.029 U	<0.100 U	<0.110 U	<0.540 U	<0.026 U	--	<0.031 U	<0.140 UJ	--	<0.026 U	<0.025 U	<0.130 UJ	<0.032 U	<0.028 U	<0.030 U	<0.026 U
Isophorone	mg/kg	NS	2,420	<0.390 U	<0.023 U	<0.080 U	<0.087 U	<0.430 U	<0.021 U	--	<0.024 U	<0.110 U	--	<0.020 U	<0.020 U	<0.100 UJ	<0.026 U	<0.022 U	<0.024 U	<0.021 U
Nitrobenzene	mg/kg	NS	32.4	<0.510 U	<0.030 U	<0.100 U	<0.110 U	<0.550 U	<0.027 U	--	<0.032 U	<0.140 U	--	<0.026 U	<0.025 U	<0.130 UJ	<0.033 U	<0.029 U	<0.031 U	<0.027 U
N-nitrosodi-n-propylamine	mg/kg	NS	0.328	<0.710 U	<0.043 U	<0.150 U	<0.160 U	<0.780 U	<0.038 U	--	<0.045 U	<0.200 U	--	<0.037 U	<0.036 U	<0.190 UJ	<0.047 U	<0.040 U	<0.044 U	<0.038 U
N-Nitrosodiphenylamine	mg/kg	0.0764	469	<0.480 U	<0.029 U	<0.099 U	<0.110 U	<0.530 U	<0.026 U	--	<0.030 U	<0.140 U	--	<0.025 U	<0.024 U	<0.130 UJ	<0.032 U	<0.027 U	<0.030 U	<0.026 U
Pyridine	mg/kg	0.0069	1,170	<3.000 U	<0.180 U	<0.610 U	<0.670 U	<3.300 U	<0.160 U	--	<0.190 U	<0.840 U	--	<0.160 U	<0.150 U	<0.790 UJ	<0.200 U	<0.170 U	<0.190 U	<0.160 U

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	MW06		MW07			MW08			MW09			MW10		MW11		MW12	
Sample / Duplicate:				MW06	MW06	MW07	MW07 DUP	MW07	MW08	MW08	MW08	MW09	MW09	MW09	MW10	MW10	MW11	MW11	MW12	MW12
Field Sample ID:				MW06-SS-121508	MW06-0708-121508	MW07-SS-121808	MWDUP001-121808	MW07-0506-121808	MW08-SS-121608	MSS-MW08-0675-121608	MW08-0675-121608	MW09-SS-010609	MSS-MW09-0608-010609	MW09-0608-010609	MW10-SS-121708	MW10-0607-121708	MW11-SS-010809	MW11-0405-010809	MW12-SS-010609	MW12-0455-010609
Sample Depth (feet):				0 - 0.5	7 - 8	0 - 1	0 - 1	5 - 6	0 - 0.5	6 - 7.5	6 - 7.5	0 - 0.5	6 - 8	6 - 8	0 - 0.5	6 - 7	0 - 0.5	4 - 5	0 - 0.5	4 - 5.5
Sample Date:				12/15/2008	12/15/2008	12/18/2008	12/18/2008	12/18/2008	12/16/2008	12/16/2008	12/16/2008	01/06/2009	01/06/2009	01/06/2009	12/17/2008	12/17/2008	01/08/2009	01/08/2009	01/06/2009	01/06/2009
Phenols																				
2,4,5-Trichlorophenol	mg/kg	NS	82,100	<0.230 U	<0.014 U	<0.047 U	<0.051 U	<0.250 U	<0.012 U	--	<0.014 U	<0.065 U	--	<0.012 U	<0.012 U	<0.061 UJ	<0.015 U	<0.013 U	<0.014 U	<0.012 U
2,4,6-Trichlorophenol	mg/kg	NS	209	<0.230 U	<0.014 U	<0.047 U	<0.051 U	<0.250 U	<0.012 U	--	<0.014 U	<0.065 U	--	<0.012 U	<0.012 U	<0.061 UJ	<0.015 U	<0.013 U	<0.014 U	<0.012 U
2,4-Dichlorophenol	mg/kg	NS	2,460	<0.230 U	<0.014 U	<0.047 U	<0.051 U	<0.250 U	<0.012 U	--	<0.014 U	<0.065 U	--	<0.012 U	<0.012 U	<0.061 UJ	<0.015 U	<0.013 U	<0.014 U	<0.012 U
2,4-Dimethylphenol	mg/kg	NS	16,400	<1.500 U	<0.091 U	<0.310 U	<0.340 U	<1.700 U	<0.082 U	--	<0.095 U	<0.430 U	--	<0.079 U	<0.076 U	<0.400 UJ	<0.099 U	<0.086 U	<0.094 U	<0.080 U
2,4-Dinitrophenol	mg/kg	NS	1,640	<7.700 U	<0.460 U	<1.600 U	<1.700 U	<8.400 U	<0.410 U	--	<0.480 U	<2.200 U	--	<0.400 U	<0.380 U	<2.000 UJ	<0.500 U	<0.430 U	<0.480 U	<0.400 U
2-Chlorophenol	mg/kg	NS	5,840	<0.480 U	<0.029 U	<0.099 U	<0.110 U	<0.530 U	<0.026 U	--	<0.030 U	<0.140 U	--	<0.025 U	<0.024 U	<0.130 UJ	<0.032 U	<0.027 U	<0.030 U	<0.026 U
2-Methylphenol	mg/kg	NS	41,000	<0.300 U	<0.018 U	<0.061 U	<0.067 U	<0.330 U	<0.016 U	--	<0.019 U	<0.084 U	--	<0.016 U	<0.015 U	<0.079 UJ	<0.020 U	<0.017 U	<0.019 U	<0.016 U
2-Nitrophenol	mg/kg	NS	NS	<0.230 U	<0.014 U	<0.047 U	<0.051 U	<0.250 U	<0.012 U	--	<0.014 U	<0.065 U	--	<0.012 U	<0.012 U	<0.061 UJ	<0.015 U	<0.013 U	<0.014 U	<0.012 U
4-Chloro-3-methylphenol	mg/kg	NS	82,100	<1.500 U	<0.091 U	<0.310 U	<0.340 U	<1.700 U	<0.082 U	--	<0.095 U	<0.430 U	--	<0.079 U	<0.076 U	<0.400 UJ	<0.099 U	<0.086 U	<0.094 U	<0.080 U
4-Methylphenol	mg/kg	NS	82,100	<0.760 U	<0.046 U	<0.160 U	<0.170 U	<0.830 U	<0.041 U	--	<0.047 U	<0.210 U	--	<0.040 U	<0.038 U	<0.200 UJ	<0.050 U	<0.043 U	<0.047 U	<0.040 U
4-Nitrophenol	mg/kg	NS	NS	<2.200 U	<0.130 U	<0.460 U	<0.500 U	<2.400 U	<0.120 U	--	<0.140 U	<0.630 U	--	<0.120 U	<0.110 U	<0.590 UJ	<0.150 U	<0.130 U	<0.140 U	<0.120 U
4,6-Dinitro-2-methylphenol	mg/kg	NS	65.7	<7.600 U	<0.460 U	<1.600 U	<1.700 U	<8.300 U	<0.410 U	--	<0.470 U	<2.100 U	--	<0.400 U	<0.380 U	<2.000 UJ	<0.500 U	<0.430 U	<0.470 U	<0.400 U
Pentachlorophenol	mg/kg	0.0028	3.97	<7.600 U	<0.460 U	<1.600 U	<1.700 U	<8.300 U	<0.410 U	--	<0.470 U	2.100 UR	--	<0.400 U	<0.380 U	<2.000 UJ	<0.500 U	<0.430 U	<0.470 U	<0.400 U
Phenol	mg/kg	2.2946	100,000	<0.410 U	<0.025 U	<0.085 U	<0.093 U	<0.450 U	<0.022 U	--	<0.026 U	<0.120 U	--	<0.022 U	<0.021 U	<0.110 UJ	<0.027 U	<0.023 U	<0.026 U	<0.022 U
Metals																				
Aluminum, Total	mg/kg	600	100,000	*2,600*	*12,000*	*1,600*	*2,300*	*7,100*	*2,200*	--	*3,900*	*3,800*	--	*4,500*	300	*5,200*	*3,400*	*6,200*	*5,600*	*12,000*
Antimony, Total	mg/kg	0.542	467	0.180 BJ-	0.034 BJ-	0.240 J-	0.310 J-	0.280 J-	0.370 J	--	0.110 JB	*3.100 J-*	--	*1.100 J-*	0.067 BJ-	0.420 J-	0.290 BJ-	0.500 J-	0.200 BJ-	0.019 BJ-
Arsenic, Total [1]	mg/kg	0.584	8.3	*3.900*	*8.200*	*6.500*	*7.900*	***10.000***	*7.500*	--	*3.800*	***8.400***	--	***18.000***	0.340 B	***170.000***	*6.700*	***9.900***	*5.300*	*3.500*
Barium, Total	mg/kg	164.8	100,000	43.000	58.000	65.000	80.000	88.000	67.000	--	58.000	69.000	--	93.000	5.900	95.000	73.000	84.000	58.000	66.000
Beryllium, Total	mg/kg	6.32	2,300	0.200	*8.100*	0.320	0.320	0.720	0.790	--	0.510	0.310	--	0.670	0.031 B	0.550	0.840	0.620	0.500	0.690
Cadmium, Total	mg/kg	0.752	985	0.480	*1.600*	*1.100*	*1.500*	0.570	0.590	--	0.330	*1.500*	--	*2.200*	0.210	0.380	*0.840*	*1.300*	0.430	0.500
Calcium, Total	mg/kg	NS	NS	81,000	27,000	44,000	47,000	12,000	9,400	--	85,000	70,000	--	9,100	2,000	18,000	17,000	58,000	32,000	77,000
Chromium, Hexavalent	mg/kg	NS	6.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium, Total [3]	mg/kg	360,000	NS	18.000	14.000	20.000	21.000	6.900	9.400	--	8.400	63.000	--	27.000	2.500	25.000	16.000	14.000	13.000	24.000
Chromium, Trivalent	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt, Total	mg/kg	3.6073	347	*4.100*	*89.000*	*5.600*	*4.800*	3.300	*4.700*	--	*4.900*	*6.700*	--	*5.400*	0.360	*5.200*	*4.900*	*5.200*	*5.200*	*10.000*
Copper, Total	mg/kg	91.6	46,700	48.000	69.000	42.000 J	44.000 J	24.000 J	40.000	--	16.000	*250.000 J*	--	*340.000 J*	8.300 J	*1,100 J*	50.000	*140.000*	40.000 J	19.000 J
Iron, Total	mg/kg	NS	100,000	16,000	15,000	**120,000**	69,000	20,000	14,000	--	9,400	36,000	--	27,000	1,800	30,000	24,000	25,000	14,000	16,000
Lead, Total	mg/kg	27	800	*88.000*	25.000	*130.000*	*230.000*	*110.000*	*80.000*	--	14.000	***860.000***	--	*260.000*	13.000 J+	*150.000*	*110.000*	***1,800***	*81.000*	14.000
Magnesium, Total	mg/kg	NS	NS	45,000	19,000	22,000	23,000	6,800	4,300	--	28,000	36,000	--	3,400	710	2,500	8,000	25,000	17,000	36,000
Manganese, Total	mg/kg	39.1244	25,900	*330.000*	*270.000*	*350.000*	*430.000*	*140.000*	*150.000*	--	*330.000*	*630.000*	--	*440.000*	21.000	*140.000*	*180.000*	*370.000*	*410.000*	*390.000*
Mercury, Total	mg/kg	0.208	3.13	0.030	0.017 B	*0.720*	*0.370*	*0.520*	*1.500*	--	0.035	*1.300 J*	--	*0.680 J*	0.022	0.071	*1.300*	*0.290*	0.029 J	0.015 JB
Nickel, Total	mg/kg	13.0612	22,500	*240.000*	*140.000*	*15.000*	*17.000*	7.700	12.000	--	*14.000*	*53.000*	--	*23.000*	1.800	13.000	*18.000*	*19.000*	13.000	*24.000*
Potassium, Total	mg/kg	NS	NS	550	1,800	350	520	1,000	430	--	840	630	--	530	170 B	540	640	750	1,000	3,400
Selenium, Total	mg/kg	0.52	5,840	0.220 B	*5.800*	*0.550 B*	0.390 B	*2.000*	*1.700*	--	*1.600*	*0.660*	--	*1.100*	<0.150 U	*1.100*	*1.500*	*1.100*	*1.300*	*0.720*
Silver, Total	mg/kg	0.8491	5,840	0.066 B	0.052 B	0.090 B	0.110 B	0.044 B	0.060 B	--	0.047 B	0.210	--	0.170	<0.023 U	0.560	0.096 B	0.130	0.056 B	0.064 B
Sodium, Total	mg/kg	NS	NS	190 B	230 B	130 BJ+	200 BJ+	430 BJ+	120 B	--	200 B	240 B	--	200 B	<68 U	290 BJ+	130 B	220 B	170 B	220 B
Thallium, Total	mg/kg	0.284	11.7	0.110	*0.870*	0.087 B	0.082 B	0.190	0.210	--	0.130 B	0.170	--	*0.300*	0.021 B	0.230	*0.540*	0.250	0.190	0.230
Vanadium, Total	mg/kg	60	5,840	13.000	21.000	7.200	7.100	8.200	8.500	--	16.000	13.000	--	24.000	1.000	19.000	12.000	19.000	18.000	28.000
Zinc, Total	mg/kg	NS	100,000	73.000	440.000	120.000 J	130.000 J	130.000 J	100.000	--	41.000	210.000	--	470.000	34.000 J	55.000 J	110.000	370.000	99.000	49.000
Inorganic - Cyanide																				
Cyanide, Amenable	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Reactive	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Total	mg/kg	4.04	195	0.21 BJ-	0.22 B	2.5	*6.4*	0.14 B	2	--	3.1	*11*	--	1.3	0.45 BJ-	3.8	*10 J*	0.51 JB	0.27 B	<0.13 U
Other																				
Sulfide, Reactive	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organic Matter	%	NS	NS	--	--	--	--	--	--	15.8	--	--	15.9	--	--	--	--	--	--	--
Percent Moisture	%	NS	NS	13	28	15	22	20	19	42.4	30	23	25.2	17	13	34	34	23	30	18

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	MW13			MW14		MW15		MW16		MW17			MW18		MW19		NMW01D	
Sample / Duplicate:				MW13	MW13	MW13	MW14	MW14	MW15	MW15	MW16	MW16	MW17	MW17	MW17 DUP	MW18	MW18	MW19	MW19	NMW01D	NMW01D
Field Sample ID:				MW13-SS-010809	MSS-MW13-0406-010809	MW13-0406-010809	MW14-SS-010809	MW14-0607-010809	MW15-SS-010709	MW15-0895-010709	MW16-SS-010709	MW16-0809-010709	MW17-SS-010609	MW17-0405-010609	MWDUP002-010609	MW18-SS-121808	MW18-0607-121808	MW19-SS-010509	MW19-0405-010509	NMW01D-SS-012609	NMW01D-0455-012609
Sample Depth (feet):				0 - 0.5	4 - 6	4 - 6	0 - 0.5	6 - 7	0 - 0.5	8 - 9.5	1 - 2	8 - 9	0 - 0.5	4 - 5	4 - 5	0 - 0.5	6 - 7	0 - 0.5	4 - 5	0 - 0.5	4 - 5.5
Sample Date:				01/08/2009	01/08/2009	01/08/2009	01/08/2009	01/08/2009	01/07/2009	01/07/2009	01/07/2009	01/07/2009	01/06/2009	01/06/2009	01/06/2009	12/18/2008	12/18/2008	01/05/2009	01/05/2009	01/26/2009	01/26/2009
VOCs																					
1,1,1-Trichloroethane	mg/kg	0.1402	640	<0.00079 UJ	--	<0.00049 U	<0.00081 UJ	<0.00072 U	<0.00063 U	<0.00046 U	<0.00046 U	<0.00061 U	<0.00098 U	0.018 J	0.026 J	<0.00058 U	<0.00087 UJ	<0.00083 U	<0.00068 U	<0.00069 U	<0.00062 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0002	3.6	<0.00093 UJ	--	<0.00057 UJ	<0.00095 UJ	<0.00084 U	<0.00073 UJ	<0.00054 U	<0.00054 UJ	<0.00072 U	<0.0011 U	<0.00095 UJ	<0.00076 UJ	<0.00068 UJ	<0.0010 UJ	<0.00097 UJ	<0.00080 UJ	<0.00081 UJ	<0.00073 U
1,1,2-Trichloroethane	mg/kg	0.0032	7.01	<0.0013 UJ	--	<0.00082 U	<0.0014 UJ	<0.0012 U	<0.0011 UJ	<0.00078 U	<0.00079 UJ	<0.0010 U	<0.0017 U	<0.0014 UJ	<0.0011 UJ	<0.00098 UJ	<0.0015 UJ	<0.0014 UJ	<0.0011 UJ	<0.0012 UJ	<0.0011 U
1,1-Dichloroethane	mg/kg	0.4834	22.2	<0.00032 UJ	--	<0.00020 U	<0.00033 UJ	<0.00029 U	<0.00025 U	<0.00019 U	<0.00019 U	<0.00025 U	<0.00039 U	<0.00033 U	<0.00026 U	<0.00023 U	<0.00035 UJ	<0.00033 U	<0.00027 U	<0.00028 U	<0.00025 U
1,1-Dichloroethene	mg/kg	0.005	1,190	<0.00090 UJ	--	<0.00055 U	<0.00092 UJ	0.0019 J	<0.00071 U	<0.00053 UJ	<0.00053 U	<0.00069 U	*0.0068 J*	0.0031 J	*0.0086 J*	<0.00066 U	<0.00098 UJ	<0.00094 U	<0.00077 U	*0.0077*	0.0026 J
1,2-Dibromo-3-chloropropane	mg/kg	0.0002	0.092	<0.00092 UJ	--	<0.00056 UJ	<0.00093 UJ	<0.00083 U	<0.00072 UJ	<0.00054 U	<0.00054 UJ	<0.00070 U	<0.0011 U	<0.00093 UJ	<0.00075 UJ	<0.00067 UJ	<0.0010 UJ	<0.00095 UJ	<0.00078 UJ	<0.00079 UJ	<0.00072 U
1,2-Dibromoethane	mg/kg	0.0000282	0.221	<0.00079 UJ	--	<0.00049 U	<0.00081 UJ	<0.00072 U	<0.00063 UJ	<0.00046 U	<0.00046 UJ	<0.00061 U	<0.00098 U	<0.00081 UJ	<0.00065 UJ	<0.00058 UJ	<0.00087 UJ	<0.00083 UJ	<0.00068 UJ	<0.00069 UJ	<0.00062 U
1,2-Dichlorobenzene	mg/kg	1.168	376	<0.00069 UJ	--	<0.00042 UJ	<0.00070 UJ	<0.00062 U	<0.00054 UJ	<0.00040 U	<0.00040 UJ	<0.00053 U	<0.00084 U	<0.00070 UJ	<0.00056 UJ	<0.00050 UJ	<0.00075 UJ	<0.00072 UJ	<0.00059 UJ	<0.00060 UJ	<0.00054 U
1,2-Dichloroethane	mg/kg	0.0028	2.87	<0.0011 UJ	--	<0.00066 U	<0.0011 UJ	<0.00096 U	<0.00084 U	<0.00062 U	<0.00062 U	<0.00082 U	<0.0013 U	<0.0011 U	<0.00087 U	<0.00078 U	<0.0012 UJ	<0.0011 U	<0.00091 U	<0.00093 U	<0.00084 U
1,2-Dichloropropane	mg/kg	0.0033	1.78	<0.00084 UJ	--	<0.00052 U	<0.00086 UJ	<0.00076 U	<0.00066 U	<0.00049 UJ	<0.00049 U	<0.00065 U	<0.0010 U	<0.00085 U	<0.00069 U	<0.00061 U	<0.00092 UJ	<0.00088 U	<0.00072 U	<0.00073 U	<0.00066 U
1,3-Dichlorobenzene	mg/kg	1.1528	297	<0.00073 UJ	--	<0.00045 UJ	<0.00075 UJ	<0.00066 U	<0.00058 UJ	<0.00043 U	<0.00043 UJ	<0.00056 U	<0.00090 U	<0.00075 UJ	<0.00060 UJ	<0.00054 UJ	<0.00080 UJ	<0.00076 UJ	<0.00063 UJ	<0.00064 UJ	<0.00058 U
1,4-Dichlorobenzene	mg/kg	0.144	16.4	<0.0012 UJ	--	<0.00073 UJ	<0.0012 UJ	<0.0011 U	<0.00094 UJ	<0.00070 U	<0.00070 UJ	<0.00092 U	<0.0015 U	<0.0012 UJ	<0.00097 UJ	<0.00087 UJ	<0.0013 UJ	<0.0012 UJ	<0.0010 UJ	<0.0010 UJ	<0.00094 U
2-Butanone (MEK)	mg/kg	1.6661	28,400	<0.0028 UJ	--	<0.0017 U	<0.0029 UJ	<0.0025 U	<0.0022 U	<0.0016 U	<0.0016 U	0.014 J	<0.0034 U	<0.0028 U	<0.0023 U	<0.0020 U	<0.0031 UJ	<0.0029 U	<0.0024 U	<0.0024 U	<0.0022 U
2-Hexanone	mg/kg	NS	1,760	<0.0075 UJ	--	<0.0046 U	<0.0076 UJ	<0.0067 U	<0.0059 U	<0.0044 U	<0.0044 U	<0.0057 U	<0.0092 U	<0.0076 U	<0.0061 U	<0.0055 U	<0.0082 UJ	<0.0078 U	<0.0064 U	<0.0065 U	<0.0059 U
4-Methyl-2-Pentanone (MIBK)	mg/kg	0.2252	3,360	<0.0067 UJ	--	<0.0041 U	<0.0068 UJ	<0.0060 U	<0.0052 UJ	<0.0039 U	<0.0039 UJ	<0.0051 U	<0.0082 U	<0.0068 UJ	<0.0054 UJ	<0.0049 UJ	<0.0073 UJ	<0.0069 UJ	<0.0057 UJ	<0.0058 UJ	<0.0052 U
Acetone	mg/kg	3.6766	100,000	<0.0082 UJ	--	<0.0050 U	<0.0084 UJ	<0.0074 U	<0.0065 U	<0.0048 U	0.050	0.060	0.017 J	<0.0084 U	<0.0067 U	<0.0060 U	0.110 J	<0.0086 U	0.015 J	<0.0071 UJB	<0.0065 UJB
Benzene	mg/kg	0.0051	7.07	0.0017 J	--	<0.00044 U	*0.0096 J*	<0.00065 U	0.0012 J	<0.00042 UJ	0.0038 J	<0.00055 U	*0.0068 J*	0.0024 J	0.0011 J	<0.00053 U	*1.800*	<0.00075 U	*0.077*	0.0011 J	0.0026 J
Bromodichloromethane	mg/kg	0.0003	1.83	<0.00034 UJ	--	<0.00021 U	<0.00034 UJ	<0.00030 U	<0.00026 UJ	<0.00020 U	<0.00020 UJ	<0.00026 U	<0.00041 U	<0.00034 UJ	<0.00027 UJ	<0.00025 UJ	<0.00037 UJ	<0.00035 UJ	<0.00029 UJ	<0.00029 UJ	<0.00026 U
Bromoform	mg/kg	0.0023	113	<0.00035 UJ	--	<0.00022 U	<0.00036 UJ	<0.00032 U	<0.00028 UJ	<0.00021 U	<0.00021 UJ	<0.00027 U	<0.00043 U	<0.00036 UJ	<0.00029 UJ	<0.00026 UJ	<0.00038 UJ	<0.00037 UJ	<0.00030 UJ	<0.00030 UJ	<0.00028 U
Bromomethane	mg/kg	0.0051	43	<0.00076 UJ	--	<0.00047 U	<0.00078 UJ	<0.00069 U	<0.00060 U	<0.00045 U	<0.00045 U	<0.00059 U	<0.00094 U	<0.00078 U	<0.00062 U	<0.00056 U	<0.00083 UJ	<0.00080 U	<0.00065 U	<0.00066 U	<0.00060 U
Carbon Disulfide	mg/kg	0.5919	738	<0.00064 UJ	--	<0.00039 U	<0.00065 UJ	<0.00058 U	<0.00051 U	<0.00037 U	<0.00037 U	0.0066	<0.00079 U	<0.00065 U	<0.00052 U	<0.00047 U	<0.00070 UJ	<0.00067 U	0.0036 J	<0.00056 U	0.00077 J
Carbon Tetrachloride	mg/kg	0.0039	4.03	<0.00096 UJ	--	<0.00059 U	<0.00098 UJ	<0.00087 U	<0.00076 U	<0.00056 U	<0.00056 U	<0.00074 U	<0.0012 U	<0.00098 U	<0.00079 U	<0.00070 U	<0.0011 UJ	<0.0010 U	<0.00082 U	<0.00083 U	<0.00076 U
Chlorobenzene	mg/kg	0.1358	761	<0.00082 UJ	--	<0.00051 U	<0.00084 UJ	<0.00074 U	<0.00065 UJ	<0.00048 U	<0.00048 UJ	<0.00063 U	<0.0010 U	<0.00084 UJ	<0.00067 UJ	<0.00060 UJ	<0.00090 UJ	<0.00086 UJ	<0.00071 UJ	<0.00072 UJ	<0.00065 U
Chloroethane	mg/kg	0.2266	2,120	<0.0014 UJ	--	<0.00083 U	<0.0014 UJ	<0.0012 U	<0.0011 U	<0.00079 U	<0.00079 U	<0.0010 U	<0.0017 U	<0.0014 U	<0.0011 U	<0.0010 U	<0.0015 UJ	<0.0014 U	<0.0012 U	<0.0012 U	<0.0011 U
Chloroform	mg/kg	0.0033	1.98	<0.00044 UJ	--	<0.00027 U	<0.00045 UJ	<0.00040 U	<0.00035 U	<0.00026 U	<0.00026 U	<0.00034 U	<0.00054 U	<0.00045 U	<0.00036 U	<0.00032 U	<0.00048 UJ	<0.00046 U	<0.00038 U	<0.00038 U	<0.00035 U
Chloromethane	mg/kg	0.0155	669	<0.0012 UJ	--	<0.00072 U	<0.0012 UJ	<0.0011 U	<0.00093 U	<0.00069 U	<0.00069 U	<0.00090 U	<0.0014 U	<0.0012 U	<0.00096 U	<0.00086 U	<0.0013 UJ	<0.0012 U	<0.0010 U	<0.0010 U	<0.00092 U
cis-1,2-Dichloroethene	mg/kg	0.0412	2,340	<0.00086 UJ	--	<0.00052 U	<0.00087 UJ	<0.00077 U	<0.00067 U	<0.00050 U	<0.00050 U	<0.00066 U	<0.0011 U	<0.00087 U	<0.00070 U	<0.00063 U	<0.00093 UJ	<0.00089 U	<0.00073 U	<0.00074 U	<0.00067 U
cis-1,3-Dichloropropene	mg/kg	NS	1,210	<0.0020 UJ	--	<0.0012 U	<0.0020 UJ	<0.0018 U	<0.0016 UJ	<0.0012 U	<0.0012 UJ	<0.0015 U	<0.0024 U	<0.0020 UJ	<0.0016 UJ	<0.0014 UJ	<0.0022 UJ	<0.0021 UJ	<0.0017 UJ	<0.0017 UJ	<0.0015 U
Cyclohexane	mg/kg	NS	117	0.008 J	--	<0.00037 U	0.012 J	<0.00055 U	<0.00048 U	<0.00036 U	0.0037 J	<0.00047 U	<0.00075 U	0.0039 J	0.0022 J	<0.00045 U	2.200	<0.00064 U	0.0081	0.0021 J	<0.00048 U
Dibromochloromethane	mg/kg	0.032	38.9	<0.00087 UJ	--	<0.00053 U	<0.00089 UJ	<0.00079 U	<0.00069 UJ	<0.00051 U	<0.00051 UJ	<0.00067 U	<0.0011 U	<0.00089 UJ	<0.00071 UJ	<0.00064 UJ	<0.00095 UJ	<0.00091 UJ	<0.00074 UJ	<0.00075 UJ	<0.00068 U
Dichloromethane	mg/kg	0.0026	1,150	<0.0011 UJ	--	<0.00070 U	<0.0012 UJ	<0.0010 U	<0.00090 U	<0.00067 U	<0.00067 U	<0.00088 U	<0.0014 U	<0.0012 U	<0.00094 U	<0.00084 U	<0.0013 UJ	<0.0012 U	<0.00098 U	<0.00099 U	<0.00090 U
Ethylbenzene	mg/kg	1.57	35.4	<0.0010 UJ	--	<0.00063 U	<0.0010 UJ	<0.00092 U	<0.00081 UJ	<0.00060 U	0.0011 J	<0.00079 U	<0.0013 U	0.0017 J	<0.00084 UJ	<0.00075 UJ	0.880 J	<0.0011 UJ	0.0017 J	<0.00089 UJ	<0.00080 U
Freon 113	mg/kg	NS	910	<0.00069 UJ	--	<0.00042 U	<0.00070 UJ	<0.00062 U	<0.00054 U	<0.00040 U	<0.00040 U	<0.00053 U	<0.00084 U	<0.00070 U	<0.00056 U	<0.00050 U	<0.00075 UJ	<0.00072 U	<0.00059 U	<0.00060 U	<0.00054 U
Freon 12	mg/kg	3.0863	530	<0.00079 UJ	--	<0.00049 U	<0.00081 UJ	<0.00072 U	<0.00063 U	<0.00046 U	<0.00046 U	<0.00061 U	<0.00098 U	<0.00081 U	<0.00065 U	<0.00058 U	<0.00087 UJ	<0.00083 U	<0.00068 U	<0.00069 U	<0.00062 U
Isopropylbenzene	mg/kg	NS	268	<0.00090 UJ	--	<0.00055 UJ	<0.00092 UJ	<0.00081 U	<0.00071 UJ	<0.00053 U	<0.00053 UJ	0.0008 J	<0.0011 U	<0.00092 UJ	<0.00074 UJ	<0.00066 UJ	0.0024 J	<0.00094 UJ	<0.00077 UJ	0.032 J	<0.00071 U
Methyl acetate	mg/kg	NS	29,000	<0.0042 UJ	--	<0.0026 U	<0.0043 UJ	<0.0038 U	<0.0033 U	<0.0025 U	<0.0025 U	<0.0032 U	<0.0052 U	<0.0043 U	<0.0034 U	<0.0031 U	<0.0046 UJ	<0.0044 U	<0.0036 U	<0.0036 U	<0.0033 U
Methylcyclohexane	mg/kg	NS	67.6	<0.00064 UJ	--	<0.00039 U	0.012 J	<0.00058 U	<0.00051 U	<0.00037 U	0.0058	<0.00049 U	<0.00079 U	0.0048 J	0.0025 J	<0.00047 U	3.500	<0.00067 U	0.011	0.0021 J	0.0008 J
Methyl-tert-butyl-ether	mg/kg	0.027	282	<0.00052 UJ	--	<0.00032 U	<0.00053 UJ	<0.00047 U	<0.00041 U	<0.00030 U	<0.00030 U	<0.00040 U	<0.00064 U	<0.00053 U	<0.00042 U	<0.00038 U	<0.00057 UJ	<0.00054 U	<0.00044 U	<0.00045 U	<0.00041 U
Styrene	mg/kg	0.22	867	<0.00096 UJ	--	<0.00059 U	<0.00098 UJ	<0.00087 U	<0.00076 UJ	<0.00056 U	<0.00056 UJ	<0.00074 U	<0.0012 U	<0.00098 UJ	<0.00079 UJ	<0.00070 UJ	<0.0011 UJ	<0.0010 UJ	0.0011 J	<0.00083 UJ	<0.00076 U
Tetrachloroethene	mg/kg	0.0045	145	<0.00090 UJ	--	<0.00055 U	<0.00092 UJ	<0.00081 U	<0.00071 UJ	<0.00053 U	<0.00053 UJ	<0.00069 U	<0.0011 U	<0.00092 UJ	<0.00074 UJ	<0.00066 UJ	<0.00098 UJ	<0.00094 UJ	<0.00077 UJ	0.0039 J	0.0014 J
Toluene	mg/kg	1.1072	818	0.014 J	--	<0.00065 U	0.086 J	<0.00095 U	<0.00083 UJ	<0.00062 U	0.0083 J	<0.00081 U	0.0042 J	0.015 J	0.0046 J	0.00094 J	*21.000*	0.0051 J	0.050 J	0.010 J	0.0019 J
trans-1,2-Dichloroethene	mg/kg	0.0626	1,850	<0.00060 UJ	--	<0.00037 U	<0.00061 UJ	<0.00054 U	<0.00047 U	<0.00035 UJ	<0.00035 UJ	<0.00046 U	<0.00073 U	<0.00061 U	<0.00049 U	<0.00044 U	<0.00065 UJ	<0.00062 U	<0.00051 U	<0.00052 U	<0.00047 U
trans-1,3-Dichloropropene	mg/kg	NS	1,510	<0.0010 UJ	--	<0.00063 U	<0.0010 UJ	<0.00092 U	<0.00081 UJ	<0.00060 U	<0.00060 UJ	<0.00079 U	<0.0013 U	<0.0010 UJ	<0.00084 UJ	<0.00075 UJ	<0.0011 UJ	<0.0011 UJ	<0.00088 UJ	<0.00089 UJ	<0.00080 U
Trichloroethene	mg/kg	0.0036	8.41	<0.00035 UJ	--	<0.00022 U	<0.00036 UJ	<0.00032 U	<0.00028 U	<0.00021 U	<0.00021 U	<0.00027 U	<0.00043 U	<0.00036 U	<0.00029 U	<0.00026 U	<0.00038 UJ	<0.00037 U	<0.00030 U	<0.00030 U	<0.00028 U
Trichlorofluoromethane	mg/kg	4.4775	1,230	<0.0016 UJ	--	<0.00097 U	<0.0016 UJ	<0.0014 U	<0.0013 U	<0.00093 U	<0.00093 U	<0.0012 U	<0.0020 U	<0.0016 U	<0.0013 U	<0.0012 U	<0.0017 UJ	<0.0017 U	<0.0014 U	<0.0014 U	<0.0012 U
Vinyl Chloride	mg/kg	0.0001	2.08	<0.0020 UJ	--	<0.0013 U	<0.0021 UJ	<0.0018 U	<0.0016 U	<0.0012 U	<0.0012 U	<0.0016 U	<0.0025 U	<0.0021 U	<0.0017 U	<0.0015 U	<0.0022 UJ	<0.0021 U	<0.0018 U	<0.0018 U	<0.0016 U
Xylenes, Total	mg/kg	3.96	260	0.0037 J	--	<0.00057 U	0.013 J	<0.00084 U	<0.00073 UJ	<0.00054 U	0.0084 J	<0.00072 U	<0.0011 U	0.0099 J	0.0043 J	<0.00068 UJ	*7.900*	0.0019 J	0.022 J	0.0023 J	<0.00073 U
PCBs																					
PCB, Total [4]	mg/kg	0.0094	0.967	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1016	mg/kg	NS	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1221	mg/kg	NS	0.883	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1232	mg/kg	NS	0.792	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1242	mg/kg	NS	0.972	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1248	mg/kg	NS	0.975	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1254	mg/kg	NS	0.988	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1260	mg/kg	NS	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	MW13			MW14		MW15		MW16		MW17			MW18		MW19		NMW01D	
Sample / Duplicate:				MW13	MW13	MW13	MW14	MW14	MW15	MW15	MW16	MW16	MW17	MW17	MW17 DUP	MW18	MW18	MW19	MW19	NMW01D	NMW01D
Field Sample ID:				MW13-SS-010809	MSS-MW13-0406-010809	MW13-0406-010809	MW14-SS-010809	MW14-0607-010809	MW15-SS-010709	MW15-0895-010709	MW16-SS-010709	MW16-0809-010709	MW17-SS-010609	MW17-0405-010609	MWDUP002-010609	MW18-SS-121808	MW18-0607-121808	MW19-SS-010509	MW19-0405-010509	NMW01D-SS-012609	NMW01D-0455-012609
Sample Depth (feet):				0 - 0.5	4 - 6	4 - 6	0 - 0.5	6 - 7	0 - 0.5	8 - 9.5	1 - 2	8 - 9	0 - 0.5	4 - 5	4 - 5	0 - 0.5	6 - 7	0 - 0.5	4 - 5	0 - 0.5	4 - 5.5
Sample Date:				01/08/2009	01/08/2009	01/08/2009	01/08/2009	01/08/2009	01/07/2009	01/07/2009	01/07/2009	01/07/2009	01/06/2009	01/06/2009	01/06/2009	12/18/2008	12/18/2008	01/05/2009	01/05/2009	01/26/2009	01/26/2009
PAHs																					
2-Methylnaphthalene	mg/kg	NS	3,010	0.320 J	--	0.032 J	0.290 J	0.350 J	<0.110 U	<0.020 U	<3.200 U	<0.024 U	0.400 J	0.690	0.630	0.028 J	1.600	0.510	0.520 J	0.150 J	0.094 J
Acenaphthene	mg/kg	NS	45,200	0.028 J	--	<0.013 U	4.700	0.030 J	<0.058 U	<0.011 U	<1.700 U	<0.013 U	0.450	0.500	0.370 J	0.036 J	0.720 J	0.520	0.480 J	0.130 J	0.097 J
Acenaphthylene	mg/kg	NS	NS	0.027 J	--	<0.021 U	<0.170 U	0.130 J	<0.096 U	<0.018 U	<2.900 U	<0.022 U	0.130 J	0.140 J	<0.021 U	0.022 J	0.790 J	0.190 J	0.230 J	<0.023 U	<0.020 U
Anthracene	mg/kg	196.9492	100,000	0.120 J	--	0.034 J	10.000	0.410	0.570 J	<0.018 U	<2.900 U	<0.022 U	0.420 J	0.530	0.210 J	0.180 J	2.500 J	0.400 J	0.280 J	0.110 J	<0.020 U
Benzo(a)anthracene	mg/kg	NS	20.8	0.520	--	0.170 J	15.000	0.880	0.690 J	<0.021 U	<3.400 U	0.039 J	0.950	2.200	0.440	1.400	3.300 J	1.100	0.510	0.450	0.055 J
Benzo(a)pyrene	mg/kg	0.47	2.11	0.430	--	0.150 J	***9.000***	*0.570 J*	*0.700 J*	<0.021 U	<3.400 U	0.026 J	*0.900*	***2.300***	0.420	*1.100*	***2.300 J***	*0.930*	0.360 J	0.390 J	0.047 J
Benzo(b)fluoranthene	mg/kg	0.4793	21.1	*0.860 JK*	--	0.270 JK	*17.000 JK*	*1.200 JK*	*1.100 JK*	<0.027 U	<4.400 U	0.047 J	*1.400 JK*	*3.300 JK*	*0.620 JK*	*2.000*	*4.000 J*	*1.700 JK*	*0.640 JK*	*0.780 JK*	0.083 JK
Benzo(g,h,i)perylene	mg/kg	NS	NS	0.290 J	--	0.089 J	4.000	0.290 J	0.630 J	<0.017 U	<2.700 U	<0.020 U	0.820	1.700	0.300 J	0.820	1.400 J	0.770	0.270 J	0.310 J	<0.019 U
Benzo(k)fluoranthene	mg/kg	NS	211	<0.048 UKJ	--	<0.049 UKJ	<0.400 UKJ	<0.046 UKJ	<0.220 UKJ	<0.041 U	<6.800 U	<0.051 U	<0.053 UKJ	<0.052 UKJ	<0.048 UKJ	0.170 J	0.420 J	<0.056 UKJ	<0.062 UKJ	<0.053 UKJ	<0.048 UKJ
Chrysene	mg/kg	0.1446	2,110	*0.680*	--	*0.180 J*	*13.000*	*1.000*	*0.750 J*	<0.028 U	<4.600 U	<0.034 U	*1.000*	*2.400*	*0.490*	*1.200*	*3.700 J*	*1.300*	*0.510*	*0.480*	0.054 J
Dibenz(a,h)anthracene	mg/kg	NS	2.11	0.089 J	--	0.030 J	1.800 J	0.130 J	<0.110 U	<0.020 U	<3.200 U	<0.024 U	0.190 J	0.500	0.075 J	0.340 J	0.470 J	0.240 J	0.091 J	0.160 J	<0.023 U
Fluoranthene	mg/kg	88.8778	30,100	0.740	--	0.230 J	41.000	1.200 J	1.200 J	<0.037 U	<6.100 U	0.051 J	2.200	4.200	0.770	1.900	7.200 J	2.500	1.100	0.890	0.110 J
Fluorene	mg/kg	14.8299	30,100	0.043 J	--	<0.022 U	5.000	0.240 J	<0.100 U	<0.019 U	<3.100 U	<0.023 U	0.180 J	0.250 J	0.150 J	0.053 J	1.900	0.250 J	0.250 J	0.130 J	0.100 J
Indeno(1,2,3-cd)pyrene	mg/kg	NS	21.1	0.250 J	--	0.081 J	4.100	0.290 J	0.480 J	<0.023 U	<3.700 U	<0.028 U	0.640	1.400	0.250 J	0.680	1.200 J	0.600	0.220 J	0.260 J	<0.026 U
Naphthalene	mg/kg	0.6582	24.1	0.340 J	--	<0.038 U	0.320 J	*24.000*	<0.170 U	<0.032 U	<5.300 U	<0.040 U	<0.041 U	0.290 J	0.230 J	0.061 J	*3.500 J*	0.097 J	0.170 J	0.058 J	<0.037 U
Phenanthrene	mg/kg	NS	NS	0.650	--	0.150 J	46.000	1.500 J	0.570 J	<0.018 U	<2.900 U	0.040 J	1.400	2.500	0.630	0.670	9.100 J	1.700	0.860	0.520	0.065 J
Pyrene	mg/kg	54.5455	22,600	0.750	--	0.250 J	33.000	0.980	1.200 J	<0.013 U	<2.100 U	0.051 J	1.800	4.200	0.800	1.500	5.400 J	1.700	0.850	0.680	0.090 J
SVOCs																					
1,2,4-Trichlorobenzene	mg/kg	0.408	113	<0.0011 UJ	--	<0.00068 UJ	<0.0011 UJ	<0.0010 U	<0.00088 UJ	<0.00065 UJ	<0.00065 UJ	<0.00086 U	<0.0014 U	<0.0011 UJ	<0.00091 UJ	<0.00082 UJ	<0.0012 UJ	0.0022 J	<0.00095 UJ	<0.00097 UJ	<0.00088 U
2,2-Oxybis(1-chloropropane)	mg/kg	NS	1,020	<0.027 U	--	<0.028 U	<0.230 U	<0.026 U	<0.130 U	<0.024 U	<3.900 U	<0.029 U	<0.030 U	<0.030 U	<0.028 U	<0.029 U	<0.100 U	<0.032 U	<0.036 U	<0.030 U	<0.028 U
2,4-Dinitrotoluene	mg/kg	0.0001	7.37	<0.079 U	--	<0.080 U	<0.660 U	<0.075 U	<0.370 U	<0.068 U	<11.000 U	<0.084 U	<0.087 U	<0.086 U	<0.080 U	<0.082 U	<0.290 U	<0.093 U	<0.100 U	<0.087 U	<0.079 U
2,6-Dinitrotoluene	mg/kg	0.0001	1.54	<0.033 U	--	<0.034 U	<0.280 U	<0.032 U	<0.160 U	<0.029 U	<4.700 U	<0.036 U	<0.037 U	<0.037 U	<0.034 U	<0.035 U	<0.120 U	<0.039 U	<0.044 U	<0.037 U	<0.034 U
2-Chloronaphthalene	mg/kg	NS	60,300	<0.012 U	--	<0.012 U	<0.100 U	<0.011 U	<0.056 U	<0.010 U	<1.700 U	<0.013 U	<0.013 U	<0.013 U	<0.012 U	<0.012 U	<0.044 U	<0.014 U	<0.016 U	<0.013 U	<0.012 U
2-Nitroaniline	mg/kg	NS	8,010	<0.060 U	--	<0.061 U	<0.500 U	<0.057 U	<0.280 U	<0.052 U	<8.500 U	<0.064 U	<0.066 U	<0.065 U	<0.061 U	<0.062 U	<0.220 U	<0.070 U	<0.078 U	<0.066 U	<0.060 U
3,3-Dichlorobenzidine	mg/kg	NS	5.11	<0.110 U	--	<0.110 U	<0.900 U	<0.100 U	<0.510 U	<0.093 U	<15.000 U	<0.110 U	<0.120 U	<0.120 U	<0.110 U	<0.110 U	<0.400 U	<0.130 U	<0.140 U	<0.120 U	<0.110 U
3-Nitroaniline	mg/kg	NS	NS	<0.087 U	--	<0.089 U	<0.730 U	<0.083 U	<0.410 U	<0.076 U	<12.000 U	<0.093 U	<0.096 U	<0.095 U	<0.088 U	<0.091 U	<0.320 U	<0.100 U	<0.110 U	<0.097 U	<0.088 U
4-Bromodiphenyl ether	mg/kg	NS	26.9	<0.023 U	--	<0.023 U	<0.190 U	<0.022 U	<0.110 U	<0.020 U	<3.200 U	<0.024 U	<0.025 U	<0.025 U	<0.023 U	<0.024 U	<0.084 U	<0.027 U	<0.030 U	<0.025 U	<0.023 U
4-Chloroaniline	mg/kg	NS	11.5	<0.098 U	--	<0.100 U	<0.820 U	<0.093 U	<0.460 U	<0.085 U	<14.000 U	<0.100 U	<0.110 U	<0.110 U	<0.099 U	<0.100 U	<0.360 U	<0.120 U	<0.130 U	<0.110 U	<0.098 U
4-Chlorodiphenyl ether	mg/kg	NS	NS	<0.025 U	--	<0.026 U	<0.210 U	<0.024 U	<0.120 U	<0.022 U	<3.600 U	<0.027 U	<0.028 U	<0.027 U	<0.025 U	<0.026 U	<0.093 U	<0.030 U	<0.033 U	<0.028 U	<0.025 U
4-Nitroaniline	mg/kg	NS	115	<0.087 U	--	<0.088 U	<0.730 U	<0.083 U	<0.410 U	<0.075 U	<12.000 U	<0.092 U	<0.096 U	<0.095 U	<0.088 U	<0.090 U	<0.320 U	<0.100 U	<0.110 U	<0.096 U	<0.087 U
Acetophenone	mg/kg	NS	2,520	<0.024 U	--	<0.024 U	<0.200 U	<0.023 U	<0.110 U	<0.021 U	<3.400 U	<0.026 U	<0.026 U	<0.026 U	<0.024 U	<0.025 U	<0.088 U	<0.028 U	<0.031 U	<0.026 U	<0.024 U
Benzaldehyde	mg/kg	NS	818	<0.080 U	--	<0.082 U	<0.670 U	<0.076 U	<0.380 U	<0.069 U	<11.000 U	<0.085 U	<0.089 U	<0.087 U	<0.081 U	<0.083 U	<0.300 U	<0.094 U	<0.100 U	<0.089 U	<0.080 U
Biphenyl	mg/kg	NS	288	0.070 J	--	<0.061 U	<0.500 U	<0.057 U	<0.280 U	<0.052 U	<8.500 U	<0.064 U	<0.066 U	<0.065 U	<0.061 U	<0.062 U	0.340 J	<0.070 U	<0.078 U	<0.066 U	<0.060 U
Bis(2-Chloroethoxy)methane	mg/kg	NS	2,460	<0.027 U	--	<0.028 U	<0.230 U	<0.026 U	<0.130 U	<0.024 U	<3.900 U	<0.029 U	<0.030 U	<0.030 U	<0.028 U	<0.029 U	<0.100 U	<0.032 U	<0.036 U	<0.030 U	<0.028 U
Bis(2-Chloroethyl)ether	mg/kg	NS	1.29	<0.020 U	--	<0.020 U	<0.170 U	<0.019 U	<0.093 U	<0.017 U	<2.800 U	<0.021 U	<0.022 U	<0.022 U	<0.020 U	<0.021 U	<0.073 U	<0.023 U	<0.026 U	<0.022 U	<0.020 U
Bis(2-Ethylhexyl)phthalate	mg/kg	2.88	164	0.130 J	--	0.100 J	<0.460 U	0.280 J	<0.260 U	<0.048 U	***660.000***	<0.059 UJB	0.130 J	<0.060 U	0.210 J	0.590	*5.200 J*	0.800	<0.072 U	<0.061 U	<0.055 UJB
Butyl benzyl phthalate	mg/kg	NS	1,210	<0.051 U	--	0.110 J	<0.430 U	0.320 J	<0.240 U	0.055 J	<7.300 U	0.160 J	0.430 J	<0.056 U	<0.052 U	<0.053 U	<0.190 U	<0.061 U	<0.067 U	0.140 J	0.090 J
Caprolactam	mg/kg	NS	100,000	<0.130 U	--	<0.130 U	<1.100 U	<0.120 U	<0.600 U	<0.110 U	<18.000 U	<0.140 U	<0.140 U	<0.140 U	<0.130 U	<0.130 U	<0.470 U	<0.150 U	<0.160 U	<0.140 U	<0.130 U
Carbazole	mg/kg	NS	NS	<0.043 U	--	<0.044 U	2.500 J	0.110 J	<0.200 U	<0.037 U	<6.100 U	<0.046 U	0.180 J	0.250 J	0.140 J	0.120 J	0.880 J	0.240 J	0.210 J	0.064 J	<0.043 U
Dibenzofuran	mg/kg	NS	1,040	0.091 J	--	<0.024 U	2.500 J	0.210 J	<0.110 U	<0.021 U	<3.400 U	<0.026 U	0.400 J	0.540	0.470	0.034 J	1.000 J	0.480	0.530	0.032 J	<0.024 U
Diethyl phthalate	mg/kg	NS	100,000	<0.031 U	--	<0.032 U	<0.260 U	<0.030 U	<0.150 U	<0.027 U	<4.400 U	<0.033 U	<0.034 U	<0.034 U	<0.032 U	<0.032 U	<0.110 U	<0.037 U	<0.040 U	<0.034 U	<0.031 U
Dimethyl phthalate	mg/kg	NS	7,390	<0.027 U	--	<0.028 U	<0.230 U	<0.026 U	<0.130 U	<0.024 U	<3.900 U	<0.029 U	0.110 J	<0.030 U	<0.028 U	<0.029 U	<0.100 U	<0.032 U	<0.036 U	<0.030 U	<0.028 U
Di-n-butyl phthalate	mg/kg	5.0333	82,100	<0.035 U	--	<0.035 U	<0.290 U	<0.033 U	<0.160 U	<0.030 U	<4.900 U	<0.037 U	0.078 J	<0.038 U	<0.035 U	0.087 J	0.260 J	<0.041 U	<0.045 U	<0.038 U	<0.035 U
Di-n-octyl phthalate	mg/kg	NS	8,210	<0.017 U	--	<0.018 U	<0.140 U	0.093 J	<0.081 U	<0.015 U	<2.400 U	0.077 J	<0.019 U	<0.019 U	<0.017 U	<0.018 U	<0.064 U	<0.020 U	<0.022 U	<0.019 U	<0.017 U
Hexachlorobenzene	mg/kg	0.0252	1.15	<0.035 U	--	<0.035 U	<0.290 U	<0.033 U	<0.160 U	<0.030 U	<4.900 U	<0.037 U	<0.038 U	<0.038 U	<0.035 U	<0.036 U	<0.130 U	<0.041 U	<0.045 U	<0.038 U	<0.035 U
Hexachlorobutadiene	mg/kg	NS	7.19	<0.00084 UJ	--	<0.00052 UJ	<0.00086 UJ	<0.00076 U	<0.00066 UJ	<0.00049 UJ	<0.00049 UJ	<0.00065 U	<0.0010 U	<0.00085 UJ	<0.00069 UJ	<0.00061 UJ	<0.00092 UJ	<0.00088 UJ	<0.00072 UJ	<0.00073 UJ	<0.00066 U
Hexachlorocyclopentadiene	mg/kg	NS	10.8	<0.060 U	--	<0.061 U	<0.500 U	<0.057 U	<0.280 U	<0.052 U	<8.500 U	<0.064 U	<0.066 U	<0.065 U	<0.061 U	<0.062 U	<0.220 U	<0.070 U	<0.078 U	<0.066 U	<0.060 U
Hexachloroethane	mg/kg	NS	11.1	<0.025 U	--	<0.026 U	<0.210 U	<0.024 U	<0.120 U	<0.022 U	<3.600 U	<0.027 U	<0.028 U	<0.028 U	<0.026 U	<0.026 U	<0.094 U	<0.030 U	<0.033 UJ	<0.028 U	<0.026 U
Isophorone	mg/kg	NS	2,420	<0.020 U	--	<0.021 U	<0.170 U	<0.019 U	<0.096 U	<0.018 U	<2.900 U	<0.022 U	<0.022 U	<0.022 U	<0.021 U	<0.021 U	<0.075 U	<0.024 U	<0.026 U	<0.023 U	<0.020 U
Nitrobenzene	mg/kg	NS	32.4	<0.026 U	--	<0.027 U	<0.220 U	<0.025 U	<0.120 U	<0.023 U	<3.700 U	<0.028 U	<0.029 U	<0.029 U	<0.027 U	<0.027 U	<0.097 U	<0.031 U	<0.034 U	<0.029 U	<0.026 U
N-nitrosodi-n-propylamine	mg/kg	NS	0.328	<0.037 U	--	<0.038 U	<0.310 U	<0.035 U	<0.170 U	<0.032 U	<5.300 U	<0.040 U	<0.041 U	<0.040 U	<0.038 U	<0.039 U	<0.140 U	<0.044 U	<0.048 U	<0.041 U	<0.037 U
N-Nitrosodiphenylamine	mg/kg	0.0764	469	<0.025 U	--	<0.026 U	<0.210 U	<0.024 U	<0.120 U	<0.022 U	<3.600 U	<0.027 U	<0.028 U	<0.027 U	<0.025 U	<0.026 U	<0.093 U	<0.030 U	<0.033 U	<0.028 U	<0.025 U
Pyridine	mg/kg	0.0069	1,170	<0.160 U	--	<0.160 U	<1.300 U	<0.150 U	<0.730 U	<0.130 U	<22.000 U	<0.170 U	<0.170 U	<0.170 U	<0.160 U	<0.160 U	<0.570 U	<0.180 U	<0.200 U	<0.170 U	<0.160 U

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	MW13			MW14		MW15		MW16		MW17			MW18		MW19		NMW01D	
Sample / Duplicate:				MW13	MW13	MW13	MW14	MW14	MW15	MW15	MW16	MW16	MW17	MW17	MW17 DUP	MW18	MW18	MW19	MW19	NMW01D	NMW01D
Field Sample ID:				MW13-SS-010809	MSS-MW13-0406-010809	MW13-0406-010809	MW14-SS-010809	MW14-0607-010809	MW15-SS-010709	MW15-0895-010709	MW16-SS-010709	MW16-0809-010709	MW17-SS-010609	MW17-0405-010609	MWDUP002-010609	MW18-SS-121808	MW18-0607-121808	MW19-SS-010509	MW19-0405-010509	NMW01D-SS-012609	NMW01D-0455-012609
Sample Depth (feet):				0 - 0.5	4 - 6	4 - 6	0 - 0.5	6 - 7	0 - 0.5	8 - 9.5	1 - 2	8 - 9	0 - 0.5	4 - 5	4 - 5	0 - 0.5	6 - 7	0 - 0.5	4 - 5	0 - 0.5	4 - 5.5
Sample Date:				01/08/2009	01/08/2009	01/08/2009	01/08/2009	01/08/2009	01/07/2009	01/07/2009	01/07/2009	01/07/2009	01/06/2009	01/06/2009	01/06/2009	12/18/2008	12/18/2008	01/05/2009	01/05/2009	01/26/2009	01/26/2009
Phenols																					
2,4,5-Trichlorophenol	mg/kg	NS	82,100	<0.012 U	--	<0.012 U	<0.100 U	<0.011 U	<0.056 U	<0.010 UJ	<1.700 U	<0.013 U	<0.013 U	<0.013 U	<0.012 U	<0.012 U	<0.044 UJ	<0.014 U	<0.016 U	<0.013 U	<0.012 U
2,4,6-Trichlorophenol	mg/kg	NS	209	<0.012 U	--	<0.012 U	<0.100 U	<0.011 U	<0.056 U	<0.010 UJ	<1.700 U	<0.013 U	<0.013 U	<0.013 U	<0.012 U	<0.012 U	<0.044 UJ	<0.014 U	<0.016 U	<0.013 U	<0.012 U
2,4-Dichlorophenol	mg/kg	NS	2,460	<0.012 U	--	<0.012 U	<0.100 U	<0.011 U	<0.056 U	<0.010 U	<1.700 U	<0.013 U	<0.013 U	<0.013 U	<0.012 U	<0.012 U	<0.044 UJ	<0.014 U	<0.016 U	<0.013 U	<0.012 U
2,4-Dimethylphenol	mg/kg	NS	16,400	<0.079 U	--	<0.080 U	<0.660 U	<0.075 U	<0.370 U	<0.068 UJ	<11.000 U	<0.084 U	<0.087 U	<0.086 U	<0.080 U	<0.082 U	<0.290 U	<0.093 U	<0.100 U	<0.087 U	<0.079 U
2,4-Dinitrophenol	mg/kg	NS	1,640	<0.400 U	--	<0.410 U	<3.300 U	<0.380 U	<1.900 U	<0.350 UJ	<56.000 U	<0.420 U	<0.440 U	<0.430 U	<0.400 U	<0.410 U	<1.500 U	<0.470 U	<0.520 U	<0.440 U	<0.400 U
2-Chlorophenol	mg/kg	NS	5,840	<0.025 U	--	<0.026 U	<0.210 U	<0.024 U	<0.120 U	<0.022 U	<3.600 U	<0.027 U	<0.028 U	<0.027 U	<0.025 U	<0.026 U	<0.093 UJ	<0.030 U	<0.033 U	<0.028 U	<0.025 U
2-Methylphenol	mg/kg	NS	41,000	<0.016 U	--	<0.016 U	<0.130 U	<0.015 U	<0.073 U	<0.013 U	<2.200 U	<0.017 U	<0.017 U	<0.017 U	<0.016 U	<0.016 U	<0.057 U	<0.018 U	<0.020 U	<0.017 U	<0.016 U
2-Nitrophenol	mg/kg	NS	NS	<0.012 U	--	<0.012 U	<0.100 U	<0.011 U	<0.056 U	<0.010 UJ	<1.700 U	<0.013 U	<0.013 U	<0.013 U	<0.012 U	<0.012 U	<0.044 UJ	<0.014 U	<0.016 U	<0.013 U	<0.012 U
4-Chloro-3-methylphenol	mg/kg	NS	82,100	<0.079 U	--	<0.080 U	<0.660 U	<0.075 U	<0.370 U	<0.068 U	<11.000 U	<0.084 U	<0.087 U	<0.086 U	<0.080 U	<0.082 U	<0.290 U	<0.093 U	<0.100 U	<0.087 U	<0.079 U
4-Methylphenol	mg/kg	NS	82,100	<0.039 U	--	<0.040 U	<0.330 U	<0.038 U	<0.190 U	<0.034 U	<5.600 U	<0.042 U	<0.044 U	<0.043 U	<0.040 U	<0.041 U	<0.150 U	<0.046 U	<0.051 U	<0.044 U	<0.040 U
4-Nitrophenol	mg/kg	NS	NS	<0.120 U	--	<0.120 U	<0.970 U	<0.110 U	<0.550 U	<0.100 UJ	<16.000 U	<0.120 U	<0.130 U	<0.130 U	<0.120 U	<0.120 U	<0.430 UJ	<0.140 U	<0.150 U	<0.130 U	<0.120 U
4,6-Dinitro-2-methylphenol	mg/kg	NS	65.7	<0.390 U	--	<0.400 U	<3.300 U	<0.380 U	<1.900 U	<0.340 UJ	<56.000 U	<0.420 U	<0.440 U	<0.430 U	<0.400 U	<0.410 U	<1.500 U	<0.460 U	<0.510 U	<0.440 U	<0.400 U
Pentachlorophenol	mg/kg	0.0028	3.97	<0.390 U	--	<0.400 U	<3.300 U	<0.380 U	<1.900 U	<0.340 UJ	<56.000 U	<0.420 U	<0.440 U	<0.430 U	<0.400 U	<0.410 U	<1.500 U	<0.460 U	<0.510 U	<0.440 U	<0.400 U
Phenol	mg/kg	2.2946	100,000	<0.021 U	--	<0.022 U	<0.180 U	<0.021 U	<0.100 U	<0.019 U	<3.100 U	<0.023 U	<0.024 U	<0.023 U	<0.022 U	<0.022 U	0.310 J	<0.025 U	<0.028 U	<0.024 U	<0.022 U
Metals																					
Aluminum, Total	mg/kg	600	100,000	*2,800*	--	*3,400*	*6,300*	*13,000*	*3,100*	*2,800*	*7,700*	*3,400*	*9,000*	*7,000 J*	*3,800 J*	*5,500*	*4,700*	*4,400*	*12,000*	*4,700*	*8,800*
Antimony, Total	mg/kg	0.542	467	0.190 BJ-	--	0.077 BJ-	0.240 BJ-	0.030 BJ-	0.190 BJ-	0.028 BJ-	0.050 BJ-	0.470 J-	0.130 BJ-	*0.620 J*	0.260 J	0.036 BJ-	0.040 BJ-	*0.820 J-*	0.082 BJ-	*0.740 J-*	0.042 BJ-
Arsenic, Total [1]	mg/kg	0.584	8.3	*4.300*	--	*2.500*	*6.700*	*3.600*	*3.900*	*1.600*	*7.300*	***170.000***	*4.500*	***13.000 J***	*6.400 J*	*3.800*	*3.400*	*4.900*	*4.500*	*4.600*	*4.800*
Barium, Total	mg/kg	164.8	100,000	48.000 J-	--	30.000	110.000	*220.000*	21.000	11.000 J-	56.000	24.000	130.000	94.000 J	32.000 J	71.000	51.000	49.000 J+	110.000	100.000	100.000
Beryllium, Total	mg/kg	6.32	2,300	0.470	--	0.270	0.480	*6.600*	0.210	0.110	0.660	0.290	0.360	1.000 J	0.420 J	0.330	0.470	1.300	0.560	0.530	0.420
Cadmium, Total	mg/kg	0.752	985	*1.100*	--	0.420	*2.600*	*1.800*	0.400	0.230	0.570	0.340	*3.400*	*1.800 J*	0.720 J	0.550	0.470	*0.910*	*0.870*	*0.870*	*0.770*
Calcium, Total	mg/kg	NS	NS	21,000 J+	--	80,000	66,000	93,000	71,000	86,000	88,000	32,000	82,000	20,000 J	34,000 J	120,000	100,000	50,000	110,000	64,000	80,000
Chromium, Hexavalent	mg/kg	NS	6.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium, Total [3]	mg/kg	360,000	NS	11.000 J-	--	6.900	130.000	7.800	45.000	6.100	14.000	30,000	17.000	21.000 J	12.000 J	14.000	11.000	11.000 J-	19.000	15.000	14.000
Chromium, Trivalent	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt, Total	mg/kg	3.6073	347	3.500 J-	--	*3.800*	*4.200*	1.700	3.100	3.100	*4.700*	*5.900*	*4.600*	*8.700 J*	*5.000 J*	*4.600*	*3.700*	*7.800 J-*	*7.100*	*4.200*	*6.100*
Copper, Total	mg/kg	91.6	46,700	30.000 J-	--	12.000	71.000	7.500	21.000	5.900	32.000	15.000	38.000 J	*130.000 J*	43.000 J	17.000 J	19.000 J	37.000 J	19.000 J	19.000 J	19.000 J
Iron, Total	mg/kg	NS	100,000	10,000	--	6,300	14,000	13,000	10,000	6,700	14,000	7,400	14,000	29,000 J	15,000 J	19,000	7,800	7,200	17,000	8,800	15,000
Lead, Total	mg/kg	27	800	*52.000 J-*	--	20.000	*110.000*	9.800	*30.000*	4.400	*36.000*	*34.000*	*180.000*	*160.000 J*	*54.000 J*	*59.000*	*36.000*	*200.000*	*260.000*	***2,300 J***	*170.000 J*
Magnesium, Total	mg/kg	NS	NS	9,600 J+	--	27,000	26,000	41,000	39,000	36,000	43,000	16,000	32,000	9,600	15,000	57,000	38,000	22,000 J+	58,000	26,000	35,000
Manganese, Total	mg/kg	39.1244	25,900	*110.000*	--	*250.000*	*310.000*	*1,100*	*290.000*	*510.000*	*430.000*	*160.000*	*360.000*	*280.000*	*200.000*	*380.000*	*290.000*	*180.000*	*410.000*	*280.000 J*	*610.000 J*
Mercury, Total	mg/kg	0.208	3.13	0.150 J+	--	0.041	*0.450*	0.120	*1.000*	0.0093 B	0.064	*0.230*	0.110 J	*0.430 J*	0.063 J	0.150	0.110	0.062 J	*0.290*	0.110	0.026
Nickel, Total	mg/kg	13.0612	22,500	11.000 J-	--	8.700	*22.000*	5.900	10.000	8.200	13.000	11.000	*16.000*	*23.000*	*15.000*	*14.000*	11.000	*34.000 J-*	*19.000*	*14.000*	12.000
Potassium, Total	mg/kg	NS	NS	610	--	560	860	1,100	570	580	1,500	320 B	1,800	2,000 J	810 J	1,600	990	2,100	3,500	1,300	2,300
Selenium, Total	mg/kg	0.52	5,840	*1.100*	--	*0.660*	*1.000*	*4.000*	0.470 B	0.250 B	*0.590*	0.370 B	*0.620 B*	*1.700 J*	*0.870 J*	0.420 B	*0.820*	*1.100*	*0.830*	*0.600 B*	*0.590 B*
Silver, Total	mg/kg	0.8491	5,840	0.087 B	--	0.250	*1.300*	0.220	0.037 B	0.021 B	0.080 B	0.039 B	0.097 B	0.160 J	0.074 JB	0.130	0.072 B	0.082 BJ-	0.110 B	0.097 B	0.100 B
Sodium, Total	mg/kg	NS	NS	110 B	--	180 B	230 B	390 B	160 B	210 B	220 B	120 B	680	480 B	320 B	260 BJ+	350 BJ+	400 B	410 B	400 B	370 B
Thallium, Total	mg/kg	0.284	11.7	0.140	--	0.150	0.200	0.045 B	0.120	0.041 B	0.260	*0.740*	0.078 B	*0.460 J*	0.160 J	0.110 B	0.110	*1.000*	*0.330*	0.110 B	0.160
Vanadium, Total	mg/kg	60	5,840	9.000	--	11.000	10.000	6.900	14.000	12.000	18.000	<0.049 U	18.000	14.000	12.000	18.000	14.000	13.000	28.000	16.000	22.000
Zinc, Total	mg/kg	NS	100,000	67.000 J-	--	54.000	180.000	37.000	120.000	25.000	92.000	130.000	380.000	270.000 J	130.000 J	62.000 J	48.000 J	93.000 J	96.000	92.000 J	100.000 J
Inorganic - Cyanide																					
Cyanide, Amenable	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Reactive	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Total	mg/kg	4.04	195	0.91 J	--	<0.13 UJB	2.1 J	*7.9 J*	0.18 B	<0.11 U	0.4 B	0.2 B	0.44 B	0.39 B	0.14 B	0.28 B	0.59	0.51 BJ-	0.27 B	0.64 B	<0.12 U
Other																					
Sulfide, Reactive	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organic Matter	%	NS	NS	--	3.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent Moisture	%	NS	NS	16	17	18	20	12	11	3.6	12	22	24	23	18	20	9.5	29	36	24	17

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	NMW01S		NMW02S			NMW03S		NMW04S		S01	S02	S03	S04	S05	S06	S07	S08	S09
Sample / Duplicate:				NMW01S	NMW01S	NMW02S	NMW02S DUP	NMW02S	NMW03S	NMW03S	NMW04S	NMW04S	S01	S02	S03	S04	S05	S06	S07	S08	S09
Field Sample ID:				NMW01S-SS-012609	NMW01S-0405-012609	NMW02S-SS-012209	MWDUP004-012209	NMW02S-0708-012209	NMW03S-SS-012109	NMW03S-0405-012109	NMW04S-SS-011909	NMW04S-0506-011909	S01-E20W3	S02-E20W4	S03-E20W5	S04-E20W6	S05-E20W7	S06-E20W8	S07-E20W9	S08-E20X0	S09-E20X1
Sample Depth (feet):				0 - 0.5	4 - 5	0 - 0.5	0 - 0.5	7 - 8	0 - 0.5	4 - 5	0 - 0.5	5 - 6	3 - 4	2 - 4	0 - 3	1 - 2	1 - 2	2 - 3	1 - 4	4	2 - 5
Sample Date:				01/26/2009	01/26/2009	01/22/2009	01/22/2009	01/22/2009	01/21/2009	01/21/2009	01/19/2009	01/19/2009	09/27/2005	09/27/2005	09/27/2005	09/27/2005	09/27/2005	09/27/2005	09/27/2005	09/27/2005	09/27/2005
VOCs																					
1,1,1-Trichloroethane	mg/kg	0.1402	640	<0.00061 UJ	<0.00065 UJ	<0.00063 U	<0.00065 U	<0.00055 U	<0.0013 U	<0.00053 U	<0.00082 U	<0.029 U	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/kg	0.0002	3.6	<0.00071 UJ	<0.00076 UJ	<0.00074 U	<0.00077 U	<0.00064 UJ	<0.0015 UJ	<0.00062 UJ	<0.00096 UJ	<0.041 U	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/kg	0.0032	7.01	<0.0010 UJ	<0.0011 UJ	<0.0011 U	<0.0011 U	<0.00092 UJ	<0.0022 UJ	<0.00089 UJ	<0.0014 UJ	<0.039 U	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/kg	0.4834	22.2	<0.00025 UJ	<0.00026 UJ	<0.00026 U	<0.00026 U	<0.00022 U	<0.00052 U	<0.00021 U	<0.00033 U	<0.072 U	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	mg/kg	0.005	1,190	0.003 J	*0.0081 J*	<0.00072 U	<0.00074 U	<0.00062 U	<0.0015 U	<0.00060 U	0.0031 J	<0.072 U	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	mg/kg	0.0002	0.092	<0.00070 UJ	<0.00075 UJ	<0.00073 U	<0.00075 U	<0.00063 UJ	<0.0015 UJ	<0.00061 UJ	<0.00095 UJ	<0.120 U	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/kg	0.0000282	0.221	<0.00061 UJ	<0.00065 UJ	<0.00063 U	<0.00065 U	<0.00055 UJ	<0.0013 UJ	<0.00053 UJ	<0.00082 UJ	<0.036 U	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/kg	1.168	376	<0.00053 UJ	<0.00056 UJ	<0.00055 U	<0.00057 U	<0.00047 UJ	<0.0011 UJ	<0.00046 UJ	<0.00071 UJ	<0.130 U	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/kg	0.0028	2.87	<0.00082 UJ	<0.00087 UJ	<0.00085 U	<0.00088 U	<0.00073 U	<0.0017 U	<0.00071 U	<0.0011 U	<0.036 U	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/kg	0.0033	1.78	<0.00064 UJ	<0.00069 UJ	<0.00067 U	<0.00069 U	<0.00058 U	<0.0014 U	<0.00056 U	<0.00087 U	<0.066 U	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/kg	1.1528	297	<0.00056 UJ	<0.00060 UJ	<0.00058 U	<0.00060 U	<0.00050 UJ	<0.0012 UJ	<0.00049 UJ	<0.00076 UJ	<0.058 U	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/kg	0.144	16.4	<0.00091 UJ	<0.00097 UJ	<0.00095 U	<0.00098 U	<0.00082 UJ	<0.0019 UJ	<0.00079 UJ	<0.0012 UJ	<0.036 U	--	--	--	--	--	--	--	--	--
2-Butanone (MEK)	mg/kg	1.6661	28,400	0.020 J	<0.0023 UJ	0.0033 J	0.0058 J	0.006 J	<0.0046 U	0.0084 J	<0.0029 U	<0.420 U	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/kg	NS	1,760	<0.0057 UJ	<0.0061 UJ	<0.0059 U	<0.0061 U	<0.0051 U	<0.012 U	<0.0050 U	<0.0077 U	<0.310 U	--	--	--	--	--	--	--	--	--
4-Methyl-2-Pentanone (MIBK)	mg/kg	0.2252	3,360	<0.0051 UJ	<0.0054 UJ	<0.0053 U	<0.0055 U	<0.0046 UJ	<0.011 UJ	<0.0044 UJ	<0.0069 UJ	<0.320 U	--	--	--	--	--	--	--	--	--
Acetone	mg/kg	3.6766	100,000	0.150 JB	0.088 JB	0.014 J	0.031	0.047	0.013 J	0.074	0.011 J	1.200 J	--	--	--	--	--	--	--	--	--
Benzene	mg/kg	0.0051	7.07	0.0021 J	*0.006 J*	0.0029 J	*0.0061 J*	0.00076 J	0.0019 J	*0.013*	<0.00074 U	<0.065 U	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/kg	0.0003	1.83	<0.00026 UJ	<0.00027 UJ	<0.00027 U	<0.00028 U	<0.00023 UJ	<0.00055 UJ	<0.00022 UJ	<0.00035 UJ	<0.057 U	--	--	--	--	--	--	--	--	--
Bromoform	mg/kg	0.0023	113	<0.00027 UJ	<0.00029 UJ	<0.00028 U	<0.00029 U	<0.00024 UJ	<0.00057 UJ	<0.00023 UJ	<0.00036 UJ	<0.041 U	--	--	--	--	--	--	--	--	--
Bromomethane	mg/kg	0.0051	43	<0.00058 UJ	<0.00062 UJ	<0.00061 U	<0.00063 U	<0.00052 U	<0.0012 U	<0.00051 U	<0.00079 U	<0.063 U	--	--	--	--	--	--	--	--	--
Carbon Disulfide	mg/kg	0.5919	738	0.0071 J	0.0067 J	0.00099 J	0.0026 J	<0.00044 U	<0.0010 U	0.0021 J	<0.00066 U	<0.092 U	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/kg	0.0039	4.03	<0.00074 UJ	<0.00079 UJ	<0.00077 U	<0.00079 U	<0.00066 U	<0.0016 U	<0.00064 U	<0.001 U	<0.024 U	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/kg	0.1358	761	<0.00063 UJ	<0.00067 UJ	<0.00066 U	<0.00068 U	<0.00057 UJ	<0.0013 UJ	<0.00055 UJ	<0.00085 UJ	<0.043 U	--	--	--	--	--	--	--	--	--
Chloroethane	mg/kg	0.2266	2,120	<0.0010 UJ	<0.0011 UJ	<0.0011 U	<0.0011 U	<0.00093 U	<0.0022 U	<0.00090 U	<0.0014 U	<0.063 U	--	--	--	--	--	--	--	--	--
Chloroform	mg/kg	0.0033	1.98	<0.00034 UJ	<0.00036 UJ	<0.00035 U	<0.00036 U	<0.00030 U	<0.00072 U	<0.00029 U	<0.00046 U	<0.066 U	--	--	--	--	--	--	--	--	--
Chloromethane	mg/kg	0.0155	669	<0.00090 UJ	<0.00096 UJ	<0.00094 U	<0.00097 U	<0.00081 U	<0.0019 U	<0.00078 U	<0.0012 U	<0.072 U	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/kg	0.0412	2,340	<0.00065 UJ	<0.00070 UJ	<0.00068 U	<0.00070 U	<0.00059 U	<0.0014 U	<0.00057 U	<0.00088 U	<0.031 U	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/kg	NS	1,210	<0.0015 UJ	<0.0016 UJ	<0.0016 U	<0.0016 U	<0.0014 UJ	<0.0032 UJ	<0.0013 UJ	<0.002 UJ	<0.039 U	--	--	--	--	--	--	--	--	--
Cyclohexane	mg/kg	NS	117	0.0058 J	0.012 J	0.00074 J	0.0012 J	0.0029 J	0.0028 J	0.012	0.00068 J	<0.040 U	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/kg	0.032	38.9	<0.00067 UJ	<0.00071 UJ	<0.00069 U	<0.00072 U	<0.00060 UJ	<0.0014 UJ	<0.00058 UJ	<0.0009 UJ	<0.047 U	--	--	--	--	--	--	--	--	--
Dichloromethane	mg/kg	0.0026	1,150	<0.00088 UJ	<0.00094 UJ	<0.00091 U	<0.00094 U	<0.00079 U	<0.0019 U	<0.00076 U	<0.0012 U	<0.099 U	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/kg	1.57	35.4	0.0011 J	<0.00084 UJ	0.0012 J	0.003 J	<0.00070 UJ	<0.0017 UJ	0.0012 J	<0.0011 UJ	<0.049 U	--	--	--	--	--	--	--	--	--
Freon 113	mg/kg	NS	910	<0.00053 UJ	<0.00056 UJ	<0.00055 U	<0.00057 U	<0.00047 U	<0.0011 U	<0.00046 U	<0.00071 U	<0.094 U	--	--	--	--	--	--	--	--	--
Freon 12	mg/kg	3.0863	530	<0.00061 UJ	<0.00065 UJ	<0.00063 U	<0.00065 U	<0.00055 U	<0.0013 U	<0.00053 U	<0.00082 U	<0.031 U	--	--	--	--	--	--	--	--	--
Isopropylbenzene	mg/kg	NS	268	<0.00069 UJ	<0.00074 UJ	0.0011 J	0.0031 J	<0.00062 UJ	<0.0015 UJ	0.00071 J	<0.00093 UJ	<0.041 U	--	--	--	--	--	--	--	--	--
Methyl acetate	mg/kg	NS	29,000	<0.0032 UJ	0.029 J	<0.0033 U	0.0074 J	<0.0029 U	<0.0069 U	<0.0028 U	<0.0043 U	<0.340 U	--	--	--	--	--	--	--	--	--
Methylcyclohexane	mg/kg	NS	67.6	0.0076 J	0.020 J	0.001 J	0.0022 J	0.003 J	0.0037 J	0.018	0.001 J	<0.060 U	--	--	--	--	--	--	--	--	--
Methyl-tert-butyl-ether	mg/kg	0.027	282	<0.00040 UJ	<0.00042 UJ	<0.00041 U	<0.00043 U	<0.00036 U	<0.00085 U	<0.00035 U	<0.00054 U	<0.072 U	--	--	--	--	--	--	--	--	--
Styrene	mg/kg	0.22	867	<0.00074 UJ	<0.00079 UJ	<0.00077 U	<0.00079 U	<0.00066 UJ	<0.0016 UJ	<0.00064 UJ	<0.001 UJ	<0.037 U	--	--	--	--	--	--	--	--	--
Tetrachloroethene	mg/kg	0.0045	145	0.0015 J	*0.0062 J*	<0.00072 U	<0.00074 U	0.00079 JJ	0.0034 J	0.0012 J	0.0016 J	<0.039 U	--	--	--	--	--	--	--	--	--
Toluene	mg/kg	1.1072	818	0.010 J	0.017 J	0.0024 J	0.0043 J	0.0011 JJ	0.0041 J	0.011 J	<0.0011 UJ	<0.056 U	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/kg	0.0626	1,850	<0.00046 UJ	<0.00049 UJ	<0.00047 U	<0.00049 U	<0.00041 U	<0.00097 U	<0.00040 U	<0.00062 U	<0.064 U	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/kg	NS	1,510	<0.00078 UJ	<0.00084 UJ	<0.00081 U	<0.00084 U	<0.00070 UJ	<0.0017 UJ	<0.00068 UJ	<0.0011 UJ	<0.059 U	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/kg	0.0036	8.41	<0.00027 UJ	<0.00029 UJ	<0.00028 U	<0.00029 U	<0.00024 U	<0.00057 U	<0.00023 U	<0.00036 U	<0.033 U	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/kg	4.4775	1,230	<0.0012 UJ	<0.0013 UJ	<0.0013 U	<0.0013 U	<0.0011 U	<0.0026 U	<0.0011 U	<0.0016 U	<0.072 U	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/kg	0.0001	2.08	<0.0016 UJ	<0.0017 UJ	<0.0016 U	<0.0017 U	<0.0014 U	<0.0033 U	<0.0014 U	<0.0021 U	<0.039 U	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/kg	3.96	260	0.0087 J	0.011 J	0.0036 J	0.009	<0.00064 UJ	<0.0015 UJ	0.011 J	<0.00096 UJ	<0.050 U	--	--	--	--	--	--	--	--	--
PCBs																					
PCB, Total [4]	mg/kg	0.0094	0.967	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1016	mg/kg	NS	28	--	--	--	--	--	--	--	--	--	<0.039 U	<0.037 U	<0.040 U	<0.038 U	<0.038 U	<0.040 U	<0.042 U	<0.042 U	<0.042 U
PCB-1221	mg/kg	NS	0.883	--	--	--	--	--	--	--	--	--	<0.080 U	<0.075 U	<0.081 U	<0.078 U	<0.078 U	<0.082 U	<0.086 U	<0.086 U	<0.085 U
PCB-1232	mg/kg	NS	0.792	--	--	--	--	--	--	--	--	--	<0.039 U	<0.037 U	<0.040 U	<0.038 U	<0.038 U	<0.040 U	<0.042 U	<0.042 U	<0.042 U
PCB-1242	mg/kg	NS	0.972	--	--	--	--	--	--	--	--	--	<0.039 U	<0.037 U	<0.040 U	<0.038 U	<0.038 U	<0.040 U	<0.042 U	<0.042 U	<0.042 U
PCB-1248	mg/kg	NS	0.975	--	--	--	--	--	--	--	--	--	<0.039 U	<0.037 U	<0.040 U	<0.038 U	<0.038 U	<0.040 U	<0.042 U	<0.042 U	<0.042 U
PCB-1254	mg/kg	NS	0.988	--	--	--	--	--	--	--	--	--	<0.039 U	<0.037 U	<0.040 U	<0.038 U	<0.038 U	<0.040 U	<0.042 U	<0.042 U	<0.042 U
PCB-1260	mg/kg	NS	1	--	--	--	--	--	--	--	--	--	<0.039 U	<0.037 U	<0.040 U	<0.038 U	<0.038 U	<0.040 U	<0.042 U	<0.042 U	<0.042 U

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	NMW01S		NMW02S			NMW03S		NMW04S		S01	S02	S03	S04	S05	S06	S07	S08	S09
Sample / Duplicate:				NMW01S	NMW01S	NMW02S	NMW02S DUP	NMW02S	NMW03S	NMW03S	NMW04S	NMW04S	S01	S02	S03	S04	S05	S06	S07	S08	S09
Field Sample ID:				NMW01S-SS-012609	NMW01S-0405-012609	NMW02S-SS-012209	MWDUP004-012209	NMW02S-0708-012209	NMW03S-SS-012109	NMW03S-0405-012109	NMW04S-SS-011909	NMW04S-0506-011909	S01-E20W3	S02-E20W4	S03-E20W5	S04-E20W6	S05-E20W7	S06-E20W8	S07-E20W9	S08-E20X0	S09-E20X1
Sample Depth (feet):				0 - 0.5	4 - 5	0 - 0.5	0 - 0.5	7 - 8	0 - 0.5	4 - 5	0 - 0.5	5 - 6	3 - 4	2 - 4	0 - 3	1 - 2	1 - 2	2 - 3	1 - 4	4	2 - 5
Sample Date:				01/26/2009	01/26/2009	01/22/2009	01/22/2009	01/22/2009	01/21/2009	01/21/2009	01/19/2009	01/19/2009	09/27/2005	09/27/2005	09/27/2005	09/27/2005	09/27/2005	09/27/2005	09/27/2005	09/27/2005	09/27/2005
PAHs																					
2-Methylnaphthalene	mg/kg	NS	3,010	0.150 J	0.180 J	1.100 JJ	0.540 JJ	0.490 J	1.300 J	3.500 J	0.380 J	<0.022 U	0.680	<1.900 U	0.890 J	0.680 J	0.110	4.800 D	0.170 J	<64.000 UJ	0.680
Acenaphthene	mg/kg	NS	45,200	<0.012 U	0.170 J	3.700 JJ	1.200 J	0.210 JJ	1.300 J	2.200 J	0.590 J	<0.012 U	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	0.092 J	<0.420 U	<64.000 UJ	<0.420 U
Acenaphthylene	mg/kg	NS	NS	0.026 J	<0.021 U	0.400 J	0.210 J	0.200 JJ	4.500 J	6.200 J	0.077 J	<0.019 U	<0.390 U	0.660 J	<2.000 U	<1.900 U	0.097 J	0.400 JD	<0.420 U	55.000 J	0.180 J
Anthracene	mg/kg	196.9492	100,000	0.086 J	0.380 J	7.900 J	5.100	0.540 J	7.000 J	13.000 J	1.400 J	<0.019 U	<0.390 U	0.610 J	1.600 J	0.720 J	0.160 J	0.110 J	0.100 J	94.000 J	0.220 J
Benzo(a)anthracene	mg/kg	NS	20.8	0.250 J	1.500 J	17.000 J	14.000	0.850 J	**38.000**	**36.000 J**	5.000 J	0.025 J	0.280 J	3.600	3.900	3.100	0.590	0.480 JD	0.380 J	**210.000 J**	0.960
Benzo(a)pyrene	mg/kg	0.47	2.11	0.190 J	*1.700 J*	***13.000 J***	***13.000 J***	*0.520 J*	***35.000 J***	***35.000 J***	***4.300 J***	0.028 J	0.230 J	***5.000***	***3.400***	***2.200***	*0.480*	*0.490 JD*	0.310 J	***170.000 J***	*0.680*
Benzo(b)fluoranthene	mg/kg	0.4793	21.1	0.400 JK	*2.600 JK*	***23.000 JK***	***22.000 JK***	*0.970 JK*	***63.000 JK***	***60.000 JK***	*7.500 JK*	0.056 JK	0.340 J	*5.500*	*3.700*	*2.200*	*0.680*	*0.850 JD*	0.380 J	***220.000 J***	*2.100*
Benzo(g,h,i)perylene	mg/kg	NS	NS	0.190 J	1.100 J	7.500 J	8.000	0.310 JJ	21.000	25.000	2.600 J	0.031 J	0.120	2.700	1.600 J	0.930 J	0.240 J	0.360 JD	0.170 J	100.000 J	1.600
Benzo(k)fluoranthene	mg/kg	NS	211	<0.047 UKJ	<0.050 UKJ	<0.200 UKJ	<0.240 UKJ	<0.047 UKJ	<0.530 UKJ	<0.720 UKJ	<0.054 UKJ	<0.046 UKJ	0.300 J	5.300	3.700	2.800	0.510	0.540 JD	0.360 J	120.000 J	0.940
Chrysene	mg/kg	0.1446	2,110	*0.310 J*	*1.400 J*	*16.000 J*	*14.000*	*0.920 J*	*38.000*	*37.000*	*5.200 J*	<0.031 U	*0.470*	*4.600*	*4.600*	*3.400*	*0.740*	*0.970 JD*	*0.500*	*220.000 J*	*1.900*
Dibenz(a,h)anthracene	mg/kg	NS	2.11	0.140 J	0.370 J	**3.000 JJ**	2.100 J	0.160 JJ	**6.500 J**	**7.400 J**	1.100 J	0.110 J	<0.390 U	1.200 J	0.660 J	0.430 J	0.120 J	0.130 J	0.097 J	**43.000 J**	0.450
Fluoranthene	mg/kg	88.8778	30,100	0.480	2.400 J	49.000 J	32.000	2.300 J	70.000	*91.000 J*	12.000 J	<0.041 U	0.450	3.700	7.600	6.200	0.970	0.790 JD	0.600	*360.000 J*	2.400
Fluorene	mg/kg	14.8299	30,100	0.120 J	0.190 J	4.300 J	1.600 J	0.570 J	2.300 J	6.400 J	0.630 J	<0.021 U	<0.390 U	<1.900 U	0.650 J	<1.900 U	<0.380 U	0.120 J	<0.420 U	*28.000 J*	<0.420 U
Indeno(1,2,3-cd)pyrene	mg/kg	NS	21.1	0.150 J	0.900	6.600 J	7.000	0.250 JJ	19.000	21.000	2.200 J	<0.025 U	0.160 J	3.300	1.900 J	1.200 J	0.380 J	0.450 JD	0.290 J	**120.000 J**	1.500
Naphthalene	mg/kg	0.6582	24.1	0.050 J	0.150 J	0.230 J	<0.180 UJ	*1.400 J*	*2.400 J*	*5.900 J*	0.120 J	<0.035 U	0.270 J	0.410 J	*2.000*	*0.660 J*	0.110 J	*9.600 D*	0.170 J	***28.000 J***	*0.950*
Phenanthrene	mg/kg	NS	NS	0.310 J	1.600 J	41.000 J	15.000	3.900 J	19.000	47.000 J	5.800 J	0.021 J	0.650	1.500 J	4.000	3.800	0.540	1.300 JD	0.460	190.000 J	1.800
Pyrene	mg/kg	54.5455	22,600	0.340 J	1.800	35.000 J	23.000	1.700 J	51.000	*58.000 J*	10.000 J	0.024 J	0.340 J	3.500	6.200	4.800	0.860	0.740 JD	0.450	*330.000 J*	2.100
SVOCs																					
1,2,4-Trichlorobenzene	mg/kg	0.408	113	<0.00085 UJ	<0.00091 UJ	<0.00089 U	<0.00092 U	<0.00077 UJ	<0.0018 UJ	<0.00074 UJ	<0.0012 UJ	<0.067 U	--	--	--	--	--	--	--	--	--
2,2-Oxybis(1-chloropropane)	mg/kg	NS	1,020	<0.027 U	<0.029 UJ	<0.110 U	<0.140 UJ	<0.027 U	<0.310 UJ	<0.410 UJ	<0.031 U	<0.026 U	<0.390 UJ	<1.900 UJ	<2.000 UJ	<1.900 UJ	<0.380 UJ	<0.400 UJ	<0.420 UJ	<64.000 UJ	<0.420 UJ
2,4-Dinitrotoluene	mg/kg	0.0001	7.37	<0.077 U	<0.082 U	<0.320 U	<0.390 UJ	<0.077 U	<0.880 UJ	<1.200 UJ	<0.088 U	<0.076 U	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	<0.400 U	<0.420 U	<64.000 UJ	<0.420 U
2,6-Dinitrotoluene	mg/kg	0.0001	1.54	<0.033 U	<0.035 U	<0.140 U	<0.160 UJ	<0.033 U	<0.370 UJ	<0.500 UJ	<0.037 U	<0.032 U	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	<0.400 U	<0.420 U	<64.000 UJ	<0.420 U
2-Chloronaphthalene	mg/kg	NS	60,300	<0.012 U	<0.012 U	<0.049 U	<0.059 UJ	<0.012 U	<0.130 UJ	<0.180 UJ	<0.013 U	<0.011 U	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	<0.400 U	<0.420 U	<64.000 UJ	<0.420 U
2-Nitroaniline	mg/kg	NS	8,010	<0.058 U	<0.062 U	<0.250 U	<0.290 UJ	<0.058 U	<0.660 UJ	<0.900 UJ	<0.067 U	<0.057 U	<0.990 U	<4.700 U	<5.000 U	<4.800 U	<0.970 U	<1.000 U	<1.100 U	<160.000 UJ	<1.100 U
3,3-Dichlorobenzidine	mg/kg	NS	5.11	<0.110 U	<0.110 U	<0.440 U	<0.530 UJ	<0.100 U	<1.200 UJ	<1.600 UJ	<0.120 U	<0.100 U	<0.390 UJ	<1.900 UJ	<2.000 UJ	<1.900 UJ	<0.380 U	<0.400 U	<0.420 U	<64.000 UJ	<0.420 U
3-Nitroaniline	mg/kg	NS	NS	<0.085 U	<0.091 U	<0.360 U	<0.430 UJ	<0.085 U	<0.970 UJ	<1.300 UJ	<0.098 U	<0.084 U	<0.990 U	<4.700 U	<5.000 U	<4.800 U	<0.970 U	<1.000 U	<1.100 U	<160.000 UJ	<1.100 U
4-Bromodiphenyl ether	mg/kg	NS	26.9	<0.022 U	<0.024 U	<0.093 U	<0.110 UJ	<0.022 U	<0.250 UJ	<0.340 UJ	<0.025 U	<0.022 U	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	<0.400 U	<0.420 U	<64.000 UJ	<0.420 U
4-Chloroaniline	mg/kg	NS	11.5	<0.096 U	<0.100 U	<0.400 U	<0.480 UJ	<0.095 U	<1.100 UJ	<1.500 UJ	<0.110 U	<0.094 U	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	<0.400 U	<0.420 U	<64.000 UJ	<0.420 U
4-Chlorodiphenyl ether	mg/kg	NS	NS	<0.025 U	<0.026 U	<0.100 U	<0.120 UJ	<0.024 U	<0.280 UJ	<0.380 UJ	<0.028 U	<0.024 U	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	<0.400 U	<0.420 U	<64.000 UJ	<0.420 U
4-Nitroaniline	mg/kg	NS	115	<0.085 U	<0.090 U	<0.360 U	<0.430 UJ	<0.084 U	<0.960 UJ	<1.300 UJ	<0.097 U	<0.083 U	<0.990 U	<4.700 U	<5.000 U	<4.800 U	<0.970 U	<1.000 U	<1.100 U	<160.000 UJ	<1.100 U
Acetophenone	mg/kg	NS	2,520	<0.023 U	<0.025 U	<0.098 U	<0.120 UJ	0.025 JJ	<0.270 UJ	<0.360 UJ	<0.027 U	<0.023 U	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	<0.400 U	<0.420 U	<64.000 UJ	0.690
Benzaldehyde	mg/kg	NS	818	<0.078 U	<0.084 U	<0.330 U	<0.390 UJ	<0.078 U	<0.890 UJ	<1.200 UJ	<0.090 U	<0.077 U	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	<0.400 U	<0.420 U	<64.000 UJ	<0.420 U
Biphenyl	mg/kg	NS	288	<0.058 U	<0.062 U	<0.250 U	<0.290 UJ	0.110 JJ	<0.660 UJ	<0.900 UJ	<0.067 U	<0.057 U	0.280	<1.900 U	<2.000 U	<1.900 U	<0.380 U	0.820 JD	<0.420 U	<64.000 UJ	0.200 J
Bis(2-Chloroethoxy)methane	mg/kg	NS	2,460	<0.027 U	<0.029 U	<0.110 U	<0.140 UJ	<0.027 U	<0.310 UJ	<0.410 UJ	<0.031 U	<0.026 U	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	<0.400 U	<0.420 U	<64.000 UJ	<0.420 U
Bis(2-Chloroethyl)ether	mg/kg	NS	1.29	<0.019 U	<0.021 U	<0.081 U	<0.098 UJ	<0.019 U	<0.220 UJ	<0.300 UJ	<0.022 U	<0.019 U	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	<0.400 U	<0.420 U	<64.000 UJ	<0.420 U
Bis(2-Ethylhexyl)phthalate	mg/kg	2.88	164	<0.054 UJB	<0.057 UJB	0.250 J	<0.270 UJB	<0.054 UJB	<0.610 UJ	<0.820 UJ	0.510	<0.053 UJB	0.170 J	<1.900 U	0.440 J	<1.900 U	<0.380 U	0.600 JD	0.130 J	<64.000 UJ	<0.420 U
Butyl benzyl phthalate	mg/kg	NS	1,210	<0.050 U	0.120 J	<0.210 U	0.400 JJ	0.084 JJ	<0.570 UJ	<0.770 UJ	0.071 J	<0.049 U	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	<0.400 U	<0.420 U	<64.000 UJ	<0.420 U
Caprolactam	mg/kg	NS	100,000	<0.120 U	<0.130 U	<0.520 U	<0.620 UJ	<0.120 U	<1.400 UJ	<1.900 UJ	<0.140 U	<0.120 U	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	<0.400 U	<0.420 U	64.000 UR	<0.420 U
Carbazole	mg/kg	NS	NS	0.055 J	0.200 J	3.300 JJ	1.200 J	0.600 J	1.200 J	2.400 J	0.340 J	<0.041 U	<0.390 UJ	<1.900 UJ	<2.000 UJ	<1.900 UJ	<0.380 UJ	<0.400 UJ	<0.420 UJ	19.000 J	0.110 J
Dibenzofuran	mg/kg	NS	1,040	0.031 J	0.100 J	2.200 JJ	0.690 J	0.410 J	0.990 J	4.500 J	0.180 J	<0.023 U	<0.390 U	<1.900 U	0.480 J	0.430 J	0.078 J	0.580 JD	0.096 J	18.000 J	0.360 J
Diethyl phthalate	mg/kg	NS	100,000	<0.030 U	<0.032 U	<0.130 U	<0.150 UJ	<0.030 U	<0.350 UJ	<0.470 UJ	<0.035 U	<0.030 U	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	<0.400 U	<0.420 U	<64.000 UJ	<0.420 U
Dimethyl phthalate	mg/kg	NS	7,390	<0.027 U	<0.029 U	<0.110 U	<0.140 UJ	<0.027 U	<0.310 UJ	<0.410 UJ	<0.031 U	<0.026 U	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	<0.400 U	<0.420 U	<64.000 UJ	<0.420 U
Di-n-butyl phthalate	mg/kg	5.0333	82,100	<0.034 U	<0.036 U	<0.140 U	<0.170 UJ	<0.034 U	<0.390 UJ	<0.520 UJ	<0.039 U	<0.033 U	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	<0.400 U	<0.420 U	<64.000 UJ	<0.420 U
Di-n-octyl phthalate	mg/kg	NS	8,210	<0.017 U	<0.018 U	<0.071 U	<0.085 UJ	<0.017 U	<0.190 UJ	<0.260 UJ	<0.019 U	<0.016 U	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	<0.400 U	<0.420 U	<64.000 UJ	<0.420 U
Hexachlorobenzene	mg/kg	0.0252	1.15	<0.034 U	<0.036 U	<0.140 U	<0.170 UJ	<0.034 U	<0.390 UJ	<0.520 UJ	<0.039 U	<0.033 U	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	<0.400 U	<0.420 U	<64.000 UJ	<0.420 U
Hexachlorobutadiene	mg/kg	NS	7.19	<0.00064 UJ	<0.00069 UJ	<0.00067 UJ	<0.00069 UJ	<0.00058 UJ	<0.0014 UJ	<0.00056 UJ	<0.00087 UJ	<0.070 U	<0.390 UJ	<1.900 U	<2.000 UJ	<1.900 U	<0.380 U	<0.400 U	<0.420 U	<64.000 UJ	<0.420 U
Hexachlorocyclopentadiene	mg/kg	NS	10.8	<0.058 U	<0.062 UJ	<0.250 U	<0.290 UJ	<0.058 U	<0.660 UJ	<0.900 UJ	<0.067 U	<0.057 U	<0.390 U	<1.900 UJ	<2.000 UJ	<1.900 UJ	<0.380 UJ	<0.400 UJ	<0.420 UJ	<64.000 UJ	<0.420 UJ
Hexachloroethane	mg/kg	NS	11.1	<0.025 U	<0.027 U	<0.100 U	<0.130 UJ	<0.025 U	<0.280 UJ	<0.380 UJ	<0.029 U	<0.024 U	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	<0.400 U	<0.420 U	<64.000 UJ	<0.420 U
Isophorone	mg/kg	NS	2,420	<0.020 U	<0.021 U	<0.210 UJ	<0.100 UJ	<0.020 U	<0.230 UJ	<0.300 UJ	<0.023 U	<0.019 U	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	<0.400 U	<0.420 U	<64.000 UJ	<0.420 U
Nitrobenzene	mg/kg	NS	32.4	<0.026 U	<0.027 U	<0.110 U	<0.130 UJ	<0.026 U	<0.290 UJ	<0.390 UJ	<0.029 U	<0.025 U	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	<0.400 U	<0.420 U	<64.000 UJ	<0.420 U
N-nitrosodi-n-propylamine	mg/kg	NS	0.328	<0.036 U	<0.039 U	<0.150 U	<0.180 UJ	<0.036 U	<0.410 UJ	<0.560 UJ	<0.041 U	<0.035 U	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	<0.400 U	<0.420 U	<64.000 UJ	<0.420 U
N-Nitrosodiphenylamine	mg/kg	0.0764	469	<0.025 U	<0.026 U	0.100 UR	<0.120 UJ	<0.024 UJ	<0.280 UJ	<0.380 UJ	<0.084 UJ	<0.024 UJ	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	<0.400 U	<0.420 U	<64.000 UJ	<0.420 U
Pyridine	mg/kg	0.0069	1,170	<0.150 U	<0.160 U	<0.640 U	<0.760 UJ	<0.150 U	<1.700 UJ	<2.300 UJ	<0.170 U	<0.150 U	--	--	--	--	--	--	--	--	--

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	NMW01S		NMW02S			NMW03S		NMW04S		S01	S02	S03	S04	S05	S06	S07	S08	S09
Sample / Duplicate:				NMW01S	NMW01S	NMW02S	NMW02S DUP	NMW02S	NMW03S	NMW03S	NMW04S	NMW04S	S01	S02	S03	S04	S05	S06	S07	S08	S09
Field Sample ID:				NMW01S-SS-012609	NMW01S-0405-012609	NMW02S-SS-012209	MWDUP004-012209	NMW02S-0708-012209	NMW03S-SS-012109	NMW03S-0405-012109	NMW04S-SS-011909	NMW04S-0506-011909	S01-E20W3	S02-E20W4	S03-E20W5	S04-E20W6	S05-E20W7	S06-E20W8	S07-E20W9	S08-E20X0	S09-E20X1
Sample Depth (feet):				0 - 0.5	4 - 5	0 - 0.5	0 - 0.5	7 - 8	0 - 0.5	4 - 5	0 - 0.5	5 - 6	3 - 4	2 - 4	0 - 3	1 - 2	1 - 2	2 - 3	1 - 4	4	2 - 5
Sample Date:				01/26/2009	01/26/2009	01/22/2009	01/22/2009	01/22/2009	01/21/2009	01/21/2009	01/19/2009	01/19/2009	09/27/2005	09/27/2005	09/27/2005	09/27/2005	09/27/2005	09/27/2005	09/27/2005	09/27/2005	09/27/2005
Phenols																					
2,4,5-Trichlorophenol	mg/kg	NS	82,100	<0.012 U	<0.012 U	<0.049 U	<0.059 UJ	<0.012 U	<0.130 UJ	<0.180 UJ	<0.013 U	<0.011 U	<0.990 U	<4.700 U	<5.000 U	<4.800 U	<0.970 U	<1.000 U	<1.100 U	<160.000 UJ	<1.100 U
2,4,6-Trichlorophenol	mg/kg	NS	209	<0.012 U	<0.012 U	<0.049 U	<0.059 UJ	<0.012 U	<0.130 UJ	<0.180 UJ	<0.013 U	<0.011 U	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	<0.400 U	<0.420 U	<64.000 UJ	<0.420 U
2,4-Dichlorophenol	mg/kg	NS	2,460	<0.012 U	<0.012 U	<0.049 U	<0.059 UJ	<0.012 U	<0.130 UJ	<0.180 UJ	<0.013 U	<0.011 U	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	<0.400 U	<0.420 U	<64.000 UJ	<0.420 U
2,4-Dimethylphenol	mg/kg	NS	16,400	<0.077 U	<0.082 U	<0.320 U	<0.390 UJ	0.180 JJ	<0.880 UJ	<1.200 UJ	<0.088 U	<0.076 U	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	2.000	<0.420 U	<64.000 UJ	<0.420 U
2,4-Dinitrophenol	mg/kg	NS	1,640	<0.390 U	<0.420 U	<1.600 U	<2.000 UJ	<0.390 U	<4.400 UJ	<6.000 UJ	<0.450 U	<0.380 U	<0.990 UJ	<4.700 UJ	<5.000 UJ	<4.800 UJ	<0.970 U	<1.000 U	<1.100 U	<160.000 UJ	<1.100 U
2-Chlorophenol	mg/kg	NS	5,840	<0.025 U	<0.026 U	<0.100 U	<0.120 UJ	<0.024 U	<0.280 UJ	<0.380 UJ	<0.028 U	<0.024 U	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	<0.400 U	<0.420 U	<64.000 UJ	<0.420 U
2-Methylphenol	mg/kg	NS	41,000	<0.015 U	<0.016 U	<0.064 U	<0.076 UJ	0.030 JJ	<0.170 UJ	<0.230 UJ	<0.017 U	<0.015 U	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	<0.400 U	<0.420 U	<64.000 UJ	<0.420 U
2-Nitrophenol	mg/kg	NS	NS	<0.012 U	<0.012 U	<0.049 U	<0.059 UJ	<0.012 U	<0.130 UJ	<0.180 UJ	<0.013 U	<0.011 U	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	<0.400 U	<0.420 U	<64.000 UJ	<0.420 U
4-Chloro-3-methylphenol	mg/kg	NS	82,100	<0.077 U	<0.082 U	<0.320 U	<0.390 UJ	<0.077 U	<0.880 UJ	<1.200 UJ	<0.088 U	<0.076 U	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	<0.400 U	<0.420 U	<64.000 UJ	<0.420 U
4-Methylphenol	mg/kg	NS	82,100	<0.039 U	<0.041 U	<0.160 U	<0.190 UJ	0.040 JJ	<0.440 UJ	<0.590 UJ	<0.044 U	<0.038 U	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	0.092 J	<0.420 U	<64.000 UJ	<0.420 U
4-Nitrophenol	mg/kg	NS	NS	<0.110 U	<0.120 U	<0.480 U	<0.570 UJ	<0.110 U	<1.300 UJ	<1.700 UJ	<0.130 U	<0.110 U	<0.990 UJ	<4.700 UJ	<5.000 UJ	<4.800 UJ	<0.970 UJ	<1.000 UJ	<1.100 UJ	<160.000 UJ	<1.100 UJ
4,6-Dinitro-2-methylphenol	mg/kg	NS	65.7	<0.390 U	<0.410 U	<1.600 U	<1.900 UJ	<0.380 U	<4.400 UJ	<5.900 UJ	<0.440 U	<0.380 U	<0.990 U	<4.700 U	<5.000 U	<4.800 U	<0.970 U	<1.000 U	<1.100 U	<160.000 UJ	<1.100 U
Pentachlorophenol	mg/kg	0.0028	3.97	<0.390 U	<0.410 U	<1.600 U	<1.900 UJ	<0.380 U	<4.400 UJ	<5.900 UJ	<0.440 U	<0.380 U	<0.990 UJ	<4.700 UJ	<5.000 UJ	<4.800 UJ	<0.970 UJ	<1.000 UJ	<1.100 UJ	<160.000 UJ	<1.100 UJ
Phenol	mg/kg	2.2946	100,000	<0.021 U	<0.022 U	<0.088 U	<0.110 UJ	0.031 JJ	<0.240 UJ	<0.320 UJ	<0.024 U	<0.021 U	<0.390 U	<1.900 U	<2.000 U	<1.900 U	<0.380 U	1.800 D	<0.420 U	<64.000 UJ	<0.420 U
Metals																					
Aluminum, Total	mg/kg	600	100,000	*3,500*	*9,600*	*5,200*	*5,200*	*7,400*	*13,000*	*7,500*	*3,700*	*5,100*	*1,180 J*	*4,140 J*	*1,740 J*	*2,300 J*	*6,850 J*	*2,640 J*	*6,120 J*	--	*2,630 J*
Antimony, Total	mg/kg	0.542	467	0.069 BJ-	*1.000 J-*	0.099 BJ-	0.077 BJ-	0.023 BJ-	0.180 BJ-	0.270 J-	0.200 JB	0.085 JB	<7.1 UJ	<7.2 UJ	<6.8 UJ	<7.2 UJ	<7.4 UJ	<7.7 UJ	<7.4 UJ	--	<7.2 UJ
Arsenic, Total [1]	mg/kg	0.584	8.3	*2.000*	*6.200*	*3.300*	*2.900*	*4.600*	*7.400*	*7.100*	*3.000*	*3.300*	*3.1*	*6.5*	*6.3*	*5.2*	***13.7***	***12.5***	*8*	--	*7.1*
Barium, Total	mg/kg	164.8	100,000	30.000	63.000	46.000	45.000	77.000	120.000	120.000	50.000	51.000	42	*207*	59.1	69.5	154	139	115	--	*220*
Beryllium, Total	mg/kg	6.32	2,300	0.190	0.560	0.310	0.310	0.630	1.300	1.400	0.390	0.540	1	0.64	1.3	0.97	1.5	0.77	1.4	--	0.62
Cadmium, Total	mg/kg	0.752	985	0.500	*1.500*	0.630	0.670	0.520	*0.980*	*0.860*	0.680	0.660	0.14 J+	*1.6*	0.59 J+	0.26 J+	*3.9*	*1.3*	0.73 J+	--	*1.1 J+*
Calcium, Total	mg/kg	NS	NS	130,000	73,000	120,000	100,000	99,000	60,000	69,000	40,000	61,000	16,000	28,800	6,970	4,040	13,700	25,100	16,400	--	22,500
Chromium, Hexavalent	mg/kg	NS	6.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium, Total [3]	mg/kg	360,000	NS	27.000	13.000	13.000 J	13.000 J	12.000 J	12.000 J	9.100 J	7.400	6.200	6.7	25.6	18.3	8.3	11.8	19.9	8.7	--	28.1
Chromium, Trivalent	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt, Total	mg/kg	3.6073	347	2.600	*5.400*	3.500	3.300	*6.400*	*3.700*	*4.000*	2.300	*5.000*	*4 J*	*4.7 J*	*6.2*	*4.7 J*	*5.5 J*	*5.8 J*	*4.3 J*	--	*4.1 J*
Copper, Total	mg/kg	91.6	46,700	19.000 J	*2,400 J*	38.000 J	31.000 J	16.000 J	53.000 J	49.000 J	22.000 J	16.000 J	16.2	85.3	39.5	28.9	*127*	47.4	40.7	--	71.2
Iron, Total	mg/kg	NS	100,000	7,900	10,000	11,000	9,600	15,000	14,000	15,000	19,000	17,000	4,880	22,100	8,840	14,500	38,100	50,400	18,100	--	21,700
Lead, Total	mg/kg	27	800	*33.000 J*	*260.000 J*	*79.000*	*82.000*	*53.000*	*130.000*	*86.000*	*44.000*	27.000	12.7 J-	*427*	*45.7*	22.8	*499*	*784*	*67.6*	--	***1,450***
Magnesium, Total	mg/kg	NS	NS	59,000	24,000	46,000	41,000	43,000	30,000	37,000	14,000	19,000	7,520	10,800	2,530	1,180	5,140	8,900	5,510	--	10,900
Manganese, Total	mg/kg	39.1244	25,900	*260.000 J*	*610.000 J*	*350.000*	*330.000*	*380.000*	*610.000*	*650.000*	*330.000*	*530.000*	*72.3*	*401*	*84.4*	*147*	*470*	*371*	*423*	--	*204*
Mercury, Total	mg/kg	0.208	3.13	0.037	0.180	0.031	0.033	0.037	*1.000*	*1.100*	0.130	0.025	<0.12 U	*1.4*	*0.53*	0.17 J-	*0.9*	*0.66*	*0.33 J-*	--	***4.5***
Nickel, Total	mg/kg	13.0612	22,500	7.400	13.000	7.800	8.700	*14.000*	8.300	7.500	6.500 JL	7.600 JL	*15*	*19.1*	12.8	11.8	*15.6*	*15.6*	11.6	--	*16.4*
Potassium, Total	mg/kg	NS	NS	520	1,700	1,100	1,000	1,800	1,500	940	900	800	229 J	872	317 J	383 J	782	711	964	--	412 J
Selenium, Total	mg/kg	0.52	5,840	0.360 B	*3.300*	*0.690*	0.520 B	*0.990*	*1.900*	*1.500*	*0.760*	*0.600*	<4.2 UJ	<4.2 UJ	<4 UJ	<4.2 UJ	<4.3 UJ	<4.4 UJ	<4.3 UJ	--	<4.2 UJ
Silver, Total	mg/kg	0.8491	5,840	0.057 B	0.650	0.044 B	0.040 B	<0.024 U	0.055 B	0.067 B	0.077 B	0.091 B	<1.2 UJ	<1.2 UJ	<1.1 UJ	<1.2 UJ	<1.2 UJ	<1.3 UJ	<1.2 UJ	--	<1.2 UJ
Sodium, Total	mg/kg	NS	NS	280 B	2,200	330 B	<69 U	310 B	560 B	320 B	190 B	190 B	125 J	187 J	113 J	178 J	92.2 J	205 J	295 J	--	154 J
Thallium, Total	mg/kg	0.284	11.7	0.044 B	0.130	0.086 B	0.070 B	0.210	0.260	0.230	0.110 B	0.110	<3 U	*1.4 J*	<2.8 U	<3 U	*1.6 J*	*1.9 J*	*1.3 J*	--	*0.76 J*
Vanadium, Total	mg/kg	60	5,840	14.000	20.000	14.000	15.000	21.000	11.000	13.000	7.000	11.000	12.7	13.5	12.7	13	16.4	14.9	13.2	--	14.5
Zinc, Total	mg/kg	NS	100,000	48.000 J	1,200 J	98.000	130.000	81.000	140.000	150.000	93.000	150.000	31.8 J-	273 J-	78.6 J-	37.6 J-	1,230 J-	289 J-	98.4 J-	--	259 J-
Inorganic - Cyanide																					
Cyanide, Amenable	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Reactive	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Total	mg/kg	4.04	195	0.27 B	2.3	0.3 B	<0.12 U	0.29 B	*9.9*	*5.3*	2.4	1.3	<3 U	<3 UJ	<2.8 U	<3 U	3.1	*29*	<3.1 UJ	--	*20.6*
Other																					
Sulfide, Reactive	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organic Matter	%	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent Moisture	%	NS	NS	14	20	18	15	14	25	16	25	13	--	--	--	--	--	--	--	--	--

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	S10	S11	S12	S13		S14	S15	S16	S17	S18	S19	S20		S21	S22	S23	S25	S26
Sample / Duplicate:				S10	S11	S12	S13	S13 DUP	S14	S15	S16	S17	S18	S19	S20 DUP	S20	S21	S22	S23	S25	S26
Field Sample ID:				S10-E20X2	S11-E20X3	S12-E20X4	S13-E20X5	S29-E20Z1	S14-E20X6	S15-E20X7	S16-E20X8	S17-E20X9	S18-E20Y0	S19-E20Y1	S30-E20Z2	S20-E20Y2	S21-E20Y3	S22-E20Y4	S23-E20Y5	S25-E20Y7	S26-E20Y8
Sample Depth (feet):				0 - 1	0	0	0	0	0	1 - 5	1 - 2	1 - 3	1 - 2.5	3 - 4	0	0	1 - 5	4 - 6	3 - 4	2 - 4	3 - 5
Sample Date:				09/28/2005	09/26/2005	09/26/2005	09/26/2005	09/26/2005	09/16/2005	09/26/2005	09/26/2005	09/26/2005	09/26/2005	09/27/2005	09/26/2005	09/28/2005	09/27/2005	09/27/2005	09/27/2005	09/27/2005	09/27/2005
VOCs																					
1,1,1-Trichloroethane	mg/kg	0.1402	640	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 U	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0002	3.6	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 UJ	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
1,1,2-Trichloroethane	mg/kg	0.0032	7.01	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 U	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
1,1-Dichloroethane	mg/kg	0.4834	22.2	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 U	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
1,1-Dichloroethene	mg/kg	0.005	1,190	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 U	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0002	0.092	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 UJ	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
1,2-Dibromoethane	mg/kg	0.0000282	0.221	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 UJ	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
1,2-Dichlorobenzene	mg/kg	1.168	376	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 UJ	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
1,2-Dichloroethane	mg/kg	0.0028	2.87	--	<0.012 UJ	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 U	<0.015 U	<0.019 UJ	<0.023 UJ	<0.018 U	<0.029 UJ	<0.023 U	<0.018 UJ	<0.021 UJ	<0.025 UJ	<0.023 UJ
1,2-Dichloropropane	mg/kg	0.0033	1.78	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 U	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
1,3-Dichlorobenzene	mg/kg	1.1528	297	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 UJ	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
1,4-Dichlorobenzene	mg/kg	0.144	16.4	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 UJ	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
2-Butanone (MEK)	mg/kg	1.6661	28,400	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 UJ	<0.015 UJ	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
2-Hexanone	mg/kg	NS	1,760	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 UJ	<0.015 UJ	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
4-Methyl-2-Pentanone (MIBK)	mg/kg	0.2252	3,360	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 UJ	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
Acetone	mg/kg	3.6766	100,000	--	0.006 J	<0.039 UJ	<0.021 UJ	<0.017 U	<0.033 UJ	<0.015 UJ	0.012 J	<0.015 UJ	0.009 J	0.015 J	0.017 J	0.038 J	0.021 J	0.063 J	0.048 J	0.013 J	0.022 J
Benzene	mg/kg	0.0051	7.07	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	0.004 J	<0.015 U	<0.019 U	*0.008 J*	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	*0.009 J*
Bromodichloromethane	mg/kg	0.0003	1.83	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 U	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
Bromoform	mg/kg	0.0023	113	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 U	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
Bromomethane	mg/kg	0.0051	43	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 U	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
Carbon Disulfide	mg/kg	0.5919	738	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 U	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
Carbon Tetrachloride	mg/kg	0.0039	4.03	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 U	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
Chlorobenzene	mg/kg	0.1358	761	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 UJ	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
Chloroethane	mg/kg	0.2266	2,120	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 U	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
Chloroform	mg/kg	0.0033	1.98	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 U	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
Chloromethane	mg/kg	0.0155	669	--	<0.012 UJ	<0.039 UJ	<0.021 UJ	<0.017 U	<0.033 UJ	<0.015 UJ	<0.020 U	<0.015 U	<0.019 UJ	<0.023 UJ	<0.018 U	<0.029 UJ	<0.023 U	<0.018 UJ	<0.021 UJ	<0.025 UJ	<0.023 UJ
cis-1,2-Dichloroethene	mg/kg	0.0412	2,340	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 U	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
cis-1,3-Dichloropropene	mg/kg	NS	1,210	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 U	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
Cyclohexane	mg/kg	NS	117	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	0.009 J	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
Dibromochloromethane	mg/kg	0.032	38.9	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 UJ	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
Dichloromethane	mg/kg	0.0026	1,150	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 U	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
Ethylbenzene	mg/kg	1.57	35.4	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 UJ	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
Freon 113	mg/kg	NS	910	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 U	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
Freon 12	mg/kg	3.0863	530	--	<0.012 UJ	<0.039 UJ	<0.021 UJ	<0.017 U	<0.033 UJ	<0.015 UJ	<0.020 UJ	<0.015 UJ	<0.019 UJ	<0.023 UJ	<0.018 U	<0.029 UJ	<0.023 U	<0.018 UJ	<0.021 UJ	<0.025 UJ	<0.023 UJ
Isopropylbenzene	mg/kg	NS	268	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 UJ	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
Methyl acetate	mg/kg	NS	29,000	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 U	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
Methylcyclohexane	mg/kg	NS	67.6	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	0.010 J	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
Methyl-tert-butyl-ether	mg/kg	0.027	282	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 U	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
Styrene	mg/kg	0.22	867	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 UJ	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
Tetrachloroethene	mg/kg	0.0045	145	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 U	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
Toluene	mg/kg	1.1072	818	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	0.015 J	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	0.007 J
trans-1,2-Dichloroethene	mg/kg	0.0626	1,850	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 U	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
trans-1,3-Dichloropropene	mg/kg	NS	1,510	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 U	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
Trichloroethene	mg/kg	0.0036	8.41	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 UJ	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
Trichlorofluoromethane	mg/kg	4.4775	1,230	--	<0.012 U	<0.039 UJ	<0.021 UJ	<0.017 U	<0.033 UJ	<0.015 UJ	<0.020 U	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
Vinyl Chloride	mg/kg	0.0001	2.08	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 U	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
Xylenes, Total	mg/kg	3.96	260	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 UJ	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
PCBs																					
PCB, Total [4]	mg/kg	0.0094	0.967	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1016	mg/kg	NS	28	<0.035 U	<0.038 U	<0.040 U	<0.039 U	<0.039 U	<0.039 UJ	<0.041 U	<0.036 U	<0.042 U	<0.038 U	<0.036 U	<0.038 U	<0.038 U	<0.040 U	<0.038 U	<0.039 U	<0.039 U	<0.036 U
PCB-1221	mg/kg	NS	0.883	<0.071 U	<0.076 U	<0.081 U	<0.079 U	<0.079 U	<0.080 UJ	<0.083 U	<0.073 U	<0.086 U	<0.077 U	<0.073 U	<0.077 U	<0.077 U	<0.082 U	<0.078 U	<0.080 U	<0.080 U	<0.073 U
PCB-1232	mg/kg	NS	0.792	<0.035 U	<0.038 U	<0.040 U	<0.039 U	<0.039 U	<0.039 UJ	<0.041 U	<0.036 U	<0.042 U	<0.038 U	<0.036 U	<0.038 U	<0.038 U	<0.040 U	<0.038 U	<0.039 U	<0.039 U	<0.036 U
PCB-1242	mg/kg	NS	0.972	<0.035 U	<0.038 U	<0.040 U	<0.039 U	<0.039 U	<0.039 UJ	<0.041 U	<0.036 U	<0.042 U	<0.038 U	<0.036 U	<0.038 U	<0.038 U	<0.040 U	<0.038 U	<0.039 U	<0.039 U	<0.036 U
PCB-1248	mg/kg	NS	0.975	<0.035 U	<0.038 U	<0.040 U	<0.039 U	<0.039 U	<0.039 UJ	<0.041 U	<0.036 U	<0.042 U	<0.038 U	<0.036 U	<0.038 U	<0.038 U	<0.040 U	<0.038 U	<0.039 U	<0.039 U	<0.036 U
PCB-1254	mg/kg	NS	0.988	<0.035 U	<0.038 U	<0.040 U	<0.039 U	<0.039 U	<0.039 UJ	<0.041 U	<0.036 U	<0.042 U	<0.038 U	<0.036 U	<0.038 U	<0.038 U	<0.040 U	<0.038 U	<0.039 U	<0.039 U	<0.036 U
PCB-1260	mg/kg	NS	1	<0.035 U	<0.038 U	<0.040 U	<0.039 U	<0.039 U	<0.039 UJ	<0.041 U	<0.036 U	<0.042 U	<0.038 U	<0.036 U	<0.038 U	<0.038 U	<0.040 U	<0.038 U	<0.039 U	<0.039 U	<0.036 U

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	S10	S11	S12	S13		S14	S15	S16	S17	S18	S19	S20		S21	S22	S23	S25	S26
Sample / Duplicate:				S10	S11	S12	S13	S13 DUP	S14	S15	S16	S17	S18	S19	S20 DUP	S20	S21	S22	S23	S25	S26
Field Sample ID:				S10-E20X2	S11-E20X3	S12-E20X4	S13-E20X5	S29-E20Z1	S14-E20X6	S15-E20X7	S16-E20X8	S17-E20X9	S18-E20Y0	S19-E20Y1	S30-E20Z2	S20-E20Y2	S21-E20Y3	S22-E20Y4	S23-E20Y5	S25-E20Y7	S26-E20Y8
Sample Depth (feet):				0 - 1	0	0	0	0	0	1 - 5	1 - 2	1 - 3	1 - 2.5	3 - 4	0	0	1 - 5	4 - 6	3 - 4	2 - 4	3 - 5
Sample Date:				09/28/2005	09/26/2005	09/26/2005	09/26/2005	09/26/2005	09/16/2005	09/26/2005	09/26/2005	09/26/2005	09/26/2005	09/27/2005	09/26/2005	09/28/2005	09/27/2005	09/27/2005	09/27/2005	09/27/2005	09/27/2005
PAHs																					
2-Methylnaphthalene	mg/kg	NS	3,010	<53.000 UJ	1.600 J	0.700 J	1.600 J	0.740 J	6.700 J	0.300 J	97.000 J	3.300 J	16.000 J	16.000 J	0.480 J	0.990 J	<2.000 U	5.100 J	1.500 J	0.680 J	3.100 J
Acenaphthene	mg/kg	NS	45,200	<53.000 UJ	1.100 J	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	11.000 J	<13.000 UJ	5.500 J	24.000 J	<1.900 U	<1.900 U	0.950 J	13.000 J	<2.000 U	<2.000 U	5.000 J
Acenaphthylene	mg/kg	NS	NS	<53.000 UJ	0.460 J	<2.000 U	1.500 J	<1.900 U	<12.000 UJ	0.270 J	68.000 J	8.800 J	20.000 J	20.000 J	2.400	4.000	0.430 J	<12.000 UJ	<2.000 U	<2.000 U	6.000 J
Anthracene	mg/kg	196.9492	100,000	24.000 J	4.800	<2.000 U	1.500 J	0.400 J	<12.000 UJ	0.420 J	98.000 J	7.200 J	30.000 J	60.000 J	2.200	2.400	0.650 J	28.000 J	<2.000 U	<2.000 U	12.000
Benzo(a)anthracene	mg/kg	NS	20.8	**100.000 J**	12.000	<2.000 U	4.100	1.200 J	2.800 J	1.500	**150.000 J**	**21.000 J**	**59.000 J**	**100.000 J**	5.700	6.600	1.400 J	**39.000 J**	2.400 J	0.880 J	20.000
Benzo(a)pyrene	mg/kg	0.47	2.11	***120.000 J***	***11.000***	<2.000 U	***3.600***	*0.930 J*	<12.000 UJ	*1.200*	***100.000 J***	***25.000 J***	***43.000 J***	***66.000 J***	***6.700***	***7.000***	*1.300 J*	***31.000 J***	*1.900 J*	*0.760 J*	***15.000***
Benzo(b)fluoranthene	mg/kg	0.4793	21.1	***140.000 J***	*10.000*	<2.000 U	*4.700*	*1.200 J*	*3.700 J*	*2.000*	***88.000 J***	***27.000 J***	***35.000 J***	***53.000 J***	*7.000*	*7.700*	*1.700 J*	***29.000 J***	*1.900 J*	*0.690 J*	*12.000*
Benzo(g,h,i)perylene	mg/kg	NS	NS	59.000 J	4.600	<2.000 U	3.000	0.560 J	2.800 J	1.100 J	43.000 J	24.000 J	21.000 J	26.000 J	6.200	8.500 J	0.820 J	16.000 J	1.200 J	0.580 J	7.000 J
Benzo(k)fluoranthene	mg/kg	NS	211	80.000 J	10.000	<2.000 U	4.200	1.200 J	3.300 J	1.700	120.000 J	22.000 J	48.000 J	74.000 J	6.500	6.900	1.100 J	27.000 J	2.200	0.670 J	16.000
Chrysene	mg/kg	0.1446	2,110	*100.000 J*	*13.000*	<2.000 U	*5.400*	*1.700 J*	*4.100 J*	*2.000*	*160.000 J*	*25.000 J*	*57.000 J*	*99.000 J*	*6.900*	*7.500*	*1.700 J*	*37.000 J*	*2.600*	*1.200 J*	*19.000*
Dibenz(a,h)anthracene	mg/kg	NS	2.11	**25.000 J**	**2.200 J**	<2.000 U	1.200 J	<1.900 U	<12.000 UJ	0.480 J	**25.000 J**	**8.000 J**	**8.700 J**	**13.000 J**	1.600 J	1.900	<2.000 U	**6.500 J**	0.540 J	<2.000 U	**2.700 J**
Fluoranthene	mg/kg	88.8778	30,100	*220.000 J*	28.000	0.430 J	6.800	1.700 J	5.300 J	2.600	*310.000 J*	38.000 J	*160.000 J*	*230.000 J*	9.200	11.000	3.400	*110.000 J*	3.100	1.700 J	56.000
Fluorene	mg/kg	14.8299	30,100	<53.000 UJ	1.500 J	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	*95.000 J*	<13.000 UJ	*26.000 J*	*37.000 J*	<1.900 U	<1.900 U	0.790	*15.000 J*	<2.000 U	<2.000 U	9.100 J
Indeno(1,2,3-cd)pyrene	mg/kg	NS	21.1	**74.000 J**	6.400	<2.000 U	3.000	0.700 J	2.600 J	1.200	**54.000 J**	**25.000 J**	**24.000 J**	**32.000 J**	5.800	6.600	0.940 J	17.000 J	1.300 J	0.550 J	7.700 J
Naphthalene	mg/kg	0.6582	24.1	<53.000 UJ	*5.000*	0.610 J	*2.700*	*1.200 J*	*15.000 J*	0.380 J	***200.000 J***	*7.700 J*	***80.000 J***	***46.000 J***	*0.900 J*	*1.500 J*	*7.200*	*7.800 J*	*0.930 J*	<2.000 U	*9.400 J*
Phenanthrene	mg/kg	NS	NS	72.000 J	13.000	0.780 J	4.700	1.300 J	4.800 J	1.800	320.000 J	18.000 J	140.000 J	180.000 J	3.500	3.200	1.800 J	93.000 J	1.800 J	1.400 J	24.000
Pyrene	mg/kg	54.5455	22,600	*180.000 J*	22.000 J	<2.000 U	5.200	1.400 J	3.800 J	1.900	*230.000 J*	26.000 J	*100.000 J*	*180.000 J*	8.500	8.100	2.700	*83.000 J*	3.200	1.600 J	41.000
SVOCs																					
1,2,4-Trichlorobenzene	mg/kg	0.408	113	--	<0.012 U	<0.039 U	<0.021 U	<0.017 U	<0.033 U	<0.015 U	<0.020 UJ	<0.015 U	<0.019 U	<0.023 U	<0.018 U	<0.029 U	<0.023 U	<0.018 U	<0.021 U	<0.025 U	<0.023 U
2,2-Oxybis(1-chloropropane)	mg/kg	NS	1,020	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
2,4-Dinitrotoluene	mg/kg	0.0001	7.37	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
2,6-Dinitrotoluene	mg/kg	0.0001	1.54	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
2-Chloronaphthalene	mg/kg	NS	60,300	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
2-Nitroaniline	mg/kg	NS	8,010	<130.000 UJ	<4.700 U	<5.000 U	<4.900 U	<4.900 U	<30.000 UJ	<3.100 U	<27.000 UJ	<32.000 UJ	<29.000 UJ	<27.000 UJ	<4.800 U	<4.800 U	<5.100 U	<29.000 UJ	<4.900 U	<4.900 U	<4.500 U
3,3-Dichlorobenzidine	mg/kg	NS	5.11	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
3-Nitroaniline	mg/kg	NS	NS	<130.000 UJ	<4.700 U	<5.000 U	<4.900 U	<4.900 U	<30.000 UJ	<3.100 U	<27.000 UJ	<32.000 UJ	<29.000 UJ	<27.000 UJ	<4.800 U	<4.800 U	<5.100 U	<29.000 UJ	<4.900 U	<4.900 U	<4.500 U
4-Bromodiphenyl ether	mg/kg	NS	26.9	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
4-Chloroaniline	mg/kg	NS	11.5	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
4-Chlorodiphenyl ether	mg/kg	NS	NS	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
4-Nitroaniline	mg/kg	NS	115	<130.000 UJ	<4.700 U	<5.000 U	<4.900 U	<4.900 U	<30.000 UJ	<3.100 U	<27.000 UJ	<32.000 UJ	<29.000 UJ	<27.000 UJ	<4.800 U	<4.800 U	<5.100 U	<29.000 UJ	<4.900 U	<4.900 U	<4.500 U
Acetophenone	mg/kg	NS	2,520	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
Benzaldehyde	mg/kg	NS	818	<53.000 UJ	<1.900 UJ	<2.000 UJ	<1.900 UJ	<1.900 U	<12.000 UJ	<1.200 UJ	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 UJ	<2.000 U	<12.000 UJ	<2.000 UJ	<2.000 U	<1.800 UJ
Biphenyl	mg/kg	NS	288	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	15.000 J	<13.000 UJ	7.100 J	3.100 J	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	0.970
Bis(2-Chloroethoxy)methane	mg/kg	NS	2,460	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
Bis(2-Chloroethyl)ether	mg/kg	NS	1.29	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
Bis(2-Ethylhexyl)phthalate	mg/kg	2.88	164	<53.000 UJ	<1.900 U	<2.000 U	0.520 J	<1.900 U	<12.000 UJ	<1.200 U	2.200 J	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	1.300 J	<1.800 U
Butyl benzyl phthalate	mg/kg	NS	1,210	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
Caprolactam	mg/kg	NS	100,000	53.000 UR	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
Carbazole	mg/kg	NS	NS	<53.000 UJ	0.860 J	<2.000 U	0.550 J	<1.900 U	<12.000 UJ	0.300 J	42.000 J	<13.000 UJ	15.000 J	27.000 J	0.530 J	0.690 J	<2.000 U	13.000 J	<2.000 U	<2.000 U	2.800 J
Dibenzofuran	mg/kg	NS	1,040	<53.000 UJ	0.780 J	<2.000 U	0.790	<1.900 U	<12.000 UJ	<1.200 U	73.000 J	3.100 J	25.000 J	25.000 J	<1.900 U	0.410 J	0.460	9.700 J	0.520 J	<2.000 U	7.400 J
Diethyl phthalate	mg/kg	NS	100,000	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
Dimethyl phthalate	mg/kg	NS	7,390	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
Di-n-butyl phthalate	mg/kg	5.0333	82,100	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
Di-n-octyl phthalate	mg/kg	NS	8,210	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
Hexachlorobenzene	mg/kg	0.0252	1.15	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
Hexachlorobutadiene	mg/kg	NS	7.19	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
Hexachlorocyclopentadiene	mg/kg	NS	10.8	<53.000 UJ	<1.900 UJ	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 UJ	<2.000 U	<12.000 UJ	<2.000 UJ	<2.000 UJ	<1.800 UJ
Hexachloroethane	mg/kg	NS	11.1	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
Isophorone	mg/kg	NS	2,420	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
Nitrobenzene	mg/kg	NS	32.4	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
N-nitrosodi-n-propylamine	mg/kg	NS	0.328	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
N-Nitrosodiphenylamine	mg/kg	0.0764	469	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
Pyridine	mg/kg	0.0069	1,170	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	S10	S11	S12	S13		S14	S15	S16	S17	S18	S19	S20		S21	S22	S23	S25	S26
Sample / Duplicate:				S10	S11	S12	S13	S13 DUP	S14	S15	S16	S17	S18	S19	S20 DUP	S20	S21	S22	S23	S25	S26
Field Sample ID:				S10-E20X2	S11-E20X3	S12-E20X4	S13-E20X5	S29-E20Z1	S14-E20X6	S15-E20X7	S16-E20X8	S17-E20X9	S18-E20Y0	S19-E20Y1	S30-E20Z2	S20-E20Y2	S21-E20Y3	S22-E20Y4	S23-E20Y5	S25-E20Y7	S26-E20Y8
Sample Depth (feet):				0 - 1	0	0	0	0	0	1 - 5	1 - 2	1 - 3	1 - 2.5	3 - 4	0	0	1 - 5	4 - 6	3 - 4	2 - 4	3 - 5
Sample Date:				09/28/2005	09/26/2005	09/26/2005	09/26/2005	09/26/2005	09/16/2005	09/26/2005	09/26/2005	09/26/2005	09/26/2005	09/27/2005	09/26/2005	09/28/2005	09/27/2005	09/27/2005	09/27/2005	09/27/2005	09/27/2005
Phenols																					
2,4,5-Trichlorophenol	mg/kg	NS	82,100	<130.000 UJ	<4.700 U	<5.000 U	<4.900 U	<4.900 U	<30.000 UJ	<3.100 U	<27.000 UJ	<32.000 UJ	<29.000 UJ	<27.000 UJ	<4.800 U	<4.800 U	<5.100 U	<29.000 UJ	<4.900 U	<4.900 U	<4.500 U
2,4,6-Trichlorophenol	mg/kg	NS	209	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
2,4-Dichlorophenol	mg/kg	NS	2,460	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
2,4-Dimethylphenol	mg/kg	NS	16,400	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	2.700 J	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
2,4-Dinitrophenol	mg/kg	NS	1,640	<130.000 UJ	<9.400 UJ	<5.000 UJ	<4.900 UJ	<4.900 U	30.000 UR	<3.100 UJ	<140.000 UJ	32.000 UR	<86.000 UJ	<82.000 UJ	<4.800 U	4.800 UR	<5.100 U	<58.000 UJ	4.900 UR	<4.900 UJ	<27.000 UJ
2-Chlorophenol	mg/kg	NS	5,840	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
2-Methylphenol	mg/kg	NS	41,000	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	2.300 J	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
2-Nitrophenol	mg/kg	NS	NS	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
4-Chloro-3-methylphenol	mg/kg	NS	82,100	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
4-Methylphenol	mg/kg	NS	82,100	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	4.300 J	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
4-Nitrophenol	mg/kg	NS	NS	<130.000 UJ	4.700 UR	<5.000 U	<4.900 U	<4.900 U	<30.000 UJ	<3.100 U	<27.000 UJ	<32.000 UJ	<29.000 UJ	<27.000 UJ	<4.800 U	<4.800 U	<5.100 U	<29.000 UJ	<4.900 U	<4.900 U	<4.500 U
4,6-Dinitro-2-methylphenol	mg/kg	NS	65.7	<130.000 UJ	<4.700 UJ	<5.000 UJ	<4.900 UJ	<4.900 U	<30.000 UJ	<3.100 UJ	<27.000 UJ	<32.000 UJ	<29.000 UJ	<27.000 UJ	<4.800 U	<4.800 UJ	<5.100 U	<29.000 UJ	<4.900 UJ	<4.900 UJ	<4.500 UJ
Pentachlorophenol	mg/kg	0.0028	3.97	<130.000 UJ	<4.700 U	<5.000 U	<4.900 U	<4.900 U	<30.000 UJ	<3.100 U	<27.000 UJ	<32.000 UJ	<29.000 UJ	<27.000 UJ	<4.800 U	<4.800 U	<5.100 U	<29.000 UJ	<4.900 U	<4.900 U	<4.500 U
Phenol	mg/kg	2.2946	100,000	<53.000 UJ	<1.900 U	<2.000 U	<1.900 U	<1.900 U	<12.000 UJ	<1.200 U	<11.000 UJ	<13.000 UJ	<11.000 UJ	<11.000 UJ	<1.900 U	<1.900 U	<2.000 U	<12.000 UJ	<2.000 U	<2.000 U	<1.800 U
Metals																					
Aluminum, Total	mg/kg	600	100,000	*1,720 J*	*4,440 J*	*639 J*	*1,920 J*	*2,100*	*4,480 J*	*9,330 J*	*2,610 J*	*3,070 J*	*7,850 J*	*5,930 J*	*2,360*	*2,340 J*	*1,240 J*	*4,840*	*1,760*	*1,270*	*1,970*
Antimony, Total	mg/kg	0.542	467	<6.4 UJ	<6.7 UJ	<7.2 UJ	<7.1 UJ	<6.2 UJ	<7.8 UJ	<7.1 UJ	<6.6 UJ	<7.8 UJ	<6.7 UJ	<7.1 UJ	6.7 UR	*6.9 R*	<6.8 UJ	<6.7 UJ	*0.77 J*	<6.7 UJ	<6.6 UJ
Arsenic, Total [1]	mg/kg	0.584	8.3	<1.1 U	*3.1*	*2.1*	*3.8*	*5.4*	***13***	*7.4*	*7.9*	*6.6*	*2.5*	*4.8*	***20.8***	***212 J***	*3.6*	*4*	*7.7*	*3.9*	*5.4*
Barium, Total	mg/kg	164.8	100,000	<21.2 UJ	54.3	25.7	61.1	66.2 J-	*174*	116	51.8	75.4	54.7	83	116 J-	84.7	45.1	64.6 J-	65.6 J-	45 J-	53 J-
Beryllium, Total	mg/kg	6.32	2,300	0.15 J+	0.34 J+	2.5	0.56 J	<0.51 UJ	1	1.6	0.77	0.77	0.44 J	0.69	<0.56 UJ	0.53 J	0.96	0.57 J	1.2	1.2	1.2
Cadmium, Total	mg/kg	0.752	985	0.14 J+	*0.91 J+*	0.17 J	0.64 J+	<0.51 U	*1.9*	0.7 J+	0.6 J+	0.54 J+	0.3 J+	*4.3*	0.56 UR	0.58 UR	0.13 J	<0.56 UJ	<0.58 U	<0.56 U	<0.55 U
Calcium, Total	mg/kg	NS	NS	139,000	107,000	1,720	43,400	30,200	11,400	54,800	17,500	55,900	91,400	73,700	2,240	2,180	2,460	91,600	9,290	2,290	15,400
Chromium, Hexavalent	mg/kg	NS	6.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium, Total [3]	mg/kg	360,000	NS	5.3	14.6	10.9	12.8	22.2	23.1	10.9	8.6	12.6	14.5	12.7	320	566 J	6.3	43.5	23	6.2	13.8
Chromium, Trivalent	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt, Total	mg/kg	3.6073	347	1.2 J-	3.2 J	*8.2*	3.2 J	*5 J*	*6.3 J*	3.4 J	*4.4 J*	*4.5 J*	*5.4 J*	*4.2 J*	*19.3*	*8.1*	*5.2 J*	*4 J*	*5 J*	*7.1*	*6.6*
Copper, Total	mg/kg	91.6	46,700	7.2 UR	48.2	21.6	66.9	77.1	73.4	59.3	23.7	43.7	19.1	26.3	*91.9*	87.2	16.9	22.4	23	18.9	20
Iron, Total	mg/kg	NS	100,000	3,670	11,600	4,010	14,900	43,500	31,300	32,900	7,080	14,000	12,500	15,600	**458,000**	**286,000**	3,680	9,720	12,100	3,650	4,410
Lead, Total	mg/kg	27	800	22.9	*103*	14.5	*187*	*181*	***903***	*152*	*69.7*	*112*	*55.5*	*197*	1.1 UR	*734 J*	9.5	*110*	*40.7*	10	16
Magnesium, Total	mg/kg	NS	NS	76,200	46,100	<599 UJ	23,600	13,800	5,850	20,800	5,920	28,800	38,200	27,200	753	951	947	46,200	4,440	701	5,150
Manganese, Total	mg/kg	39.1244	25,900	*136*	*306*	17.5	*178*	*361*	*349*	*843*	*119*	*498*	*321*	*331*	*1,280*	*806*	22.6	*236*	*106*	12.8	*61*
Mercury, Total	mg/kg	0.208	3.13	<0.11 U	*0.32 J-*	*0.21 J-*	*2.4*	*1.3*	***6.8***	*0.87*	*1*	*0.67*	<0.11 U	<0.12 U	***10.9***	***10.1***	<0.11 U	<0.11 U	0.12 J-	<0.11 U	<0.11 UJ
Nickel, Total	mg/kg	13.0612	22,500	7	12.1	*52.2*	12.5	*19.5*	*19.9*	11.6	9.2	*14.8*	*15.1*	*13.4*	*41.5*	*32.6*	10.7	*28.9*	12.3	*13.7*	*14.2*
Potassium, Total	mg/kg	NS	NS	655	1,230	154 J	444 J	<514 UJ	577 J	1,280	543 J	746	3,020	2,070	<560 UJ	627	296 J	1,340	<575 UJ	<559 UJ	<552 UJ
Selenium, Total	mg/kg	0.52	5,840	<3.7 UJ	<3.9 UJ	<4.2 UJ	<4.2 UJ	<3.6 UJ	<4.5 UJ	<4.2 UJ	<3.8 UJ	<4.5 UJ	<3.9 UJ	<4.1 UJ	3.9 UR	4 UR	<4 UJ	<3.9 UJ	<4 UJ	<3.9 UJ	<3.9 UJ
Silver, Total	mg/kg	0.8491	5,840	1.1 UR	<1.1 UJ	<1.2 UJ	<1.2 UJ	<1 UJ	<1.3 UJ	<1.2 UJ	<1.1 UJ	<1.3 UJ	<1.1 UJ	<1.2 UJ	1.1 UR	<1.2 UJ	<1.1 UJ	<1.1 UJ	<1.2 UJ	<1.1 U	<1.1 UJ
Sodium, Total	mg/kg	NS	NS	192 J	259 J	113 J	147 J	132 J	185 J	421 J	160 J	241 J	347 J	499 J	31.6 J	218 J	115 J	632	249 J	125 J	162 J
Thallium, Total	mg/kg	0.284	11.7	<2.7 U	<2.8 U	<3 U	<3 U	*1.7 J+*	*1 J*	*2.4 J*	<2.8 U	*1.5 J*	*0.59 J*	*0.87 J*	***13.9***	*8.4*	<2.8 U	<2.8 U	<2.9 U	<2.8 U	*0.69 J+*
Vanadium, Total	mg/kg	60	5,840	17.6	16	15.4	10.1	10.3	13.5	13.2	12	11.2	22	16.7	5.6 UR	24.1	11.9	17.1	11.4 J	14.1	20
Zinc, Total	mg/kg	NS	100,000	24.5 J-	248 J-	36.4 J-	114 J-	99.3	342 J-	133 J-	53.9 J-	81.2 J-	81.5 J-	849 J-	6.7 UR	380 J-	16.5 J-	80.5	36.1	16.3	30.3
Inorganic - Cyanide																					
Cyanide, Amenable	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Reactive	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Total	mg/kg	4.04	195	<2.7 U	<2.8 UJ-	<3 UJ-	*9.8 J-*	*9*	*28.8 J-*	<3 UJ-	*15.4 J-*	<3.2 UJ-	<2.8 UJ-	<2.9 U	*21.6*	*23.6 J-*	<2.8 U	<2.8 U	<2.9 U	<2.8 U	<2.8 U
Other																					
Sulfide, Reactive	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organic Matter	%	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent Moisture	%	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	S27	S28	S31	S32	S33	S34	S35	S36	S37	S38		SB-A-01	SB-A-04	SB-A-05	SB-A-12		SB-A-13	SB-A-14
Sample / Duplicate:				S27	S28	S31	S32	S33	S34	S35	S36	S37	S38 DUP	S38	SB-A-01	SB-A-04	SB-A-05	SB-A-12	SB-A-12 DUP	SB-A-13	SB-A-14
Field Sample ID:				S27-E20Y9	S28-E20Z0	S31-E20Z3	S32-E20Z4	S33-E20Z5	S34-E20Z6	S35-E20Z7	S36-E20Z8	S37-E20Z9	S42-E2104	S38-E2100	MCS-SB-A-010708-E1QR1	MCS-SB-A-040607-E1QQ4	MCS-SB-A-050001C-E1QR0	MCS-SB-A-120405-E1QQ5	MCS-SB-A-120405D-E1QQ6	MCS-SB-A-130608-E1QQ7	MCS-SB-A-140405-E1QS0
Sample Depth (feet):				1 - 4	2 - 6	0	0	1 - 3	1 - 3	0 - 1	4 - 5	5 - 8	4 - 5	4 - 7	7 - 8	6 - 7	0 - 1	4 - 5	4 - 5	6 - 8	4 - 5
Sample Date:				09/27/2005	09/27/2005	09/27/2005	09/26/2005	09/26/2005	09/26/2005	09/28/2005	09/28/2005	09/28/2005	09/28/2005	09/28/2005	12/11/2001	12/11/2001	12/11/2001	12/11/2001	12/11/2001	12/11/2001	12/12/2001
VOCs																					
1,1,1-Trichloroethane	mg/kg	0.1402	640	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 U	<0.025 U	<0.033 U	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0002	3.6	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 UJ	<0.025 U	<0.033 UJ	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
1,1,2-Trichloroethane	mg/kg	0.0032	7.01	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 U	<0.025 U	<0.033 U	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
1,1-Dichloroethane	mg/kg	0.4834	22.2	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 U	<0.025 U	<0.033 U	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
1,1-Dichloroethene	mg/kg	0.005	1,190	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 U	<0.025 U	<0.033 U	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0002	0.092	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 UJ	<0.025 U	<0.033 UJ	<0.013 U	1.700 UR	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
1,2-Dibromoethane	mg/kg	0.0000282	0.221	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 UJ	<0.025 U	<0.033 UJ	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
1,2-Dichlorobenzene	mg/kg	1.168	376	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 UJ	<0.025 U	<0.033 UJ	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
1,2-Dichloroethane	mg/kg	0.0028	2.87	<0.027 UJ	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 U	<0.025 UJ	<0.033 UJ	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
1,2-Dichloropropane	mg/kg	0.0033	1.78	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 U	<0.025 U	<0.033 U	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
1,3-Dichlorobenzene	mg/kg	1.1528	297	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 UJ	<0.025 U	<0.033 UJ	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
1,4-Dichlorobenzene	mg/kg	0.144	16.4	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 UJ	<0.025 U	<0.033 UJ	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
2-Butanone (MEK)	mg/kg	1.6661	28,400	<0.027 U	<0.013 U	<0.028 U	<0.014 UJ	<0.011 UJ	<0.011 UJ	<0.014 U	<0.020 U	<0.022 U	<0.025 U	<0.033 U	0.012 J	<1.700 U	0.037	0.008 J	0.007 J	0.012 J	0.024
2-Hexanone	mg/kg	NS	1,760	<0.027 U	<0.013 U	<0.028 U	<0.014 UJ	<0.011 UJ	<0.011 UJ	<0.014 U	<0.020 U	<0.022 UJ	<0.025 U	<0.033 UJ	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
4-Methyl-2-Pentanone (MIBK)	mg/kg	0.2252	3,360	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 UJ	<0.025 U	<0.033 UJ	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
Acetone	mg/kg	3.6766	100,000	<0.027 UJ	0.032	0.029	<0.014 UJ	<0.011 UJ	<0.011 UJ	<0.014 U	0.034	0.023 J	0.017 J	0.027 J	0.054	<1.700 U	0.290	0.059	0.048	0.063	0.100
Benzene	mg/kg	0.0051	7.07	<0.027 U	<0.013 U	*0.013 J*	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 U	<0.025 U	<0.033 U	*0.009 J*	***13.000***	*0.013 J*	*0.061*	*0.056*	*0.140*	*4.200*
Bromodichloromethane	mg/kg	0.0003	1.83	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 U	<0.025 U	<0.033 U	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
Bromoform	mg/kg	0.0023	113	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 U	<0.025 U	<0.033 U	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
Bromomethane	mg/kg	0.0051	43	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 U	<0.025 U	<0.033 U	<0.013 U	<1.700 U	<0.020 U	0.002 J	<0.017 U	<0.017 U	<0.018 U
Carbon Disulfide	mg/kg	0.5919	738	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 U	<0.025 U	<0.033 U	0.006 J	<1.700 U	0.004 J	0.003 J	0.004 J	0.010 J	0.019
Carbon Tetrachloride	mg/kg	0.0039	4.03	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 U	<0.025 U	<0.033 U	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
Chlorobenzene	mg/kg	0.1358	761	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 UJ	<0.025 U	<0.033 UJ	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
Chloroethane	mg/kg	0.2266	2,120	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 U	<0.025 U	<0.033 U	<0.013 U	<1.700 UJ	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
Chloroform	mg/kg	0.0033	1.98	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 U	<0.025 U	<0.033 U	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
Chloromethane	mg/kg	0.0155	669	<0.027 UJ	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 U	<0.025 UJ	<0.033 UJ	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
cis-1,2-Dichloroethene	mg/kg	0.0412	2,340	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 U	<0.025 U	<0.033 U	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
cis-1,3-Dichloropropene	mg/kg	NS	1,210	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 U	<0.025 U	<0.033 U	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
Cyclohexane	mg/kg	NS	117	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 U	<0.025 U	0.009 J	0.004 J	<1.700 U	0.005 J	0.003 J	0.004 J	0.007 J	<0.018 U
Dibromochloromethane	mg/kg	0.032	38.9	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 U	<0.025 U	<0.033 U	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
Dichloromethane	mg/kg	0.0026	1,150	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 U	<0.025 U	<0.033 U	*0.003 J*	<1.700 U	*0.004 J*	*0.003 J*	*0.004 J*	*0.004 J*	*0.006 J*
Ethylbenzene	mg/kg	1.57	35.4	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 UJ	<0.025 U	<0.033 UJ	0.009 J	***40.000***	<0.020 U	<0.016 U	<0.017 U	0.049	*14.000*
Freon 113	mg/kg	NS	910	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 U	<0.025 U	<0.033 U	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
Freon 12	mg/kg	3.0863	530	<0.027 UJ	<0.013 U	<0.028 U	<0.014 UJ	<0.011 UJ	<0.011 UJ	<0.014 U	<0.020 U	<0.022 U	<0.025 UJ	<0.033 UJ	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
Isopropylbenzene	mg/kg	NS	268	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 UJ	<0.025 U	<0.033 UJ	0.010 J	1.300 J	<0.020 U	<0.016 U	<0.017 U	0.053	1.600
Methyl acetate	mg/kg	NS	29,000	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 U	<0.025 U	<0.033 U	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	0.750 J
Methylcyclohexane	mg/kg	NS	67.6	<0.027 U	<0.013 U	0.007 J	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 U	<0.025 U	0.009 J	0.008 J	<1.700 U	0.005 J	0.003 J	0.007 J	0.014 J	0.270 J
Methyl-tert-butyl-ether	mg/kg	0.027	282	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 U	<0.025 U	<0.033 U	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
Styrene	mg/kg	0.22	867	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 UJ	<0.025 U	<0.033 UJ	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	*0.310 J*
Tetrachloroethene	mg/kg	0.0045	145	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 UJ	<0.025 U	<0.033 UJ	<0.013 U	<1.700 U	0.002 J	<0.016 U	<0.017 U	<0.017 U	<0.018 U
Toluene	mg/kg	1.1072	818	<0.027 U	0.003 J	0.011 J	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 UJ	<0.025 U	0.021 J	0.004 J	*7.500 J*	0.009 J	0.013 J	0.011 J	0.004 J	*2.200*
trans-1,2-Dichloroethene	mg/kg	0.0626	1,850	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 U	<0.025 U	<0.033 U	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
trans-1,3-Dichloropropene	mg/kg	NS	1,510	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 U	<0.025 U	<0.033 U	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
Trichloroethene	mg/kg	0.0036	8.41	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 U	<0.025 U	<0.033 U	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
Trichlorofluoromethane	mg/kg	4.4775	1,230	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 U	<0.025 U	<0.033 U	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
Vinyl Chloride	mg/kg	0.0001	2.08	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 U	<0.025 U	<0.033 U	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
Xylenes, Total	mg/kg	3.96	260	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 UJ	<0.025 U	<0.033 UJ	0.020	*130.000*	<0.020 U	0.003 J	0.012 J	0.017	*7.100*
PCBs																					
PCB, Total [4]	mg/kg	0.0094	0.967	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1016	mg/kg	NS	28	<0.037 U	<0.038 U	<0.036 U	<0.040 U	<0.037 U	<0.035 U	<0.170 U	<0.038 U	<0.036 U	<0.037 U	<0.038 U	<0.043 U	<0.460 U	<0.440 U	<0.380 U	<0.380 U	<0.490 U	<0.410 U
PCB-1221	mg/kg	NS	0.883	<0.074 U	<0.076 U	<0.073 U	<0.081 U	<0.075 U	<0.071 U	<0.350 U	<0.077 U	<0.074 U	<0.075 U	<0.078 U	<0.088 U	<0.940 U	<0.890 U	<0.780 U	<0.780 U	<1.000 U	<0.830 U
PCB-1232	mg/kg	NS	0.792	<0.037 U	<0.038 U	<0.036 U	<0.040 U	<0.037 U	<0.035 U	<0.170 U	<0.038 U	<0.036 U	<0.037 U	<0.038 U	<0.043 U	<0.460 U	<0.440 U	<0.380 U	<0.380 U	<0.490 U	<0.410 U
PCB-1242	mg/kg	NS	0.972	<0.037 U	<0.038 U	<0.036 U	<0.040 U	<0.037 U	<0.035 U	<0.170 U	<0.038 U	<0.036 U	<0.037 U	<0.038 U	<0.043 U	<0.460 U	<0.440 U	<0.380 U	<0.380 U	<0.490 U	<0.410 U
PCB-1248	mg/kg	NS	0.975	<0.037 U	<0.038 U	<0.036 U	<0.040 U	<0.037 U	<0.035 U	<0.170 U	<0.038 U	<0.036 U	<0.037 U	<0.038 U	<0.043 U	<0.460 U	<0.440 U	<0.380 U	<0.380 U	<0.490 U	<0.410 U
PCB-1254	mg/kg	NS	0.988	<0.037 U	<0.038 U	<0.036 U	<0.040 U	<0.037 U	<0.035 U	<0.170 U	<0.038 U	<0.036 U	<0.037 U	<0.038 U	<0.043 U	<0.460 U	<0.440 U	<0.380 U	<0.380 U	<0.490 U	<0.410 U
PCB-1260	mg/kg	NS	1	<0.037 U	<0.038 U	<0.036 U	<0.040 U	<0.037 U	<0.035 U	<0.170 U	<0.038 U	<0.036 U	<0.037 U	<0.038 U	<0.043 U	<0.460 U	<0.440 U	<0.380 U	<0.380 U	<0.490 U	<0.410 U

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	S27	S28	S31	S32	S33	S34	S35	S36	S37	S38		SB-A-01	SB-A-04	SB-A-05	SB-A-12		SB-A-13	SB-A-14
Sample / Duplicate:				S27	S28	S31	S32	S33	S34	S35	S36	S37	S38 DUP	S38	SB-A-01	SB-A-04	SB-A-05	SB-A-12	SB-A-12 DUP	SB-A-13	SB-A-14
Field Sample ID:				S27-E20Y9	S28-E20Z0	S31-E20Z3	S32-E20Z4	S33-E20Z5	S34-E20Z6	S35-E20Z7	S36-E20Z8	S37-E20Z9	S42-E2104	S38-E2100	MCS-SB-A-010708-E1QR1	MCS-SB-A-040607-E1QQ4	MCS-SB-A-050001C-E1QR0	MCS-SB-A-120405-E1QQ5	MCS-SB-A-120405D-E1QQ6	MCS-SB-A-130608-E1QQ7	MCS-SB-A-140405-E1QS0
Sample Depth (feet):				1 - 4	2 - 6	0	0	1 - 3	1 - 3	0 - 1	4 - 5	5 - 8	4 - 5	4 - 7	7 - 8	6 - 7	0 - 1	4 - 5	4 - 5	6 - 8	4 - 5
Sample Date:				09/27/2005	09/27/2005	09/27/2005	09/26/2005	09/26/2005	09/26/2005	09/28/2005	09/28/2005	09/28/2005	09/28/2005	09/28/2005	12/11/2001	12/11/2001	12/11/2001	12/11/2001	12/11/2001	12/11/2001	12/12/2001
PAHs																					
2-Methylnaphthalene	mg/kg	NS	3,010	0.110 J	4.500 J	6.800 D	0.680 J	<0.370 U	0.880 J	<10.000 U	0.680 J	1.500 JD	3.900	4.500	0.940 J	390.000 J	1.600 J	1.300 J	<3.800 U	3.600 J	65.000
Acenaphthene	mg/kg	NS	45,200	0.150 J	9.900 J	9.000 JD	<1.200 U	<0.370 U	<1.000 U	5.600 J	<1.900 U	0.270 J	0.580 J	0.680 J	1.300 J	610.000 J	<2.200 U	<1.900 U	<3.800 U	3.900 J	9.300 J
Acenaphthylene	mg/kg	NS	NS	0.130 J	<11.000 U	11.000 JD	0.310 J	<0.370 U	<1.000 U	<10.000 U	<1.900 U	0.410	0.280 J	<1.900 U	<0.430 U	<1,400 U	0.520 J	0.400 J	<3.800 U	<15.000 U	4.800 J
Anthracene	mg/kg	196.9492	100,000	0.470	16.000	26.000 JD	0.520 J	<0.370 U	<1.000 U	12.000	<1.900 U	1.900 JD	1.300	0.470 J	1.700 J	*570.000 J*	1.100 J	0.710 J	<3.800 U	<15.000 U	5.500 J
Benzo(a)anthracene	mg/kg	NS	20.8	0.970	18.000	**45.000 D**	2.200	<0.370 U	0.660 J	**34.000**	0.780 J	3.500 JD	0.950 J	0.880 J	2.700	**640.000 J**	4.000	3.200	3.200 J	<15.000 U	3.300 J
Benzo(a)pyrene	mg/kg	0.47	2.11	*0.770*	***15.000***	***33.000 D***	*1.700*	<0.370 U	*0.810 J*	***39.000***	*0.670 J*	***2.200 JD***	*0.650 J*	*0.510 J*	***2.200***	***470.000 J***	***4.000***	***3.100***	***3.800***	<15.000 U	<13.000 U
Benzo(b)fluoranthene	mg/kg	0.4793	21.1	*0.630*	*14.000*	***33.000 D***	*2.100*	<0.370 U	*0.920 J*	***46.000***	*0.780 J*	*2.200 JD*	*0.690 J*	*0.660 J*	*1.700 J*	***330.000 J***	*5.100*	*3.700*	*3.400 J*	<15.000 U	<13.000 U
Benzo(g,h,i)perylene	mg/kg	NS	NS	0.510 J	7.000 J	9.200 JD	1.400	<0.370 U	0.930 J	16.000	<1.900 U	1.100 JD	0.450 J	0.430 J	1.400 J	<1,400 U	3.800	3.500	3.300 J	<15.000 U	<13.000 U
Benzo(k)fluoranthene	mg/kg	NS	211	0.750	15.000	30.000 JD	2.000	<0.370 U	0.980 J	31.000	0.720 J	2.400 JD	0.630 J	0.540 J	1.600 J	**410.000 J**	3.400	2.700	2.700 J	<15.000 U	<13.000 U
Chrysene	mg/kg	0.1446	2,110	*0.940*	*18.000*	*41.000 D*	*2.700*	<0.370 U	*0.870 J*	*38.000*	*1.000 J*	*4.300 D*	*1.600*	*1.400 J*	*2.700*	*600.000 J*	*5.400*	*4.300*	*3.900*	<15.000 U	*3.700 J*
Dibenz(a,h)anthracene	mg/kg	NS	2.11	0.170 J	**2.600 J**	**5.600 J**	0.530 J	<0.370 U	0.370 J	**7.300 J**	<1.900 U	0.450	<1.100 U	<1.900 U	0.450 J	<1,400 U	1.600 J	<1.900 U	0.920 J	<15.000 U	<13.000 U
Fluoranthene	mg/kg	88.8778	30,100	2.000	48.000	*130.000 D*	3.700	0.087 J	1.300	63.000	1.600 J	8.300 D	2.100	1.600 J	6.200	*1.600*	6.400	4.700	4.800	<15.000 U	12.000 J
Fluorene	mg/kg	14.8299	30,100	0.170 J	13.000	*17.000 JD*	<1.200 U	<0.370 U	<1.000 U	5.900 J	<1.900 U	1.100 JD	<1.100 U	1.100 J	1.300 J	*760.000 J*	0.470 J	<1.900 U	<3.800 U	<15.000 U	13.000 J
Indeno(1,2,3-cd)pyrene	mg/kg	NS	21.1	0.500	8.600 J	20.000 JD	1.500	<0.370 U	0.900 J	**23.000**	0.410 J	1.500 JD	0.380 J	<1.900 U	1.200 J	<1,400 U	3.500	3.100	2.700 J	<15.000 U	<13.000 U
Naphthalene	mg/kg	0.6582	24.1	0.089 J	*6.200 J*	*24.000 D*	*0.990 J*	<0.370 U	*6.400*	<10.000 U	0.430 J	*1.300 JD*	*5.700*	*7.100*	*4.000*	***3.300***	*3.400*	*3.200*	*2.200 J*	***87.000***	***220.000***
Phenanthrene	mg/kg	NS	NS	1.200	52.000	48.000 D	2.300	0.080 J	1.000	41.000	1.300 J	5.800 D	3.400	3.500	5.900	2,300	5.700	4.900	4.300	<15.000 U	29.000 J
Pyrene	mg/kg	54.5455	22,600	2.000	35.000	*89.000 D*	3.100	<0.370 U	1.000	*56.000*	1.400 J	6.200 D	1.700	1.600 J	4.800	*1.400*	6.300	4.700	4.400	<15.000 U	9.000 J
SVOCs																					
1,2,4-Trichlorobenzene	mg/kg	0.408	113	<0.027 U	<0.013 U	<0.028 U	<0.014 U	<0.011 U	<0.011 U	<0.014 U	<0.020 U	<0.022 UJ	<0.025 U	<0.033 UJ	<0.013 U	<1.700 U	<0.020 U	<0.016 U	<0.017 U	<0.017 U	<0.018 U
2,2-Oxybis(1-chloropropane)	mg/kg	NS	1,020	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 UJ	<1.100 U	<1.900 U	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	<13.000 U
2,4-Dinitrotoluene	mg/kg	0.0001	7.37	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	<13.000 U
2,6-Dinitrotoluene	mg/kg	0.0001	1.54	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	<13.000 U
2-Chloronaphthalene	mg/kg	NS	60,300	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	<13.000 U
2-Nitroaniline	mg/kg	NS	8,010	<0.920 U	<28.000 U	<27.000 U	<3.000 U	<0.930 U	<2.600 U	<26.000 U	<4.800 U	<0.910 U	<2.800 U	<4.800 U	<1.100 U	<3,500 U	<5.500 U	<4.800 U	<9.700 U	<37.000 U	<31.000 U
3,3-Dichlorobenzidine	mg/kg	NS	5.11	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 UJ	<1,400 UJ	<2.200 UJ	<1.900 UJ	<3.800 UJ	<15.000 UJ	<13.000 UJ
3-Nitroaniline	mg/kg	NS	NS	<0.920 U	<28.000 U	<27.000 U	<3.000 U	<0.930 U	<2.600 U	<26.000 U	<4.800 U	<0.910 U	<2.800 U	<4.800 U	<1.100 U	<3,500 U	<5.500 U	<4.800 U	<9.700 U	<37.000 U	<31.000 U
4-Bromodiphenyl ether	mg/kg	NS	26.9	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	<13.000 U
4-Chloroaniline	mg/kg	NS	11.5	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	<13.000 U
4-Chlorodiphenyl ether	mg/kg	NS	NS	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	<13.000 U
4-Nitroaniline	mg/kg	NS	115	<0.920 U	<28.000 U	<27.000 U	<3.000 U	<0.930 U	<2.600 U	<26.000 U	<4.800 U	<0.910 U	<2.800 U	<4.800 U	<1.100 U	<3,500 U	<5.500 U	<4.800 U	<9.700 U	<37.000 U	<31.000 U
Acetophenone	mg/kg	NS	2,520	<0.370 U	<11.000 U	3.600 J	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 U	<1,400 U	<2.200 U	0.390 J	<3.800 U	<15.000 U	<13.000 U
Benzaldehyde	mg/kg	NS	818	<0.370 UJ	<11.000 U	<11.000 U	<1.200 UJ	<0.370 UJ	<1.000 UJ	<10.000 U	<1.900 U	<0.360 U	<1.100 UJ	<1.900 UJ	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	<13.000 U
Biphenyl	mg/kg	NS	288	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	0.340 J	0.760 J	1.000 J	0.180 J	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	8.100 J
Bis(2-Chloroethoxy)methane	mg/kg	NS	2,460	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	<13.000 U
Bis(2-Chloroethyl)ether	mg/kg	NS	1.29	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	<13.000 U
Bis(2-Ethylhexyl)phthalate	mg/kg	2.88	164	1.100	*8.500 J*	<11.000 U	<1.200 U	0.081 J	<1.000 U	<10.000 U	<1.900 U	0.530	0.680 J	1.000 J	0.390 J	<1,400 U	0.650 J	<1.900 U	<3.800 UJ	<15.000 U	<13.000 U
Butyl benzyl phthalate	mg/kg	NS	1,210	<0.370 U	29.000	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	<13.000 U
Caprolactam	mg/kg	NS	100,000	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	<13.000 U
Carbazole	mg/kg	NS	NS	0.110 J	7.800 J	4.800 J	0.240 J	<0.370 U	<1.000 U	5.100 J	<1.900 U	0.620 J	0.370 J	<1.900 U	0.400 J	<1,400 U	0.550 J	<1.900 U	<3.800 U	<15.000 U	<13.000 U
Dibenzofuran	mg/kg	NS	1,040	0.100 J	8.300 J	13.000 JD	0.300 J	<0.370 U	<1.000 U	2.600 J	<1.900 U	0.970 JD	0.850 J	1.000 J	0.780 J	490.000 J	1.100 J	0.660 J	<3.800 U	<15.000 U	11.000 J
Diethyl phthalate	mg/kg	NS	100,000	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	<13.000 U
Dimethyl phthalate	mg/kg	NS	7,390	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	<13.000 U
Di-n-butyl phthalate	mg/kg	5.0333	82,100	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	<13.000 U
Di-n-octyl phthalate	mg/kg	NS	8,210	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 UJ	<1,400 UJ	<2.200 UJ	<1.900 UJ	<3.800 UJ	<15.000 UJ	<13.000 UJ
Hexachlorobenzene	mg/kg	0.0252	1.15	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	<13.000 U
Hexachlorobutadiene	mg/kg	NS	7.19	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	<13.000 U
Hexachlorocyclopentadiene	mg/kg	NS	10.8	<0.370 UJ	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 UJ	<1.100 UJ	<1.900 U	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	<13.000 U
Hexachloroethane	mg/kg	NS	11.1	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	<13.000 U
Isophorone	mg/kg	NS	2,420	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	<13.000 U
Nitrobenzene	mg/kg	NS	32.4	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	<13.000 U
N-nitrosodi-n-propylamine	mg/kg	NS	0.328	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	<13.000 U
N-Nitrosodiphenylamine	mg/kg	0.0764	469	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	<13.000 U
Pyridine	mg/kg	0.0069	1,170	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	S27	S28	S31	S32	S33	S34	S35	S36	S37	S38		SB-A-01	SB-A-04	SB-A-05	SB-A-12		SB-A-13	SB-A-14
Sample / Duplicate:				S27	S28	S31	S32	S33	S34	S35	S36	S37	S38 DUP	S38	SB-A-01	SB-A-04	SB-A-05	SB-A-12	SB-A-12 DUP	SB-A-13	SB-A-14
Field Sample ID:				S27-E20Y9	S28-E20Z0	S31-E20Z3	S32-E20Z4	S33-E20Z5	S34-E20Z6	S35-E20Z7	S36-E20Z8	S37-E20Z9	S42-E2104	S38-E2100	MCS-SB-A-010708-E1QR1	MCS-SB-A-040607-E1QQ4	MCS-SB-A-050001C-E1QR0	MCS-SB-A-120405-E1QQ5	MCS-SB-A-120405D-E1QQ6	MCS-SB-A-130608-E1QQ7	MCS-SB-A-140405-E1QS0
Sample Depth (feet):				1 - 4	2 - 6	0	0	1 - 3	1 - 3	0 - 1	4 - 5	5 - 8	4 - 5	4 - 7	7 - 8	6 - 7	0 - 1	4 - 5	4 - 5	6 - 8	4 - 5
Sample Date:				09/27/2005	09/27/2005	09/27/2005	09/26/2005	09/26/2005	09/26/2005	09/28/2005	09/28/2005	09/28/2005	09/28/2005	09/28/2005	12/11/2001	12/11/2001	12/11/2001	12/11/2001	12/11/2001	12/11/2001	12/12/2001
Phenols																					
2,4,5-Trichlorophenol	mg/kg	NS	82,100	<0.920 U	<28.000 U	<27.000 U	<3.000 U	<0.930 U	<2.600 U	<26.000 U	<4.800 U	<0.910 U	<2.800 U	<4.800 U	<1.100 U	<3,500 U	<5.500 U	<4.800 U	<9.700 U	<37.000 U	<31.000 U
2,4,6-Trichlorophenol	mg/kg	NS	209	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	<13.000 U
2,4-Dichlorophenol	mg/kg	NS	2,460	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 UJ	<15.000 U	<13.000 U
2,4-Dimethylphenol	mg/kg	NS	16,400	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	<13.000 U
2,4-Dinitrophenol	mg/kg	NS	1,640	0.920 UR	<28.000 U	<27.000 U	<3.000 UJ	<0.930 UJ	<2.600 UJ	<26.000 U	<4.800 U	<0.910 U	2.800 UR	<4.800 UJ	<1.100 U	<3,500 U	<5.500 U	<4.800 U	<9.700 UJ	<37.000 U	<31.000 U
2-Chlorophenol	mg/kg	NS	5,840	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	<13.000 U
2-Methylphenol	mg/kg	NS	41,000	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	<13.000 U
2-Nitrophenol	mg/kg	NS	NS	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	<13.000 U
4-Chloro-3-methylphenol	mg/kg	NS	82,100	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	<13.000 U
4-Methylphenol	mg/kg	NS	82,100	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	<13.000 U
4-Nitrophenol	mg/kg	NS	NS	<0.920 U	<28.000 U	<27.000 U	<3.000 U	<0.930 U	<2.600 U	<26.000 U	<4.800 U	<0.910 UJ	<2.800 U	<4.800 U	<1.100 U	<3,500 U	<5.500 U	<4.800 U	<9.700 U	<37.000 U	<31.000 U
4,6-Dinitro-2-methylphenol	mg/kg	NS	65.7	<0.920 UJ	<28.000 U	<27.000 U	<3.000 UJ	<0.930 UJ	<2.600 UJ	<26.000 U	<4.800 U	<0.910 U	<2.800 UJ	<4.800 UJ	<1.100 U	<3,500 U	<5.500 U	<4.800 U	<9.700 U	<37.000 U	<31.000 U
Pentachlorophenol	mg/kg	0.0028	3.97	<0.920 U	<28.000 U	<27.000 U	<3.000 U	<0.930 U	<2.600 U	<26.000 U	<4.800 U	<0.910 UJ	<2.800 U	<4.800 U	<1.100 U	<3,500 U	<5.500 U	<4.800 U	<9.700 UJ	<37.000 U	<31.000 U
Phenol	mg/kg	2.2946	100,000	<0.370 U	<11.000 U	<11.000 U	<1.200 U	<0.370 U	<1.000 U	<10.000 U	<1.900 U	<0.360 U	<1.100 U	<1.900 U	<0.430 U	<1,400 U	<2.200 U	<1.900 U	<3.800 U	<15.000 U	<13.000 U
Metals																					
Aluminum, Total	mg/kg	600	100,000	3,040	7,520	2,250	6,010	5,860	8,480	3,310	1,520	4,710	1,490	1,590	4,980	2,610	3,000	6,300	4,280	9,270	21,400
Antimony, Total	mg/kg	0.542	467	<7 UJ	<6.9 UJ	0.82 J	<7.8 UJ	<6.8 UJ	5.7 J	<6.3 UJ	<7 UJ	0.91 J	<6.7 UJ	<6.9 UJ	<1.1 UJ	<0.99 UJ	5.1 J	1.6 J	1.5 J	<1.2 UJ	<0.96 UJ
Arsenic, Total [1]	mg/kg	0.584	8.3	8.1	6.5	6.2	**8.9**	3.2	**10.1**	3.3	7.5	4.6	4.2	5	6.1	**12.9**	**22.1**	**12.6**	**10.2**	5.2	3.6
Barium, Total	mg/kg	164.8	100,000	62.9 J-	184 J-	82.2 J-	111 J-	75.9 J-	110 J-	49 J-	144 J-	113 J-	83.8 J-	72.1 J-	65.6	86.5	192	285	111	98.9	177
Beryllium, Total	mg/kg	6.32	2,300	<0.58 UJ	0.63	1.6	0.88	<0.56 UJ	1.1	<0.53 UJ	1.3	0.99	1.3	1.3	0.74 J	0.35 J	0.63 J	0.56 J	0.58 J	0.95 J	3.5 J
Cadmium, Total	mg/kg	0.752	985	<0.58 U	<0.57 UJ	<0.55 UJ	0.94 J+	<0.56 U	<0.63 UJ	0.76 J+	<0.59 U	<0.57 UJ	<0.56 U	<0.57 U	0.23	0.18	13.6	0.96	0.58	<0.13 U	<0.1 U
Calcium, Total	mg/kg	NS	NS	4,730	108,000	24,900	57,700	12,600	28,700	108,000	3,840	74,200	3,720	4,050	39,200	8,100	14,700	27,900	31,600	25,100	69,700
Chromium, Hexavalent	mg/kg	NS	6.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium, Total [3]	mg/kg	360,000	NS	5.4	33.1	6.2	34.3	9.8	23.3	15.9	9.7	13.2	8.6	8.8	8.1	10.9	40.3	29.6	16.6	7.7	3.4
Chromium, Trivalent	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt, Total	mg/kg	3.6073	347	3.5 J	5.8	8.3	5 J	3.8 J	5.5 J	3.3 J	8.3 J	5.9	6.5	6.5	2	2.3	7.6	3.8	3.2	3.6	1.4
Copper, Total	mg/kg	91.6	46,700	20.6	33.7	32.7	65.3	15.5	104	47	29.2	29.1	20	19.8	174 J	55.2 J	575 J	114 J	111 J	27 J	59.9 J
Iron, Total	mg/kg	NS	100,000	17,100	12,700	4,970	15,200	17,100	22,300	18,000	7,630	9,260	4,420	4,320	14,200	18,800	**126,000**	55,500	36,400	16,200	7,730
Lead, Total	mg/kg	27	800	59.4	380	20.8	155	26.2	252	192	49	117	15.6	15.5	98.6	127	**2,750**	**1,610**	**1,180**	53.6	26
Magnesium, Total	mg/kg	NS	NS	1,120	38,200	12,300	32,300	5,040	13,100	50,400	1,340	30,500	1,340	1,530	16,100	3,570	8,000	11,800	14,800	10,900	31,000
Manganese, Total	mg/kg	39.1244	25,900	213	457	71	319	597	436	266	51.9	198	29.1	33.5	501 J	112 J	778 J	505 J	430 J	605 J	628 J
Mercury, Total	mg/kg	0.208	3.13	<0.12 UJ	0.17 J-	0.17 J-	0.65	<0.11 UJ	0.65	0.28 J-	<0.12 UJ	0.17 J-	<0.11 UJ	<0.11 UJ	0.19 J	0.47 J	**6 J**	**3.7 J**	2.6 J	0.31 J	0.09 J
Nickel, Total	mg/kg	13.0612	22,500	7.5	40.7	15.4	15	8	15.1	15.5	14.6	14.5	14.2	14.3	8.6	7.6	42.5	16.2	13.1	9	5.4
Potassium, Total	mg/kg	NS	NS	<585 UJ	2,000	581	1,160	778	1,280	865	<585 UJ	1,690	<561 UJ	<573 UJ	725 J	364 J	510 J	1,100 J	763 J	903 J	2,360 J
Selenium, Total	mg/kg	0.52	5,840	<4.1 UJ	<4 UJ	<3.8 UJ	<4.6 U	<4 U	<4.4 UJ	<3.7 U	<4.1 UJ	<4 UJ	<3.9 UJ	<4 UJ	<1.4 U	3.7	4.7	3.5	2.7	2.5	2.7
Silver, Total	mg/kg	0.8491	5,840	<1.2 UJ	<1.1 UJ	<1.1 UJ	<1.3 UJ	<1.1 UJ	<1.3 UJ	<1.1 UJ	<1.2 UJ	<1.1 UJ	<1.1 U	<1.1 U	<0.29 U	<0.27 U	0.41	<0.23 U	<0.23 U	<0.33 U	<0.26 U
Sodium, Total	mg/kg	NS	NS	151 J	455 J	209 J	243 J	180 J	292 J	233 J	257 J	423 J	172 J	169 J	658 J	418 J	5,840 J	1,140 J	719 J	591 J	874 J
Thallium, Total	mg/kg	0.284	11.7	0.77 J+	<2.9 U	<2.7 U	0.81 J+	<2.8 U	0.91 J+	<2.6 U	<2.9 U	<2.9 U	<2.8 U	<2.9 U	1.5 UR	1.4 UR	1.3 UR	1.2 UR	1.2 UR	1.7 UR	1.3 UR
Vanadium, Total	mg/kg	60	5,840	9.2	20.5	10.4	18.9	17.4	23.7	20.8	18.1	15.8	20.8	21.8	22.6	9	11.2	10.9	9	13.7	8.2
Zinc, Total	mg/kg	NS	100,000	29.6	286	49.6	165	47.3	230	204	25.6	109	25.3	28	207	70.5	4,660	545	176	63.8	30.7
Inorganic - Cyanide																					
Cyanide, Amenable	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Reactive	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Total	mg/kg	4.04	195	<2.9 U	1 J	<2.7 U	<3.3 U	<2.8 U	6.3	0.99 J	<2.9 U	<2.9 U	<2.8 U	<2.9 U	3 J	10.6 J	14.7 J	13.4 J	8.8 J	2.1 J	24.4 J
Other																					
Sulfide, Reactive	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organic Matter	%	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent Moisture	%	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	SB-A-15	SB-A-16	SB-A-17	SB-A-21	SB-A-22	SB-A-25	SB-B-06	SB-B-09	SB-B-10		SB-B-37	SB-C-28	SB-C-29	SB-C-30	SB-C-31	SB-C-34	SB-C-35	SB-C-36
Sample / Duplicate:				SB-A-15	SB-A-16	SB-A-17	SB-A-21	SB-A-22	SB-A-25	SB-B-06	SB-B-09	SB-B-10	SB-B-10	SB-B-37	SB-C-28	SB-C-29	SB-C-30	SB-C-31	SB-C-34	SB-C-35	SB-C-36
Field Sample ID:				MCS-SB-A-150405-E1QR5	MCS-SB-A-160607-E1QR2	MCS-SB-A-170607-E1QR9	MCS-SB-A-210708-E1QS1	MCS-SB-A-220607-E1QR6	MCS-SB-A-250708-E1QT3	MCS-SB-B-060204-E1QQ3	MCS-SB-B-090708-E1QQ9	MCS-SB-B-100405-ME1Q08	MCS-SB-S-100405-E1QQ8	MCS-SB-B-370910-E1QX7	MCS-SB-C-280405-E1QW0	MCS-SB-C2903045-E1QW4	MCS-SB-C-300708-E1QX0	MCS-SB-C-3100005-E1QX5	MCS-SB-C-3400005-E1QW1	MCS-SB-C-350507BC-E1QX4	MCS-SB-C-360102-E1QW3
Sample Depth (feet):				4 - 5	6 - 7	6 - 7	7 - 8	6 - 7	7 - 8	2 - 4	7 - 8	4 - 5	4 - 5	9 - 10	4 - 5	3 - 4.5	7 - 8	0 - 0.5	0 - 0.5	5 - 7	1 - 2
Sample Date:				12/12/2001	12/11/2001	12/12/2001	12/12/2001	12/12/2001	12/12/2001	12/11/2001	12/11/2001	12/11/2001	12/11/2001	12/13/2001	12/13/2001	12/13/2001	12/13/2001	12/13/2001	12/13/2001	12/13/2001	12/13/2001
VOCs																					
1,1,1-Trichloroethane	mg/kg	0.1402	640	<0.019 U	<0.020 U	<2.600 UJ	<0.011 U	<1.700 U	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0002	3.6	<0.019 U	<0.020 U	<2.600 UJ	*2.500 J*	<1.700 U	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
1,1,2-Trichloroethane	mg/kg	0.0032	7.01	<0.019 U	<0.020 U	<2.600 UJ	*2.200 J*	<1.700 U	*0.029 J*	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
1,1-Dichloroethane	mg/kg	0.4834	22.2	<0.019 U	<0.020 U	<2.600 UJ	<0.011 U	<1.700 U	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
1,1-Dichloroethene	mg/kg	0.005	1,190	<0.019 U	<0.020 U	<2.600 UJ	<0.011 U	<1.700 U	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0002	0.092	<0.019 U	<0.020 U	2.600 UR	<0.011 U	1.700 UR	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
1,2-Dibromoethane	mg/kg	0.0000282	0.221	<0.019 U	<0.020 U	<2.600 UJ	***2.100 J***	<1.700 U	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	***5.700***	<0.016 U	<0.011 U	<0.010 U	<0.016 U
1,2-Dichlorobenzene	mg/kg	1.168	376	<0.019 U	<0.020 U	<2.600 UJ	<0.011 U	<1.700 U	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
1,2-Dichloroethane	mg/kg	0.0028	2.87	<0.019 U	<0.020 U	<2.600 UJ	*1.400 J*	<1.700 U	0.001 J	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
1,2-Dichloropropane	mg/kg	0.0033	1.78	<0.019 U	<0.020 U	<2.600 UJ	<0.011 U	<1.700 U	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
1,3-Dichlorobenzene	mg/kg	1.1528	297	<0.019 U	<0.020 U	<2.600 UJ	<0.011 U	<1.700 U	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
1,4-Dichlorobenzene	mg/kg	0.144	16.4	<0.019 U	<0.020 U	<2.600 UJ	<0.011 U	<1.700 U	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
2-Butanone (MEK)	mg/kg	1.6661	28,400	0.011 J	<0.020 U	<2.600 UJ	0.018	<1.700 U	0.019 J	<0.020 U	0.009 J	--	<0.021 U	0.120	0.007 J	0.026	0.009 J	<0.016 U	0.007 J	0.003 J	<0.016 U
2-Hexanone	mg/kg	NS	1,760	<0.019 U	<0.020 U	<2.600 UJ	<0.011 U	<1.700 U	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
4-Methyl-2-Pentanone (MIBK)	mg/kg	0.2252	3,360	<0.019 U	<0.020 U	<2.600 UJ	<0.011 U	<1.700 U	0.002 J	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
Acetone	mg/kg	3.6766	100,000	0.076	0.043	<2.600 UJ	0.069	<1.700 U	2.100	0.025 J	0.066	--	0.050	0.830	0.056	0.160	0.071	0.018	0.160	0.014	0.042
Benzene	mg/kg	0.0051	7.07	*0.093*	*0.300*	***20.000***	***8.100 J***	*1.000 J*	*0.026 J*	<0.020 U	<0.021 U	--	*0.041*	*0.007 J*	0.002 J	0.003 J	*0.009 J*	<0.016 U	0.001 J	0.003 J	*0.006 J*
Bromodichloromethane	mg/kg	0.0003	1.83	<0.019 U	<0.020 U	<2.600 UJ	<0.011 U	<1.700 U	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
Bromoform	mg/kg	0.0023	113	<0.019 U	<0.020 U	<2.600 UJ	*2.400 J*	<1.700 U	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
Bromomethane	mg/kg	0.0051	43	<0.019 U	<0.020 U	<2.600 UJ	<0.011 U	<1.700 U	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
Carbon Disulfide	mg/kg	0.5919	738	0.003 J	0.007 J	<2.600 UJ	0.054	<1.700 U	0.005 J	<0.020 U	0.003 J	--	0.005 J	0.027 J	0.005 J	0.025	0.006 J	0.029	0.001 J	<0.010 U	<0.016 U
Carbon Tetrachloride	mg/kg	0.0039	4.03	<0.019 U	<0.020 U	<2.600 UJ	<0.011 U	<1.700 U	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
Chlorobenzene	mg/kg	0.1358	761	<0.019 U	<0.020 U	<2.600 UJ	0.002 J	<1.700 U	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
Chloroethane	mg/kg	0.2266	2,120	<0.019 U	<0.020 U	2.600 UR	<0.011 U	1.700 UR	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
Chloroform	mg/kg	0.0033	1.98	<0.019 U	<0.020 U	<2.600 UJ	<0.011 U	<1.700 U	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
Chloromethane	mg/kg	0.0155	669	<0.019 U	<0.020 U	<2.600 UJ	<0.011 U	<1.700 U	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
cis-1,2-Dichloroethene	mg/kg	0.0412	2,340	<0.019 U	<0.020 U	<2.600 UJ	<0.011 U	<1.700 U	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
cis-1,3-Dichloropropene	mg/kg	NS	1,210	<0.019 U	<0.020 U	<2.600 UJ	<0.011 U	<1.700 U	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
Cyclohexane	mg/kg	NS	117	0.003 J	0.005 J	0.400 J	0.007 J	<1.700 U	0.004 J	0.003 J	0.008 J	--	0.002 J	0.008 J	0.007 J	0.007 J	0.014 J	<0.016 U	0.007 J	0.006 J	0.005 J
Dibromochloromethane	mg/kg	0.032	38.9	<0.019 U	<0.020 U	<2.600 UJ	*1.500 J*	<1.700 U	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
Dichloromethane	mg/kg	0.0026	1,150	*0.014 J*	*0.004 J*	<2.600 U	*0.004 J*	<1.700 U	*0.094 J*	*0.004 J*	*0.003 J*	--	*0.004 J*	*0.120*	*0.005 J*	*0.008 J*	*2.800*	*0.004 J*	*0.005 J*	*0.004 J*	*0.007 J*
Ethylbenzene	mg/kg	1.57	35.4	0.015 J	<0.020 U	***81.000***	*9.200 J*	0.310 J	0.004 J	<0.020 U	<0.021 U	--	<0.021 U	0.010 J	<0.014 U	<0.018 U	0.006 J	<0.016 U	<0.011 U	0.002 J	<0.016 U
Freon 113	mg/kg	NS	910	<0.019 U	<0.020 U	<2.600 UJ	<0.011 U	<1.700 U	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
Freon 12	mg/kg	3.0863	530	<0.019 U	<0.020 U	<2.600 UJ	<0.011 U	<1.700 U	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
Isopropylbenzene	mg/kg	NS	268	0.013 J	<0.020 U	15.000	0.028	0.720 J	0.035 J	<0.020 U	<0.021 U	--	<0.021 U	0.063 J	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
Methyl acetate	mg/kg	NS	29,000	<0.019 U	<0.020 U	<2.600 UJ	2.600 J	0.930 J	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
Methylcyclohexane	mg/kg	NS	67.6	0.005 J	0.002 J	2.700 J	0.017	<1.700 U	0.004 J	<0.020 U	0.011 J	--	0.003 J	0.008 J	0.010 J	0.009 J	0.020 J	<0.016 U	0.007 J	0.007 J	0.005 J
Methyl-tert-butyl-ether	mg/kg	0.027	282	<0.019 U	<0.020 U	<2.600 UJ	*2.500 J*	<1.700 U	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	*6.800*	<0.016 U	<0.011 U	<0.010 U	<0.016 U
Styrene	mg/kg	0.22	867	<0.019 U	<0.020 U	<2.600 UJ	*11.000 J*	<1.700 U	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
Tetrachloroethene	mg/kg	0.0045	145	<0.019 U	<0.020 U	<2.600 UJ	<0.011 U	<1.700 U	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
Toluene	mg/kg	1.1072	818	0.025	0.006 J	*8.600*	*20.000*	0.190 J	0.170	0.008 J	0.006 J	--	0.006 J	0.039 J	0.002 J	0.002 J	*37.000*	<0.016 U	0.002 J	0.007 J	0.007 J
trans-1,2-Dichloroethene	mg/kg	0.0626	1,850	<0.019 U	<0.020 U	<2.600 UJ	<0.011 U	<1.700 U	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
trans-1,3-Dichloropropene	mg/kg	NS	1,510	<0.019 U	<0.020 U	<2.600 UJ	<0.011 U	<1.700 U	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
Trichloroethene	mg/kg	0.0036	8.41	<0.019 U	<0.020 U	<2.600 UJ	<0.011 U	<1.700 U	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	0.001 J	<0.010 U	<0.016 U
Trichlorofluoromethane	mg/kg	4.4775	1,230	<0.019 U	<0.020 U	<2.600 UJ	<0.011 U	<1.700 U	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
Vinyl Chloride	mg/kg	0.0001	2.08	<0.019 U	<0.020 U	<2.600 UJ	<0.011 U	<1.700 U	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	<0.027 U	<0.016 U	<0.011 U	<0.010 U	<0.016 U
Xylenes, Total	mg/kg	3.96	260	0.041	<0.020 U	*28.000*	*97.000*	*5.700*	0.013 J	<0.020 U	0.003 J	--	<0.021 U	0.042 J	<0.014 U	<0.018 U	0.014 J	<0.016 U	<0.011 U	0.003 J	0.005 J
PCBs																					
PCB, Total [4]	mg/kg	0.0094	0.967	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1016	mg/kg	NS	28	<0.420 U	<0.051 U	<0.700 U	<0.410 U	<0.480 U	<0.053 U	<0.430 U	<0.400 U	--	<0.450 U	<0.062 U	<0.380 U	<0.410 U	<0.044 U	0.042 UR	<0.380 U	<0.038 U	<0.410 U
PCB-1221	mg/kg	NS	0.883	<0.860 U	<0.100 U	<1.400 U	<0.840 U	<0.970 U	<0.110 U	<0.870 U	<0.810 U	--	<0.920 U	<0.130 U	<0.780 U	<0.820 U	<0.089 U	0.086 UR	<0.760 U	<0.078 U	<0.840 U
PCB-1232	mg/kg	NS	0.792	<0.420 U	<0.051 U	<0.700 U	<0.410 U	<0.480 U	<0.053 U	<0.430 U	<0.400 U	--	<0.450 U	<0.062 U	<0.380 U	<0.410 U	<0.044 U	0.042 UR	<0.380 U	<0.038 U	<0.410 U
PCB-1242	mg/kg	NS	0.972	<0.420 U	<0.051 U	<0.700 U	<0.410 U	<0.480 U	<0.053 U	<0.430 U	<0.400 U	--	<0.450 U	<0.062 U	<0.380 U	<0.410 U	<0.044 U	0.042 UR	<0.380 U	<0.038 U	<0.410 U
PCB-1248	mg/kg	NS	0.975	<0.420 U	<0.051 U	<0.700 U	<0.410 U	<0.480 U	<0.053 U	<0.430 U	<0.400 U	--	<0.450 U	<0.062 U	<0.380 U	<0.410 U	<0.044 U	0.042 UR	<0.380 U	<0.038 U	<0.410 U
PCB-1254	mg/kg	NS	0.988	<0.420 U	<0.051 U	<0.700 U	<0.410 U	<0.480 U	<0.053 U	<0.430 U	<0.400 U	--	<0.450 U	<0.062 U	<0.380 U	<0.410 U	<0.044 U	0.042 UR	<0.380 U	<0.038 U	<0.410 U
PCB-1260	mg/kg	NS	1	<0.420 U	<0.051 U	<0.700 U	<0.410 U	<0.480 U	<0.053 U	<0.430 U	<0.400 U	--	<0.450 U	<0.062 U	<0.380 U	<0.410 U	<0.044 U	0.042 UR	<0.380 U	<0.038 U	<0.410 U

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	SB-A-15	SB-A-16	SB-A-17	SB-A-21	SB-A-22	SB-A-25	SB-B-06	SB-B-09	SB-B-10		SB-B-37	SB-C-28	SB-C-29	SB-C-30	SB-C-31	SB-C-34	SB-C-35	SB-C-36
Sample / Duplicate:				SB-A-15	SB-A-16	SB-A-17	SB-A-21	SB-A-22	SB-A-25	SB-B-06	SB-B-09	SB-B-10	SB-B-10	SB-B-37	SB-C-28	SB-C-29	SB-C-30	SB-C-31	SB-C-34	SB-C-35	SB-C-36
Field Sample ID:				MCS-SB-A-150405-E1QR5	MCS-SB-A-160607-E1QR2	MCS-SB-A-170607-E1QR9	MCS-SB-A-210708-E1QS1	MCS-SB-A-220607-E1QR6	MCS-SB-A-250708-E1QT3	MCS-SB-B-060204-E1QQ3	MCS-SB-B-090708-E1QQ9	MCS-SB-B-100405-ME1Q08	MCS-SB-S-100405-E1QQ8	MCS-SB-B-370910-E1QX7	MCS-SB-C-280405-E1QW0	MCS-SB-C2903045-E1QW4	MCS-SB-C-300708-E1QX0	MCS-SB-C-3100005-E1QX5	MCS-SB-C-3400005-E1QW1	MCS-SB-C-350507BC-E1QX4	MCS-SB-C-360102-E1QW3
Sample Depth (feet):				4 - 5	6 - 7	6 - 7	7 - 8	6 - 7	7 - 8	2 - 4	7 - 8	4 - 5	4 - 5	9 - 10	4 - 5	3 - 4.5	7 - 8	0 - 0.5	0 - 0.5	5 - 7	1 - 2
Sample Date:				12/12/2001	12/11/2001	12/12/2001	12/12/2001	12/12/2001	12/12/2001	12/11/2001	12/11/2001	12/11/2001	12/11/2001	12/13/2001	12/13/2001	12/13/2001	12/13/2001	12/13/2001	12/13/2001	12/13/2001	12/13/2001
PAHs																					
2-Methylnaphthalene	mg/kg	NS	3,010	4.700	0.210 J	530.000	150.000	50.000 J	<73.000 U	2.700	<2.000 U	--	1.900 J	<3.100 U	0.540 J	0.110 J	<0.440 U	<2.100 U	0.660	<0.380 U	<0.410 U
Acenaphthene	mg/kg	NS	45,200	<4.200 U	<0.510 U	57.000	<110.000 U	160.000	<73.000 U	1.300 J	7.100	--	<4.500 U	1.200 J	<1.900 U	<0.410 U	<0.440 U	<2.100 U	0.093 J	<0.380 U	<0.410 U
Acenaphthylene	mg/kg	NS	NS	1.900 J	<0.510 U	4.600 J	120.000	81.000 J	<73.000 U	1.000 J	1.100 J	--	1.400 J	<3.100 U	<1.900 U	<0.410 U	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
Anthracene	mg/kg	196.9492	100,000	1.900 J	0.360 J	<19.000 U	140.000	*230.000*	18.000 J	1.500 J	0.450 J	--	1.500 J	1.800 J	0.410 J	<0.410 U	<0.440 U	<2.100 U	0.210 J	<0.380 U	<0.410 U
Benzo(a)anthracene	mg/kg	NS	20.8	19.000	1.200	<19.000 U	**120.000**	**230.000**	**110.000**	2.900	1.400 J	--	12.000	2.600 J	1.600 J	0.280 J	0.120 J	1.300 J	1.100	<0.380 U	0.380 J
Benzo(a)pyrene	mg/kg	0.47	2.11	***21.000***	*1.200*	<19.000 U	***86.000 J***	***120.000 J***	***68.000 J***	*2.100*	*1.100 J*	--	***15.000***	***2.200 J***	*1.200 J*	0.240 J	*0.570*	*0.520 J*	0.240 J	<0.380 U	0.230 J
Benzo(b)fluoranthene	mg/kg	0.4793	21.1	*18.000*	*0.820*	<19.000 U	***60.000 J***	***80.000 J***	***88.000***	*2.000 J*	*1.200 J*	--	*15.000*	*1.800 J*	*1.400 J*	0.330 J	0.230 J	*0.910 J*	*0.900*	<0.380 U	0.290 J
Benzo(g,h,i)perylene	mg/kg	NS	NS	13.000	1.300	<19.000 U	45.000 J	44.000 J	<73.000 U	1.100 J	0.570 J	--	14.000	1.100 J	<1.900 U	<0.410 U	0.099 J	<2.100 U	<0.370 U	<0.380 UJ	0.150 J
Benzo(k)fluoranthene	mg/kg	NS	211	17.000	0.780	<19.000 U	75.000 J	110.000 J	62.000 J	1.700 J	0.900 J	--	12.000	1.800 J	1.400 J	0.230 J	0.200 J	0.910 J	0.630	<0.380 U	0.270 J
Chrysene	mg/kg	0.1446	2,110	*20.000*	*1.300*	<19.000 U	*120.000*	*190.000*	*110.000*	*3.500*	*1.600 J*	--	*13.000*	*2.700 J*	*1.900*	*0.360 J*	*0.260 J*	*1.800 J*	*0.990*	<0.380 U	*0.470*
Dibenz(a,h)anthracene	mg/kg	NS	2.11	**6.700**	0.480 J	<19.000 U	<110.000 U	**26.000**	**20.000 J**	0.520 J	<2.000 U	--	**3.800 J**	<3.100 U	<1.900 U	<0.410 U	<0.440 U	<2.100 U	0.310 J	<0.380 U	0.089 J
Fluoranthene	mg/kg	88.8778	30,100	23.000	1.200	7.600 J	*320.000*	*550.000*	*180.000*	5.300	3.000	--	20.000	8.700	3.300	0.540	0.450	2.900	1.500	<0.380 U	0.840
Fluorene	mg/kg	14.8299	30,100	<4.200 U	0.140 J	*31.000*	*160.000*	*400.000*	<73.000 U	2.400	3.600	--	<4.500 U	1.200 J	<1.900 U	<0.410 U	<0.440 U	<2.100 U	0.150 J	<0.380 U	<0.410 U
Indeno(1,2,3-cd)pyrene	mg/kg	NS	21.1	17.000	0.900	<19.000 U	**42.000 J**	**44.000 J**	**46.000 J**	1.000 J	0.540 J	--	12.000	1.000 J	0.750 J	0.170 J	0.350 J	<2.100 U	0.260 J	<0.380 U	0.170 J
Naphthalene	mg/kg	0.6582	24.1	*17.000*	0.400 J	***3.000***	***740.000***	***430.000***	***82.000***	*5.400*	*2.700*	--	*14.000*	*5.900*	<1.900 U	0.086 J	<0.440 U	<2.100 U	0.410	<0.380 U	0.130 J
Phenanthrene	mg/kg	NS	NS	4.800	1.600	83.000 J	490.000	920.000	<73.000 U	5.700	2.800	--	7.600	1.800 J	2.500	0.440	0.230 J	3.400	1.300	<0.380 U	0.450
Pyrene	mg/kg	54.5455	22,600	22.000	2.100	11.000 J	*250.000*	*410.000*	*150.000*	4.000	2.500	--	20.000	7.200	3.300	0.470	1.100	2.000 J	0.690	<0.380 U	0.510
SVOCs																					
1,2,4-Trichlorobenzene	mg/kg	0.408	113	<0.019 U	<0.020 U	<2.600 UJ	<0.011 U	<1.700 U	<0.016 U	<0.020 U	<0.021 U	--	<0.021 U	<0.047 U	<0.014 U	<0.018 U	*2.600*	<0.016 U	<0.011 U	<0.010 U	<0.016 U
2,2-Oxybis(1-chloropropane)	mg/kg	NS	1,020	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	<2.100 U	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 U	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
2,4-Dinitrotoluene	mg/kg	0.0001	7.37	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	<2.100 U	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 U	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
2,6-Dinitrotoluene	mg/kg	0.0001	1.54	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	*0.660 J*	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 U	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
2-Chloronaphthalene	mg/kg	NS	60,300	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	<2.100 U	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 U	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
2-Nitroaniline	mg/kg	NS	8,010	<11.000 U	<1.300 U	<48.000 U	<280.000 U	<36.000 U	<180.000 U	<5.400 U	<5.000 U	--	<11.000 U	<7.800 U	<4.800 U	<1.000 U	<1.100 U	<5.300 U	<0.940 U	<0.970 U	<1.000 U
3,3-Dichlorobenzidine	mg/kg	NS	5.11	<4.200 UJ	<0.510 UJ	<19.000 UJ	<110.000 UJ	<14.000 UJ	<73.000 UJ	<2.100 UJ	<2.000 U	--	<4.500 UJ	<3.100 U	<1.900 UJ	<0.410 UJ	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
3-Nitroaniline	mg/kg	NS	NS	<11.000 U	<1.300 U	<48.000 U	<280.000 U	<36.000 U	<180.000 U	<5.400 U	<5.000 U	--	<11.000 U	<7.800 U	<4.800 U	<1.000 U	<1.100 U	<5.300 U	<0.940 U	<0.970 U	<1.000 U
4-Bromodiphenyl ether	mg/kg	NS	26.9	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	<2.100 U	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 U	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
4-Chloroaniline	mg/kg	NS	11.5	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	<2.100 U	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 UJ	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
4-Chlorodiphenyl ether	mg/kg	NS	NS	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	<2.100 U	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 U	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
4-Nitroaniline	mg/kg	NS	115	<11.000 U	<1.300 U	<48.000 U	<280.000 U	<36.000 U	<180.000 U	<5.400 U	<5.000 U	--	<11.000 U	<7.800 U	<4.800 U	<1.000 U	<1.100 U	<5.300 U	<0.940 U	<0.970 U	<1.000 U
Acetophenone	mg/kg	NS	2,520	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	<2.100 U	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 U	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
Benzaldehyde	mg/kg	NS	818	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	<2.100 U	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 U	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
Biphenyl	mg/kg	NS	288	<4.200 U	<0.510 U	41.000	30.000 J	61.000 J	<73.000 U	0.930 J	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 U	<0.440 U	<2.100 U	0.120 J	<0.380 U	<0.410 U
Bis(2-Chloroethoxy)methane	mg/kg	NS	2,460	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	<2.100 U	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 U	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
Bis(2-Chloroethyl)ether	mg/kg	NS	1.29	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	<2.100 U	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 U	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
Bis(2-Ethylhexyl)phthalate	mg/kg	2.88	164	<4.200 UJ	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	0.920 J	<2.000 U	--	<4.500 UJ	<3.100 U	<1.900 U	0.110 J	<0.440 U	<2.100 U	0.210 J	<0.380 U	<0.410 U
Butyl benzyl phthalate	mg/kg	NS	1,210	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	<2.100 U	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 U	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
Caprolactam	mg/kg	NS	100,000	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	<2.100 U	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 U	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
Carbazole	mg/kg	NS	NS	<4.200 U	<0.510 U	7.800 J	100.000 J	36.000	<73.000 U	0.640 J	3.800	--	<4.500 U	<3.100 U	<1.900 U	<0.410 U	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
Dibenzofuran	mg/kg	NS	1,040	0.900 J	0.150 J	27.000	110.000	250.000	<73.000 U	1.300 J	1.500 J	--	1.500 J	0.850 J	<1.900 U	<0.410 U	<0.440 U	0.790 J	0.200 J	<0.380 U	<0.410 U
Diethyl phthalate	mg/kg	NS	100,000	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	<2.100 U	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 U	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
Dimethyl phthalate	mg/kg	NS	7,390	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	<2.100 U	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 U	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
Di-n-butyl phthalate	mg/kg	5.0333	82,100	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	<2.100 U	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 U	<0.440 U	<2.100 U	0.130 J	<0.380 U	<0.410 U
Di-n-octyl phthalate	mg/kg	NS	8,210	<4.200 UJ	<0.510 UJ	<19.000 UJ	<110.000 UJ	<14.000 UJ	<73.000 UJ	<2.100 UJ	<2.000 U	--	<4.500 UJ	<3.100 U	<1.900 UJ	<0.410 U	<0.440 UJ	<2.100 U	<0.370 U	<0.380 UJ	<0.410 UJ
Hexachlorobenzene	mg/kg	0.0252	1.15	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	<2.100 U	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 U	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
Hexachlorobutadiene	mg/kg	NS	7.19	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	<2.100 U	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 U	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
Hexachlorocyclopentadiene	mg/kg	NS	10.8	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	<2.100 U	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 U	<0.440 UJ	<2.100 U	<0.370 U	<0.380 UJ	<0.410 UJ
Hexachloroethane	mg/kg	NS	11.1	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	<2.100 U	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 U	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
Isophorone	mg/kg	NS	2,420	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	<2.100 U	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 U	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
Nitrobenzene	mg/kg	NS	32.4	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	<2.100 U	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 U	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
N-nitrosodi-n-propylamine	mg/kg	NS	0.328	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	<2.100 U	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 U	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
N-Nitrosodiphenylamine	mg/kg	0.0764	469	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	<2.100 U	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 U	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
Pyridine	mg/kg	0.0069	1,170	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	SB-A-15	SB-A-16	SB-A-17	SB-A-21	SB-A-22	SB-A-25	SB-B-06	SB-B-09	SB-B-10		SB-B-37	SB-C-28	SB-C-29	SB-C-30	SB-C-31	SB-C-34	SB-C-35	SB-C-36
Sample / Duplicate:				SB-A-15	SB-A-16	SB-A-17	SB-A-21	SB-A-22	SB-A-25	SB-B-06	SB-B-09	SB-B-10	SB-B-10	SB-B-37	SB-C-28	SB-C-29	SB-C-30	SB-C-31	SB-C-34	SB-C-35	SB-C-36
Field Sample ID:				MCS-SB-A-150405-E1QR5	MCS-SB-A-160607-E1QR2	MCS-SB-A-170607-E1QR9	MCS-SB-A-210708-E1QS1	MCS-SB-A-220607-E1QR6	MCS-SB-A-250708-E1QT3	MCS-SB-B-060204-E1QQ3	MCS-SB-B-090708-E1QQ9	MCS-SB-B-100405-ME1Q08	MCS-SB-S-100405-E1QQ8	MCS-SB-B-370910-E1QX7	MCS-SB-C-280405-E1QW0	MCS-SB-C2903045-E1QW4	MCS-SB-C-300708-E1QX0	MCS-SB-C-3100005-E1QX5	MCS-SB-C-3400005-E1QW1	MCS-SB-C-350507BC-E1QX4	MCS-SB-C-360102-E1QW3
Sample Depth (feet):				4 - 5	6 - 7	6 - 7	7 - 8	6 - 7	7 - 8	2 - 4	7 - 8	4 - 5	4 - 5	9 - 10	4 - 5	3 - 4.5	7 - 8	0 - 0.5	0 - 0.5	5 - 7	1 - 2
Sample Date:				12/12/2001	12/11/2001	12/12/2001	12/12/2001	12/12/2001	12/12/2001	12/11/2001	12/11/2001	12/11/2001	12/11/2001	12/13/2001	12/13/2001	12/13/2001	12/13/2001	12/13/2001	12/13/2001	12/13/2001	12/13/2001
Phenols																					
2,4,5-Trichlorophenol	mg/kg	NS	82,100	<11.000 U	<1.300 U	<48.000 U	<280.000 U	<36.000 U	<180.000 U	<5.400 U	<5.000 U	--	<11.000 U	<7.800 U	<4.800 U	<1.000 UJ	<1.100 U	<5.300 U	<0.940 U	<0.970 U	<1.000 U
2,4,6-Trichlorophenol	mg/kg	NS	209	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	<2.100 U	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 UJ	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
2,4-Dichlorophenol	mg/kg	NS	2,460	<4.200 UJ	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	<2.100 U	<2.000 U	--	<4.500 UJ	<3.100 U	<1.900 U	<0.410 UJ	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
2,4-Dimethylphenol	mg/kg	NS	16,400	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	1.200 J	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 UJ	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
2,4-Dinitrophenol	mg/kg	NS	1,640	<11.000 UJ	<1.300 U	<48.000 U	<280.000 U	<36.000 U	<180.000 U	<5.400 U	<5.000 U	--	<11.000 UJ	<7.800 U	<4.800 U	<1.000 UJ	<1.100 U	<5.300 U	<0.940 U	<0.970 U	<1.000 U
2-Chlorophenol	mg/kg	NS	5,840	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	<2.100 U	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 UJ	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
2-Methylphenol	mg/kg	NS	41,000	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	<2.100 U	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 UJ	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
2-Nitrophenol	mg/kg	NS	NS	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	<2.100 U	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 UJ	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
4-Chloro-3-methylphenol	mg/kg	NS	82,100	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	<2.100 U	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 UJ	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
4-Methylphenol	mg/kg	NS	82,100	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	<2.100 U	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 UJ	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
4-Nitrophenol	mg/kg	NS	NS	<11.000 U	<1.300 U	<48.000 U	<280.000 U	<36.000 U	<180.000 U	<5.400 U	<5.000 U	--	<11.000 U	<7.800 U	<4.800 U	<1.000 UJ	<1.100 U	<5.300 U	<0.940 U	<0.970 U	<1.000 U
4,6-Dinitro-2-methylphenol	mg/kg	NS	65.7	<11.000 U	<1.300 U	<48.000 U	<280.000 U	<36.000 U	<180.000 U	<5.400 U	<5.000 U	--	<11.000 U	<7.800 U	<4.800 U	<1.000 UJ	<1.100 U	<5.300 U	<0.940 U	<0.970 U	<1.000 U
Pentachlorophenol	mg/kg	0.0028	3.97	<11.000 UJ	<1.300 U	<48.000 U	<280.000 U	<36.000 U	<180.000 U	<5.400 U	<5.000 U	--	<11.000 UJ	<7.800 U	<4.800 U	<1.000 UJ	<1.100 U	<5.300 U	<0.940 U	<0.970 U	<1.000 U
Phenol	mg/kg	2.2946	100,000	<4.200 U	<0.510 U	<19.000 U	<110.000 U	<14.000 U	<73.000 U	<2.100 U	<2.000 U	--	<4.500 U	<3.100 U	<1.900 U	<0.410 UJ	<0.440 U	<2.100 U	<0.370 U	<0.380 U	<0.410 U
Metals																					
Aluminum, Total	mg/kg	600	100,000	3,690	1,610	2,310	4,040	6,210	2,780	751	4,640	3,090	--	9,290	6,540	6,900	2,070	410	2,250	6,050	2,000
Antimony, Total	mg/kg	0.542	467	<0.91 UJ	11.9 J	8.6 J	1.7 J	4.8 J	<1.3 UJ	<1.1 UJ	<0.88 UJ	<0.98 UJ	--	<1.5 UJ	1.6 J	1.6 J	<0.93 UJ	3.1 J	2.5 J	<0.86 UJ	1.4 J
Arsenic, Total [1]	mg/kg	0.584	8.3	**13.5**	**14.7**	**22.5**	**11.2**	**10.2**	**9.2 J**	2.7	**9.4**	7.8	--	**16.4**	**11.3 J**	**10.7 J**	**63.6 J**	**103**	**14.2 J**	2.9	4.1 J
Barium, Total	mg/kg	164.8	100,000	66.6	28.6	327	54.6	105	39.2	23.8	42.9	77.9	--	101	65.1	319	16.8	41.8	3,710	33.6	74.1
Beryllium, Total	mg/kg	6.32	2,300	0.62 J	0.75 J	0.55 J	0.39 J	0.6 J	0.38 J	0.29 J	3.9 J	0.65 J	--	0.94	1	1.2	0.15	<0.1 U	0.26 J	0.26	0.36 J
Cadmium, Total	mg/kg	0.752	985	<0.1 U	6	15.8	1.8	0.31	0.17	<0.12 U	0.53	0.32	--	0.59	0.69	2	<0.1 U	0.16	0.88	<0.09 U	0.27
Calcium, Total	mg/kg	NS	NS	17,500	4,700	5,400	32,600	76,700	5,860	1,860	12,500	10,900	--	70,600	47,700	41,500	31,900	3,880	29,400	96,700	13,600
Chromium, Hexavalent	mg/kg	NS	6.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium, Total [3]	mg/kg	360,000	NS	6.8	4.1	8.5	6.7	15	5.7 J	2.2	5	5.9	--	42.5	12.6 J	9.9 J	7.6 J	10.5	192 J	12.5	15 J
Chromium, Trivalent	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt, Total	mg/kg	3.6073	347	2.1	1.4	10.6	2.8	7	1.6	2.4	13.2	2.7	--	5.1	6.4	4.1	2.3	1.4	**475**	5.7	1.1
Copper, Total	mg/kg	91.6	46,700	31.3 J	18,000 J	210 J	768 J	76.7 J	34.7	12.4 J	73 J	43.9 J	--	66.5	71.9	64.6	8.4	37.1	213	16.1	57.8
Iron, Total	mg/kg	NS	100,000	17,100	22,100	11,100	11,200	34,500	10,800	2,850	7,410	8,020	--	25,500	27,200	43,600	5,350	70,200	77,400	11,100	7,700
Lead, Total	mg/kg	27	800	56	**1,360**	418	106	**2,150**	77	11.7	24.6	68.1	--	92.6	106	191	6.6	283	149	7.4	98.1
Magnesium, Total	mg/kg	NS	NS	5,180	1,410	1,330	14,300	27,200	2,890	687	7,120	3,280	--	16,900	21,700	14,800	13,400	105	11,400	41,000	5,050
Manganese, Total	mg/kg	39.1244	25,900	171 J	140 J	168 J	281 J	533 J	57.7 J	20 J	115 J	102 J	--	543	416 J	1,180 J	167 J	142	833 J	340	117 J
Mercury, Total	mg/kg	0.208	3.13	**8.5 J**	0.36 J	0.3 J	0.2 J	0.24 J	**9.5 J**	0.06 UR	0.09 J	**9.7 J**	--	0.38	0.32 J	**3.3 J**	<0.05 U	**9.2**	0.09 J	<0.06 U	0.06 J
Nickel, Total	mg/kg	13.0612	22,500	7.8	12	41.8	9.2	18.6	7.6	4	30.6	7.2	--	16.9	27.6	17.4	6.2	9.5	61.8	15.6	9.4
Potassium, Total	mg/kg	NS	NS	566 J	239 J	419 J	722 J	1,050 J	492 J	142 J	170 J	487 J	--	1,240 J	1,320 J	1,070 J	331 J	299 J	1,190 J	1,430 J	375 J
Selenium, Total	mg/kg	0.52	5,840	1.3	3.5	9.8	18.4	7.4	1.8 J	2.1	3.3	1.3	--	5.5	1.3 J	2.3 J	<1.2 U	5.8	2.6 J	<1.1 U	1.4 J
Silver, Total	mg/kg	0.8491	5,840	<0.25 U	6.5	<0.54 U	0.35	<0.3 U	<0.34 U	<0.3 U	<0.24 U	<0.26 U	--	<0.41 U	<0.23 U	<0.24 U	<0.25 U	<0.25 U	<0.22 U	<0.23 U	<0.22 U
Sodium, Total	mg/kg	NS	NS	<80.9 U	6,960 J	824 J	1,780 J	606 J	284 J	351 J	234 J	547 J	--	892 J	767 J	1,290 J	336 J	264 J	2,520 J	418 J	160 J
Thallium, Total	mg/kg	0.284	11.7	1.3 UR	1.6 UR	2.8 UR	1.3 UR	1.6 UR	<1.8 UJ	1.5 UR	1.2 UR	1.4 UR	--	2.2 UR	<1.2 UJ	<1.2 UJ	<1.3 UJ	1.3 UR	<1.1 UJ	1.2 UR	<1.2 UJ
Vanadium, Total	mg/kg	60	5,840	13.8	6	12.1	7.7	29	7.7	4.9	6.5	8.1	--	18.3	18.9	12.6	16.5	3.2	9.2	15.8	4.6
Zinc, Total	mg/kg	NS	100,000	69.5	4,560	260	1,170	147	122 J	12.7	95.9	165	--	176	243 J	631 J	27.6 J	17.5	437 J	46.2	103 J
Inorganic - Cyanide																					
Cyanide, Amenable	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Reactive	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Total	mg/kg	4.04	195	1.2 J	11.5 J	1.4 J	3.7 J	15.5 J	1.9	0.5 J	1.3 J	3.6 J	--	18.5	1.8	8.6	0.05	190	0.4	<0.03 U	1.2
Other																					
Sulfide, Reactive	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organic Matter	%	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent Moisture	%	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	SP07	SP09	SP11				SP13				SP15	SP16 (cont'd on next page)						
Sample / Duplicate:				SP07	SP09	SP11	SP11	SP11 DUP	SP11	SP13	SP13	SP13	SP13	SP15	SP16	SP16	SP16	SP16	SP16	SP16	SP16
Field Sample ID:				SP07-102008	SP09-102008	SP11-01-102108	SP11-02-102108	SPDUP003-102108	SP11-03-102108	SP13-03-102108	SP13-01-102108	SP13-02-102108	SP13-04-102108	SP15-101608	SP16-01-102308	SP16-02-102308	SP16-03-102308	SP16-04-102308	SP16-05-102308	SP16-06-102308	SP16-07-102308
Sample Depth (feet):				0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1.5	0.5	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 2	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1
Sample Date:				10/20/2008	10/20/2008	10/21/2008	10/21/2008	10/21/2008	10/21/2008	10/21/2008	10/21/2008	10/21/2008	10/21/2008	10/16/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008
VOCs																					
1,1,1-Trichloroethane	mg/kg	0.1402	640	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/kg	0.0002	3.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/kg	0.0032	7.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/kg	0.4834	22.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	mg/kg	0.005	1,190	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	mg/kg	0.0002	0.092	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/kg	0.0000282	0.221	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/kg	1.168	376	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/kg	0.0028	2.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/kg	0.0033	1.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/kg	1.1528	297	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/kg	0.144	16.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone (MEK)	mg/kg	1.6661	28,400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/kg	NS	1,760	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-Pentanone (MIBK)	mg/kg	0.2252	3,360	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	mg/kg	3.6766	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	mg/kg	0.0051	7.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/kg	0.0003	1.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/kg	0.0023	113	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/kg	0.0051	43	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Disulfide	mg/kg	0.5919	738	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/kg	0.0039	4.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/kg	0.1358	761	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	mg/kg	0.2266	2,120	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/kg	0.0033	1.98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/kg	0.0155	669	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/kg	0.0412	2,340	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/kg	NS	1,210	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	mg/kg	NS	117	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/kg	0.032	38.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichloromethane	mg/kg	0.0026	1,150	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/kg	1.57	35.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Freon 113	mg/kg	NS	910	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Freon 12	mg/kg	3.0863	530	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene	mg/kg	NS	268	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl acetate	mg/kg	NS	29,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylcyclohexane	mg/kg	NS	67.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl-tert-butyl-ether	mg/kg	0.027	282	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	mg/kg	0.22	867	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	mg/kg	0.0045	145	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	mg/kg	1.1072	818	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/kg	0.0626	1,850	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/kg	NS	1,510	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/kg	0.0036	8.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/kg	4.4775	1,230	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/kg	0.0001	2.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/kg	3.96	260	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCBs																					
PCB, Total [4]	mg/kg	0.0094	0.967	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1016	mg/kg	NS	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1221	mg/kg	NS	0.883	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1232	mg/kg	NS	0.792	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1242	mg/kg	NS	0.972	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1248	mg/kg	NS	0.975	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1254	mg/kg	NS	0.988	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1260	mg/kg	NS	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	SP07	SP09	SP11				SP13				SP15	SP16 (cont'd on next page)						
Sample / Duplicate:				SP07	SP09	SP11	SP11	SP11 DUP	SP11	SP13	SP13	SP13	SP13	SP15	SP16	SP16	SP16	SP16	SP16	SP16	SP16
Field Sample ID:				SP07-102008	SP09-102008	SP11-01-102108	SP11-02-102108	SPDUP003-102108	SP11-03-102108	SP13-03-102108	SP13-01-102108	SP13-02-102108	SP13-04-102108	SP15-101608	SP16-01-102308	SP16-02-102308	SP16-03-102308	SP16-04-102308	SP16-05-102308	SP16-06-102308	SP16-07-102308
Sample Depth (feet):				0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1.5	0.5	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 2	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1
Sample Date:				10/20/2008	10/20/2008	10/21/2008	10/21/2008	10/21/2008	10/21/2008	10/21/2008	10/21/2008	10/21/2008	10/21/2008	10/16/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008
PAHs																					
2-Methylnaphthalene	mg/kg	NS	3,010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	mg/kg	NS	45,200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	mg/kg	196.9492	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	mg/kg	NS	20.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	mg/kg	0.47	2.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	mg/kg	0.4793	21.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	mg/kg	NS	211	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	mg/kg	0.1446	2,110	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	mg/kg	NS	2.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	mg/kg	88.8778	30,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	mg/kg	14.8299	30,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	mg/kg	NS	21.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/kg	0.6582	24.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	mg/kg	54.5455	22,600	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SVOCs																					
1,2,4-Trichlorobenzene	mg/kg	0.408	113	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,2-Oxybis(1-chloropropane)	mg/kg	NS	1,020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	mg/kg	0.0001	7.37	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	mg/kg	0.0001	1.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	mg/kg	NS	60,300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	mg/kg	NS	8,010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3,3-Dichlorobenzidine	mg/kg	NS	5.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromodiphenyl ether	mg/kg	NS	26.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	mg/kg	NS	11.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorodiphenyl ether	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	mg/kg	NS	115	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetophenone	mg/kg	NS	2,520	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzaldehyde	mg/kg	NS	818	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Biphenyl	mg/kg	NS	288	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethoxy)methane	mg/kg	NS	2,460	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethyl)ether	mg/kg	NS	1.29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Ethylhexyl)phthalate	mg/kg	2.88	164	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl phthalate	mg/kg	NS	1,210	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Caprolactam	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	mg/kg	NS	1,040	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl phthalate	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl phthalate	mg/kg	NS	7,390	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butyl phthalate	mg/kg	5.0333	82,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate	mg/kg	NS	8,210	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	mg/kg	0.0252	1.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	mg/kg	NS	7.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	mg/kg	NS	10.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	mg/kg	NS	11.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isophorone	mg/kg	NS	2,420	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	mg/kg	NS	32.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-nitrosodi-n-propylamine	mg/kg	NS	0.328	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	mg/kg	0.0764	469	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyridine	mg/kg	0.0069	1,170	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	SP07	SP09	SP11				SP13				SP15	SP16 (cont'd on next page)						
Sample / Duplicate:				SP07	SP09	SP11	SP11	SP11 DUP	SP11	SP13	SP13	SP13	SP13	SP15	SP16	SP16	SP16	SP16	SP16	SP16	SP16
Field Sample ID:				SP07-102008	SP09-102008	SP11-01-102108	SP11-02-102108	SPDUP003-102108	SP11-03-102108	SP13-03-102108	SP13-01-102108	SP13-02-102108	SP13-04-102108	SP15-101608	SP16-01-102308	SP16-02-102308	SP16-03-102308	SP16-04-102308	SP16-05-102308	SP16-06-102308	SP16-07-102308
Sample Depth (feet):				0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1.5	0.5	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 2	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1
Sample Date:				10/20/2008	10/20/2008	10/21/2008	10/21/2008	10/21/2008	10/21/2008	10/21/2008	10/21/2008	10/21/2008	10/21/2008	10/16/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008
Phenols																					
2,4,5-Trichlorophenol	mg/kg	NS	82,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	mg/kg	NS	209	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	mg/kg	NS	2,460	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	mg/kg	NS	16,400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	mg/kg	NS	1,640	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	mg/kg	NS	5,840	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylphenol	mg/kg	NS	41,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	mg/kg	NS	82,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	mg/kg	NS	82,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	mg/kg	NS	65.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	mg/kg	0.0028	3.97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	mg/kg	2.2946	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals																					
Aluminum, Total	mg/kg	600	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Antimony, Total	mg/kg	0.542	467	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic, Total [1]	mg/kg	0.584	8.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Barium, Total	mg/kg	164.8	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Beryllium, Total	mg/kg	6.32	2,300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium, Total	mg/kg	0.752	985	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Calcium, Total	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium, Hexavalent	mg/kg	NS	6.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium, Total [3]	mg/kg	360,000	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium, Trivalent	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt, Total	mg/kg	3.6073	347	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper, Total	mg/kg	91.6	46,700	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron, Total	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead, Total	mg/kg	27	800	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Magnesium, Total	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese, Total	mg/kg	39.1244	25,900	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury, Total	mg/kg	0.208	3.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nickel, Total	mg/kg	13.0612	22,500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Potassium, Total	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium, Total	mg/kg	0.52	5,840	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver, Total	mg/kg	0.8491	5,840	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sodium, Total	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium, Total	mg/kg	0.284	11.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium, Total	mg/kg	60	5,840	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc, Total	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Inorganic - Cyanide																					
Cyanide, Amenable	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Reactive	mg/kg	4.04	195	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.2 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U
Cyanide, Total	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other																					
Sulfide, Reactive	mg/kg	NS	NS	44 B	26 B	<56 U	18 B	<56 U	17 B	<58 U	<55 U	<56 U	18 B	<55 U	<54 U	8.4 B	<54 U	26 B	<53 U	<55 U	<55 U
Organic Matter	%	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent Moisture	%	NS	NS	9.2	8.9	9.9	11	11	8	13	8.8	10	12	8.6	8	5	8	8.5	6.4	8.7	9.6

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	SP16 (cont'd)																	
Sample / Duplicate:				SP16	SP16	SP16	SP16	SP16	SP16	SP16	SP16	SP16	SP16	SP16	SP16	SP16 DUP	SP16 DUP	SP16	SP16	SP16	SP16
Field Sample ID:				SP16-08-102308	SP16-09-102308	SP16-10-102308	SP16-11-102308	SP16-12-102308	SP16-13-102308	SP16-14-102308	SP16-15-102308	SP16-16-102308	SP16-17-102308	SP16-18-102308	SP16-19-102308	SPDUP005-102308	SPDUP006-102308	SP16-20-102408	SP16-21-102408	SP16-22-102408	SP16-23-102408
Sample Depth (feet):				0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1
Sample Date:				10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/24/2008	10/24/2008	10/24/2008	10/24/2008
VOCs																					
1,1,1-Trichloroethane	mg/kg	0.1402	640	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/kg	0.0002	3.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/kg	0.0032	7.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/kg	0.4834	22.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	mg/kg	0.005	1,190	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	mg/kg	0.0002	0.092	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/kg	0.0000282	0.221	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/kg	1.168	376	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/kg	0.0028	2.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/kg	0.0033	1.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/kg	1.1528	297	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/kg	0.144	16.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone (MEK)	mg/kg	1.6661	28,400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/kg	NS	1,760	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-Pentanone (MIBK)	mg/kg	0.2252	3,360	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	mg/kg	3.6766	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	mg/kg	0.0051	7.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/kg	0.0003	1.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/kg	0.0023	113	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/kg	0.0051	43	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Disulfide	mg/kg	0.5919	738	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/kg	0.0039	4.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/kg	0.1358	761	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	mg/kg	0.2266	2,120	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/kg	0.0033	1.98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/kg	0.0155	669	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/kg	0.0412	2,340	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/kg	NS	1,210	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	mg/kg	NS	117	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/kg	0.032	38.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichloromethane	mg/kg	0.0026	1,150	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/kg	1.57	35.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Freon 113	mg/kg	NS	910	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Freon 12	mg/kg	3.0863	530	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene	mg/kg	NS	268	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl acetate	mg/kg	NS	29,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylcyclohexane	mg/kg	NS	67.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl-tert-butyl-ether	mg/kg	0.027	282	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	mg/kg	0.22	867	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	mg/kg	0.0045	145	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	mg/kg	1.1072	818	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/kg	0.0626	1,850	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/kg	NS	1,510	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/kg	0.0036	8.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/kg	4.4775	1,230	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/kg	0.0001	2.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/kg	3.96	260	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCBs																					
PCB, Total [4]	mg/kg	0.0094	0.967	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1016	mg/kg	NS	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1221	mg/kg	NS	0.883	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1232	mg/kg	NS	0.792	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1242	mg/kg	NS	0.972	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1248	mg/kg	NS	0.975	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1254	mg/kg	NS	0.988	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1260	mg/kg	NS	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	SP16 (cont'd)																	
Sample / Duplicate:				SP16	SP16	SP16	SP16	SP16	SP16	SP16	SP16	SP16	SP16	SP16	SP16	SP16 DUP	SP16 DUP	SP16	SP16	SP16	SP16
Field Sample ID:				SP16-08-102308	SP16-09-102308	SP16-10-102308	SP16-11-102308	SP16-12-102308	SP16-13-102308	SP16-14-102308	SP16-15-102308	SP16-16-102308	SP16-17-102308	SP16-18-102308	SP16-19-102308	SPDUP005-102308	SPDUP006-102308	SP16-20-102408	SP16-21-102408	SP16-22-102408	SP16-23-102408
Sample Depth (feet):				0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1
Sample Date:				10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/24/2008	10/24/2008	10/24/2008	10/24/2008
PAHs																					
2-Methylnaphthalene	mg/kg	NS	3,010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	mg/kg	NS	45,200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	mg/kg	196.9492	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	mg/kg	NS	20.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	mg/kg	0.47	2.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	mg/kg	0.4793	21.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	mg/kg	NS	211	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	mg/kg	0.1446	2,110	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	mg/kg	NS	2.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	mg/kg	88.8778	30,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	mg/kg	14.8299	30,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	mg/kg	NS	21.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/kg	0.6582	24.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	mg/kg	54.5455	22,600	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SVOCs																					
1,2,4-Trichlorobenzene	mg/kg	0.408	113	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,2-Oxybis(1-chloropropane)	mg/kg	NS	1,020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	mg/kg	0.0001	7.37	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	mg/kg	0.0001	1.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	mg/kg	NS	60,300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	mg/kg	NS	8,010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3,3-Dichlorobenzidine	mg/kg	NS	5.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromodiphenyl ether	mg/kg	NS	26.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	mg/kg	NS	11.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorodiphenyl ether	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	mg/kg	NS	115	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetophenone	mg/kg	NS	2,520	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzaldehyde	mg/kg	NS	818	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Biphenyl	mg/kg	NS	288	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethoxy)methane	mg/kg	NS	2,460	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethyl)ether	mg/kg	NS	1.29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Ethylhexyl)phthalate	mg/kg	2.88	164	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl phthalate	mg/kg	NS	1,210	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Caprolactam	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	mg/kg	NS	1,040	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl phthalate	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl phthalate	mg/kg	NS	7,390	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butyl phthalate	mg/kg	5.0333	82,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate	mg/kg	NS	8,210	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	mg/kg	0.0252	1.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	mg/kg	NS	7.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	mg/kg	NS	10.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	mg/kg	NS	11.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isophorone	mg/kg	NS	2,420	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	mg/kg	NS	32.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-nitrosodi-n-propylamine	mg/kg	NS	0.328	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	mg/kg	0.0764	469	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyridine	mg/kg	0.0069	1,170	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	SP16 (cont'd)																	
Sample / Duplicate:				SP16	SP16	SP16	SP16	SP16	SP16	SP16	SP16	SP16	SP16	SP16	SP16	SP16 DUP	SP16 DUP	SP16	SP16	SP16	SP16
Field Sample ID:				SP16-08-102308	SP16-09-102308	SP16-10-102308	SP16-11-102308	SP16-12-102308	SP16-13-102308	SP16-14-102308	SP16-15-102308	SP16-16-102308	SP16-17-102308	SP16-18-102308	SP16-19-102308	SPDUP005-102308	SPDUP006-102308	SP16-20-102408	SP16-21-102408	SP16-22-102408	SP16-23-102408
Sample Depth (feet):				0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1
Sample Date:				10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/23/2008	10/24/2008	10/24/2008	10/24/2008	10/24/2008
Phenols																					
2,4,5-Trichlorophenol	mg/kg	NS	82,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	mg/kg	NS	209	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	mg/kg	NS	2,460	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	mg/kg	NS	16,400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	mg/kg	NS	1,640	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	mg/kg	NS	5,840	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylphenol	mg/kg	NS	41,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	mg/kg	NS	82,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	mg/kg	NS	82,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	mg/kg	NS	65.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	mg/kg	0.0028	3.97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	mg/kg	2.2946	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals																					
Aluminum, Total	mg/kg	600	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Antimony, Total	mg/kg	0.542	467	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic, Total [1]	mg/kg	0.584	8.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Barium, Total	mg/kg	164.8	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Beryllium, Total	mg/kg	6.32	2,300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium, Total	mg/kg	0.752	985	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Calcium, Total	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium, Hexavalent	mg/kg	NS	6.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium, Total [3]	mg/kg	360,000	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium, Trivalent	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt, Total	mg/kg	3.6073	347	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper, Total	mg/kg	91.6	46,700	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron, Total	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead, Total	mg/kg	27	800	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Magnesium, Total	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese, Total	mg/kg	39.1244	25,900	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury, Total	mg/kg	0.208	3.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nickel, Total	mg/kg	13.0612	22,500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Potassium, Total	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium, Total	mg/kg	0.52	5,840	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver, Total	mg/kg	0.8491	5,840	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sodium, Total	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium, Total	mg/kg	0.284	11.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium, Total	mg/kg	60	5,840	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc, Total	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Inorganic - Cyanide																					
Cyanide, Amenable	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Reactive	mg/kg	4.04	195	<1.1 U	0.82 B	<1.0 U	<1.1 U	<1.1 U	<1.2 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U
Cyanide, Total	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other																					
Sulfide, Reactive	mg/kg	NS	NS	8.4 B	<52 U	8.4 B	<53 U	<54 U	19 B	8.6 B	<55 U	<57 U	<56 U	18 B	<53 U	<53 U	27 B	8.7 B	<54 U	<57 U	<56 U
Organic Matter	%	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent Moisture	%	NS	NS	4.9	3.1	4.7	5.1	8.2	16	7.1	8.8	12	10	12	4.8	5.4	9.7	7.6	8	13	10

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	SP16 (cont'd)					SP21	SP22			SP24	SP25	SP26		SP27		SP28	SP29	SP34
Sample / Duplicate:				SP16	SP16	SP16	SP16	SP16 DUP	SP21	SP22	SP22	SP22	SP24	SP25	SP26	SP26	SP27	SP27	SP28	SP29	SP34
Field Sample ID:				SP16-24-102408	SP16-25-102408	SP16-26-102408	SP16-27-102408	SPDUP007-102408	SP21-102208	SP22-01-102008	SP22-02-102008	SP22-03-102008	SP24-102008	SP25-102008	SP26-02-102408	SP26-01-102408	SP27-01-102108	SP27-02-102108	SP28-102208	SP29-102108	SP34-102208
Sample Depth (feet):				0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0	0 - 0.5	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1
Sample Date:				10/24/2008	10/24/2008	10/24/2008	10/24/2008	10/24/2008	10/22/2008	10/20/2008	10/20/2008	10/20/2008	10/20/2008	10/20/2008	10/24/2008	10/24/2008	10/21/2008	10/21/2008	10/22/2008	10/21/2008	10/22/2008
VOCs																					
1,1,1-Trichloroethane	mg/kg	0.1402	640	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/kg	0.0002	3.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/kg	0.0032	7.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/kg	0.4834	22.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	mg/kg	0.005	1,190	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	mg/kg	0.0002	0.092	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/kg	0.0000282	0.221	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/kg	1.168	376	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/kg	0.0028	2.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/kg	0.0033	1.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/kg	1.1528	297	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/kg	0.144	16.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone (MEK)	mg/kg	1.6661	28,400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/kg	NS	1,760	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-Pentanone (MIBK)	mg/kg	0.2252	3,360	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	mg/kg	3.6766	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	mg/kg	0.0051	7.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/kg	0.0003	1.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/kg	0.0023	113	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/kg	0.0051	43	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Disulfide	mg/kg	0.5919	738	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/kg	0.0039	4.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/kg	0.1358	761	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	mg/kg	0.2266	2,120	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/kg	0.0033	1.98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/kg	0.0155	669	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/kg	0.0412	2,340	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/kg	NS	1,210	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	mg/kg	NS	117	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/kg	0.032	38.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichloromethane	mg/kg	0.0026	1,150	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/kg	1.57	35.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Freon 113	mg/kg	NS	910	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Freon 12	mg/kg	3.0863	530	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene	mg/kg	NS	268	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl acetate	mg/kg	NS	29,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylcyclohexane	mg/kg	NS	67.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl-tert-butyl-ether	mg/kg	0.027	282	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	mg/kg	0.22	867	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	mg/kg	0.0045	145	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	mg/kg	1.1072	818	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/kg	0.0626	1,850	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/kg	NS	1,510	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/kg	0.0036	8.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/kg	4.4775	1,230	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/kg	0.0001	2.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/kg	3.96	260	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCBs																					
PCB, Total [4]	mg/kg	0.0094	0.967	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1016	mg/kg	NS	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1221	mg/kg	NS	0.883	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1232	mg/kg	NS	0.792	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1242	mg/kg	NS	0.972	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1248	mg/kg	NS	0.975	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1254	mg/kg	NS	0.988	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1260	mg/kg	NS	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	SP16 (cont'd)					SP21	SP22			SP24	SP25	SP26		SP27		SP28	SP29	SP34
Sample / Duplicate:				SP16	SP16	SP16	SP16	SP16 DUP	SP21	SP22	SP22	SP22	SP24	SP25	SP26	SP26	SP27	SP27	SP28	SP29	SP34
Field Sample ID:				SP16-24-102408	SP16-25-102408	SP16-26-102408	SP16-27-102408	SPDUP007-102408	SP21-102208	SP22-01-102008	SP22-02-102008	SP22-03-102008	SP24-102008	SP25-102008	SP26-02-102408	SP26-01-102408	SP27-01-102108	SP27-02-102108	SP28-102208	SP29-102108	SP34-102208
Sample Depth (feet):				0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0	0 - 0.5	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1
Sample Date:				10/24/2008	10/24/2008	10/24/2008	10/24/2008	10/24/2008	10/22/2008	10/20/2008	10/20/2008	10/20/2008	10/20/2008	10/20/2008	10/24/2008	10/24/2008	10/21/2008	10/21/2008	10/22/2008	10/21/2008	10/22/2008
PAHs																					
2-Methylnaphthalene	mg/kg	NS	3,010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	mg/kg	NS	45,200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	mg/kg	196.9492	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	mg/kg	NS	20.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	mg/kg	0.47	2.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	mg/kg	0.4793	21.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	mg/kg	NS	211	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	mg/kg	0.1446	2,110	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	mg/kg	NS	2.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	mg/kg	88.8778	30,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	mg/kg	14.8299	30,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	mg/kg	NS	21.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/kg	0.6582	24.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	mg/kg	54.5455	22,600	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SVOCs																					
1,2,4-Trichlorobenzene	mg/kg	0.408	113	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,2-Oxybis(1-chloropropane)	mg/kg	NS	1,020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	mg/kg	0.0001	7.37	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	mg/kg	0.0001	1.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	mg/kg	NS	60,300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	mg/kg	NS	8,010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3,3-Dichlorobenzidine	mg/kg	NS	5.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromodiphenyl ether	mg/kg	NS	26.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	mg/kg	NS	11.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorodiphenyl ether	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	mg/kg	NS	115	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetophenone	mg/kg	NS	2,520	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzaldehyde	mg/kg	NS	818	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Biphenyl	mg/kg	NS	288	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethoxy)methane	mg/kg	NS	2,460	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethyl)ether	mg/kg	NS	1.29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Ethylhexyl)phthalate	mg/kg	2.88	164	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl phthalate	mg/kg	NS	1,210	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Caprolactam	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	mg/kg	NS	1,040	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl phthalate	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl phthalate	mg/kg	NS	7,390	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butyl phthalate	mg/kg	5.0333	82,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate	mg/kg	NS	8,210	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	mg/kg	0.0252	1.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	mg/kg	NS	7.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	mg/kg	NS	10.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	mg/kg	NS	11.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isophorone	mg/kg	NS	2,420	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	mg/kg	NS	32.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-nitrosodi-n-propylamine	mg/kg	NS	0.328	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	mg/kg	0.0764	469	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyridine	mg/kg	0.0069	1,170	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	SP16 (cont'd)					SP21	SP22			SP24	SP25	SP26		SP27		SP28	SP29	SP34
Sample / Duplicate:				SP16	SP16	SP16	SP16	SP16 DUP	SP21	SP22	SP22	SP22	SP24	SP25	SP26	SP26	SP27	SP27	SP28	SP29	SP34
Field Sample ID:				SP16-24-102408	SP16-25-102408	SP16-26-102408	SP16-27-102408	SPDUP007-102408	SP21-102208	SP22-01-102008	SP22-02-102008	SP22-03-102008	SP24-102008	SP25-102008	SP26-02-102408	SP26-01-102408	SP27-01-102108	SP27-02-102108	SP28-102208	SP29-102108	SP34-102208
Sample Depth (feet):				0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0	0 - 0.5	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1
Sample Date:				10/24/2008	10/24/2008	10/24/2008	10/24/2008	10/24/2008	10/22/2008	10/20/2008	10/20/2008	10/20/2008	10/20/2008	10/20/2008	10/24/2008	10/24/2008	10/21/2008	10/21/2008	10/22/2008	10/21/2008	10/22/2008
Phenols																					
2,4,5-Trichlorophenol	mg/kg	NS	82,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	mg/kg	NS	209	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	mg/kg	NS	2,460	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	mg/kg	NS	16,400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	mg/kg	NS	1,640	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	mg/kg	NS	5,840	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylphenol	mg/kg	NS	41,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	mg/kg	NS	82,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	mg/kg	NS	82,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	mg/kg	NS	65.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	mg/kg	0.0028	3.97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	mg/kg	2.2946	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals																					
Aluminum, Total	mg/kg	600	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Antimony, Total	mg/kg	0.542	467	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic, Total [1]	mg/kg	0.584	8.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Barium, Total	mg/kg	164.8	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Beryllium, Total	mg/kg	6.32	2,300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium, Total	mg/kg	0.752	985	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Calcium, Total	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium, Hexavalent	mg/kg	NS	6.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium, Total [3]	mg/kg	360,000	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium, Trivalent	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt, Total	mg/kg	3.6073	347	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper, Total	mg/kg	91.6	46,700	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron, Total	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead, Total	mg/kg	27	800	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Magnesium, Total	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese, Total	mg/kg	39.1244	25,900	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury, Total	mg/kg	0.208	3.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nickel, Total	mg/kg	13.0612	22,500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Potassium, Total	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium, Total	mg/kg	0.52	5,840	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver, Total	mg/kg	0.8491	5,840	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sodium, Total	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium, Total	mg/kg	0.284	11.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium, Total	mg/kg	60	5,840	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc, Total	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Inorganic - Cyanide																					
Cyanide, Amenable	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Reactive	mg/kg	4.04	195	<1.0 U	0.67 B	<1.2 U	<1.1 U	<1.2 U	<1.1 U	<1.0 U	<1.1 U	<1.2 U	<1.0 U	<1.2 U	<1.2 U	<1.2 U	0.75 B	<1.1 U	<1.1 U	<1.2 U	<1.1 U
Cyanide, Total	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other																					
Sulfide, Reactive	mg/kg	NS	NS	<52 U	<56 U	<58 U	<54 U	<58 U	<54 U	41 B	<53 U	48 B	33 B	9.3 B	<58 U	20 B	<55 U	8.8 B	9.2 B	<58 U	<55 U
Organic Matter	%	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent Moisture	%	NS	NS	4.7	11	13	7.4	13	7.8	2	5.7	16	3.3	14	13	18	9.2	9.2	13	14	9.6

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	SP35		SP36	SP38		SP40	SP42	SP44	SP45	SP46	SP47	SP48		SP49	SP51	SP55	SP56
Sample / Duplicate:				SP35	SP35 DUP	SP36	SP38	SP38	SP40	SP42	SP44	SP45	SP46	SP47	SP48	SP48 DUP	SP49	SP51	SP55	SP56
Field Sample ID:				SP35-102208	SPDUP004-102208	SP36-102208	SP38-01-102208	SP38-02-102208	SP40-102208	SP42-102208	SP44-102208	SP45-102108	SP46-102108	SP47-102108	SP48-102008	SPDUP001-102008	SP49-102208	SP51-102408	SP55-102408	SP56-102008
Sample Depth (feet):				0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5	0.5	0.5	0.5 - 1	0.5 - 1	0.5 - 1	0	0	0.5 - 1
Sample Date:				10/22/2008	10/22/2008	10/22/2008	10/22/2008	10/22/2008	10/22/2008	10/22/2008	10/22/2008	10/21/2008	10/21/2008	10/21/2008	10/20/2008	10/20/2008	10/22/2008	10/24/2008	10/24/2008	10/20/2008
VOCs																				
1,1,1-Trichloroethane	mg/kg	0.1402	640	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/kg	0.0002	3.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/kg	0.0032	7.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/kg	0.4834	22.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	mg/kg	0.005	1,190	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	mg/kg	0.0002	0.092	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/kg	0.0000282	0.221	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/kg	1.168	376	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/kg	0.0028	2.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/kg	0.0033	1.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/kg	1.1528	297	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/kg	0.144	16.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone (MEK)	mg/kg	1.6661	28,400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/kg	NS	1,760	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-Pentanone (MIBK)	mg/kg	0.2252	3,360	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	mg/kg	3.6766	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	mg/kg	0.0051	7.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/kg	0.0003	1.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/kg	0.0023	113	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/kg	0.0051	43	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Disulfide	mg/kg	0.5919	738	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/kg	0.0039	4.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/kg	0.1358	761	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	mg/kg	0.2266	2,120	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/kg	0.0033	1.98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/kg	0.0155	669	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/kg	0.0412	2,340	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/kg	NS	1,210	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	mg/kg	NS	117	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/kg	0.032	38.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichloromethane	mg/kg	0.0026	1,150	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/kg	1.57	35.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Freon 113	mg/kg	NS	910	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Freon 12	mg/kg	3.0863	530	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene	mg/kg	NS	268	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl acetate	mg/kg	NS	29,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylcyclohexane	mg/kg	NS	67.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl-tert-butyl-ether	mg/kg	0.027	282	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	mg/kg	0.22	867	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	mg/kg	0.0045	145	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	mg/kg	1.1072	818	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/kg	0.0626	1,850	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/kg	NS	1,510	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/kg	0.0036	8.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/kg	4.4775	1,230	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/kg	0.0001	2.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/kg	3.96	260	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCBs																				
PCB, Total [4]	mg/kg	0.0094	0.967	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1016	mg/kg	NS	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1221	mg/kg	NS	0.883	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1232	mg/kg	NS	0.792	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1242	mg/kg	NS	0.972	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1248	mg/kg	NS	0.975	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1254	mg/kg	NS	0.988	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1260	mg/kg	NS	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	SP35		SP36	SP38		SP40	SP42	SP44	SP45	SP46	SP47	SP48		SP49	SP51	SP55	SP56
Sample / Duplicate:				SP35	SP35 DUP	SP36	SP38	SP38	SP40	SP42	SP44	SP45	SP46	SP47	SP48	SP48 DUP	SP49	SP51	SP55	SP56
Field Sample ID:				SP35-102208	SPDUP004-102208	SP36-102208	SP38-01-102208	SP38-02-102208	SP40-102208	SP42-102208	SP44-102208	SP45-102108	SP46-102108	SP47-102108	SP48-102008	SPDUP001-102008	SP49-102208	SP51-102408	SP55-102408	SP56-102008
Sample Depth (feet):				0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5	0.5	0.5	0.5 - 1	0.5 - 1	0.5 - 1	0	0	0.5 - 1
Sample Date:				10/22/2008	10/22/2008	10/22/2008	10/22/2008	10/22/2008	10/22/2008	10/22/2008	10/22/2008	10/21/2008	10/21/2008	10/21/2008	10/20/2008	10/20/2008	10/22/2008	10/24/2008	10/24/2008	10/20/2008
PAHs																				
2-Methylnaphthalene	mg/kg	NS	3,010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	mg/kg	NS	45,200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	mg/kg	196.9492	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	mg/kg	NS	20.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	mg/kg	0.47	2.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	mg/kg	0.4793	21.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	mg/kg	NS	211	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	mg/kg	0.1446	2,110	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	mg/kg	NS	2.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	mg/kg	88.8778	30,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	mg/kg	14.8299	30,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	mg/kg	NS	21.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/kg	0.6582	24.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	mg/kg	54.5455	22,600	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SVOCs																				
1,2,4-Trichlorobenzene	mg/kg	0.408	113	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,2-Oxybis(1-chloropropane)	mg/kg	NS	1,020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	mg/kg	0.0001	7.37	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	mg/kg	0.0001	1.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	mg/kg	NS	60,300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	mg/kg	NS	8,010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3,3-Dichlorobenzidine	mg/kg	NS	5.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromodiphenyl ether	mg/kg	NS	26.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	mg/kg	NS	11.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorodiphenyl ether	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	mg/kg	NS	115	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetophenone	mg/kg	NS	2,520	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzaldehyde	mg/kg	NS	818	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Biphenyl	mg/kg	NS	288	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethoxy)methane	mg/kg	NS	2,460	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethyl)ether	mg/kg	NS	1.29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Ethylhexyl)phthalate	mg/kg	2.88	164	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl phthalate	mg/kg	NS	1,210	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Caprolactam	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	mg/kg	NS	1,040	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl phthalate	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl phthalate	mg/kg	NS	7,390	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butyl phthalate	mg/kg	5.0333	82,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate	mg/kg	NS	8,210	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	mg/kg	0.0252	1.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	mg/kg	NS	7.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	mg/kg	NS	10.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	mg/kg	NS	11.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isophorone	mg/kg	NS	2,420	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	mg/kg	NS	32.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-nitrosodi-n-propylamine	mg/kg	NS	0.328	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	mg/kg	0.0764	469	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyridine	mg/kg	0.0069	1,170	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	SP35		SP36	SP38		SP40	SP42	SP44	SP45	SP46	SP47	SP48		SP49	SP51	SP55	SP56
Sample / Duplicate:				SP35	SP35 DUP	SP36	SP38	SP38	SP40	SP42	SP44	SP45	SP46	SP47	SP48	SP48 DUP	SP49	SP51	SP55	SP56
Field Sample ID:				SP35-102208	SPDUP004-102208	SP36-102208	SP38-01-102208	SP38-02-102208	SP40-102208	SP42-102208	SP44-102208	SP45-102108	SP46-102108	SP47-102108	SP48-102008	SPDUP001-102008	SP49-102208	SP51-102408	SP55-102408	SP56-102008
Sample Depth (feet):				0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5 - 1	0.5	0.5	0.5	0.5 - 1	0.5 - 1	0.5 - 1	0	0	0.5 - 1
Sample Date:				10/22/2008	10/22/2008	10/22/2008	10/22/2008	10/22/2008	10/22/2008	10/22/2008	10/22/2008	10/21/2008	10/21/2008	10/21/2008	10/20/2008	10/20/2008	10/22/2008	10/24/2008	10/24/2008	10/20/2008
Phenols																				
2,4,5-Trichlorophenol	mg/kg	NS	82,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	mg/kg	NS	209	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	mg/kg	NS	2,460	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	mg/kg	NS	16,400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	mg/kg	NS	1,640	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	mg/kg	NS	5,840	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylphenol	mg/kg	NS	41,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	mg/kg	NS	82,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	mg/kg	NS	82,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	mg/kg	NS	65.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	mg/kg	0.0028	3.97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	mg/kg	2.2946	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals																				
Aluminum, Total	mg/kg	600	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Antimony, Total	mg/kg	0.542	467	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic, Total [1]	mg/kg	0.584	8.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Barium, Total	mg/kg	164.8	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Beryllium, Total	mg/kg	6.32	2,300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium, Total	mg/kg	0.752	985	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Calcium, Total	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium, Hexavalent	mg/kg	NS	6.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium, Total [3]	mg/kg	360,000	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium, Trivalent	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt, Total	mg/kg	3.6073	347	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper, Total	mg/kg	91.6	46,700	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron, Total	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead, Total	mg/kg	27	800	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Magnesium, Total	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese, Total	mg/kg	39.1244	25,900	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury, Total	mg/kg	0.208	3.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nickel, Total	mg/kg	13.0612	22,500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Potassium, Total	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium, Total	mg/kg	0.52	5,840	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver, Total	mg/kg	0.8491	5,840	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sodium, Total	mg/kg	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium, Total	mg/kg	0.284	11.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium, Total	mg/kg	60	5,840	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc, Total	mg/kg	NS	100,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Inorganic - Cyanide																				
Cyanide, Amenable	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Reactive	mg/kg	4.04	195	<1.2 U	<1.2 U	<1.1 U	<1.1 U	<1.2 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.0 U	<1.1 U
Cyanide, Total	mg/kg	4.04	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other																				
Sulfide, Reactive	mg/kg	NS	NS	<59 U	<58 U	<55 U	<55 U	<58 U	<57 U	9 B	43 B	18 B	<55 U	8.8 B	45 B	18 B	<54 U	8.4 B	<50 U	18 B
Organic Matter	%	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent Moisture	%	NS	NS	15	14	8.6	9.8	13	13	11	6.1	10	9.7	8.6	12	13	7.1	5.2	0.57	12

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	SP59		SP62	SS-A-37	SS-A-38	Statistics by Analyte [2]					
Sample / Duplicate:				SP59	SP59 DUP	SP62	SS-A-37	SS-A-38	Total Number of Samples Analyzed	Number of Detections	Minimum Detected Result	Source	Number of Samples that Exceed Soil-to-Groundwater Pathway RCLs	Number of Samples that Exceed Industrial Direct Contact RCLs
Field Sample ID:				SP59-102008	SPDUP002-102008	SP62-102208	MCS-SS-A-37-E1R01	MCS-SS-A-38-E1R02						
Sample Depth (feet):				0.5 - 1	0.5 - 1	0	0 - 0.6	0 - 0.6						
Sample Date:				10/20/2008	10/20/2008	10/22/2008	12/18/2001	12/18/2001						
VOCs														
1,1,1-Trichloroethane	mg/kg	0.1402	640	--	--	--	<0.021 UJ	<0.014 UJ	294	5	0.0024	0.034	0	0
1,1,2,2-Tetrachloroethane	mg/kg	0.0002	3.6	--	--	--	<0.021 UJ	<0.014 UJ	294	1	2.5	2.5	1	0
1,1,2-Trichloroethane	mg/kg	0.0032	7.01	--	--	--	<0.021 UJ	<0.014 UJ	294	2	0.029	2.2	2	0
1,1-Dichloroethane	mg/kg	0.4834	22.2	--	--	--	<0.021 UJ	<0.014 UJ	294	1	0.0041	0.0041	0	0
1,1-Dichloroethene	mg/kg	0.005	1,190	--	--	--	<0.021 UJ	<0.014 UJ	294	22	0.0011	0.0086	7	0
1,2-Dibromo-3-chloropropane	mg/kg	0.0002	0.092	--	--	--	<0.021 UJ	<0.014 UJ	294	0	0	0	0	0
1,2-Dibromoethane	mg/kg	0.0000282	0.221	--	--	--	<0.021 UJ	<0.014 UJ	294	2	2.1	5.7	2	2
1,2-Dichlorobenzene	mg/kg	1.168	376	--	--	--	<0.021 UJ	<0.014 UJ	294	3	0.00085	0.0024	0	0
1,2-Dichloroethane	mg/kg	0.0028	2.87	--	--	--	<0.021 UJ	<0.014 UJ	294	3	0.001	1.4	1	0
1,2-Dichloropropane	mg/kg	0.0033	1.78	--	--	--	<0.021 UJ	<0.014 UJ	294	0	0	0	0	0
1,3-Dichlorobenzene	mg/kg	1.1528	297	--	--	--	<0.021 UJ	<0.014 UJ	294	1	0.0023	0.0023	0	0
1,4-Dichlorobenzene	mg/kg	0.144	16.4	--	--	--	<0.021 UJ	<0.014 UJ	294	1	0.0017	0.0017	0	0
2-Butanone (MEK)	mg/kg	1.6661	28,400	--	--	--	<0.021 UJ	<0.014 UJ	294	60	0.0023	0.2	0	0
2-Hexanone	mg/kg	NS	1,760	--	--	--	<0.021 UJ	<0.014 UJ	294	0	0	0	0	0
4-Methyl-2-Pentanone (MIBK)	mg/kg	0.2252	3,360	--	--	--	<0.021 UJ	<0.014 UJ	294	2	0.002	0.015	0	0
Acetone	mg/kg	3.6766	100,000	--	--	--	0.027 L	0.018 L	294	141	0.0052	42	1	0
Benzene	mg/kg	0.0051	7.07	--	--	--	0.005 L	<0.014 UJ	294	142	0.00059	1200	62	8
Bromodichloromethane	mg/kg	0.0003	1.83	--	--	--	<0.021 UJ	<0.014 UJ	294	0	0	0	0	0
Bromoform	mg/kg	0.0023	113	--	--	--	<0.021 UJ	<0.014 UJ	294	1	2.4	2.4	1	0
Bromomethane	mg/kg	0.0051	43	--	--	--	<0.021 UJ	<0.014 UJ	294	1	0.002	0.002	0	0
Carbon Disulfide	mg/kg	0.5919	738	--	--	--	<0.021 UJ	0.002 L	294	59	0.00051	0.054	0	0
Carbon Tetrachloride	mg/kg	0.0039	4.03	--	--	--	<0.021 UJ	<0.014 UJ	294	1	0.0028	0.0028	0	0
Chlorobenzene	mg/kg	0.1358	761	--	--	--	<0.021 UJ	<0.014 UJ	294	1	0.002	0.002	0	0
Chloroethane	mg/kg	0.2266	2,120	--	--	--	<0.021 UJ	<0.014 UJ	294	0	0	0	0	0
Chloroform	mg/kg	0.0033	1.98	--	--	--	<0.021 UJ	<0.014 UJ	294	2	0.00089	0.0069	1	0
Chloromethane	mg/kg	0.0155	669	--	--	--	<0.021 UJ	<0.014 UJ	294	2	0.0029	11	1	0
cis-1,2-Dichloroethene	mg/kg	0.0412	2,340	--	--	--	<0.021 UJ	<0.014 UJ	294	0	0	0	0	0
cis-1,3-Dichloropropene	mg/kg	NS	1,210	--	--	--	<0.021 UJ	<0.014 UJ	294	0	0	0	0	0
Cyclohexane	mg/kg	NS	117	--	--	--	<0.021 UJ	<0.014 UJ	294	115	0.00047	2.2	0	0
Dibromochloromethane	mg/kg	0.032	38.9	--	--	--	<0.021 UJ	<0.014 UJ	294	1	1.5	1.5	1	0
Dichloromethane	mg/kg	0.0026	1,150	--	--	--	<0.021 UJ	<0.014 UJ	294	37	0.001	110	27	0
Ethylbenzene	mg/kg	1.57	35.4	--	--	--	<0.021 UJ	<0.014 UJ	294	43	0.00094	81	10	3
Freon 113	mg/kg	NS	910	--	--	--	<0.021 UJ	<0.014 UJ	294	0	0	0	0	0
Freon 12	mg/kg	3.0863	530	--	--	--	<0.021 UJ	<0.014 UJ	294	0	0	0	0	0
Isopropylbenzene	mg/kg	NS	268	--	--	--	<0.021 UJ	<0.014 UJ	294	30	0.00071	15	0	0
Methyl acetate	mg/kg	NS	29,000	--	--	--	<0.021 UJ	<0.014 UJ	294	12	0.0034	2.6	0	0
Methylcyclohexane	mg/kg	NS	67.6	--	--	--	0.003 L	0.002 L	294	142	0.0005	3.5	0	0
Methyl-tert-butyl-ether	mg/kg	0.027	282	--	--	--	<0.021 UJ	<0.014 UJ	294	2	2.5	6.8	2	0
Styrene	mg/kg	0.22	867	--	--	--	<0.021 UJ	<0.014 UJ	294	12	0.0011	55	7	0
Tetrachloroethene	mg/kg	0.0045	145	--	--	--	<0.021 UJ	<0.014 UJ	294	18	0.00079	0.0082	3	0
Toluene	mg/kg	1.1072	818	--	--	--	0.003 L	<0.014 UJ	294	144	0.00087	1600	13	1
trans-1,2-Dichloroethene	mg/kg	0.0626	1,850	--	--	--	<0.021 UJ	<0.014 UJ	294	0	0	0	0	0
trans-1,3-Dichloropropene	mg/kg	NS	1,510	--	--	--	<0.021 UJ	<0.014 UJ	294	0	0	0	0	0
Trichloroethene	mg/kg	0.0036	8.41	--	--	--	<0.021 UJ	<0.014 UJ	294	2	0.001	0.043	1	0
Trichlorofluoromethane	mg/kg	4.4775	1,230	--	--	--	<0.021 UJ	<0.014 UJ	294	0	0	0	0	0
Vinyl Chloride	mg/kg	0.0001	2.08	--	--	--	<0.021 UJ	<0.014 UJ	294	0	0	0	0	0
Xylenes, Total	mg/kg	3.96	260	--	--	--	<0.021 UJ	<0.014 UJ	294	95	0.0011	2400	14	3
PCBs														
PCB, Total [4]	mg/kg	0.0094	0.967	--	--	--	--	--	27	11	0.024	1.6	11	1
PCB-1016	mg/kg	NS	28	--	--	--	<0.047 U	<0.039 U	92	0	0	0	0	0
PCB-1221	mg/kg	NS	0.883	--	--	--	<0.096 U	<0.079 U	92	0	0	0	0	0
PCB-1232	mg/kg	NS	0.792	--	--	--	<0.047 U	<0.039 U	92	0	0	0	0	0
PCB-1242	mg/kg	NS	0.972	--	--	--	<0.047 U	<0.039 U	92	0	0	0	0	0
PCB-1248	mg/kg	NS	0.975	--	--	--	<0.047 U	<0.039 U	92	0	0	0	0	0
PCB-1254	mg/kg	NS	0.988	--	--	--	<0.047 U	<0.039 U	92	0	0	0	0	0
PCB-1260	mg/kg	NS	1	--	--	--	<0.047 U	<0.039 U	92	11	0.024	1.6	0	1

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Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	SP59		SP62	SS-A-37	SS-A-38	Statistics by Analyte [2]					
Sample / Duplicate:				SP59	SP59 DUP	SP62	SS-A-37	SS-A-38	Total Number of Samples Analyzed	Number of Detections	Minimum Detected Result	Source	Number of Samples that Exceed Soil-to-Groundwater Pathway RCLs	Number of Samples that Exceed Industrial Direct Contact RCLs
Field Sample ID:				SP59-102008	SPDUP002-102008	SP62-102208	MCS-SS-A-37-E1R01	MCS-SS-A-38-E1R02						
Sample Depth (feet):				0.5 - 1	0.5 - 1	0	0 - 0.6	0 - 0.6						
Sample Date:				10/20/2008	10/20/2008	10/22/2008	12/18/2001	12/18/2001						
PAHs														
2-Methylnaphthalene	mg/kg	NS	3,010	--	--	--	0.660 J	0.790	307	236	0.023	36000	0	5
Acenaphthene	mg/kg	NS	45,200	--	--	--	0.440 J	0.070 J	307	215	0.014	1300	0	0
Acenaphthylene	mg/kg	NS	NS	--	--	--	0.250 J	<0.390 U	307	178	0.021	12000	0	0
Anthracene	mg/kg	196.9492	100,000	--	--	--	1.100 J	0.270 J	307	257	0.031	10000	11	0
Benzo(a)anthracene	mg/kg	NS	20.8	--	--	--	5.800	0.750	307	282	0.025	11000	0	51
Benzo(a)pyrene	mg/kg	0.47	2.11	--	--	--	***5.300***	*0.650*	307	275	0.026	7500	224	143
Benzo(b)fluoranthene	mg/kg	0.4793	21.1	--	--	--	*10.000*	*1.200*	307	277	0.038	5800	242	56
Benzo(g,h,i)perylene	mg/kg	NS	NS	--	--	--	0.630 J	0.046 J	307	268	0.019	1400	0	0
Benzo(k)fluoranthene	mg/kg	NS	211	--	--	--	0.790 J	0.650	307	64	0.17	7000	0	5
Chrysene	mg/kg	0.1446	2,110	--	--	--	*9.000*	*1.000*	307	274	0.037	12000	267	3
Dibenz(a,h)anthracene	mg/kg	NS	2.11	--	--	--	0.150 J	<0.390 U	307	232	0.026	250	0	63
Fluoranthene	mg/kg	88.8778	30,100	--	--	--	7.800	1.200	307	279	0.048	25000	36	0
Fluorene	mg/kg	14.8299	30,100	--	--	--	0.550 J	<0.390 U	307	224	0.027	17000	37	0
Indeno(1,2,3-cd)pyrene	mg/kg	NS	21.1	--	--	--	1.900 J	0.220 J	307	265	0.026	2800	0	34
Naphthalene	mg/kg	0.6582	24.1	--	--	--	*1.300 J*	*0.660*	307	236	0.04	120000	134	33
Phenanthrene	mg/kg	NS	NS	--	--	--	5.200	1.800	307	284	0.021	45000	0	0
Pyrene	mg/kg	54.5455	22,600	--	--	--	7.100	1.100	307	290	0.015	19000	42	0
SVOCs														
1,2,4-Trichlorobenzene	mg/kg	0.408	113	--	--	--	<0.021 UJ	<0.014 UJ	294	7	0.0009	2.6	1	0
2,2-Oxybis(1-chloropropane)	mg/kg	NS	1,020	--	--	--	<0.940 U	<0.390 U	307	0	0	0	0	0
2,4-Dinitrotoluene	mg/kg	0.0001	7.37	--	--	--	<0.940 U	<0.390 U	307	0	0	0	0	0
2,6-Dinitrotoluene	mg/kg	0.0001	1.54	--	--	--	<0.940 U	<0.390 U	307	2	0.59	0.66	2	0
2-Chloronaphthalene	mg/kg	NS	60,300	--	--	--	<0.940 U	<0.390 U	307	0	0	0	0	0
2-Nitroaniline	mg/kg	NS	8,010	--	--	--	<2.400 U	<0.980 U	307	0	0	0	0	0
3,3-Dichlorobenzidine	mg/kg	NS	5.11	--	--	--	<0.940 U	<0.390 U	307	0	0	0	0	0
3-Nitroaniline	mg/kg	NS	NS	--	--	--	<2.400 U	<0.980 U	307	0	0	0	0	0
4-Bromodiphenyl ether	mg/kg	NS	26.9	--	--	--	<0.940 U	<0.390 U	307	0	0	0	0	0
4-Chloroaniline	mg/kg	NS	11.5	--	--	--	<0.940 U	<0.390 U	307	2	0.23	5400	0	1
4-Chlorodiphenyl ether	mg/kg	NS	NS	--	--	--	<0.940 U	<0.390 U	307	0	0	0	0	0
4-Nitroaniline	mg/kg	NS	115	--	--	--	<2.400 U	<0.980 U	307	0	0	0	0	0
Acetophenone	mg/kg	NS	2,520	--	--	--	0.100 J	<0.390 U	307	23	0.025	3.6	0	0
Benzaldehyde	mg/kg	NS	818	--	--	--	<0.940 UJ	<0.390 UJ	307	6	0.088	0.48	0	0
Biphenyl	mg/kg	NS	288	--	--	--	0.150 J	0.120 J	307	76	0.064	4700	0	5
Bis(2-Chloroethoxy)methane	mg/kg	NS	2,460	--	--	--	<0.940 U	<0.390 U	307	0	0	0	0	0
Bis(2-Chloroethyl)ether	mg/kg	NS	1.29	--	--	--	<0.940 U	<0.390 U	307	0	0	0	0	0
Bis(2-Ethylhexyl)phthalate	mg/kg	2.88	164	--	--	--	<0.940 U	0.110 J	307	108	0.061	660	17	1
Butyl benzyl phthalate	mg/kg	NS	1,210	--	--	--	<0.940 U	<0.390 U	307	31	0.055	29	0	0
Caprolactam	mg/kg	NS	100,000	--	--	--	<0.940 U	<0.390 U	307	0	0	0	0	0
Carbazole	mg/kg	NS	NS	--	--	--	1.000 J	0.110 J	307	191	0.044	6400	0	0
Dibenzofuran	mg/kg	NS	1,040	--	--	--	0.490 J	0.430	307	235	0.026	12000	0	5
Diethyl phthalate	mg/kg	NS	100,000	--	--	--	<0.940 U	<0.390 U	307	0	0	0	0	0
Dimethyl phthalate	mg/kg	NS	7,390	--	--	--	<0.940 U	<0.390 U	307	16	0.034	1.5	0	0
Di-n-butyl phthalate	mg/kg	5.0333	82,100	--	--	--	<0.940 U	<0.390 U	307	12	0.049	1.7	0	0
Di-n-octyl phthalate	mg/kg	NS	8,210	--	--	--	<0.940 UJ	<0.390 U	307	6	0.077	3.4	0	0
Hexachlorobenzene	mg/kg	0.0252	1.15	--	--	--	<0.940 U	<0.390 U	307	0	0	0	0	0
Hexachlorobutadiene	mg/kg	NS	7.19	--	--	--	<0.940 U	<0.390 U	307	4	0.001	0.35	0	0
Hexachlorocyclopentadiene	mg/kg	NS	10.8	--	--	--	<0.940 U	<0.390 U	307	0	0	0	0	0
Hexachloroethane	mg/kg	NS	11.1	--	--	--	<0.940 U	<0.390 U	307	0	0	0	0	0
Isophorone	mg/kg	NS	2,420	--	--	--	<0.940 U	<0.390 U	307	0	0	0	0	0
Nitrobenzene	mg/kg	NS	32.4	--	--	--	<0.940 U	<0.390 U	307	0	0	0	0	0
N-nitrosodi-n-propylamine	mg/kg	NS	0.328	--	--	--	<0.940 U	<0.390 U	307	0	0	0	0	0
N-Nitrosodiphenylamine	mg/kg	0.0764	469	--	--	--	<0.940 U	<0.390 U	307	0	0	0	0	0
Pyridine	mg/kg	0.0069	1,170	--	--	--	--	--	239	0	0	0	0	0

Table 1. Soil Results 2001-2015

Wisconsin Gas LLC. (d/b/a We Energies)
Former Milwaukee Solvay Coke & Gas Site
311 East Greenfield Avenue, Milwaukee, WI
BRRTS: 02-41-466662 CERCLA ID: WIN000508215

Sample Location:		Soil-to-Groundwater Pathway RCLs:	Industrial Direct Contact RCLs:	SP59		SP62	SS-A-37	SS-A-38
Sample / Duplicate:				SP59	SP59 DUP	SP62	SS-A-37	SS-A-38
Field Sample ID:				SP59-102008	SPDUP002-102008	SP62-102208	MCS-SS-A-37-E1R01	MCS-SS-A-38-E1R02
Sample Depth (feet):				0.5 - 1	0.5 - 1	0	0 - 0.6	0 - 0.6
Sample Date:				10/20/2008	10/20/2008	10/22/2008	12/18/2001	12/18/2001
Phenols								
2,4,5-Trichlorophenol	mg/kg	NS	82,100	--	--	--	<2.400 U	<0.980 U
2,4,6-Trichlorophenol	mg/kg	NS	209	--	--	--	<0.940 U	<0.390 U
2,4-Dichlorophenol	mg/kg	NS	2,460	--	--	--	<0.940 U	<0.390 U
2,4-Dimethylphenol	mg/kg	NS	16,400	--	--	--	<0.940 U	<0.390 U
2,4-Dinitrophenol	mg/kg	NS	1,640	--	--	--	<2.400 U	<0.980 U
2-Chlorophenol	mg/kg	NS	5,840	--	--	--	<0.940 U	<0.390 U
2-Methylphenol	mg/kg	NS	41,000	--	--	--	<0.940 U	0.055 J
2-Nitrophenol	mg/kg	NS	NS	--	--	--	<0.940 U	<0.390 U
4-Chloro-3-methylphenol	mg/kg	NS	82,100	--	--	--	<0.940 U	<0.390 U
4-Methylphenol	mg/kg	NS	82,100	--	--	--	<0.940 U	0.100 J
4-Nitrophenol	mg/kg	NS	NS	--	--	--	<2.400 U	<0.980 U
4,6-Dinitro-2-methylphenol	mg/kg	NS	65.7	--	--	--	<2.400 U	<0.980 U
Pentachlorophenol	mg/kg	0.0028	3.97	--	--	--	<2.400 U	<0.980 U
Phenol	mg/kg	2.2946	100,000	--	--	--	<0.940 U	<0.390 U
Metals								
Aluminum, Total	mg/kg	600	100,000	--	--	--	*2,390*	*8,940*
Antimony, Total	mg/kg	0.542	467	--	--	--	*2.2 J*	*1.5 J*
Arsenic, Total [1]	mg/kg	0.584	8.3	--	--	--	***17.8***	***8.9***
Barium, Total	mg/kg	164.8	100,000	--	--	--	61.1	*260*
Beryllium, Total	mg/kg	6.32	2,300	--	--	--	0.6 J	1.5
Cadmium, Total	mg/kg	0.752	985	--	--	--	*1*	*2*
Calcium, Total	mg/kg	NS	NS	--	--	--	3,330	44,800
Chromium, Hexavalent	mg/kg	NS	6.36	--	--	--	--	--
Chromium, Total [3]	mg/kg	360,000	NS	--	--	--	80.2	42
Chromium, Trivalent	mg/kg	NS	100,000	--	--	--	--	--
Cobalt, Total	mg/kg	3.6073	347	--	--	--	*3.8*	*3.7*
Copper, Total	mg/kg	91.6	46,700	--	--	--	77.6	*124*
Iron, Total	mg/kg	NS	100,000	--	--	--	35,300	32,200
Lead, Total	mg/kg	27	800	--	--	--	*42.1*	*326*
Magnesium, Total	mg/kg	NS	NS	--	--	--	1,040	22,800
Manganese, Total	mg/kg	39.1244	25,900	--	--	--	*213*	*695*
Mercury, Total	mg/kg	0.208	3.13	--	--	--	0.09	0.18
Nickel, Total	mg/kg	13.0612	22,500	--	--	--	*31.8*	*36.7*
Potassium, Total	mg/kg	NS	NS	--	--	--	376 J	1,030 J
Selenium, Total	mg/kg	0.52	5,840	--	--	--	*3.6*	*2.6*
Silver, Total	mg/kg	0.8491	5,840	--	--	--	<0.29 U	<0.29 U
Sodium, Total	mg/kg	NS	NS	--	--	--	670 J	879 J
Thallium, Total	mg/kg	0.284	11.7	--	--	--	1.5 UR	1.5 UR
Vanadium, Total	mg/kg	60	5,840	--	--	--	10.3	9.7
Zinc, Total	mg/kg	NS	100,000	--	--	--	404 J	378 J
Inorganic - Cyanide								
Cyanide, Amenable	mg/kg	4.04	195	--	--	--	--	--
Cyanide, Reactive	mg/kg	4.04	195	<1.1 U	<1.2 U	<1.0 U	--	--
Cyanide, Total	mg/kg	4.04	195	--	--	--	2.6	*4.9*
Other								
Sulfide, Reactive	mg/kg	NS	NS	<57 U	<58 U	8.2 B	--	--
Organic Matter	%	NS	NS	--	--	--	--	--
Percent Moisture	%	NS	NS	12	14	2.7	--	--

Statistics by Analyte [2]					
Total Number of Samples Analyzed	**Number of Detections**	**Minimum Detected Result**	**Source**	Number of Samples that Exceed Soil-to-Groundwater Pathway RCLs	Number of Samples that Exceed Industrial Direct Contact RCLs
307	0	0	0	0	0
307	0	0	0	0	0
307	0	0	0	0	0
307	16	0.1	1900	0	0
307	0	0	0	0	0
307	0	0	0	0	0
307	23	0.021	1200	0	0
307	0	0	0	0	0
307	0	0	0	0	0
307	22	0.04	2000	0	0
307	0	0	0	0	0
307	0	0	0	0	0
307	0	0	0	0	0
307	26	0.021	1100	7	0
302	302	300	44000	300	0
302	242	0.016	35	52	0
302	301	0.34	340	300	91
302	301	5.6	3710	36	0
302	296	0.031	11	4	0
302	280	0.06	71	107	0
302	302	770	150000	0	0
42	8	0.19	2.6	0	0
344	344	2.2	30000	0	0
42	42	3.4	3200	0	0
302	302	0.36	475	196	1
302	301	1.8	18000	44	0
302	302	1800	458000	0	4
302	301	2.3	4500	230	19
302	301	105	92000	0	0
302	302	12.8	1800	290	0
302	281	0.0062	110	115	23
302	302	0.17	240	146	0
302	292	96	4100	0	0
302	256	0.16	31	206	0
302	223	0.021	6.5	6	0
302	288	31.6	6960	0	0
302	248	0.015	13.9	63	1
302	300	1	41	0	0
302	301	6.4	48000	0	0
3	2	11	160	2	0
74	3	0.67	0.82	0	0
305	255	0.05	430	77	1
74	30	8.2	48	0	0
18	18	0.4	35.2	0	0
331	331	0.57	72	0	0

[O:ECK 9/21/17][U:ECK 9/22/17]

Notes
Italic Underline = result exceeds Soil-to-Groundwater Pathway RCL
BOLD = result exceeds Industrial Soil Direct Contact RCL
-- = Analysis not performed
< = Concentration is less than reported limit of detection (LOD)

B = Method blank contamination. The associated method blank contains the target analyte at a reportable level.
D = Sample results are obtained from a dilution. If this qualifier is also applied to a lab recovery result (i.e., surrogate or matrix spike) , this indicates that the reported recovery is calculated from a diluted sample.
E = Result exceeds calibration range of the instrument. Result is an estimated value.
J = Estimated concentration at or above the Limit of Detection (LOD) and below the Limit of Quantification (LOQ)
J- = Indicates a concentration estimated low
J+ = Indicates a concentration estimated high
p = More than 40% RPD between primary and confirmation column results. The lower of the two results is reported
Q = Estimated maximum possible concentration. Quantitation of analytes is calculated using a parent PAH response factor, rather than individual concentrations.
R = The data are unusable. The sample result is rejected due to inability to meet QC criteria.
U = The analyte was analyzed for, but not detected above the RL.

Qualifiers H, K, L and S were undefined

DUP = Quality Control Field Duplicate Sample
NS = No Standard
WDNR = Wisconsin Department of Natural Resources
Groundwater Pathway RCLs are based on a Dilution Factor of 2.
RCL = NR720 Soil Residual Contaminant Level (WDNR) (March 2017)
Background threshold values are non-outlier trace element maximum levels in Wisconsin surface soils from the USGS Report at: http://pubs.usgs.gov/sir/2011/5202 .

BTEX = Benzene, Toluene, Ethylbenzene and Xylene
GEO = Geotechnical Property
PAH = Polycyclic Aromatic Hydrocarbon
PCB = Polychlorinated Biphenyl
SVOC = Semi-Volatile Organic Compound
VOC = Volatile Organic Compound

mg/kg = milligrams per kilogram (equivalent to parts per million - ppm)
Analytical data as provided by Milwaukee Solvay Coke and Gas Site RI FS Group. (Arcadis 2016)
1. Arsenic Background Threshold Value (BTV) of 8.3 mg/kg was used for screening results.
2. Statistics do not include any "R" flagged results (rejected data)
3. Total Chromium Industrial DC RCL is from Chromium (III), Insoluble Salts.
4. PCBs, Total Industrial Direct Contact RCL is considered High-Risk

Alternate Parameter Names:
2-Methylphenol aka o-Cresol
4-Methylphenol aka p-Cresol
Chloroethane aka Ethyl Chloride
Dichloromethane aka Methylene Chloride
Freon 113 aka Trichloro-1,2,2-trifluoroethane, 1,1,2-
Freon 12 aka Dichlorodifluoromethane

Table 2. Sampling Locations and Rationale
Milwaukee Solvay Coke and Gas Site
Milwaukee, Wisconsin
Docket No: V-W-17-C-010

Sampling Location	Northing[1]	Easting[1]	Visual Observations				COC Sampling[2]	Principal Threat Waste Confirmation[3]	Target Depth (feet)[4]	Comments[5]
			NAPL	Cyanide	Peat Layer	Top of Native Clay				
CG-SB60	377,635.83	2,559,451.04	X	X	X	X		X	20	Evaluation of sheen on northern portion of property noted in S33GP (5' bgs) and S34GP (6' bgs).
CG-SB61	377,613.83	2,559,494.72	X	X	X	X	X	X	20	Evaluation of sheen on northern portion of property noted in S33GP (5' bgs) and S34GP (6' bgs). Document soil conditions within the direct contact zone.
CG-SB62	377,529.09	2,559,561.39	X	X	X	X			20	Further assessment of blue staining observed by NRT in 2017 on interior foundation of office building (approximately 10' to 12' bgs).
CG-SB63	377,490.01	2,559,582.41	X	X	X	X			20	Further assessment of blue staining observed by NRT in 2017 on interior foundation of office building (approximately 10' to 12' bgs).
CG-SB64	377,445.01	2,559,560.40	X	X	X	X			20	Further assessment of blue staining observed by NRT in 2017 on interior foundation of office building (approximately 10' to 12' bgs).
CG-SB65	377,489.02	2,559,507.85	X	X	X	X	X		20	Further assessment of blue staining observed by NRT in 2017 on interior foundation of office building (approximately 10' to 12' bgs). Document soil conditions within the direct contact zone.
CG-SB66	377,316.67	2,559,691.36	X	X	X	X			25	Assessment/confirmation of sheen in area north of SB-A-01 (odor and sheen observed in SB-A-01 at 7' to 8' bgs).
CG-SB67	377,311.98	2,559,487.71	X	X	X	X			40	Assessment/confirmation of sheen extent for sheen and odor observed in CG-SB04 (8' to 9' bgs).
CG-SB68	377,308.86	2,559,416.36	X	X	X	X			40	Evaluation of northern ovens for potential NAPL or cyanide.
CG-SB69	377,284.90	2,559,602.30	X	X	X	X			25	Assessment/confirmation of sheen extent south of SB-A-01 (odor and sheen at 7' to 8' bgs) and west of CG-SB05 (sheen and staining at 6' to greater than 8' bgs).
CG-SB70	377,180.21	2,559,421.57	X	X	X	X			25	Evaluation of northern ovens for potential NAPL or cyanide.
CG-SB71	377,227.09	2,559,747.09	X	X	X	X			25	Assessment/confirmation of sheen and staining limits northwest of odor, sheen, staining and NAPL blebs observed in MW-22 and MW-22D (8' to 18' bgs, with some odors 0' to 8' bgs).
CG-SB72	377,120.14	2,559,744.48	X	X	X	X			25	Assessment/confirmation of sheen and NAPL blebs extent in area north/west of SB-A-03 (solidified coal tar in test pit from 0.5' to 6' bgs), CG-SB07 (elevated PID 4' to 4.9' bgs), CG-SB07B (strong odor, sheen and staining 8' to greater than 13' bgs) and CG-SB41 (staining, blebs and odor 3' to 16' bgs).
CG-SB73	377,045.32	2,559,820.18	X	X	X	X			25	Assessment/confirmation of sheen and NAPL blebs extent in area south/east of SB-A-03 (solidified coal tar in test pit from 0.5' to 6' bgs), CG-SB07 (elevated PID 4' to 4.9' bgs), CG-SB07B (strong odor, sheen and staining 8' to greater than 13' bgs) and CG-SB41 (staining, blebs and odor 3' to 16' bgs).
CG-SB74	377,034.47	2,559,642.23	X	X	X	X			25	Assessment/confirmation of NAPL west/southwest of CG-SB31 (sheen on water in boring at 7' bgs) and CG-TT03 (sheen on water in test pit at 7' bgs).
CG-SB75	377,000.61	2,559,429.55	X	X	X	X	X		25	Evaluation of northern ovens for potential NAPL or cyanide. Document soil conditions within the direct contact zone.
CG-SB76	376,945.32	2,559,594.31	X	X	X	X			25	Assessment/confirmation of NAPL east of SB-A-21 (apparent coal tar 2-2.5' bgs).

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			NAPL	Cyanide	Peat Layer	Top of Native Clay				
CG-SB77	376,957.47	2,559,754.47	X	X	X	X			25	Assessment/confirmation of NAPL south of CG-SB41 (staining, blebs and odor 3' to 16' bgs) and west of CS-SB22 (sheen and moderate odor 9' to 9.5' bgs).
CG-SB78	376,839.15	2,559,554.29	X	X	X	X			25	Assessment/confirmation of NAPL east of CG-SB45 (intermittent staining, blebs and odor 12' to 21' bgs) and NAPL staining, odor 42' to 43' bgs) and CG-SB45NW (odor 11' to 20' and NAPL 15' to 17' bgs) and west of S04GP (oily material 4' to 8' bgs) and CG-SB44 (staining, blebs and/or odor 12' to 25' bgs).
CG-SB79	376,847.83	2,559,431.46	X	X	X	X			25	Evaluation of northern ovens for potential NAPL or cyanide.
CG-SB80	376,817.89	2,559,608.98	X	X	X	X			30	Assessment/confirmation of NAPL east of CG-SB45 (intermittent staining, blebs and odor 12' to 21' bgs and NAPL staining, odor 42' to 43' bgs) and CG-SB45NW(odor 11' to 20' and NAPL 15' to 17' bgs) and west of S04GP (oily material 4' to 8' bgs) and CG-SB44 (staining, blebs and/or odor 12' to 25' bgs).
CG-SB81	376,741.50	2,559,526.51	X	X	X	X			45	Evaluation and confirmation of NAPL, particularly NAPL observed at 42' to 43' bgs in CG-SB45 (intermittent staining, blebs and odor 12' to 21' bgs and NAPL staining, odor 42' to 43' bgs).
CG-SB82	376,607.04	2,559,619.40	X	X	X	X			30	Evaluation/confirmation of NAPL northwest of CG-SB46 (petroleum odor 10' to 13' bgs and odors, sheen and NAPL blebs 15' to 16' bgs).
CG-SB83	376,569.28	2,559,506.55	X	X	X	X			25	Evaluation of southern ovens for potential NAPL or cyanide.
CG-SB84	376,565.37	2,559,387.19	X	X	X	X	X		25	Evaluation of southern ovens for potential NAPL or cyanide. Document soil conditions within the direct contact zone.
CG-SB85	376,519.80	2,559,733.11	X	X	X	X			25	Evaluation/confirmation of NAPL southeast of CG-SB46 (petroleum odor 10' to 13' bgs and odors, sheen and NAPL blebs 15' to 16' bgs).
CG-SB86	376,538.46	2,559,601.60	X	X	X	X			25	Evaluation of NAPL presence/extent northwest of CG-SB47 (odor, staining and/or sheen 5' to 20' bgs) and northeast of CG-SB16 (odors and staining 18' to 20.5' bgs, elevated PID 20' to 23.9' bgs).
CG-SB87	376,480.73	2,559,645.00	X	X	X	X			25	Evaluation of NAPL presence/extent north of CG-SB38 (odors 8' to 20' bgs and sheen, staining and odors 21' to greater than 22.7' bgs) and south of SB-A-17 (staining, elevated FID and odors in test pit 2' to 5' bgs).
CG-SB88	376,442.54	2,559,505.25	X	X	X	X			25	Evaluation of southern ovens for potential NAPL or cyanide.
CG-SB89	376,405.65	2,559,602.03	X	X	X	X			25	Evaluation of NAPL extent southeast of SB-A-15 (staining, odor and elevated FID in test pit 4' to 6' bgs) and southwest of CG-SB38 (odors 8' to 20' bgs and sheen, staining and odors 21' to greater than 22.7' bgs).
CG-SB90	376,410.86	2,559,398.04	X	X	X	X			25	Evaluation of southern ovens for potential NAPL or cyanide.
CG-SB91	376,352.70	2,559,507.85	X	X	X	X			25	Evaluation of southern ovens for potential NAPL or cyanide.
CG-SB92	376,278.91	2,559,401.08	X	X	X	X			25	Evaluation of southern ovens for potential NAPL or cyanide.
CG-SB93	376,294.97	2,559,582.07	X	X	X	X			25	Evaluation of NAPL presence/extent southeast of CG-SB18 (odor and staining 4' to 6' bgs and odor and sheen 8' to 13' bgs).

Table 2. Sampling Locations and Rationale
Milwaukee Solvay Coke and Gas Site
Milwaukee, Wisconsin
Docket No: V-W-17-C-010

Sampling Location	Northing[1]	Easting[1]	Visual Observations				COC Sampling[2]	Principal Threat Waste Confirmation[3]	Target Depth (feet)[4]	Comments[5]
			NAPL	Cyanide	Peat Layer	Top of Native Clay				
CG-SB94	376,271.10	2,559,675.39	X	X	X	X			25	Evaluation of NAPL presence/extent north of MW-26D (staining and odor 5' to 6' bgs and staining, sheen and elevated PID from 10' to 15' bgs).
CG-SB95	376,253.30	2,559,715.75	X	X	X	X			25	Evaluation of NAPL presence/extent east of MW-26D (staining and odor 5' to 6' bgs and staining, sheen and elevated PID from 10' to 15' bgs) and north of CG-SB37 (odors 4' to 6' and elevated PID 4' to greater than 9.8' bgs).
CG-SB96	376,229.00	2,559,511.32	X	X	X	X	X		25	Evaluation of southern ovens for potential NAPL or cyanide. Document the soil conditions within the direct contact zone.
CG-SB97	376,209.90	2,559,661.93	X	X	X	X			25	Evaluation of NAPL presence/extent south of MW-26D (staining and odor 5' to 6' bgs and staining, sheen and elevated PID from 10' to 15' bgs) and north of CG-SB21 (free product, sheen, odor 12' bgs).
CG-SB98	376,173.44	2,559,592.05	X	X	X	X			40	Evaluation of NAPL presence/extent west of S09GP (oily staining 5' to 6' bgs) and east of CG-SB49 (odor 0' to 4' bgs; staining, elevated PID and NAPL 4' to 14' bgs; elevated PID 14' to 16' bgs 38' to 40' bgs).
CG-SB99	376,164.76	2,559,443.61	X	X	X	X			25	Evaluation of southern ovens for potential NAPL or cyanide. Blue-stained concrete from oven foundations and limited NAPL was observed along the oven foundations in this area by NRT in 2017.
CG-SB100	376,135.68	2,559,418.87	X	X	X	X			25	Evaluation of southern ovens for potential NAPL or cyanide. Blue-stained concrete from oven foundations and limited NAPL was observed along the oven foundations in this area by NRT in 2017.
CG-SB101	376,145.23	2,559,726.17	X	X	X	X			25	Evaluate presence/extent of NAPL east of CG-SB21 (free product, sheen, odor 12' bgs).
CG-SB102	376,067.11	2,559,471.83	X	X	X	X			25	Assessment/confirmation of NAPL and cyanide evaluation. Blue-stained concrete from oven foundations and limited NAPL was observed along the oven foundations in this area by NRT in 2017.
CG-SB103	376,037.16	2,559,729.20	X	X	X	X	X		25	Assessment of former oil house. Document soil conditions weithin the direct contact zone.
CG-SB104	376,035.42	2,559,704.03	X	X	X	X			25	Assessment of former oil house.
CG-SB105	376,031.52	2,559,678.42	X	X	X	X			25	Assessment of former oil house.
CG-SB106	375,982.90	2,559,716.18	X	X	X	X			25	Assessment of former oil house and potential NAPL north of CG-SB36 (observed sheen a 6' bgs).
CG-SB107	375,950.35	2,559,424.95	X	X	X	X			25	Evaluation of NAPL extent southeast of MW-27 (odor and sheen 10' to 12' bgs) and northwest of CG-SB26 (sheen and odor 9').
CG-SB108	375,886.98	2,559,682.76	X	X	X	X			25	Evaluation of NAPL nature/presence/extent west of SB-A-25 (oily sludge, oil and sheen 5' to 8').
CG-SB109	375,889.59	2,559,796.48	X	X	X	X		X	25	Evaluation of NAPL nature/presence/extent east of SB-A-25 (oily sludge, oil and sheen 5' to 8').
CG-SB110	375,805.82	2,559,671.91	X	X	X	X			25	Evaluation of NAPL presence/extent northeast of CG-SB51 (sheen at 5' to 7').

Table 2. Sampling Locations and Rationale
Milwaukee Solvay Coke and Gas Site
Milwaukee, Wisconsin
Docket No: V-W-17-C-010

Sampling Location	Northing[1]	Easting[1]	Visual Observations				COC Sampling[2]	Principal Threat Waste Confirmation[3]	Target Depth (feet)[4]	Comments[5]
			NAPL	Cyanide	Peat Layer	Top of Native Clay				
CG-SB111	375,796.71	2,559,778.68	X	X	X	X			25	Evaluation of NAPL presence/extent west of SB-B-37 (odor , staining and elevated PID 4' to 6.1'; elevated PID 8 to greater than 9.8' bgs).
CG-TT18	377,229.64	2,559,560.23	X	X					12	Evaluation of blue staining and surficial tar observed by NRT in 2017.
CG-TT19	377,201.86	2,559,504.68	X	X					12	Evaluation of blue staining observed by NRT in 2017.
CG-TT20	377,131.38	2,559,728.63	X	X					12	Evaluation of partial tank on ground surface and surficial tar observed by NRT in 2017.
CG-TT21	377,124.08	2,559,571.34	X	X					12	Evaluation of NAPL presence/extent north of CG-SB30A (sheen and odor 5' bgs) and south of CG-SB05 (sheen, staining and odor 6' to 7' bgs).
CG-TT22	377,083.98	2,559,711.71	X	X					12	Evaluation of surficial tar observed by NRT in 2017.
CG-TT23	377,036.93	2,559,468.91	X	X					12	Evaluation of blue staining observed by NRT in 2017.
CG-TT24	376,768.44	2,559,565.09	X	X					12	Evaluation of presence/extent of NAPL northeast of CG-SB45 (intermittent staining, blebs and odor 12' to 21' bgs and NAPL staining, odor 42' to 43' bgs).
CG-TT25	376,710.72	2,559,705.28	X	X					12	Evaluation of presence/extent of NAPL southeast of SB-A-14 (odor, staining and elevated PID 0' to 2' bgs and 4' to 6' bgs In test pit) and northwest of SB-A-24 (apparent solidified coal tar 4' to 5' bgs).
CG-TT26	376,704.64	2,559,585.06	X	X					12	Surficial coal tar observed north/northeast of byproducts building.
CG-TT27	376,660.37	2,559,677.07	X	X					12	Evaluation of presence/extent of NAPL southeast of SB-A-14 (odor, staining and elevated PID 0' to 2' bgs and 4' to 6' bgs In test pit) and northwest of SB-A-24 (apparent solidified coal tar 4' to 5' bgs).
CG-TT28	376,661.67	2,559,576.81	X	X					12	Evaluation of potential impacts assocaited with piping with coal tar observed south/southeast of byproducts building by NRT in 2017.
CG-TT29	375,860.06	2,559,714.09	X	X					12	Evaluation of presence/extent of NAPL north/northwest of SB-A-25 (oily sludge, odor and sheen 5' to 8' bgs).
CS-SB35	376,996.90	2,559,845.87	X	X	X	X			25	Evaluation of presence/extent of NAPL east of CS-SB-22 (sheen and moderate odor 9' to 9.5' bgs) and north of SB-B06 (black/free oily material and odor 2' to 5' bgs).
CS-SB36	376,947.42	2,559,902.12	X	X	X	X	X		25	Evaluation of presence/extent of NAPL east of SB-B06 (black/free oily material and odor 2' to 5' bgs). Document soil conditions within the direct contact zone.
CS-SB37	376,848.46	2,559,824.00	X	X	X	X			25	Evaluation of geology (peat surface/thickness and top of clay surface).
CS-SB38	376,794.81	2,559,791.19	X	X	X	X	X		25	Evaluation of geology (peat surface/thickness and top of clay surface) and NAPL extent east of S04GP (oily material 4' to 8' bgs). Document soil conditions within the direct contact zone.
CS-SB39	376,751.58	2,559,854.21	X	X	X	X			25	Evaluation of geology (peat surface/thickness and top of clay surface).
CS-SB40	376,766.17	2,560,106.81	X	X	X	X	X		30	Evaluation of NAPL presence/extent northwest of CS-MW23D (staining 9' to 12' bgs). Document soil conditions within the direct contact zone.

Table 2. Sampling Locations and Rationale
Milwaukee Solvay Coke and Gas Site
Milwaukee, Wisconsin
Docket No: V-W-17-C-010

Sampling Location	Northing[1]	Easting[1]	Visual Observations				COC Sampling[2]	Principal Threat Waste Confirmation[3]	Target Depth (feet)[4]	Comments[5]
			NAPL	Cyanide	Peat Layer	Top of Native Clay				
CS-SB41	376,743.77	2,560,139.10	X	X	X	X		X	30	Evaluation of NAPL presence/extent east of CS-MW23D (staining 9' to 12' bgs)
CS-SB42	376,697.94	2,560,028.17	X	X	X	X			35	Evaluation of geology (peat surface/thickness and top of clay surface).
CS-SB43	376,631.79	2,559,958.37	X	X	X	X	X		35	Evaluation of geology (peat surface/thickness and top of clay surface). Document soil conditions within the direct contact zone.
CS-SB44	376,571.37	2,559,912.54	X	X	X	X			35	Evaluation of geology (peat surface/thickness and top of clay surface).
CS-SB45	376,389.08	2,559,984.42	X	X	X	X	X		35	Boring within footprint of former Pile 16. Document soil conditions within the direct contact zone.
CS-SB46	375,900.72	2,560,131.12	X	X	X	X	X		20	Evaluation of NAPL presence/extent northeast of MW-28D (NAPL blebs 8.5' to 9.5' bgs). Document soil conditions within the direct contact zone.
CS-SB47	375,864.78	2,560,105.07	X	X	X	X			20	Evaluation of NAPL presence/extent east of MW-28D (NAPL blebs 8.5' to 9.5' bgs).
CS-SB48	375,808.53	2,559,969.14	X	X	X	X			20	Evaluation of NAPL presence/extent west of MW-28D (NAPL blebs 8.5' to 9.5' bgs) and SB-B-32 (staining 4' to 8' bgs).
CS-SB49	375,821.55	2,560,105.07	X	X	X	X			20	Evaluation of NAPL presence/extent southeast of MW-28D (NAPL blebs 8.5' to 9.5' bgs).
CS-SB50	376,179.96	2,560,085.69					X		4	Document soil conditions within the direct contact zone.
FT-SB38	375,744.81	2,559,455.94	X	X	X	X			25	NAPL nature/presence/extent east of FT-SB26 (odor 0' to 4' bgs, staining 3' to 4' bgs).
FT-SB39	375,149.38	2,559,875.16	X	X	X	X	X		25	Evaluation of soil quality adjacent to river. Document soil conditions within the direct contact zone.
FT-SB40	374,844.52	2,559,758.49	X	X	X	X	X		25	Evaluation of soil quality adjacent to river. Document soil conditions within the direct contact zone.
FT-SB41	374,820.76	2,559,443.16					X		4	Document soil conditions within the direct contact zone.
FT-SB42	374,931.17	2,559,597.32					X		4	Document soil conditions within the direct contact zone.
FT-SB43	375,070.76	2,559,412.43					X		4	Document soil conditions within the direct contact zone.
FT-SB44	375,093.67	2,559,710.87					X		4	Document soil conditions within the direct contact zone.
FT-SB45	375,373.36	2,559,718.85					X		4	Document soil conditions within the direct contact zone.
FT-SB46	375,424.06	2,559,894.55					X		4	Document soil conditions within the direct contact zone.
FT-SB47	375,459.47	2,559,429.96					X		4	Document soil conditions within the direct contact zone.
FT-SB48	375,639.33	2,559,695.24					X		4	Document soil conditions within the direct contact zone.
FT-SB49	375,676.14	2,559,586.91					X		4	Document soil conditions within the direct contact zone.
FT-TT08	375,241.57	2,559,357.71	X	X					12	Evaluation of NAPL presence/extent in area near FT-SB32 (tar-like material with sheen and possible NAPL (1.5' to 4.5').
FT-TT09	374,655.64	2,559,552.50	X	X					12	Evaluation of surficial tar observed by NRT in 2017.
FT-TT10	374,647.82	2,559,516.57	X	X					12	Evaluation of surficial tar observed by NRT in 2017.

1. Northing and Easting provided in coordinate system NAD_1927_StatePlane_Wisconsin_South_FIPS_4803. Test pit coordinates are taken from the center of the test pits.
2. Constituents of Concern (COC) for soil are polycyclic aromatic hydrocarbons (PAH), arsenic and cyanide.
3. Principal threat waste analysis is 34 PAH.
4. Target depth based on depth of clay for nearby borings for borings that will be used for peat layer and top of clay observations (if available), 12 feet for test pits based on proposed equipment limitations, and 4 feet for borings that are meant for direct contact zone soil quality only. Depths will be adjusted in the field based on observations.

Table 2. Sampling Locations and Rationale
Milwaukee Solvay Coke and Gas Site
Milwaukee, Wisconsin
Docket No: V-W-17-C-010

Sampling Location	Northing[1]	Easting[1]	Visual Observations				COC Sampling[2]	Principal Threat Waste Confirmation[3]	Target Depth (feet)[4]	Comments[5]
			NAPL	Cyanide	Peat Layer	Top of Native Clay				

5. Free product/sheen/staining/odor/elevated PID documentation from Table 4.2 of the Milwaukee Solvay Coke and Gas Site Remedial Investigation/Feasibility Study Group RI Report (Arcadis, 2016).

Table 3. Sampling and Analysis Plan Summary
Milwaukee Solvay Coke and Gas Site
Milwaukee, Wisconsin
Docket No: V-W-17-C-010

Sample Type/Location	Proposed Number of Samples	Parameter	Method	Estimated Sample Quantity[2]	Field Duplicates[3]	Equipment Blanks[4]	MS/MSD[5]	TOTAL	Container Type	Minimum Volume	Preservation (Cool to 4° ≥ 2°C All Samples)	Holding Time from Sample Date
Solid Samples (Soil Samples)												
Direct Contact Soil (0-2 and 2-4 fbgs)	48	PAHs	8270-SIM	5	1	1	1	8	amber glass	4 oz.		14/40 days
		Arsenic	6020A	5	1	1	1	8	plastic	5 oz.		6 months
		Cyanide	9012A	5	1	1	1	8	plastic	5 oz.		6 months
Prinicipal Threat Waste Soil (visually affected interval)	4	34 PAHs	8270-SIM	4	1	0	0	5	amber glass	4 oz.		14/40 days
Potential surface barrier fill material on and off-site stockpiles	10	VOCs	8260B	10	1	0	1	12	glass vial	2 oz.	methanol	7/28 days
		SVOCs	8270-C	10	1	0	1	12	amber glass	4 oz.		14/40 days
		PCBs	8082A	10	1	0	1	12	amber glass	4 oz.		14/40 days
		Pesticides	8081B	10	1	0	1	12	amber glass	4 oz.		14/40 days
		Metals[A]	6020A/7471A	10	1	0	1	12	plastic	5 oz.		6 months
Liquid Samples (Groundwater Samples)												
Groundwater - wells[1] (baseline conditions)	35	Benzene	8260B	35	4	4	2	45	glass vial	2-40 ml	HCl to pH<2, Zero Hsp[7]	14 days
		PAHs	8270-SIM	35	4	4	2	45	amber glass	250 ml		14 days
		Available Cyanide	OIA-1677	35	4	4	2	45	plastic	500 ml	NaOH ≥ 12	14 days
		Arsenic	6020A	35	4	4	2	45	plastic	500 ml	HNO3 to pH<2	6 months
		Field Parameters[B]	Field	35	0	0	0	35	field measured			
Waste Characterization Samples (Soil Cutting and Well Development/Purge Water Samples)												
Soil	1	Protocol B	Various	Composite	NA	NA	NA	NA	As Required for Analysis (check with landfill and laboratory)			
Water (Well Dev./Purge and Decon. Water)	1	Protocol B or Analysis Required by local POTW	Various	Composite	NA	NA	NA	NA	As Required for Analysis (check with landfill and laboratory)			

Notes:

A) Metals for soil analysis include RCRA list: antimony, arsenic, barium, cadmium, chromium, lead, mercury, and silver.
B) Field parameters include temperature, pH, specific conductivity, oxidation-reduction potential, turbidity and dissolved oxygen.

1. Groundwater monitoring will establish a baseline, pre-remediation groundwater quality condition. Wells containing measurable DNAPL will not be sampled.
2. Estimated number of samples does not include contingency investigation locations.
3. Field duplicates will be collected at a frequency of one per group of ten or fewer water samples and one per group of twenty or fewer soil samples.
4. Equipment blanks will be collected at a frequency of one per sampling day with non-dedicated sampling equipment.
5. Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples will be collected at a frequency of one per group of twenty or fewer water samples. Additional volume will be determined per laboratory requirements.
6. Trip blanks will accompany each cooler containing VOC water samples, including equipment blanks.
7. "Zero Hsp" is Zero Headspace for water Benzene/VOC analyses.

Figures

DRAWN BY/DATE:
TDC 9/8/17
REVIEWED BY/DATE:
JFK 9/11/17
APPROVED BY/DATE:
JMH 9/22/17

SITE LOCATION

EE/CA SUPPORT SAMPLING PLAN
FORMER MILWAUKEE SOLVAY COKE AND GAS SITE
311 EAST GREENFIELD AVENUE
MILWAUKEE, WISCONSIN

PROJECT NO: 2133

FIGURE NO: 1

Natural Resource Technology
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HISTORICAL SITE FEATURES
(1963 AERIAL PHOTOGRAPH BACKGROUND)

EE/CA SUPPORT SAMPLING PLAN
FORMER MILWAUKEE SOLVAY COKE AND GAS SITE
311 EAST GREENFIELD AVENUE
MILWAUKEE, WISCONSIN

DRAWN BY/DATE:
TDC 9/20/17
REVIEWED BY/DATE:
JFK 9/20/17
APPROVED BY/DATE:
JMH 9/22/17

HISTORICAL SITE FEATURES
ALTA SURVEY BOUNDARY

NOTES:
1. Historical features based on information provided in the Milwaukee Solvay Coke and Gas Site Remedial Investigation / Feasibility Study Group, RI Report (Arcadis 2016).
2. ALTA Survey Boundary based on the ALTA/NSPS LAND TITLE SURVEY conducted on 4/20/2017 by Kapur & Associates, Inc.
3. Service Layer Credits: Milwaukee County Land Information Office

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0 125 250
SCALE IN FEET

PROJECT NO: 2133

FIGURE NO: 2

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PREVIOUS SAMPLING LOCATIONS

FORMER MILWAUKEE SOLVAY COKE AND GAS SITE -
311 EAST GREENFIELD AVENUE
MILWAUKEE, WISCONSIN

DRAFT

PROJECT NO: 2133

FIGURE NO: 3

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MONITORING WELL LOCATION

ABANDONED MONITORING WELL LOCATION

SOIL BORING LOCATION

ALTA SURVEY BOUNDARY

NOTES:

1. Boring locations as presented in the Milwaukee Solvay Coke and Gas Site Remedial Investigation / Feasibility Study Group, RI Report (Arcadis 2016).
2. ALTA Survey Boundary based on the ALTA/NSPS LAND TITLE SURVEY conducted on 4/20/2017 by Kapur & Associates, Inc.
3. Service Layer Credits: Milwaukee County Land Information Office

DRAWN BY/DATE: TDC 9/20/17
REVIEWED BY/DATE: JFK 9/20/17
APPROVED BY/DATE: JMH 9/22/17

PREVIOUS SAMPLING LOCATIONS NORTH

EE/CA SUPPORT SAMPLING PLAN
FORMER MILWAUKEE SOLVAY COKE AND GAS SITE
311 EAST GREENFIELD AVENUE
MILWAUKEE, WISCONSIN

PROJECT NO: 2133

FIGURE NO: 3A

Natural Resource Technology
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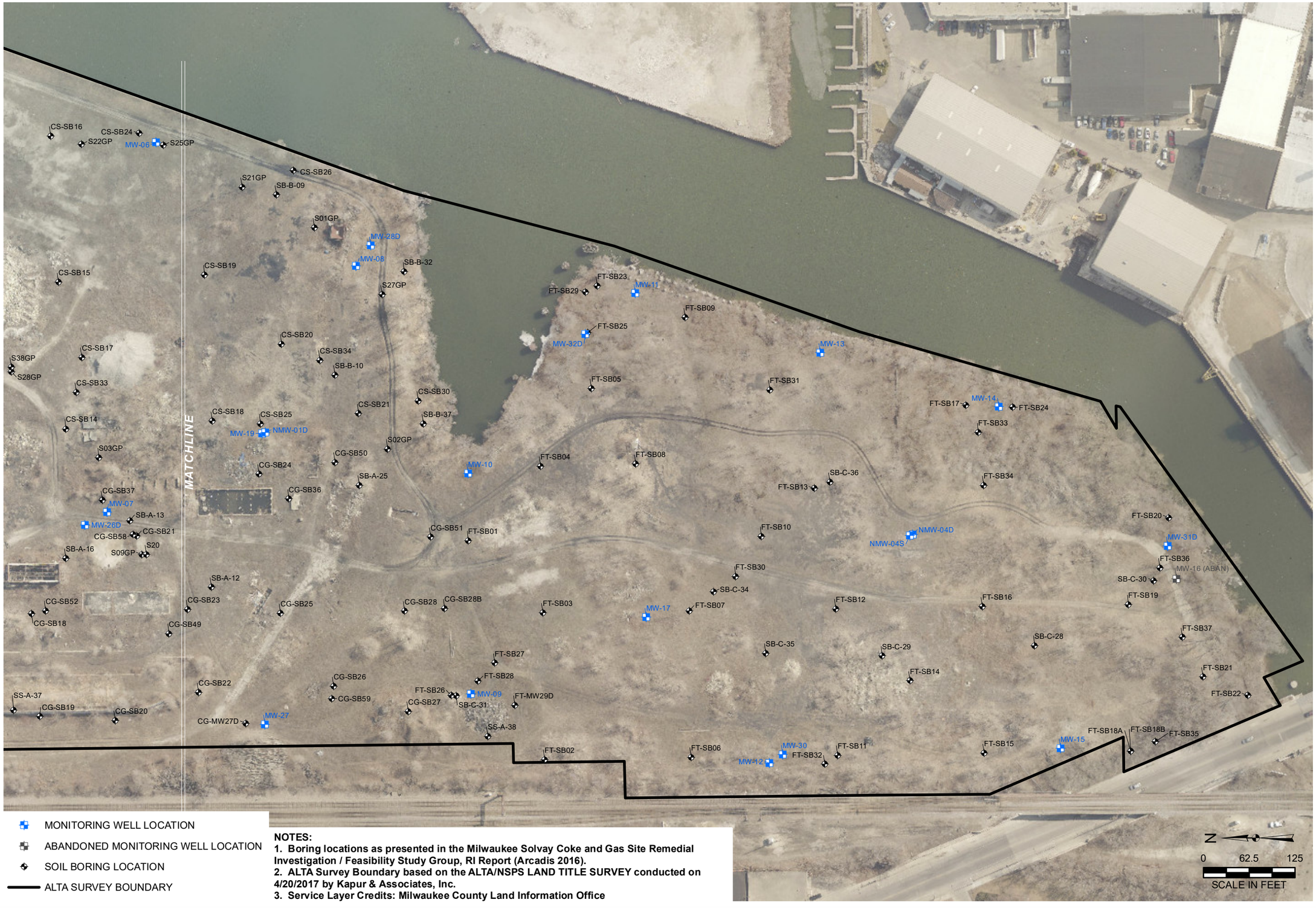

NOTES:
1. Boring locations as presented in the Milwaukee Solvay Coke and Gas Site Remedial Investigation / Feasibility Study Group, RI Report (Arcadis 2016).
2. ALTA Survey Boundary based on the ALTA/NSPS LAND TITLE SURVEY conducted on 4/20/2017 by Kapur & Associates, Inc.
3. Service Layer Credits: Milwaukee County Land Information Office

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REVIEWED BY/DATE: JFK 9/20/17
APPROVED BY/DATE: JMH 9/22/17

PREVIOUS SAMPLING LOCATIONS SOUTH

EE/CA SUPPORT SAMPLING PLAN
FORMER MILWAUKEE SOLVAY COKE AND GAS SITE
311 EAST GREENFIELD AVENUE
MILWAUKEE, WISCONSIN

PROJECT NO: 2133

FIGURE NO: 3B

Natural Resource Technology
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2017 SITE OBSERVATIONS
NORTH

EE/CA SUPPORT SAMPLING PLAN
FORMER MILWAUKEE SOLVAY COKE AND GAS SITE
311 EAST GREENFIELD AVENUE
MILWAUKEE, WISCONSIN

DRAWN BY/DATE: TDC 9/20/17
REVIEWED BY/DATE: JFK 9/20/17
APPROVED BY/DATE: JMH 9/22/17

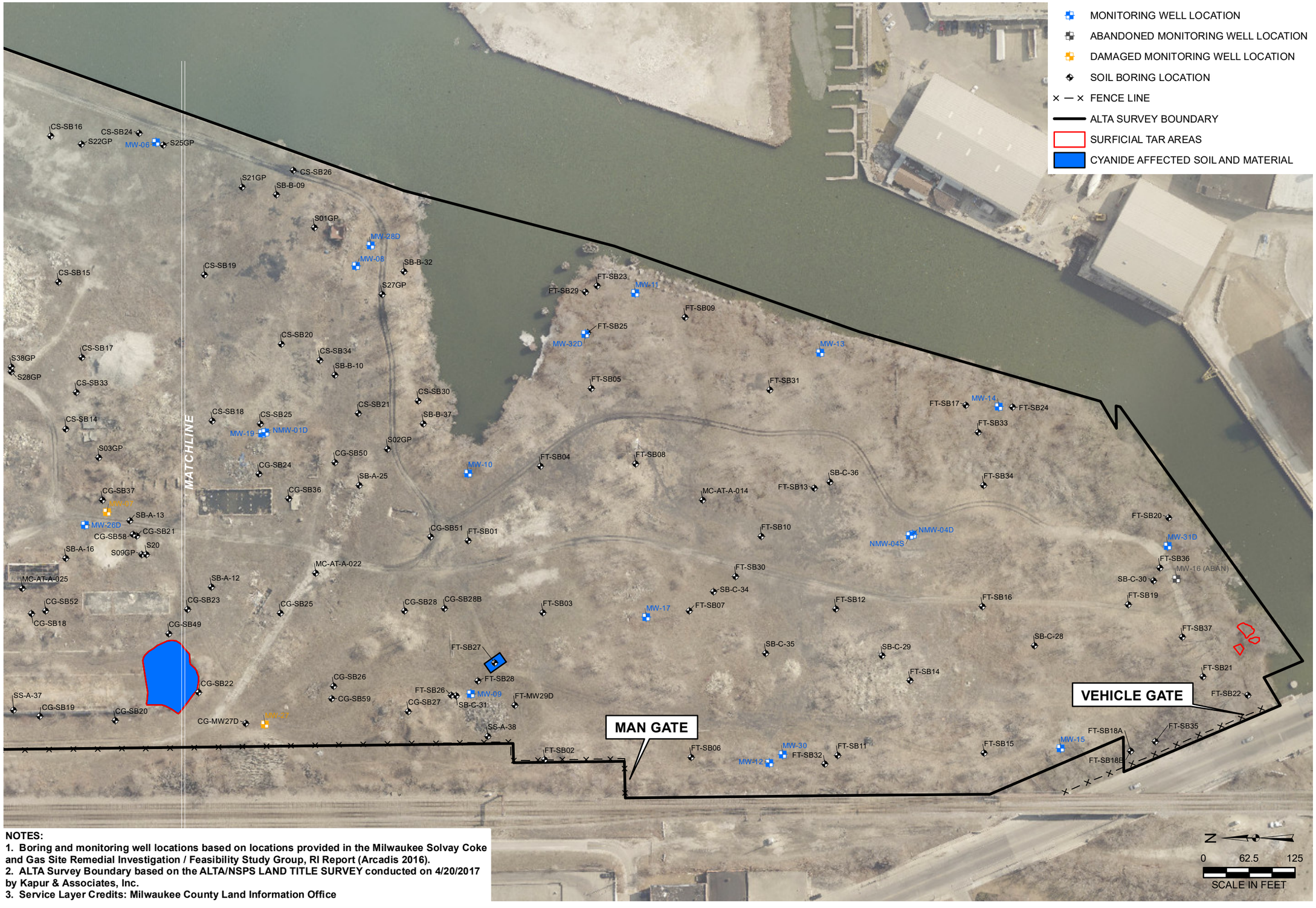
NOTES:
1. Boring and monitoring well locations based on locations provided in the Milwaukee Solvay Coke and Gas Site Remedial Investigation / Feasibility Study Group, RI Report (Arcadis 2016).
2. ALTA Survey Boundary based on the ALTA/NSPS LAND TITLE SURVEY conducted on 4/20/2017 by Kapur & Associates, Inc.
3. Service Layer Credits: Milwaukee County Land Information Office

PROJECT NO: 2133

FIGURE NO: 4A

Natural Resource Technology
AN OBG COMPANY

Y:\Mapping\Projects\2121333\MXD\Sampling_Plan\Figure 4_2017 Site Observations.mxd Author: CushmaTD: Date/Time: 9/22/2017, 11:43:03 AM



NOTES:

1. Boring and monitoring well locations based on locations provided in the Milwaukee Solvay Coke and Gas Site Remedial Investigation / Feasibility Study Group, RI Report (Arcadis 2016).
2. ALTA Survey Boundary based on the ALTA/NSPS LAND TITLE SURVEY conducted on 4/20/2017 by Kapur & Associates, Inc.
3. Service Layer Credits: Milwaukee County Land Information Office

DRAWN BY/DATE: TDC 9/20/17
REVIEWED BY/DATE: JFK 9/20/17
APPROVED BY/DATE: JMH 9/22/17

2017 SITE OBSERVATIONS SOUTH

EE/CA SUPPORT SAMPLING PLAN
FORMER MILWAUKEE SOLVAY COKE AND GAS SITE
311 EAST GREENFIELD AVENUE
MILWAUKEE, WISCONSIN

PROJECT NO: 2133

FIGURE NO: 4B

Natural Resource Technology
AN OBG COMPANY

Y:\Mapping\Projects\212133\MXD\Sampling_Plan\Figure 4_2017 Site Observations.mxd Author: CushmaTD Date/Time: 9/22/2017, 11:44:13 AM

LOCATIONS WITH POTENTIALLY PARTIALLY SATURATED OR SATURATED NAPL OBSERVATIONS PER THE MILWAUKEE SOLVAY COKE AND GAS SITE REMEDIAL INVESTIGATION / FEASIBILITY STUDY GROUP, RI REPORT (ARCADIS 2016) FIGURE 4-2

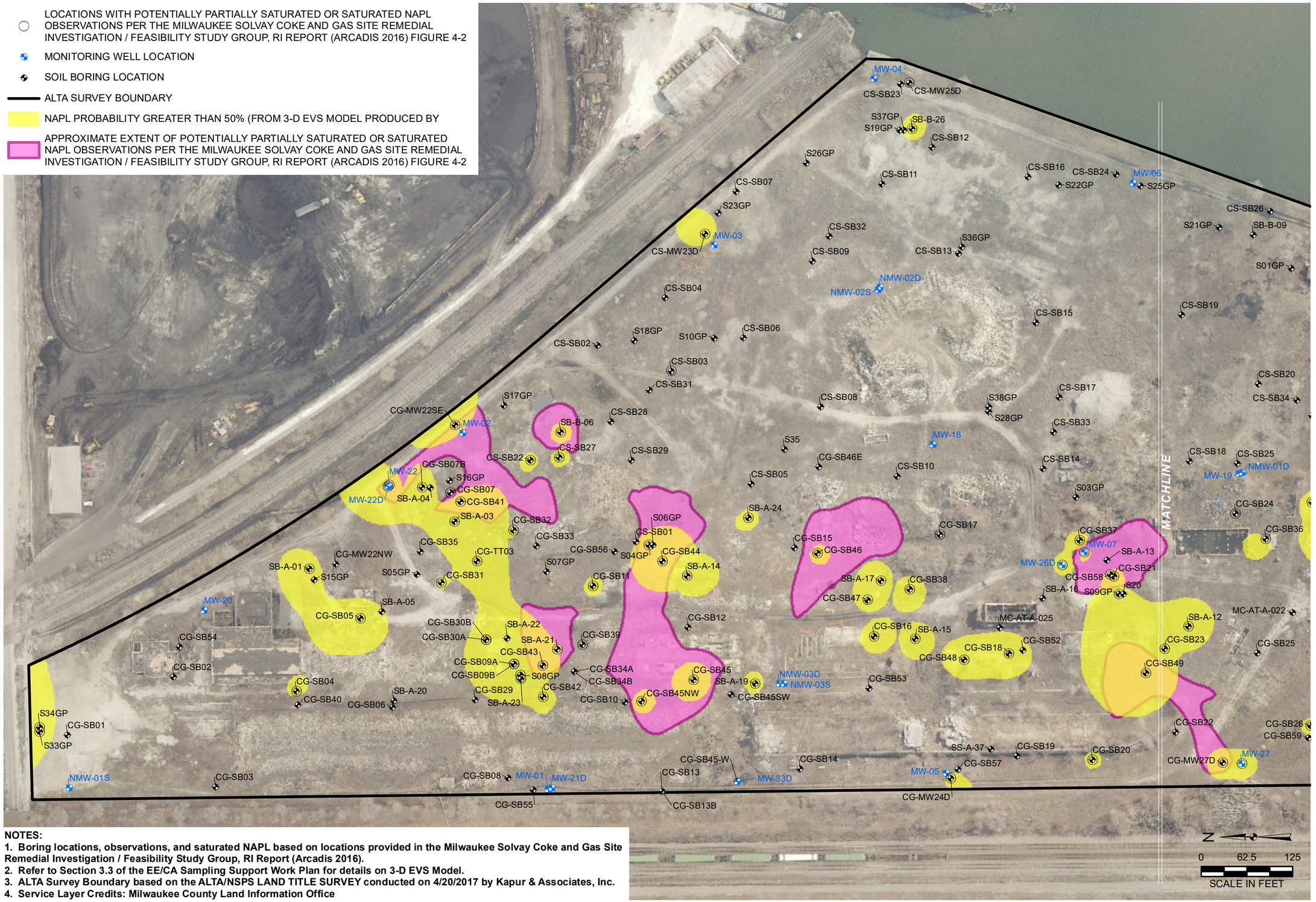
MONITORING WELL LOCATION

SOIL BORING LOCATION

ALTA SURVEY BOUNDARY

NAPL PROBABILITY GREATER THAN 50% (FROM 3-D EVS MODEL PRODUCED BY

APPROXIMATE EXTENT OF POTENTIALLY PARTIALLY SATURATED OR SATURATED NAPL OBSERVATIONS PER THE MILWAUKEE SOLVAY COKE AND GAS SITE REMEDIAL INVESTIGATION / FEASIBILITY STUDY GROUP, RI REPORT (ARCADIS 2016) FIGURE 4-2



NOTES:

1. Boring locations, observations, and saturated NAPL based on locations provided in the Milwaukee Solvay Coke and Gas Site Remedial Investigation / Feasibility Study Group, RI Report (Arcadis 2016).
2. Refer to Section 3.3 of the EE/CA Sampling Support Work Plan for details on 3-D EVS Model.
3. ALTA Survey Boundary based on the ALTA/NSPS LAND TITLE SURVEY conducted on 4/20/2017 by Kapur & Associates, Inc.
4. Service Layer Credits: Milwaukee County Land Information Office

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APPROVED BY/DATE: JMH 9/22/17

OBSERVATIONS OF NAPL NORTH

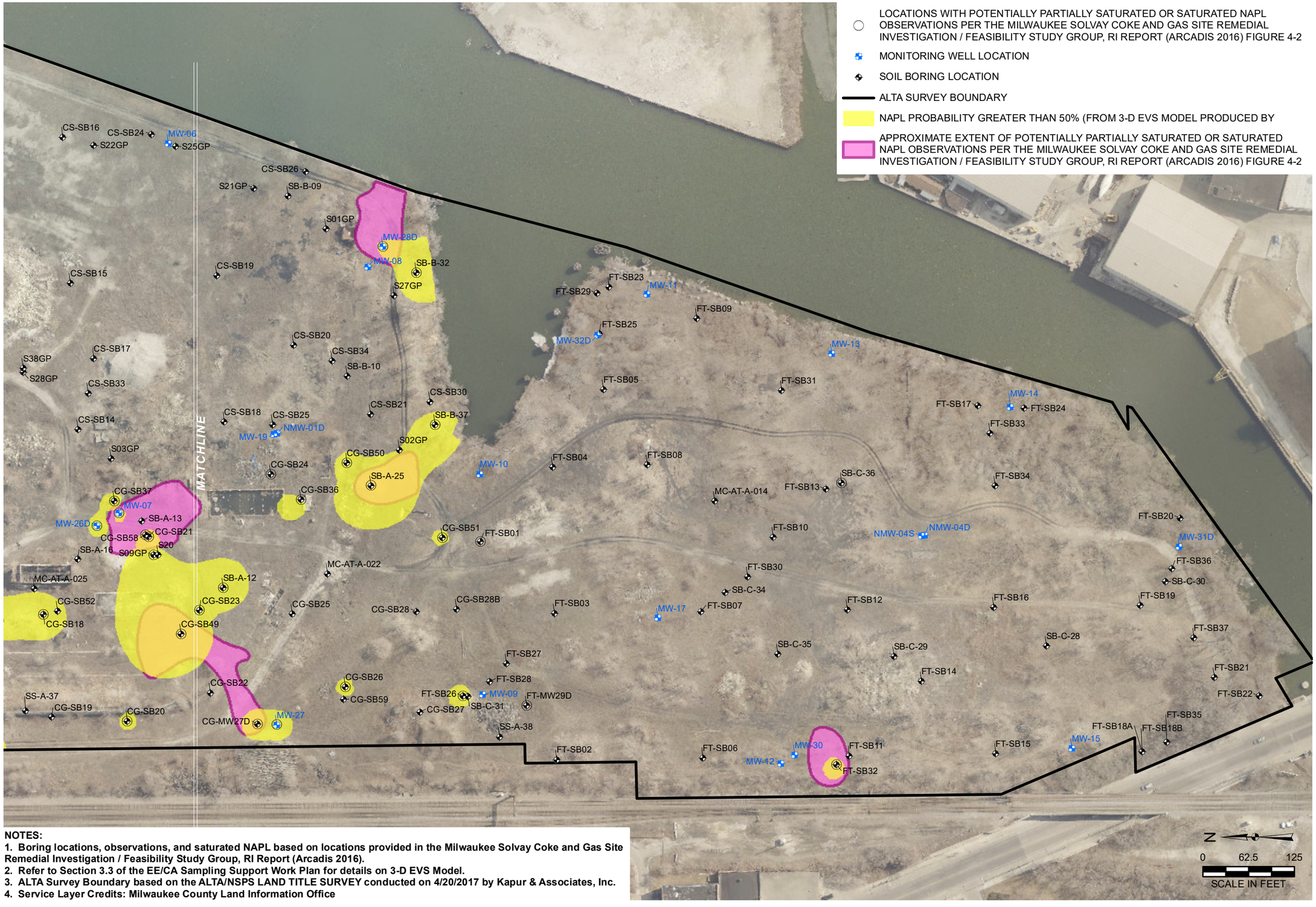
EE/CA SUPPORT SAMPLING PLAN
FORMER MILWAUKEE SOLVAY COKE AND GAS SITE
311 EAST GREENFIELD AVENUE
MILWAUKEE, WISCONSIN

PROJECT NO: 2133

FIGURE NO: 5A

Natural Resource Technology
AN OBG COMPANY

Y:\Mapping\Projects\2121333\MXD\Sampling_Plan\Figure 5_Observations of DNAPL.mxd Author: CushmaTD: Date/Time: 9/22/2017, 12:02:34 PM



NOTES:

1. Boring locations, observations, and saturated NAPL based on locations provided in the Milwaukee Solvay Coke and Gas Site Remedial Investigation / Feasibility Study Group, RI Report (Arcadis 2016).
2. Refer to Section 3.3 of the EE/CA Sampling Support Work Plan for details on 3-D EVS Model.
3. ALTA Survey Boundary based on the ALTA/NSPS LAND TITLE SURVEY conducted on 4/20/2017 by Kapur & Associates, Inc.
4. Service Layer Credits: Milwaukee County Land Information Office

DRAWN BY/DATE: TDC 9/20/17
REVIEWED BY/DATE: JFK 9/20/17
APPROVED BY/DATE: JMH 9/22/17

OBSERVATIONS OF NAPL SOUTH

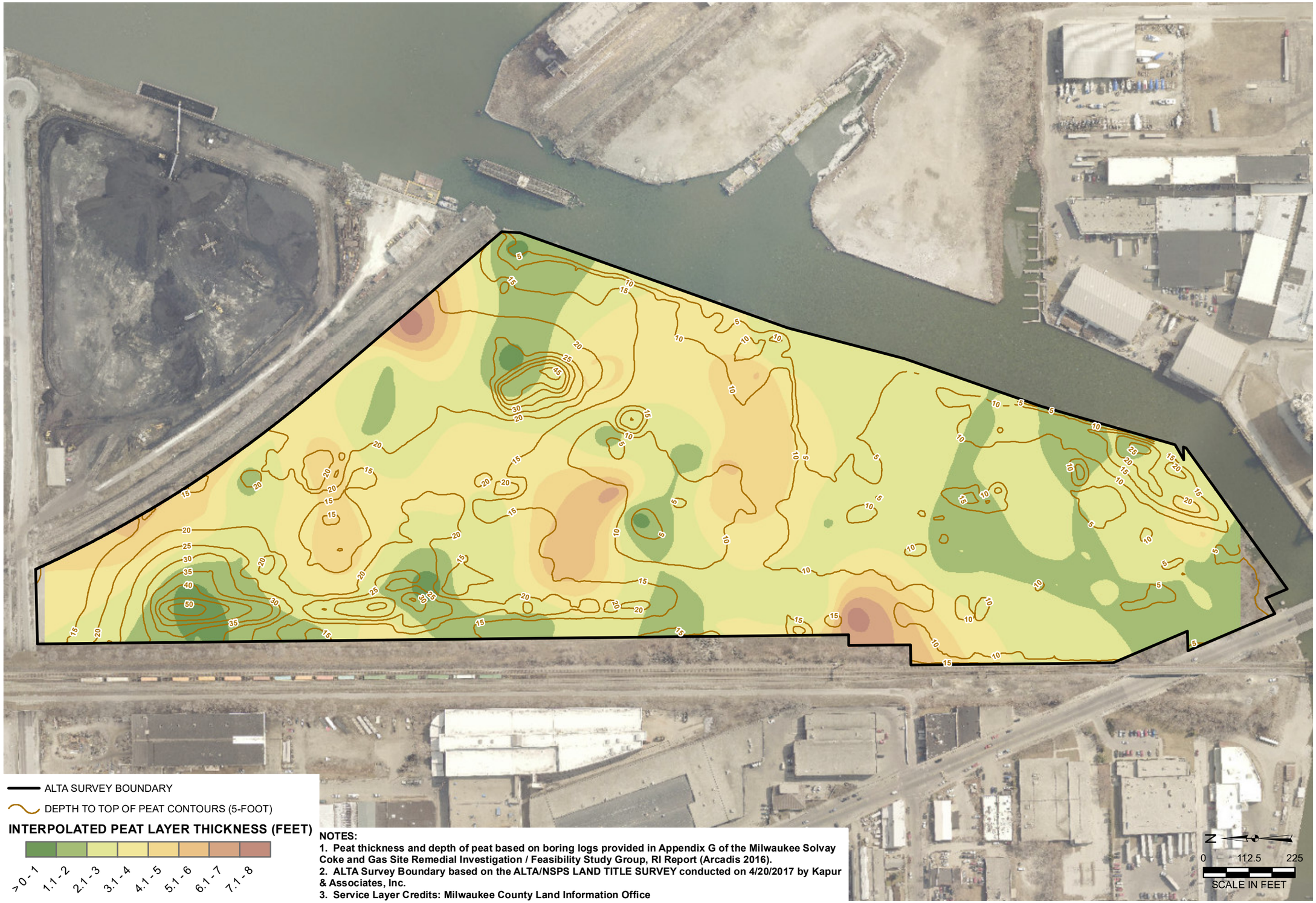
EE/CA SUPPORT SAMPLING PLAN
FORMER MILWAUKEE SOLVAY COKE AND GAS SITE
311 EAST GREENFIELD AVENUE
MILWAUKEE, WISCONSIN

PROJECT NO: 2133

FIGURE NO: 5B

Natural Resource Technology
AN OBG COMPANY

Y:\Mapping\Projects\212133\MXD\Sampling_Plan\Figure 5_Observations of DNAPL.mxd Author: CushmaTD, Date/Time: 9/22/2017, 12:04:15 PM



NOTES:
1. Peat thickness and depth of peat based on boring logs provided in Appendix G of the Milwaukee Solvay Coke and Gas Site Remedial Investigation / Feasibility Study Group, RI Report (Arcadis 2016).
2. ALTA Survey Boundary based on the ALTA/NSPS LAND TITLE SURVEY conducted on 4/20/2017 by Kapur & Associates, Inc.
3. Service Layer Credits: Milwaukee County Land Information Office

DRAWN BY/DATE: TDC 9/20/17
REVIEWED BY/DATE: JFK 9/20/17
APPROVED BY/DATE: JMH 9/22/17

DEPTH TO PEAT LAYER SURFACE AND PEAT LAYER THICKNESS

EE/CA SUPPORT SAMPLING PLAN
FORMER MILWAUKEE SOLVAY COKE AND GAS SITE
311 EAST GREENFIELD AVENUE
MILWAUKEE, WISCONSIN

PROJECT NO: 2133

FIGURE NO: 6

Natural Resource Technology
AN OBG COMPANY

Y:\Mapping\Projects\21\2133\MXD\Sampling_Plan\Figure 6_Peat Layer Surface.mxd Author: CushmaTD; Date/Time: 9/22/2017, 12:10:49 PM

NATIVE CLAY SURFACE

EE/CA SUPPORT SAMPLING PLAN
FORMER MILWAUKEE SOLVAY COKE AND GAS SITE
311 EAST GREENFIELD AVENUE
MILWAUKEE, WISCONSIN

DRAWN BY/DATE:
TDC 9/20/17
REVIEWED BY/DATE:
JFK 9/20/17
APPROVED BY/DATE:
JMH 9/22/17

MONITORING WELL LOCATIONS
SOIL BORING LOCATIONS
GROUND SURFACE ELEVATION CONTOURS (5-FEET)
ALTA SURVEY BOUNDARY

TOP OF CLAY ELEVATION SURFACE (FEET)

545 - 550 | 551 - 555 | 556 - 560 | 561 - 565 | 566 - 570 | 571 - 575 | 576 - 580 | 581 - 585 | 586 - 590

NOTES:
1. Clay depth, boring and monitoring well locations based on boring logs provided in Appendix G of the Milwaukee Solvay Coke and Gas Site Remedial Investigation / Feasibility Study Group, RI Report (Arcadis 2016).
2. ALTA Survey Boundary based on the ALTA/NSPS LAND TITLE SURVEY conducted on 4/20/2017 by Kapur & Associates, Inc.
3. Service Layer Credits: Milwaukee County Land Information Office

N
0 112.5 225
SCALE IN FEET

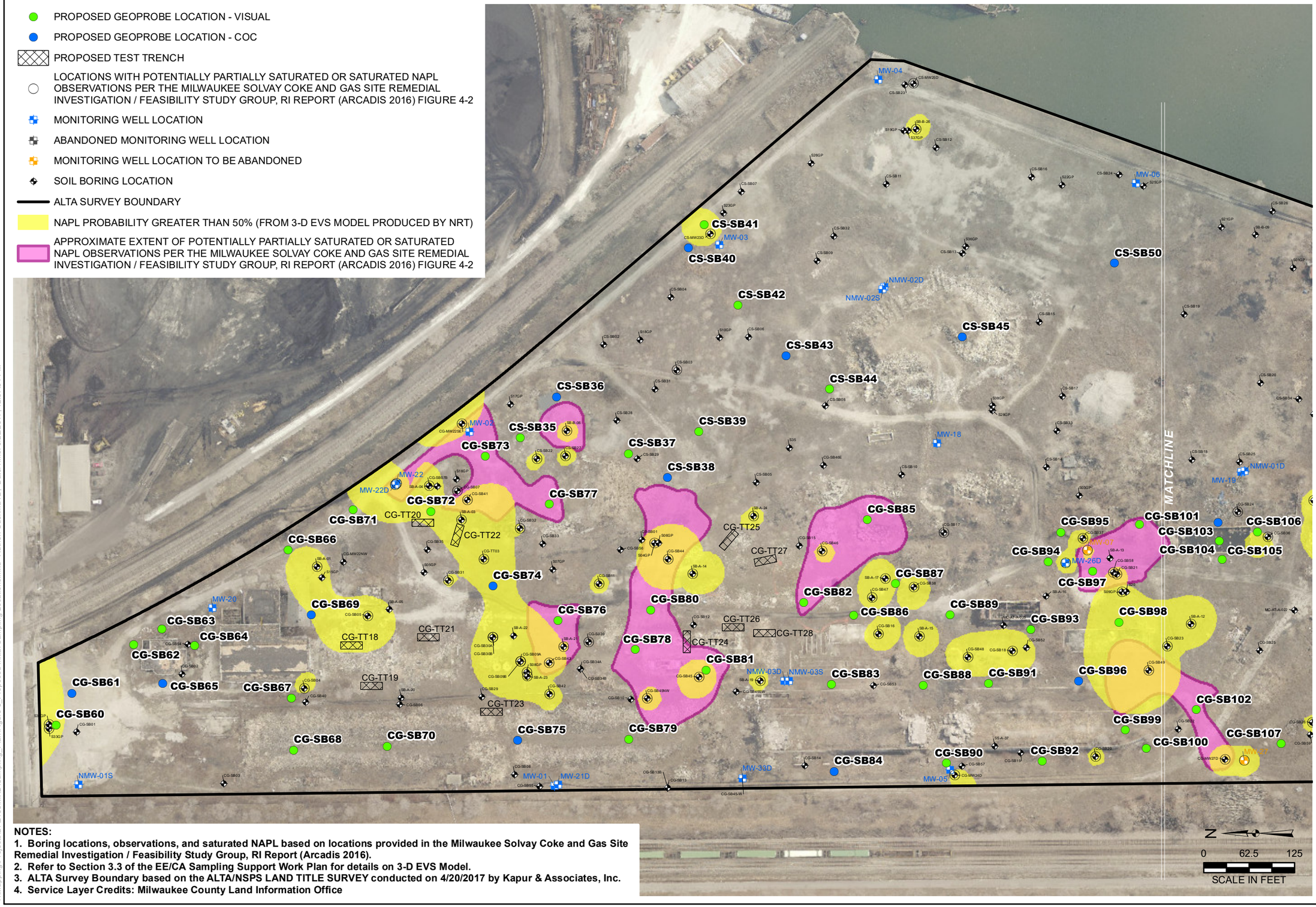
PROJECT NO: 2133

FIGURE NO: 7

Natural Resource Technology
AN OBG COMPANY

Y:\Mapping\Projects\2121233\MXD\Sampling_Plan\Figure 7_Native Clay Surface.mxd Author: CushmaTD: Date/Time: 9/22/2017, 12:25:13 PM

- PROPOSED GEOPROBE LOCATION - VISUAL
- PROPOSED GEOPROBE LOCATION - COC
- PROPOSED TEST TRENCH
- LOCATIONS WITH POTENTIALLY PARTIALLY SATURATED OR SATURATED NAPL OBSERVATIONS PER THE MILWAUKEE SOLVAY COKE AND GAS SITE REMEDIAL INVESTIGATION / FEASIBILITY STUDY GROUP, RI REPORT (ARCADIS 2016) FIGURE 4-2
- MONITORING WELL LOCATION
- ABANDONED MONITORING WELL LOCATION
- MONITORING WELL LOCATION TO BE ABANDONED
- SOIL BORING LOCATION
- ALTA SURVEY BOUNDARY
- NAPL PROBABILITY GREATER THAN 50% (FROM 3-D EVS MODEL PRODUCED BY NRT)
- APPROXIMATE EXTENT OF POTENTIALLY PARTIALLY SATURATED OR SATURATED NAPL OBSERVATIONS PER THE MILWAUKEE SOLVAY COKE AND GAS SITE REMEDIAL INVESTIGATION / FEASIBILITY STUDY GROUP, RI REPORT (ARCADIS 2016) FIGURE 4-2



NOTES:

1. Boring locations, observations, and saturated NAPL based on locations provided in the Milwaukee Solvay Coke and Gas Site Remedial Investigation / Feasibility Study Group, RI Report (Arcadis 2016).
2. Refer to Section 3.3 of the EE/CA Sampling Support Work Plan for details on 3-D EVS Model.
3. ALTA Survey Boundary based on the ALTA/NSPS LAND TITLE SURVEY conducted on 4/20/2017 by Kapur & Associates, Inc.
4. Service Layer Credits: Milwaukee County Land Information Office

DRAWN BY/DATE: TDC 9/20/17
REVIEWED BY/DATE: JFK 9/20/17
APPROVED BY/DATE: JMH 9/22/17

PROPOSED INITIAL SAMPLING LOCATIONS NORTH

EE/CA SUPPORT SAMPLING PLAN
FORMER MILWAUKEE SOLVAY COKE AND GAS SITE
311 EAST GREENFIELD AVENUE
MILWAUKEE, WISCONSIN

PROJECT NO: 2133

FIGURE NO: 8A

Natural Resource Technology
AN OBG COMPANY

Y:\Mapping\Projects\2121233\MXD\Sampling_Plan\Figure 8_Proposed Initial Sampling Locations.mxd Author: CushmaTD: Date/Time: 9/22/2017, 12:37:31 PM

PROPOSED GEOPROBE LOCATION - VISUAL

PROPOSED GEOPROBE LOCATION - COC

PROPOSED TEST TRENCH

LOCATIONS WITH POTENTIALLY PARTIALLY SATURATED OR SATURATED NAPL OBSERVATIONS PER THE MILWAUKEE SOLVAY COKE AND GAS SITE REMEDIAL INVESTIGATION / FEASIBILITY STUDY GROUP, RI REPORT (ARCADIS 2016) FIGURE 4-2

MONITORING WELL LOCATION

ABANDONED MONITORING WELL LOCATION

MONITORING WELL LOCATION TO BE ABANDONED

SOIL BORING LOCATION

ALTA SURVEY BOUNDARY

NAPL PROBABILITY GREATER THAN 50% (FROM 3-D EVS MODEL PRODUCED BY NRT)

APPROXIMATE EXTENT OF POTENTIALLY PARTIALLY SATURATED OR SATURATED NAPL OBSERVATIONS PER THE MILWAUKEE SOLVAY COKE AND GAS SITE REMEDIAL INVESTIGATION / FEASIBILITY STUDY GROUP, RI REPORT (ARCADIS 2016) FIGURE 4-2

MATCHLINE

CS-SB46 CS-SB47 CS-SB49 CS-SB50 CS-SB48 CG-SB109 CG-SB111 CG-SB101 CG-SB103 CG-SB104 CG-SB106 CG-SB105 CG-SB110 CG-SB108 CG-SB95 CG-SB94 CG-SB97 CG-SB98 CG-SB93 CG-SB91 CG-SB96 CG-SB102 CG-SB99 CG-SB100 CG-SB92 CG-SB107 FT-SB46 FT-SB39 FT-SB40 FT-SB45 FT-SB44 FT-SB48 FT-SB49 FT-SB42 FT-SB38 FT-SB47 FT-SB41 FT-SB43

MW-06 MW-23D MW-08 MW-11 MW-32D MW-13 MW-14 MW-19 NMW-01D MW-10 CG-TT29 MW-07 MW-26D MW-27 MW-09 MW-30 MW-12 FT-TT08 NMW-04S NMW-04D MW-31D MW-16 (ABAN) MW-17 MW-15 FT-TT09 FT-TT10

NOTES:
1. Boring locations, observations, and saturated NAPL based on locations provided in the Milwaukee Solvay Coke and Gas Site Remedial Investigation / Feasibility Study Group, RI Report (Arcadis 2016).
2. Refer to Section 3.3 of the EE/CA Sampling Support Work Plan for details on 3-D EVS Model.
3. ALTA Survey Boundary based on the ALTA/NSPS LAND TITLE SURVEY conducted on 4/20/2017 by Kapur & Associates, Inc.
4. Service Layer Credits: Milwaukee County Land Information Office

N

0 62.5 125

SCALE IN FEET

DRAWN BY/DATE: TDC 9/20/17
REVIEWED BY/DATE: JFK 9/20/17
APPROVED BY/DATE: JMH 9/22/17

PROPOSED INITIAL SAMPLING LOCATIONS SOUTH

EE/CA SUPPORT SAMPLING PLAN
FORMER MILWAUKEE SOLVAY COKE AND GAS SITE
311 EAST GREENFIELD AVENUE
MILWAUKEE, WISCONSIN

PROJECT NO: 2133

FIGURE NO: 8B

Natural Resource Technology
AN OBG COMPANY

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Appendix A

Quality Assurance Project Plan

QUALITY ASSURANCE PROJECT PLAN

This appendix provides site-specific elements as identified in the Multi-site Quality Assurance Project Plan (QAPP). Unless specifically noted otherwise, the Multi-site QAPP prepared for WEC Energy Group's Wisconsin Public Service Corporation's (WPSC) former MGP sites being addressed in an AOC for Remedial Investigations and Feasibility Studies (RI/FS), CERCLA Docket No. V-W-06-C-847, effective May 5, 2006, will be followed while implementing the Engineering Evaluation and Cost Analysis (EE/CA) Support Sampling Plan at the Milwaukee Solvay Coke and Gas Site (Site), located in Milwaukee, Wisconsin. This appendix references the Multi-site QAPP sections which may require site-specific elements.

Section 1.1 – Introduction

The Multi-site QAPP addresses all of the activities to be performed at the Site.

Section 1.3 – Problem Definition/Background Information (A5)

The EE/CA Support Sampling Plan has been prepared to further determine the nature and extent of source material and address any remaining data gaps at the (Site) located in Milwaukee, Wisconsin. Specifically, this EE/CA Support Sampling Plan addresses data acquisition activities necessary to evaluate upland area removal alternatives in the EE/CA and to support a Non-Time Critical Removal Action (NTCRA) at the Site.

Section 1.4 – Project/Task Description and Schedule (A6)

Conditions that require further assessment to support an EE/CA with the remedial action objectives (RAOs) as presented in the AOC (Docket # V-W-17-C-010, effective August 31, 2017) are presented in Section 3.2 of the EE/CA Support Sampling Plan. Activities include, soil and groundwater sampling.

The other activities presented in Section 1.4 of the Multi-site QAPP are not anticipated at this time.

Site-specific tasks to be performed and the sampling rationale are presented in Section 3 and Table 3 of the EE/CA Support Sampling Plan.

The project quantitation limits (PQLs) for the EE/CA Support Sampling Plan are provided as an attachment on Uniform Federal Policy (UFP) Worksheet #15. Pace Analytical Services is proposed for soil and water analyses. Alpha is proposed for select soil sample analysis. Both laboratories are included in the USEPA approved Multi-Site QAPP. Updates to the laboratory's practical quantitation limit (PQL) and reporting limits (RL) compared to applicable Site screening levels are also provided on UFP Worksheet #15. A site-specific sampling and analysis summary is presented on Table 4 of the EE/CA Support Sampling Plan and Table 3 and 4 detail the media to be sampled and the constituents to be analyzed.

A site-specific schedule for implementing the EE/CA Support Sampling Plan activities is presented in Section 4 of the EE/CA Support Sampling Plan.

Section 1.5.3 – Step 3 Decision Inputs

As mentioned above, Tables 3 and 4 summarize the media to be sampled, rationale, and the constituents to be analyzed. The laboratory's PQL and RL compared to applicable Site screening levels are provided on UFP Worksheet #15. In some instances, the PQL may be above the screening level because commercially available techniques cannot achieve detection levels below the screening levels. Section 3 and Appendix J of the EE/CA Support Sampling Plan describes the standard operating procedures (SOPs) to be used.

Section 1.5.3.1 – Screening Level Ecological Risk Assessment (SLERA)

An SLERA was prepared as part of the USEPA-approved Remedial Investigation Report, prepared for Milwaukee Solvay Coke and Gas Site Remedial Investigation/Feasibility Study Group and an update is not anticipated to be necessary.

Section 1.5.3.2 – Human Health Risk Assessment (HHRA)

An HHRA was prepared as part of the USEPA-approved Remedial Investigation Report, prepared for Milwaukee Solvay Coke and Gas Site Remedial Investigation/Feasibility Study Group and an update is not anticipated to be necessary.

Section 1.5.4 – Step 4 Investigation Boundaries

Figure 2 of the EE/CA Sampling Support Work Plan depicts the site boundaries to be investigated. Figures 8a and 8b provide proposed sampling locations.

Sample volumes required for laboratory and toxicity testing are provided on Table 4 of the EE/CA Sampling Support Work Plan.

As mentioned above, the sampling rationale is presented in Section 3 and Table 3 of the EE/CA Sampling Support Work Plan.

Section 1.5.8 Measurement Performance Criteria

The laboratories selected to perform the analysis are discussed in Section 3 of the EE/CA Sampling Support Work Plan and include Pace Analytical Services for soil and water samples and Alpha for select soil samples. Both laboratories are included in the USEPA-approved Multi-site QAPP. Modifications, if any, will be provided to USEPA for review and approval in accordance with the AOC/SOW.

Section 2.1.1 Schedule

A site-specific schedule for implementing the EE/CA Sampling Support Work Plan is presented in Section 4 of the EE/CA Sampling Support Work Plan.

Section 2.1.2 Sampling Design Rationale

Table 3 provides sample location rationale and target depths. Table 4 summarizes the media to be sampled and the constituents to be analyzed.

Section 2.3.1.3 Sample Container, Volume, Preservation and Holding Time

Table 4 summarizes the sample containers, volume, preservation and holding times for the media to be sampled and the constituents to be analyzed.

Section 2.4 Analytical Methods Requirements (B4)

Table 4 summarizes the parameters to be analyzed.

QAPP Worksheet #15: Project Action Limits and Laboratory-Specific Detection/Quantitation Limits
(UFP-QAPP Manual Section 2.6.2.3 and Figure 15)
(EPA 2106-G-05 Section 2.2.6)

Matrix: Soil
Analytical Method: 8260B
Concentration level (if applicable):

Analyte	CAS No.	WI Industrial DC RCL (mg/kg)	WI Soil to GW RCL (mg/Kg)	Laboratory Detection Limit (mg/Kg)	Laboratory Reporting Limit (mg/Kg)
Volatile Organic Compounds by Method SW846-8260B					
Acetone	67-64-1	100000	3.677		
Acetonitrile	75-05-8	4920	#N/A		
Acrolein (Propenal)	107-02-8	0.873	#N/A		
Acrylonitrile	107-13-1	1.5	#N/A		
Allyl alcohol	107-18-6	21.5	#N/A		
Allyl chloride	107-05-1	4.54	#N/A		
Benzene	71-43-2	7.07	0.005	0.025	0.060
Benzyl chloride	100-44-7	6.23	#N/A		
Bis(2-chloroethyl)sulfide	505-60-2	1050	#N/A		
Bromoacetone	598-31-2	#N/A	#N/A		
Bromochloromethane	74-97-5	906	#N/A	0.025	0.060
Bromodichloromethane	75-27-4	1.83	0.0003	0.025	0.060
4-Bromofluorobenzene (surr)	460-00-4	323	#N/A		

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI Industrial DC RCL (mg/kg)	WI Soil to GW RCL (mg/Kg)	Laboratory Detection Limit (mg/Kg)	Laboratory Reporting Limit (mg/Kg)
Bromoform	75-25-2	113	0.002	0.025	0.060
Bromomethane	74-83-9	43	0.005	0.069093	0.250
n-Butanol	71-36-3	7640	#N/A		
2-Butanone (MEK)	78-93-3	28400	1.6661		
t-Butyl alcohol	75-65-0	#N/A	0.0049		
Carbon disulfide	75-15-0	738	0.5919		
Carbon tetrachloride	56-23-5	4.03	0.0039	0.025	0.060
Chloral hydrate	302-17-0	100000	#N/A		
Chlorobenzene	108-90-7	761	0.1358	0.025	0.060
Chlorobenzene-d_5 (IS)	3114-55-4	#N/A	#N/A		
Chlorodibromomethane	124-48-1	38.9	0.032	0.025	0.060
Chloroethane	75-00-3	2120	0.227	0.067017716	0.250
2-Chloroethanol	107-07-3	23400	#N/A		
2-Chloroethyl vinyl ether	110-75-8	117	#N/A		
Chloroform	67-66-3	1.98	0.003	0.046442419	0.250
Chloromethane	74-87-3	669	0.016	0.025	0.060
Chloroprene	126-99-8	0.0636	#N/A		
3-Chloropropionitrile	542-76-7	#N/A	#N/A		
Crotonaldehyde	4170-30-3	20100	#N/A		

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI Industrial DC RCL (mg/kg)	WI Soil to GW RCL (mg/Kg)	Laboratory Detection Limit (mg/Kg)	Laboratory Reporting Limit (mg/Kg)
1,2-Dibromo-3-chloropropane	96-12-8	0.0923	0.00017	0.091241581	0.250
1,2-Dibromoethane	106-93-4	0.221	0.00003	0.025	0.060
Dibromomethane	74-95-3	143	#N/A	0.025	0.060
1,2-Dichlorobenzene	95-50-1	376	1.168	0.025	0.060
1,3-Dichlorobenzene	541-73-1	297	1.153	0.025	0.060
1,4-Dichlorobenzene	106-46-7	16.4	0.144	0.025	0.060
1,4-Dichlorobenzene-d_4 (IS)	3855-82-1	#N/A	#N/A		
cis-1,4-Dichloro-2-butene	1476-11-5	0.0469	#N/A		
trans-1,4-Dichloro-2-butene	110-57-6	0.0469	#N/A		
Dichlorodifluoromethane	75-71-8	530	3.0863	0.025	0.060
1,1-Dichloroethane	75-34-3	22.2	0.4834	0.025	0.060
1,2-Dichloroethane	107-06-2	2.87	0.0028	0.025	0.060
1,2-Dichloroethane-d_4 (surr)	17060-07-0	#N/A	#N/A		
1,1-Dichloroethene	75-35-4	1190	0.0050	0.025	0.060
trans-1,2-Dichloroethene	156-60-5	1850	0.0626	0.025	0.060
1,2-Dichloropropane	78-87-5	1.78	0.0033	0.025	0.060
1,3-Dichloro-2-propanol	96-23-1	#N/A	#N/A		
cis-1,3-Dichloropropene	10061-01-5	1210	#N/A	0.025	0.060
trans-1,3-Dichloropropene	10061-02-6	1510	#N/A	0.025	0.060

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI Industrial DC RCL (mg/kg)	WI Soil to GW RCL (mg/Kg)	Laboratory Detection Limit (mg/Kg)	Laboratory Reporting Limit (mg/Kg)
1,2,3,4-Diepoxybutane	1464-53-5	100000	#N/A		
Diethyl ether	60-29-7	10100	0.4478		
1,4-Difluorobenzene (IS)	540-36-3	#N/A	#N/A		
1,4-Dioxane	123-91-1	26.5	0.0012		
Epichlorohydrin	106-89-8	117	#N/A		
Ethanol	64-17-5	100000	#N/A		
Ethyl acetate	141-78-6	3800	#N/A		
Ethylbenzene	100-41-4	35.4	1.57	0.025	0.060
Ethylene oxide	75-21-8	0.0358	#N/A		
Ethyl methacrylate	97-63-2	1100	#N/A		
Fluorobenzene (IS)	462-06-6	2390	#N/A		
Hexachlorobutadiene	87-68-3	7.19	#N/A	0.025	0.060
Hexachloroethane	67-72-1	11.1	#N/A		
2-Hexanone	591-78-6	1760	#N/A		
2-Hydroxypropionitrile	78-97-7	#N/A	#N/A		
Iodomethane	74-88-4	3040	#N/A		
Isobutyl alcohol	78-83-1	10000	#N/A		
Isopropylbenzene	98-82-8	268	#N/A	0.025	0.060
Malononitrile	109-77-3	82.1	#N/A		

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI Industrial DC RCL (mg/kg)	WI Soil to GW RCL (mg/Kg)	Laboratory Detection Limit (mg/Kg)	Laboratory Reporting Limit (mg/Kg)
Methacrylonitrile	126-98-7	107	#N/A		
Methanol	67-56-1	100000	2.0245		
Methylene chloride	75-09-2	1150	0.0026	0.025	0.060
Methyl methacrylate	80-62-6	2360	#N/A		
4-Methyl-2-pentanone (MIBK)	108-10-1	3360	0.2252		
Naphthalene	91-20-3	24.1	0.6582	0.0400453	0.250
Nitrobenzene	98-95-3	32.4	#N/A		
2-Nitropropane	79-46-9	0.0861	#N/A		
N-Nitroso-di-n-butylamine	924-16-3	0.494	#N/A		
Paraldehyde	123-63-7	#N/A	#N/A		
Pentachloroethane	76-01-7	36.3	#N/A		
2-Pentanone	107-87-9	#N/A	#N/A		
2-Picoline	109-06-8	100000	#N/A		
1-Propanol	71-23-8	100000	#N/A		
2-Propanol	67-63-0	34500	#N/A		
Propargyl alcohol	107-19-7	2340	#N/A		
f3-Propiolactone	57-57-8	#N/A	#N/A		
Propionitrile (ethyl cyanide)	107-12-0	15600	#N/A		
n-Propylamine	107-10-8	#N/A	#N/A		

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI Industrial DC RCL (mg/kg)	WI Soil to GW RCL (mg/Kg)	Laboratory Detection Limit (mg/Kg)	Laboratory Reporting Limit (mg/Kg)
Pyridine	110-86-1	1170	0.0069		
Styrene	100-42-5	867	0.22	0.025	0.060
1,1,1,2-Tetrachloroethane	630-20-6	12.3	0.0534	0.025	0.060
1,1,2,2-Tetrachloroethane	79-34-5	3.6	0.0002	0.025	0.060
Tetrachloroethene	127-18-4	145	0.0045	0.025	0.060
Toluene	108-88-3	818	1.1072	0.025	0.060
Toluene-d8 (surr)	2037-26-5	#N/A	#N/A		
o-Toluidine	95-53-4	144	#N/A		
1,2,4-Trichlorobenzene	120-82-1	113	0.408	0.047550292	0.250
1,1,1-Trichloroethane	71-55-6	640	0.1402	0.025	0.060
1,1,2-Trichloroethane	79-00-5	7.01	0.0032	0.025	0.060
Trichloroethene	79-01-6	8.41	0.0036	0.025	0.060
Trichlorofluoromethane	75-69-4	1230	4.4775	0.025	0.060
1,2,3-Trichloropropane	96-18-4	0.109	0.0519	0.025	0.060
Vinyl acetate	108-05-4	2750	#N/A		
Vinyl chloride	75-01-4	2.08	0.0001	0.025	0.060
o-Xylene	95-47-6	434	#N/A	0.025	0.060
m-Xylene	108-38-3	388	#N/A		
p-Xylene	106-42-3	390	#N/A		

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI Industrial DC RCL (mg/kg)	WI Soil to GW RCL (mg/Kg)	Laboratory Detection Limit (mg/Kg)	Laboratory Reporting Limit (mg/Kg)
1,3,5-Trimethylbenzene	108-68-8	182	#N/A	0.025	0.060
1,2,4-Trimethylbenzene	95-63-6	219	#N/A	0.025	0.060

NOTE: #NA = no regulatory concentration for the indicated analyte.

Matrix: Soil
Analytical Method: 8270C
Concentration level (if applicable):

Analyte	CAS No.	WI Industrial DC RCL (mg/kg)	WI Soil to GW RCL (mg/Kg)	Laboratory Detection Limit (mg/Kg)	Laboratory Reporting Limit (mg/Kg)
Semi-volatile Organic Compounds by Method SW846-8270C					
Acenaphthene	83-32-9	45200	#N/A	0.0591931	0.19731
Acenaphthylene	208-96-8	0	#N/A	0.0595466	0.19849
Acetophenone	98-86-2	2520	#N/A		
2-Acetylaminofluorene	53-96-3	0.605	#N/A		
1-Acetyl-2-thiourea	591-08-2	#N/A	#N/A		
2-Aminoanthraquinone	117-79-3	#N/A	#N/A		
Aminoazobenzene	60-09-3	#N/A	#N/A		
4-Aminobiphenyl	92-67-1	0.109	#N/A		
3-Amino-9-ethylcarbazole	132-32-1	#N/A	#N/A		
Anilazine	101-05-3	#N/A	#N/A		
Aniline	62-53-3	403	#N/A		
o-Anisidine	90-04-0	#N/A	#N/A		
Anthracene	120-12-7	100000	196.95	0.0266778	0.08892
Aramite	140-57-8	91.9	#N/A		
Azinphos-methyl	86-50-0	2460	#N/A		
Barban	101-27-9	#N/A	#N/A		

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI Industrial DC RCL (mg/kg)	WI Soil to GW RCL (mg/Kg)	Laboratory Detection Limit (mg/Kg)	Laboratory Reporting Limit (mg/Kg)
Benzidine	92-87-5	0.00999	#N/A		
Benzoic Acid	65-85-0	100000	#N/A		
Benz(a)anthracene	56-55-3	20.8	#N/A	0.0258504	0.086168
Benzo(b)fluoranthene	205-99-2	21.1	0.4793	0.02868	0.0956
Benzo(k)fluoranthene	207-08-9	211	#N/A	0.0399665	0.13322
Benzo(g,h,i)perylene	191-24-2	0	#N/A	0.0436689	0.14556
Benzo(a)pyrene	50-32-8	2.11	0.47	0.0251155	0.083718
Benzo(e)pyrene	192-97-2	#N/A	#N/A		
p-Benzoquinone	106-51-4	#N/A	#N/A		
Benzyl alcohol	100-51-6	82100	#N/A		
Bis(2-chloroethoxy)methane	111-91-1	2460	#N/A	0.0449525	0.14984
Bis(2-chloroethyl) ether	111-44-4	1.29	#N/A	0.0521093	0.1737
Bis(2-chloroisopropyl) ether	108-60-1	1020	#N/A		
Bis(2-ethylhexyl) phthalate	117-81-7	164	2.88	0.0277559	0.09252
4-Bromophenyl phenyl ether	101-55-3	26.9	#N/A	0.0349569	0.11652
Bromoxynil	1689-84-5	22.3	#N/A		
Butyl benzyl phthalate	85-68-7	1210	#N/A	0.0267668	0.08922
Captafol	2425-06-1	15.3	#N/A		
Captan	133-06-2	999	#N/A		

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI Industrial DC RCL (mg/kg)	WI Soil to GW RCL (mg/Kg)	Laboratory Detection Limit (mg/Kg)	Laboratory Reporting Limit (mg/Kg)
Carbaryl	63-25-2	82100	0.0726		
Carbofuran	1563-66-2	4100	0.0312		
Carbophenothion	786-19-6	#N/A	#N/A		
Chlordane (NOS)	57-74-9	#N/A	#N/A		
Chlorfenvinphos	470-90-6	574	#N/A		
4-Chloroaniline	106-47-8	11.5	#N/A	0.0274314	0.09143
Chlorobenzilate	510-15-6	20.9	#N/A		
5-Chloro-2-methylaniline	95-79-4	#N/A	#N/A		
4-Chloro-3-methylphenol	59-50-7	82100	#N/A	0.0519369	0.17312
3-(Chloromethyl)pyridine hydrochloride	6959-48-4	#N/A	#N/A		
1-Chloronaphthalene	90-13-1	266	#N/A		
2-Chloronaphthalene	91-58-7	60300	#N/A	0.0214304	0.071434
2-Chlorophenol	95-57-8	5840	#N/A	0.0416619	0.13887
4-Chloro-1,2-phenylenediamine	95-83-0	#N/A	#N/A		
4-Chloro-1,3-phenylenediamine	5131-60-2	#N/A	#N/A		
4-Chlorophenyl phenyl ether	7005-72-3	#N/A	#N/A		
Chrysene	218-01-9	2110	0.1446	0.0249569	0.08319
Coumaphos	56-72-4	#N/A	#N/A		
p-Cresidine	120-71-8	#N/A	#N/A		

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI Industrial DC RCL (mg/kg)	WI Soil to GW RCL (mg/Kg)	Laboratory Detection Limit (mg/Kg)	Laboratory Reporting Limit (mg/Kg)
Crotoxyphos	7700-17-6	#N/A	#N/A		
2-Cyclohexyl-4,6-dinitro-phenol	131-89-5	1640	#N/A		
Demeton-O	298-03-3	#N/A	#N/A		
Demeton-S	126-75-0	#N/A	#N/A		
Diallate (cis or trans)	2303-16-4	37.7	#N/A		
2,4-Diaminotoluene	95-80-7	#N/A	#N/A		
Dibenz(a,j)acridine	224-42-0	#N/A	#N/A		
Dibenz(a,h)anthracene	53-70-3	2.11	#N/A	0.0453374	0.15112
Dibenzofuran	132-64-9	1040	#N/A	0.0202055	0.06735
Dibenzo(a,e)pyrene	192-65-4	0.176	#N/A		
1,2-Dibromo-3-chloropropane	96-12-8	0.0923	0.0002		
Di-n-butyl phthalate	84-74-2	82100	5.0333	0.0249484	0.08316
Dichlone	117-80-6	#N/A	#N/A		
1,2-Dichlorobenzene	95-50-1	376	1.168	0.052485	0.17495
1,3-Dichlorobenzene	541-73-1	297	1.1528	0.0231143	0.077047
1,4-Dichlorobenzene	106-46-7	16.4	0.144	0.023254	0.077513
3,3'-Dichlorobenzidine	91-94-1	5.11	#N/A	0.0452872	0.15096
2,4-Dichlorophenol	120-83-2	2460	#N/A	0.0446065	0.14868
2,6-Dichlorophenol	87-65-0	#N/A	#N/A		

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI Industrial DC RCL (mg/kg)	WI Soil to GW RCL (mg/Kg)	Laboratory Detection Limit (mg/Kg)	Laboratory Reporting Limit (mg/Kg)
Dichlorovos	62-73-7	7.92	#N/A		
Dicrotophos	141-66-2	57.4	#N/A		
Diethyl phthalate	84-66-2	100000	#N/A	0.0276781	0.09226
Diethylstilbestrol	56-53-1	0.00657	#N/A		
Diethyl sulfate	64-67-5	#N/A	#N/A		
Dimethoate	60-51-5	1810	0.00090		
3,3'-Dimethoxybenzidine	119-90-4	1.44	#N/A		
Dimethylaminoazobenzene	60-11-7	0.5	#N/A		
7,12-Dimethylbenz(a)-anthracene	57-97-6	0.0084	#N/A		
3,3'-Dimethylbenzidine	119-93-7	0.209	#N/A		
α,α-Dimethylphenethylamine	122-09-8	#N/A	#N/A		
2,4-Dimethylphenol	105-67-9	16400	#N/A	0.0330074	0.11002
Dimethyl phthalate	131-11-3	7390	#N/A	0.0217128	0.07238
1,2-Dinitrobenzene	528-29-0	82.1	#N/A		
1,3-Dinitrobenzene	99-65-0	82.1	#N/A		
1,4-Dinitrobenzene	100-25-4	82.1	#N/A		
4,6-Dinitro-2-methylphenol	534-52-1	65.7	#N/A	0.0514485	0.17149
2,4-Dinitrophenol	51-28-5	1640	#N/A	0.0508491	0.16949
2,4-Dinitrotoluene	121-14-2	7.37	0.00014	0.0238714	0.07957

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI Industrial DC RCL (mg/kg)	WI Soil to GW RCL (mg/Kg)	Laboratory Detection Limit (mg/Kg)	Laboratory Reporting Limit (mg/Kg)
2,6-Dinitrotoluene	606-20-2	1.54	0.00014	0.0316886	0.105628
Dinocap	39300-45-3	#N/A	#N/A		
Dinoseb	88-85-7	821	0.123		
Diphenylamine	122-39-4	82100	#N/A		
5,5-Diphenylhydantoin	57-41-0	#N/A	#N/A		
1,2-Diphenylhydrazine	122-66-7	2.87	#N/A		
Di-n-octyl phthalate	117-84-0	8210	#N/A	0.0375306	0.1251
Disulfoton	298-04-4	32.8	#N/A		
EPN	2104-64-5	8.21	#N/A		
Ethion	563-12-2	410	#N/A		
Ethyl carbamate	51-79-6	2.3	#N/A		
Ethyl methanesulfonate	62-50-0	#N/A	#N/A		
Famphur	52-85-7	#N/A	#N/A		
Fensulfothion	115-90-2	#N/A	#N/A		
Fenthion	55-38-9	#N/A	#N/A		
Fluchloralin	33245-39-5	#N/A	#N/A		
Fluoranthene	206-44-0	30100	88.88	0.0236189	0.07873
Fluorene	86-73-7	30100	14.83	0.0195098	0.06503
2-Fluorobiphenyl (surr)	321-60-8	#N/A	#N/A		

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI Industrial DC RCL (mg/kg)	WI Soil to GW RCL (mg/Kg)	Laboratory Detection Limit (mg/Kg)	Laboratory Reporting Limit (mg/Kg)
2-Fluorophenol (surr)	367-12-4	27300	#N/A		
Hexachlorobenzene	118-74-1	1.15	0.0252	0.0280731	0.09358
Hexachlorobutadiene	87-68-3	7.19	#N/A		
Hexachlorocyclopentadiene	77-47-4	10.8	#N/A	0.0395002	0.13167
Hexachloroethane	67-72-1	11.1	#N/A	0.0267118	0.08904
Hexachlorophene	70-30-4	246	#N/A		
Hexachloropropene	1888-71-7	43.8	#N/A		
Hexamethylphosphoramide	680-31-9	328	#N/A		
Hydroquinone	123-31-9	38.3	#N/A		
Indeno(1,2,3-cd)pyrene	193-39-5	21.1	#N/A	0.0361176	0.12039
Isodrin	465-73-6	#N/A	#N/A		
Isophorone	78-59-1	2420	#N/A	0.0256594	0.08553
Isosafrole	120-58-1	234	#N/A		
Kepone	143-50-0	0.23	#N/A		
Leptophos	21609-90-5	#N/A	#N/A		
Malathion	121-75-5	16400	#N/A		
Maleic anhydride	108-31-6	80700	#N/A		
Mestranol	72-33-3	#N/A	#N/A		
Methapyrilene	91-80-5	#N/A	#N/A		

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI Industrial DC RCL (mg/kg)	WI Soil to GW RCL (mg/Kg)	Laboratory Detection Limit (mg/Kg)	Laboratory Reporting Limit (mg/Kg)
3-Methylcholanthrene	56-49-5	0.104	#N/A		
4,4'-Methylenebis(2-chloroaniline)	101-14-4	23	#N/A		
4,4'-Methylenebis(N,N-dimethyl-aniline)	101-61-1	50	#N/A		
Methyl methanesulfonate	66-27-3	23.2	#N/A		
2-Methylnaphthalene	91-57-6	3010	#N/A	0.0433422	0.14447
Methyl parathion	298-00-0	205	#N/A		
2-Methylphenol	95-48-7	41000	#N/A	0.0303264	0.10109
3-Methylphenol	108-39-4	41000	#N/A		
4-Methylphenol	106-44-5	82100	#N/A		
Mevinphos	7786-34-7	#N/A	#N/A		
Mexacarbate	315-18-4	#N/A	#N/A		
Mirex	2385-85-5	0.171	#N/A		
Monocrotophos	6923-22-4	#N/A	#N/A		
Naled	300-76-5	2340	#N/A		
Naphthalene	91-20-3	24.1	0.658	0.0583639	0.19455
1,4-Naphthoquinone	130-15-4	#N/A	#N/A		
1-Naphthylamine	134-32-7	#N/A	#N/A		
2-Naphthylamine	91-59-8	1.28	#N/A		
Nicotine	54-11-5	#N/A	#N/A		

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI Industrial DC RCL (mg/kg)	WI Soil to GW RCL (mg/Kg)	Laboratory Detection Limit (mg/Kg)	Laboratory Reporting Limit (mg/Kg)
5-Nitroacenaphthene	602-87-9	#N/A	#N/A		
2-Nitroaniline	88-74-4	8010	#N/A	0.047567	0.15855
3-Nitroaniline	99-09-2	#N/A	#N/A	0.0283864	0.09462
4-Nitroaniline	100-01-6	115	#N/A	0.0692796	0.23093
5-Nitro-o-anisidine	99-59-2	46.9	#N/A		
Nitrobenzene	98-95-3	32.4	#N/A		
4-Nitrobiphenyl	92-93-3	#N/A	#N/A		
Nitrofen	1836-75-5	#N/A	#N/A		
2-Nitrophenol	88-75-5	#N/A	#N/A	0.0526808	0.1756
4-Nitrophenol	100-02-7	#N/A	#N/A	0.0420302	0.1401
5-Nitro-o-toluidine	99-55-8	255	#N/A		
Nitroquinoline-1-oxide	56-57-5	#N/A	#N/A		
N-Nitrosodi-n-butylamine	924-16-3	0.494	#N/A		
N-Nitrosodiethylamine	55-18-5	0.0153	#N/A		
N-Nitrosodimethylamine	62-75-9	0.0397	#N/A		
N-Nitrosomethylethylamine	10595-95-6	0.103	#N/A		
N-Nitrosodiphenylamine	86-30-6	469	0.076	0.2264811	0.75494
N-Nitrosodi-n-propylamine	621-64-7	0.328	#N/A	0.026474	0.08824
N-Nitrosomorpholine	59-89-2	0.343	#N/A		

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI Industrial DC RCL (mg/kg)	WI Soil to GW RCL (mg/Kg)	Laboratory Detection Limit (mg/Kg)	Laboratory Reporting Limit (mg/Kg)
N-Nitrosopiperidine	100-75-4	0.244	#N/A		
N-Nitrosopyrrolidine	930-55-2	1.09	#N/A		
Octamethyl pyrophosphoramide	152-16-9	1640	#N/A		
4,4'-Oxydianiline	101-80-4	#N/A	#N/A		
Parathion	56-38-2	4920	#N/A		
Pentachlorobenzene	608-93-5	934	#N/A		
Pentachloronitrobenzene	82-68-8	12.6	#N/A		
Pentachlorophenol	87-86-5	3.97	0.0028	0.0367601	0.12253
Perylene	198-55-0	0	#N/A		
Phenacetin	62-44-2	1040	#N/A		
Phenanthrene	85-01-8	0	#N/A	0.0214147	0.07138
Phenobarbital	50-06-6	#N/A	#N/A		
Phenol	108-95-2	100000	2.295	0.039612	0.13204
1,4-Phenylenediamine	106-50-3	821	#N/A		
Phorate	298-02-2	164	#N/A		
Phosalone	2310-17-0	#N/A	#N/A		
Phosmet	732-11-6	16400	#N/A		
Phosphamidon	13171-21-6	#N/A	#N/A		
Phthalic anhydride	85-44-9	100000	#N/A		

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI Industrial DC RCL (mg/kg)	WI Soil to GW RCL (mg/Kg)	Laboratory Detection Limit (mg/Kg)	Laboratory Reporting Limit (mg/Kg)
2-Picoline (2-Methylpyridine)	109-06-8	100000	#N/A		
Piperonyl sulfoxide	120-62-7	#N/A	#N/A		
Pronamide	23950-58-5	61500	#N/A		
Propylthiouracil	51-52-5	#N/A	#N/A		
Pyrene	129-00-0	22600	54.545	0.0369977	0.12333
Resorcinol	108-46-3	#N/A	#N/A		
Safrole	94-59-7	10.4	#N/A		
Strychnine	57-24-9	246	#N/A		
Sulfallate	95-06-7	#N/A	#N/A		
Terbufos	13071-79-9	29.2	#N/A		
1,2,4,5-Tetrachlorobenzene	95-94-3	350	#N/A		
2,3,4,6-Tetrachlorophenol	58-90-2	24600	#N/A		
Tetrachlorvinphos	961-11-5	95.7	#N/A		
Tetraethyl dithiopyrophosphate	3689-24-5	410	#N/A		
Tetraethyl pyrophosphate	107-49-3	#N/A	#N/A		
Thionazine	297-97-2	#N/A	#N/A		
Thiophenol (Benzenethiol)	108-98-5	1170	#N/A		
Toluene diisocyanate	584-84-9	38.5	#N/A		
o-Toluidine	95-53-4	144	#N/A		

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI Industrial DC RCL (mg/kg)	WI Soil to GW RCL (mg/Kg)	Laboratory Detection Limit (mg/Kg)	Laboratory Reporting Limit (mg/Kg)
1,2,4-Trichlorobenzene	120-82-1	113	0.408	0.0188696	0.062898
2,4,5-Trichlorophenol	95-95-4	82100	#N/A	0.0294842	0.09828
2,4,6-Trichlorophenol	88-06-2	209	#N/A	0.0254504	0.08483
Trifluralin	1582-09-8	425	0.4939		
2,4,5-Trimethylaniline	137-17-7	#N/A	#N/A		
Trimethyl phosphate	512-56-1	115	#N/A		
1,3,5-Trinitrobenzene	99-35-4	32400	#N/A		
Tris(2,3-dibromopropyl) phosphate	126-72-7	1.34	#N/A		

NOTE: #NA = no regulatory concentration for the indicated analyte.

Matrix: Soil
Analytical Method: 8082
Concentration level (if applicable):

Analyte	CAS No.	WI Industrial DC RCL (mg/kg)	WI Soil to GW RCL (mg/Kg)	Laboratory Detection Limit (mg/Kg)	Laboratory Reporting Limit (mg/Kg)
Polychlorinated Biphenyls by Method SW846-8082					
Aroclor 1016	12674-11-2	28	#N/A	0.025	0.050
Aroclor 1221	11104-28-2	0.883	#N/A	0.025	0.050
Aroclor 1232	11141-16-5	0.792	#N/A	0.025	0.050
Aroclor 1242	53469-21-9	0.972	#N/A	0.025	0.050
Aroclor 1248	12672-29-6	0.975	#N/A	0.025	0.050
Aroclor 1254	11097-69-1	0.988	#N/A	0.025	0.050
Aroclor 1260	11096-82-5	1	#N/A	0.025	0.050
Aroclor 1262	37324-23-5	#N/A	#N/A	0.025	0.050
Aroclor 1268	11100-14-4	#N/A	#N/A	0.025	0.050

NOTE: #NA = no regulatory concentration for the indicated analyte.

Matrix: Soil
Analytical Method: Parent and Alkylated PAHs by GC/MS-SIM by Alpha Analytical, Westborough, MA
Concentration level (if applicable):

Analyte	CAS No.	WI Industrial DC RCL (mg/kg)	WI Soil to GW RCL (mg/Kg)	Laboratory Detection Limit (mg/Kg)	Laboratory Reporting Limit (mg/Kg)
Method: Parent and Alkylated PAHs by GC/MS-SIM					
Acenaphthene	83-32-9	45200	#N/A	0.000177	0.001
Acenaphthylene	208-96-8	0	#N/A	0.000192	0.001
Anthracene	120-12-7	100000	196.95	0.000207	0.001
Benzo(a)anthracene	56-55-3	20.8	#N/A	0.000205	0.001
Benzo(a)pyrene	50-32-8	2.11	0.47	0.000287	0.001
Benzo(b)fluoranthene	205-99-2	21.1	0.4793	0.000261	0.001
Benzo(e)pyrene	192-97-2	#N/A	#N/A	0.000207	0.001
Benzo(g,h,i)perylene	191-24-2	0	#N/A	0.000267	0.001
Benzo(k)fluoranthene	207-08-9	211	#N/A	0.000199	0.001
C1-benzo(a)anthracene/chrysenes (alkyl chrysenes)	---	#N/A	#N/A	0.000203	0.001
C1-fluorenes	---	#N/A	#N/A	0.000268	0.001
C1-naphthalenes	---	#N/A	#N/A	0.000289	0.001
C1-phenanthrene/anthracenes	---	#N/A	#N/A	0.000333	0.001
C1-pyrene/fluoranthenes	---	#N/A	#N/A	0.000264	0.001

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI Industrial DC RCL (mg/kg)	WI Soil to GW RCL (mg/Kg)	Laboratory Detection Limit (mg/Kg)	Laboratory Reporting Limit (mg/Kg)
C2-benzo(a)anthracene/chrysenes (alkyl chrysenes)	---	#N/A	#N/A	0.000203	0.001
C2-fluorenes	---	#N/A	#N/A	0.000268	0.001
C2-napthalenes	---	#N/A	#N/A	0.000289	0.001
C2-phenanthrene/anthracenes	---	#N/A	#N/A	0.000333	0.001
C3-benzo(a)anthracene/chrysenes (alkyl chrysenes)	---	#N/A	#N/A	0.000203	0.001
C3-fluorenes	---	#N/A	#N/A	0.000268	0.001
C3-napthalenes	---	#N/A	#N/A	0.000289	0.001
C3-phenanthrene/anthracenes	---	#N/A	#N/A	0.000333	0.001
C4-benzo(a)anthracene/chrysenes (alkyl chrysenes)	---	#N/A	#N/A	0.000203	0.001
C4-napthalenes	---	#N/A	#N/A	0.000289	0.001
C4-phenanthrene/anthracenes	---	#N/A	#N/A	0.000333	0.001
Carbazole	86-74-8	#N/A	#N/A	0.000329	0.001
Chrysene	218-01-9	2110	0.1446	0.000203	0.001
Dibenzo(a,h)anthracene (ah+ac)	53-70-3	2.11	#N/A	0.000271	0.001
Dibenzofuran	132-64-9	1040	#N/A	0.000316	0.001
Fluoranthene	206-44-0	30100	88.88	0.000319	0.001
Fluorene	86-73-7	30100	14.83	0.000264	0.001

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI Industrial DC RCL (mg/kg)	WI Soil to GW RCL (mg/Kg)	Laboratory Detection Limit (mg/Kg)	Laboratory Reporting Limit (mg/Kg)
Indeno(1,2,3-cd)pyrene	193-39-5	21.1	#N/A	0.000273	0.001
1-Methylnaphthalene	90-12-0	72.7	#N/A	0.000317	0.001
2-Methylnaphthalene	91-57-6	3010	#N/A	0.000259	0.001
Naphthalene	91-20-3	24.1	0.658	0.000289	0.001
Perylene	198-55-0	0	#N/A	0.000194	0.001
Phenanthrene	85-01-8	0	#N/A	0.000333	0.001
Pyrene	129-00-0	22600	54.545	0.000264	0.001

NOTE: #NA = no regulatory concentration for the indicated analyte.

Matrix: Soil
Analytical Method: As noted
Concentration level (if applicable):

Analyte	CAS No.	WI Industrial DC RCL (mg/kg)	WI Soil to GW RCL (mg/Kg)	Laboratory Detection Limit (mg/Kg)	Laboratory Reporting Limit (mg/Kg)
Inorganic Compounds by Method SW846-6020A					
Aluminum	7429-90-5	100000	600	78.789	262.613
Antimony	7440-36-0	467	0.542	0.165	0.667
Arsenic	7440-38-2	3	0.584	0.264	0.879
Barium	7440-39-3	100000	164.8	0.229	0.762
Beryllium	7440-41-7	2300	6.32	0.080	0.667
Cadmium	7440-43-9	985	0.752	0.097	0.667
Calcium	7440-70-2	#N/A	#N/A	185.528	618.424
Chromium, Total	7440-47-3	#N/A	360000	1.338	4.459
Chromium (III)	16065-83-1	100000	#N/A		
Chromium (VI)	18540-29-9	6.36	#N/A		
Cobalt	7440-48-4	347	3.6073	0.089	0.667
Copper	7440-50-8	46700	91.6	0.393	1.309
Cyanide (SW-846 9012A)	57-12-5	195	4.04	0.12000	0.40
Iron	7439-89-6	100000	#N/A	39.297	166.675
Lead	7439-92-1	800	27	0.181	0.667

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI Industrial DC RCL (mg/kg)	WI Soil to GW RCL (mg/Kg)	Laboratory Detection Limit (mg/Kg)	Laboratory Reporting Limit (mg/Kg)
Magnesium	7439-95-4	#N/A	#N/A	20.696	166.675
Manganese	7439-96-5	25900	39.124	0.814	2.713
Mercury (SW-846 7471B)	7439-97-6	3.13	0.208	0.0110	0.0370
Nickel	7440-02-0	22500	13.061	0.263	0.877
Potassium	7440-09-7	#N/A	#N/A	310.310	1034.385
Selenium	7882-49-2	5840	0.52	0.182	0.667
Silver	7440-22-4	5840	0.849	0.095	0.333
Sodium	7440-23-5	#N/A	#N/A	9.956	166.675
Thallium	7440-28-0	11.7	0.284	0.114	0.667
Vanadium	7440-62-2	5840	60	0.428	1.428
Zinc	7440-66-6	100000	#N/A	3.650	12.167

NOTE: #NA = no regulatory concentration for the indicated analyte.

Matrix: Soil
Analytical Method: 8270C
Concentration level (if applicable):

Analyte	CAS No.	WI Industrial DC RCL (mg/kg)	WI Soil to GW RCL (mg/Kg)	Laboratory Detection Limit (mg/Kg)	Laboratory Reporting Limit (mg/Kg)
Pesticides by Method SW846-8081					
Aldrin	309-00-2	0.187	#N/A	0.0005459	0.00182
α-BHC	319-84-6	0.365	#N/A	0.0004657	0.00155
β-BHC	319-85-7	1.28	#N/A	0.00054	0.0018
δ-BHC	319-86-8	#N/A	#N/A	0.000508	0.00169
γ-BHC (Lindane)	58-89-9	2.54	0.0023	0.001054	0.00351
α-Chlordane	5103-71-9	#N/A	#N/A	0.0005548	0.00185
γ-Chlordane	5566-34-7	#N/A	#N/A	0.0006387	0.00213
4,4'-DDD	72-54-8	9.57	#N/A	0.00102	0.0034
4,4'-DDE	72-55-9	9.38	#N/A	0.001085	0.00362
4,4'-DDT	50-29-3	8.53	#N/A	0.0016	0.00533
Dieldrin	60-57-1	0.144	#N/A	0.001047	0.00349
Endosulfan I	959-98-8	#N/A	#N/A	0.0005252	0.00175
Endosulfan II	33213-65-9	#N/A	#N/A	0.001328	0.00443
Endosulfan sulfate	1031-07-8	#N/A	#N/A	0.001284	0.00428
Endrin	72-20-8	246	0.1616	0.001177	0.00392
Endrin aldehyde	7421-93-4	#N/A	#N/A	0.001173	0.00391

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI Industrial DC RCL (mg/kg)	WI Soil to GW RCL (mg/Kg)	Laboratory Detection Limit (mg/Kg)	Laboratory Reporting Limit (mg/Kg)
Endrin ketone	53494-70-5	#N/A	#N/A	0.001745	0.00582
Heptachlor	76-44-8	0.654	0.0662	0.0005843	0.00195
Heptachlor epoxide	1024-57-3	0.338	0.0082	0.0004931	0.00164
Methoxychlor	72-43-5	4100	4.32	0.007521	0.0251
Toxaphene	8001-35-2	2.09	0.928	0.0141078	0.0470212974

NOTE: #NA = no regulatory concentration for the indicated analyte.

Matrix: Soil
Analytical Method: As noted
Concentration level (if applicable):

Analyte	CAS No.	Project Action Limit	Laboratory Detection Limit	Laboratory Reporting Limit
Waste Characterization – Hazardous Characteristics				
Total Solids (A2540 B-97)	NA	NA (%)		
Density – Bulk (D5057-90)	NA	NA (lb/ft^3)		
Density – Bulk, Dry (D5057-90)	NA	NA (lb/ft^3)		
Density – Bulk, Wet (D5057-90)	NA	NA (lb/ft^3)		
Moisture (E160.3M)	NA	NA (%)		
Flashpoint/Ignitability (SW1010A)	NA	<140 °F		
Cyanide, Reactive (SW 7.3.3.2)	57-12-5	NA (mg/Kg)	0.4 mg/kg	1 mg/kg
Sulfide, Reactive (SW 7.3.4.2)	18496-25-8	NA (mg/Kg)	10 mg/kg	10 mg/kg
pH, corrosivity (SW9045D)	NA	2 < pH < 12.5	0.01 Std. Units	0.1 Std. Units
Chloride (SW9056A)	NA	NA (mg/Kg)		
Phenolics, Total (SW9066)	NA	NA (mg/Kg)		
Free Liquids (SW9095B)	NA	Pass		
Analyte	**CAS No.**	**Project Action Limit (mg/L)**	**Laboratory Detection Limit**	**Laboratory Reporting Limit**
Waste Characterization – Toxicity Characteristics by TCLP Method 1311				
TCLP Arsenic	7440-38-2	5.0	0.0417 mg/L	0.125 mg/L
TCLP Barium	7440-39-3	100	0.025 mg/L	0.075 mg/L
TCLP Benzene	71-43-2	0.5	0.5 ug/L	1 ug/L
TCLP Cadmium	7440-43-9	1.0	0.00665 mg/L	0.025 mg/L
TCLP Carbon tetrachloride	56-23-5	0.5	0.5 ug/L	1 ug/L

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	Project Action Limit (mg/L)	Laboratory Detection Limit	Laboratory Reporting Limit
TCLP Chlordane	57-74-9	0.03		
TCLP Chlorobenzene	108-90-7	100	0.5 ug/L	1 ug/L
TCLP Chloroform	67-66-3	6.0	2.5 ug/L	5 ug/L
TCLP Chromium	7440-47-3	5.0	0.0127 mg/L	0.05 mg/L
TCLP o-Cresol	95-48-7	200	8.681 ug/L	28.9 ug/L
TCLP m-Cresol	108-39-4	200		
TCLP p-Cresol	106-44-5	200		
TCLP 2,4-D	94-75-7	10.0		
TCLP 1,4-Dichlorobenzene	106-46-7	7.5	18.774 ug/L	62.5 ug/L
TCLP 1,2-Dichloroethane	107-06-2	0.5	0.167654 ug/L	1 ug/L
TCLP 1,1-Dichloroethylene	75-35-4	0.7	0.410249 ug/L	1 ug/L
TCLP 2,4-Dinitrotoluene	121-14-2	0.13	7.916 ug/L	26.4 ug/L
TCLP Endrin	72-20-8	0.02		
TCLP Heptachlor	76-44-8	0.008		
TCLP Hexachlorobenzene	118-74-1	0.13	16.933 ug/L	56.4 ug/L
TCLP Hexachloro-1,3-butadiene	87-68-3	0.5	24.611 ug/L	82 ug/L
TCLP Hexachloroethane	67-72-1	3.0	26.593 ug/L	88.6 ug/L
TCLP Lead	7439-92-1	5.0	0.0217 mg/L	0.065 mg/L
TCLP Lindane	58-89-9	0.4		
TCLP Mercury	7439-97-6	0.2	0.126 ug/L	0.42016 ug/L
TCLP Methoxychlor	72-43-5	10.0		
TCLP Methyl Ethyl Ketone	78-93-3	200	2.979164 ug/L	20 ug/L
TCLP Nitrobenzene	98-95-3	2.0	14.501 ug/L	48.3 ug/L
TCLP Pentachlorophenol	87-86-5	100	14.343 ug/L	47.8 ug/L

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	Project Action Limit (mg/L)	Laboratory Detection Limit	Laboratory Reporting Limit
TCLP Pyridine	100-86-1	5.0	17.893 ug/L	59.6 ug/L
TCLP Selenium	7782-49-2	1.0	0.0828 mg/L	0.25 mg/L
TCLP Silver	7440-22-4	5.0	0.0166 mg/L	0.05 mg/L
TCLP Tetrachloroethylene	127-18-4	0.7	0.5 ug/L	1 ug/L
TCLP Toxaphene	8001-35-2	0.5		
TCLP Trichloroethylene	79-01-6	0.5	0.330675 ug/L	1 ug/L
TCLP 2,4,5-Trichlorophenol	95-95-4	400	8.422 ug/L	28 ug/L
TCLP 2,4,6-Trichlorophenol	88-06-2	2.0	21.129 ug/L	70.4 ug/L
TCLP 2,4,5-TP (Silvex)	93-72-1	1.0		
TCLP Vinyl Chloride	75-01-4	0.2	0.175599 ug/L	1 ug/L

Notes: TCLP Project Action Limits as set by 40 CFR Part 261 Hazardous Waste Identification

NOTE: #NA = no regulatory concentration for the indicated analyte.

Matrix: Groundwater
Analytical Method: As noted
Concentration level (if applicable):

Analyte	CAS No.	WI NR140 GW ES (ug/L)	Laboratory Detection Limit (ug/L)	Laboratory Reporting Limit (ug/L)
Volatile Organic Compounds by Method SW846-8260B				
Acetone	67-64-1	9000		
Acetonitrile	75-05-8	#N/A		
Acrolein (Propenal)	107-02-8	#N/A		
Acrylonitrile	107-13-1	#N/A		
Allyl alcohol	107-18-6	#N/A		
Allyl chloride	107-05-1	#N/A		
Benzene	71-43-2	5	0.5	1
Benzyl chloride	100-44-7	#N/A		
Bis(2-chloroethyl)sulfide	505-60-2	#N/A		
Bromoacetone	598-31-2	#N/A		
Bromochloromethane	74-97-5	#N/A	0.340288	1
Bromodichloromethane	75-27-4	0.6	0.5	1
4-Bromofluorobenzene (surr)	460-00-4	#N/A		
Bromoform	75-25-2	4.4	0.5	1
Bromomethane	74-83-9	10	2.434473	5
n-Butanol	71-36-3	#N/A		

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI NR140 GW ES (ug/L)	Laboratory Detection Limit (ug/L)	Laboratory Reporting Limit (ug/L)
2-Butanone (MEK)	78-93-3	4000		
t-Butyl alcohol	75-65-0	12		
Carbon disulfide	75-15-0	1000		
Carbon tetrachloride	56-23-5	5	0.5	1
Chloral hydrate	302-17-0	#N/A		
Chlorobenzene	108-90-7	100	0.5	1
Chlorobenzene-d_5 (IS)	3114-55-4	#N/A		
Chlorodibromomethane	124-48-1	60	0.5	1
Chloroethane	75-00-3	400	0.374502	1
2-Chloroethanol	107-07-3	#N/A		
2-Chloroethyl vinyl ether	110-75-8	#N/A		
Chloroform	67-66-3	6	2.5	5
Chloromethane	74-87-3	30	0.5	1
Chloroprene	126-99-8	#N/A		
3-Chloropropionitrile	542-76-7	#N/A		
Crotonaldehyde	4170-30-3	#N/A		
1,2-Dibromo-3-chloropropane	96-12-8	0.2	2.164361	5
1,2-Dibromoethane	106-93-4	0.05	0.17777	1
Dibromomethane	74-95-3	#N/A	0.426508	1

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI NR140 GW ES (ug/L)	Laboratory Detection Limit (ug/L)	Laboratory Reporting Limit (ug/L)
1,2-Dichlorobenzene	95-50-1	600	0.5	1
1,3-Dichlorobenzene	541-73-1	600	0.5	1
1,4-Dichlorobenzene	106-46-7	75	0.5	1
1,4-Dichlorobenzene-d_4 (IS)	3855-82-1	#N/A		
cis-1,4-Dichloro-2-butene	1476-11-5	#N/A		
trans-1,4-Dichloro-2-butene	110-57-6	#N/A		
Dichlorodifluoromethane	75-71-8	1000	0.224151	1
1,1-Dichloroethane	75-34-3	850	0.241524	1
1,2-Dichloroethane	107-06-2	5	0.16808	1
1,2-Dichloroethane-d_4 (surr)	17060-06-0	#N/A		
1,1-Dichloroethene	75-35-4	7	0.410249	1
trans-1,2-Dichloroethene	156-60-5	100	0.256577	1
1,2-Dichloropropane	78-87-5	5	0.233076	1
1,3-Dichloro-2-propanol	96-23-1	#N/A		
cis-1,3-Dichloropropene	10061-01-5	#N/A	0.5	1
trans-1,3-Dichloropropene	10061-02-6	#N/A	0.229606	1
1,2,3,4-Diepoxybutane	1464-53-5	#N/A		
Diethyl ether	60-29-7	1000		
1,4-Difluorobenzene (IS)	540-36-3	#N/A		

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI NR140 GW ES (ug/L)	Laboratory Detection Limit (ug/L)	Laboratory Reporting Limit (ug/L)
1,4-Dioxane	123-91-1	3		
Epichlorohydrin	106-89-8	#N/A		
Ethanol	64-17-5	#N/A		
Ethyl acetate	141-78-6	#N/A		
Ethylbenzene	100-41-4	700	0.5	1
Ethylene oxide	75-21-8	#N/A		
Ethyl methacrylate	97-63-2	#N/A		
Fluorobenzene (IS)	462-06-6	#N/A		
Hexachlorobutadiene	87-68-3	#N/A	2.105642	5
Hexachloroethane	67-72-1	#N/A		
2-Hexanone	591-78-6	#N/A		
2-Hydroxypropionitrile	78-97-7	#N/A		
Iodomethane	74-88-4	#N/A		
Isobutyl alcohol	78-83-1	#N/A		
Isopropylbenzene	98-82-8	#N/A	0.143317	1
Malononitrile	109-77-3	#N/A		
Methacrylonitrile	126-98-7	#N/A		
Methanol	67-56-1	5000		
Methylene chloride	75-09-2	5	0.23258	1

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI NR140 GW ES (ug/L)	Laboratory Detection Limit (ug/L)	Laboratory Reporting Limit (ug/L)
Methyl methacrylate	80-62-6	#N/A		
4-Methyl-2-pentanone (MIBK)	108-10-1	500		
Naphthalene	91-20-3	100	2.5	5
Nitrobenzene	98-95-3	#N/A		
2-Nitropropane	79-46-9	#N/A		
N-Nitroso-di-n-butylamine	924-16-3	#N/A		
Paraldehyde	123-63-7	#N/A		
Pentachloroethane	76-01-7	#N/A		
2-Pentanone	107-87-9	#N/A		
2-Picoline	109-06-8	#N/A		
1-Propanol	71-23-8	#N/A		
2-Propanol	67-63-0	#N/A		
Propargyl alcohol	107-19-7	#N/A		
f3-Propiolactone	57-57-8	#N/A		
Propionitrile (ethyl cyanide)	107-12-0	#N/A		
n-Propylamine	107-10-8	#N/A		
Pyridine	110-86-1	10		
Styrene	100-42-5	100	0.5	1
1,1,1,2-Tetrachloroethane	630-20-6	70	0.180582	1

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI NR140 GW ES (ug/L)	Laboratory Detection Limit (ug/L)	Laboratory Reporting Limit (ug/L)
1,1,2,2-Tetrachloroethane	79-34-5	0.2	0.249331	1
Tetrachloroethene	127-18-4	5	0.5	1
Toluene	108-88-3	800	0.5	1
Toluene-d8 (surr)	2037-26-5	#N/A		
o-Toluidine	95-53-4	#N/A		
1,2,4-Trichlorobenzene	120-82-1	70	2.209495	5
1,1,1-Trichloroethane	71-55-6	200	0.5	1
1,1,2-Trichloroethane	79-00-5	5	0.197393	1
Trichloroethene	79-01-6	5	0.330675	1
Trichlorofluoromethane	75-69-4	3490	0.184954	1
1,2,3-Trichloropropane	96-18-4	60	0.5	1
Vinyl acetate	108-05-4	#N/A		
Vinyl chloride	75-01-4	0.2	0.175599	1
o-Xylene	95-47-6	#N/A	0.5	1
m-Xylene	108-38-3	#N/A		
p-Xylene	106-42-3	#N/A		
1,3,5-Trimethylbenzene	108-68-8	#N/A	0.5	1
1,2,4-Trimethylbenzene	95-63-6	#N/A	0.5	1

NOTE: #NA = no regulatory concentration for the indicated analyte.

Matrix: Groundwater
Analytical Method: As noted
Concentration level (if applicable):

Analyte	CAS No.	WI NR140 GW ES (ug/L)	Laboratory Detection Limit (ug/L)	Laboratory Reporting Limit (ug/L)
Semi-volatile Organic Compounds by Method SW846-8270C				
Acenaphthene	83-32-9	#N/A	1.3394	4.4645
Acenaphthylene	208-96-8	#N/A	1.0617	3.5391
Acetophenone	98-86-2	#N/A		
2-Acetylaminofluorene	53-96-3	#N/A		
1-Acetyl-2-thiourea	591-08-2	#N/A		
2-Aminoanthraquinone	117-79-3	#N/A		
Aminoazobenzene	60-09-3	#N/A		
4-Aminobiphenyl	92-67-1	#N/A		
3-Amino-9-ethylcarbazole	132-32-1	#N/A		
Anilazine	101-05-3	#N/A		
Aniline	62-53-3	#N/A		
o-Anisidine	90-04-0	#N/A		
Anthracene	120-12-7	3000	1.8059	6.0197
Aramite	140-57-8	#N/A		
Azinphos-methyl	86-50-0	#N/A		

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI NR140 GW ES (ug/L)	Laboratory Detection Limit (ug/L)	Laboratory Reporting Limit (ug/L)
Barban	101-27-9	#N/A		
Benzidine	92-87-5	#N/A		
Benzoic Acid	65-85-0	#N/A		
Benz(a)anthracene	56-55-3	#N/A	0.5349	1.7831
Benzo(b)fluoranthene	205-99-2	0.2	0.654	2.1801
Benzo(k)fluoranthene	207-08-9	#N/A	1.0027	3.3425
Benzo(g,h,i)perylene	191-24-2	#N/A	0.8107	2.7024
Benzo(a)pyrene	50-32-8	0.2	1.8826	6.2755
Benzo(e)pyrene	192-97-2	#N/A		
p-Benzoquinone	106-51-4	#N/A		
Benzyl alcohol	100-51-6	#N/A		
Bis(2-chloroethoxy)methane	111-91-1	#N/A	0.9963	3.3209
Bis(2-chloroethyl) ether	111-44-4	#N/A	1.5816	5.2721
Bis(2-chloroisopropyl) ether	108-60-1	#N/A		
Bis(2-ethylhexyl) phthalate	117-81-7	6	0.6932	2.3108
4-Bromophenyl phenyl ether	101-55-3	#N/A	1.9722	6.5739
Bromoxynil	1689-84-5	#N/A		
Butyl benzyl phthalate	85-68-7	#N/A	0.7735	2.5782
Captafol	2425-06-1	#N/A		

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI NR140 GW ES (ug/L)	Laboratory Detection Limit (ug/L)	Laboratory Reporting Limit (ug/L)
Captan	133-06-2	#N/A		
Carbaryl	63-25-2	40		
Carbofuran	1563-66-2	40		
Carbophenothion	786-19-6	#N/A		
Chlordane (NOS)	57-74-9	#N/A		
Chlorfenvinphos	470-90-6	#N/A		
4-Chloroaniline	106-47-8	#N/A	1.097	3.6565
Chlorobenzilate	510-15-6	#N/A		
5-Chloro-2-methylaniline	95-79-4	#N/A		
4-Chloro-3-methylphenol	59-50-7	#N/A	1.6878	5.6259
3-(Chloromethyl)pyridine hydrochloride	6959-48-4	#N/A		
1-Chloronaphthalene	90-13-1	#N/A		
2-Chloronaphthalene	91-58-7	#N/A	1.6457	5.4856
2-Chlorophenol	95-57-8	#N/A	1.1566	3.8555
4-Chloro-1,2-phenylenediamine	95-83-0	#N/A		
4-Chloro-1,3-phenylenediamine	5131-60-2	#N/A		
4-Chlorophenyl phenyl ether	7005-72-3	#N/A	0.8194	2.7315
Chrysene	218-01-9	0.2	1.7395	5.7984
Coumaphos	56-72-4	#N/A		

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI NR140 GW ES (ug/L)	Laboratory Detection Limit (ug/L)	Laboratory Reporting Limit (ug/L)
p-Cresidine	120-71-8	#N/A		
Crotoxyphos	7700-17-6	#N/A		
2-Cyclohexyl-4,6-dinitro-phenol	131-89-5	#N/A		
Demeton-O	298-03-3	#N/A		
Demeton-S	126-75-0	#N/A		
Diallate (cis or trans)	2303-16-4	#N/A		
2,4-Diaminotoluene	95-80-7	#N/A		
Dibenz(a,j)acridine	224-42-0	#N/A		
Dibenz(a,h)anthracene	53-70-3	#N/A	1.3213	4.4045
Dibenzofuran	132-64-9	#N/A	0.7685	2.5618
Dibenzo(a,e)pyrene	192-65-4	#N/A		
1,2-Dibromo-3-chloropropane	96-12-8	0.2		
Di-n-butyl phthalate	84-74-2	1000	2.5639	8.5462
Dichlone	117-80-6	#N/A		
1,2-Dichlorobenzene	95-50-1	600	1.9296	6.432
1,3-Dichlorobenzene	541-73-1	600	1.883	6.2766
1,4-Dichlorobenzene	106-46-7	75	1.8774	6.2582
3,3'-Dichlorobenzidine	91-94-1	#N/A	0.9054	3.0179
2,4-Dichlorophenol	120-83-2	#N/A	1.3667	4.5555

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI NR140 GW ES (ug/L)	Laboratory Detection Limit (ug/L)	Laboratory Reporting Limit (ug/L)
2,6-Dichlorophenol	87-65-0	#N/A		
Dichlorovos	62-73-7	#N/A		
Dicrotophos	141-66-2	#N/A		
Diethyl phthalate	84-66-2	#N/A	1.0824	3.6079
Diethylstilbestrol	56-53-1	#N/A		
Diethyl sulfate	64-67-5	#N/A		
Dimethoate	60-51-5	2		
3,3'-Dimethoxybenzidine	119-90-4	#N/A		
Dimethylaminoazobenzene	60-11-7	#N/A		
7,12-Dimethylbenz(a)-anthracene	57-97-6	#N/A		
3,3'-Dimethylbenzidine	119-93-7	#N/A		
α,α-Dimethylphenethylamine	122-09-8	#N/A		
2,4-Dimethylphenol	105-67-9	#N/A	1.2651	4.2168
Dimethyl phthalate	131-11-3	#N/A	1.9304	6.4347
1,2-Dinitrobenzene	528-29-0	#N/A		
1,3-Dinitrobenzene	99-65-0	#N/A		
1,4-Dinitrobenzene	100-25-4	#N/A		
4,6-Dinitro-2-methylphenol	534-52-1	#N/A		
2,4-Dinitrophenol	51-28-5	#N/A	0.7112	2.3706

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI NR140 GW ES (ug/L)	Laboratory Detection Limit (ug/L)	Laboratory Reporting Limit (ug/L)
2,4-Dinitrotoluene	121-14-2	0.05	0.7916	2.6385
2,6-Dinitrotoluene	606-20-2	0.05	0.6028	2.0093
Dinocap	39300-45-3	#N/A		
Dinoseb	88-85-7	7		
Diphenylamine	122-39-4	#N/A		
5,5-Diphenylhydantoin	57-41-0	#N/A		
1,2-Diphenylhydrazine	122-66-7	#N/A		
Di-n-octyl phthalate	117-84-0	#N/A	1.8923	6.3075
Disulfoton	298-04-4	#N/A		
EPN	2104-64-5	#N/A		
Ethion	563-12-2	#N/A		
Ethyl carbamate	51-79-6	#N/A		
Ethyl methanesulfonate	62-50-0	#N/A		
Famphur	52-85-7	#N/A		
Fensulfothion	115-90-2	#N/A		
Fenthion	55-38-9	#N/A		
Fluchloralin	33245-39-5	#N/A		
Fluoranthene	206-44-0	400	0.5634	1.878
Fluorene	86-73-7	400	0.7499	2.4998

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI NR140 GW ES (ug/L)	Laboratory Detection Limit (ug/L)	Laboratory Reporting Limit (ug/L)
2-Fluorobiphenyl (surr)	321-60-8	#N/A		
2-Fluorophenol (surr)	367-12-4	#N/A		
Hexachlorobenzene	118-74-1	1	1.6933	5.6442
Hexachlorobutadiene	87-68-3	#N/A		
Hexachlorocyclopentadiene	77-47-4	#N/A	0.6784	2.2613
Hexachloroethane	67-72-1	#N/A	2.6593	8.8642
Hexachlorophene	70-30-4	#N/A		
Hexachloropropene	1888-71-7	#N/A		
Hexamethylphosphoramide	680-31-9	#N/A		
Hydroquinone	123-31-9	#N/A		
Indeno(1,2,3-cd)pyrene	193-39-5	#N/A	1.4979	4.993
Isodrin	465-73-6	#N/A		
Isophorone	78-59-1	#N/A	0.7346	2.4485
Isosafrole	120-58-1	#N/A		
Kepone	143-50-0	#N/A		
Leptophos	21609-90-5	#N/A		
Malathion	121-75-5	#N/A		
Maleic anhydride	108-31-6	#N/A		
Mestranol	72-33-3	#N/A		

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI NR140 GW ES (ug/L)	Laboratory Detection Limit (ug/L)	Laboratory Reporting Limit (ug/L)
Methapyrilene	91-80-5	#N/A		
3-Methylcholanthrene	56-49-5	#N/A		
4,4'-Methylenebis(2-chloroaniline)	101-14-4	#N/A		
4,4'-Methylenebis(N,N-dimethyl-aniline)	101-61-1	#N/A		
Methyl methanesulfonate	66-27-3	#N/A		
2-Methylnaphthalene	91-57-6	#N/A	1.5142	5.0472
Methyl parathion	298-00-0	#N/A		
2-Methylphenol	95-48-7	#N/A	0.8681	2.8938
3-Methylphenol	108-39-4	#N/A		
4-Methylphenol	106-44-5	#N/A		
Mevinphos	7786-34-7	#N/A		
Mexacarbate	315-18-4	#N/A		
Mirex	2385-85-5	#N/A		
Monocrotophos	6923-22-4	#N/A		
Naled	300-76-5	#N/A		
Naphthalene	91-20-3	100	1.8986	6.3288
1,4-Naphthoquinone	130-15-4	#N/A		
1-Naphthylamine	134-32-7	#N/A		
2-Naphthylamine	91-59-8	#N/A		

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI NR140 GW ES (ug/L)	Laboratory Detection Limit (ug/L)	Laboratory Reporting Limit (ug/L)
Nicotine	54-11-5	#N/A		
5-Nitroacenaphthene	602-87-9	#N/A		
2-Nitroaniline	88-74-4	#N/A	0.7737	2.5789
3-Nitroaniline	99-09-2	#N/A	0.9696	3.2321
4-Nitroaniline	100-01-6	#N/A	1.8309	6.1031
5-Nitro-o-anisidine	99-59-2	#N/A		
Nitrobenzene	98-95-3	#N/A	1.4501	4.8337
4-Nitrobiphenyl	92-93-3	#N/A		
Nitrofen	1836-75-5	#N/A		
2-Nitrophenol	88-75-5	#N/A	1.1643	3.8809
4-Nitrophenol	100-02-7	#N/A	1.0477	3.4923
5-Nitro-o-toluidine	99-55-8	#N/A		
Nitroquinoline-1-oxide	56-57-5	#N/A		
N-Nitrosodi-n-butylamine	924-16-3	#N/A		
N-Nitrosodiethylamine	55-18-5	#N/A		
N-Nitrosodimethylamine	62-75-9	#N/A		
N-Nitrosomethylethylamine	10595-95-6	#N/A		
N-Nitrosodiphenylamine	86-30-6	7	3.5279	11.7595
N-Nitrosodi-n-propylamine	621-64-7	#N/A	0.9712	3.2375

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI NR140 GW ES (ug/L)	Laboratory Detection Limit (ug/L)	Laboratory Reporting Limit (ug/L)
N-Nitrosomorpholine	59-89-2	#N/A		
N-Nitrosopiperidine	100-75-4	#N/A		
N-Nitrosopyrrolidine	930-55-2	#N/A		
Octamethyl pyrophosphoramide	152-16-9	#N/A		
4,4'-Oxydianiline	101-80-4	#N/A		
Parathion	56-38-2	#N/A		
Pentachlorobenzene	608-93-5	#N/A		
Pentachloronitrobenzene	82-68-8	#N/A		
Pentachlorophenol	87-86-5	1	1.4343	4.781
Perylene	198-55-0	#N/A		
Phenacetin	62-44-2	#N/A		
Phenanthrene	85-01-8	#N/A	1.8211	6.0705
Phenobarbital	50-06-6	#N/A		
Phenol	108-95-2	2000	0.5995	1.9984
1,4-Phenylenediamine	106-50-3	#N/A		
Phorate	298-02-2	#N/A		
Phosalone	2310-17-0	#N/A		
Phosmet	732-11-6	#N/A		
Phosphamidon	13171-21-6	#N/A		

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI NR140 GW ES (ug/L)	Laboratory Detection Limit (ug/L)	Laboratory Reporting Limit (ug/L)
Phthalic anhydride	85-44-9	#N/A		
2-Picoline (2-Methylpyridine)	109-06-8	#N/A		
Piperonyl sulfoxide	120-62-7	#N/A		
Pronamide	23950-58-5	#N/A		
Propylthiouracil	51-52-5	#N/A		
Pyrene	129-00-0	250	1.3469	4.4897
Resorcinol	108-46-3	#N/A		
Safrole	94-59-7	#N/A		
Strychnine	57-24-9	#N/A		
Sulfallate	95-06-7	#N/A		
Terbufos	13071-79-9	#N/A		
1,2,4,5-Tetrachlorobenzene	95-94-3	#N/A		
2,3,4,6-Tetrachlorophenol	58-90-2	#N/A		
Tetrachlorvinphos	961-11-5	#N/A		
Tetraethyl dithiopyrophosphate	3689-24-5	#N/A		
Tetraethyl pyrophosphate	107-49-3	#N/A		
Thionazine	297-97-2	#N/A		
Thiophenol (Benzenethiol)	108-98-5	#N/A		
Toluene diisocyanate	584-84-9	#N/A		

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI NR140 GW ES (ug/L)	Laboratory Detection Limit (ug/L)	Laboratory Reporting Limit (ug/L)
o-Toluidine	95-53-4	#N/A		
1,2,4-Trichlorobenzene	120-82-1	70	2.0347	6.7823
2,4,5-Trichlorophenol	95-95-4	#N/A	0.8422	2.8073
2,4,6-Trichlorophenol	88-06-2	#N/A	2.1129	7.0429
Trifluralin	1582-09-8	7.5		
2,4,5-Trimethylaniline	137-17-7	#N/A		
Trimethyl phosphate	512-56-1	#N/A		
1,3,5-Trinitrobenzene	99-35-4	#N/A		
Tris(2,3-dibromopropyl) phosphate	126-72-7	#N/A		

NOTE: #NA = no regulatory concentration for the indicated analyte.

Matrix: Groundwater
Analytical Method: 8082
Concentration level (if applicable):

Analyte	CAS No.	WI NR140 GW ES (ug/L)	Laboratory Detection Limit (ug/L)	Laboratory Reporting Limit (ug/L)
Polychlorinated Biphenyls by Method SW846-8082				
Aroclor 1016	12674-11-2	#N/A	0.25	0.5
Aroclor 1221	11104-28-2	#N/A	0.25	0.5
Aroclor 1232	11141-16-5	#N/A	0.25	0.5
Aroclor 1242	53469-21-9	#N/A	0.25	0.5
Aroclor 1248	12672-29-6	#N/A	0.25	0.5
Aroclor 1254	11097-69-1	#N/A	0.25	0.5
Aroclor 1260	11096-82-5	#N/A	0.25	0.5
Aroclor 1262	37324-23-5	#N/A	0.25	0.5
Aroclor 1268	11100-14-4	#N/A	0.25	0.5

NOTE: #NA = no regulatory concentration for the indicated analyte.

Matrix: Groundwater
Analytical Method: As noted
Concentration level (if applicable):

Analyte	CAS No.	WI NR140 GW ES (ug/L)	Laboratory Detection Limit (ug/L)	Laboratory Reporting Limit (ug/L)
Inorganic Compounds by Method SW846-6020A				
Aluminum	7429-90-5	200	58.700	250.00
Antimony	7440-36-0	6	0.150	1.00
Arsenic	7440-38-2	10	0.279	1.00
Barium	7440-39-3	2000	0.341	1.14
Beryllium	7440-41-7	4	0.178	1.00
Cadmium	7440-43-9	5	0.081	1.00
Calcium	7440-70-2	#N/A	69.774	250.00
Chromium	7440-47-3	100	1.0199	3.40
Cobalt	7440-48-4	40	0.085	1.00
Copper	7440-50-8	1300	1.093	3.65
Cyanide, Free	57-12-5	200	0.00679	0.023
Iron	7439-89-6	#N/A	110.551	368.50
Lead	7439-92-1	15	0.195	1.00
Magnesium	7439-95-4	#N/A	29.700	250.00
Manganese	7439-96-5	300	2.700	9.00
Mercury (SW-846 7471B)	7439-97-6	2	0.179	0.597

NOTE: #NA = no regulatory concentration for the indicated analyte.

Analyte	CAS No.	WI NR140 GW ES (ug/L)	Laboratory Detection Limit (ug/L)	Laboratory Reporting Limit (ug/L)
Nickel	7440-02-0	100	0.402	1.34
Potassium	7440-09-7	#N/A	236.721	789.10
Selenium	7882-49-2	50	0.317	1.06
Silver	7440-22-4	50	0.101	0.50
Sodium	7440-23-5	#N/A	42.000	250.00
Thallium	7440-28-0	2	0.140	1.00
Vanadium	7440-62-2	30	0.316	1.05
Zinc	7440-66-6	#N/A	4.600	15.33

NOTE: #NA = no regulatory concentration for the indicated analyte.

Matrix: Groundwater
Analytical Method: As noted
Concentration level (if applicable):

Analyte	CAS No.	WI NR140 GW ES (ug/L)	Laboratory Detection Limit (ug/L)	Laboratory Reporting Limit (ug/L)
Geochemical Parameters				
Alkalinity, Total ((2320B)	7429-90-5	#NA	5000	10000
Nitrate-Nitrite, Total (353.2)	7440-36-0	#NA	95	250
Sulfate, Total (EPA 300.0)	14808-79-8	#NA	2000	4000

NOTE: #NA = no regulatory concentration for the indicated analyte.

Appendix B

Push Probe and Monitoring Well Boring Logs (2008-2009)

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CG-SB01
Coordinates	**Ground Elevation**	**Page**
N 377607.7878 E 2559441.233	585.96	1 of 2
Total Depth (feet) 36 / **Hole Size (inches)** 3	Driller (s) Eduardo DeAlba	
Drilling Rig Geoprobe 6610DT	Drilling Company GeoServe, Inc.	
Date 12-12-08 / To 12-12-08 / Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
585	1	CONCRETE FILL: coarse to fine gravel base FILL: moderate yellowish Brown (10YR 5/4) sandy silt with coarse gravel, dry		DT	1	PUSH	NA	3.4/4		0.0	Sampled 1-1.5' (SS) (0800). Sample collected from below 0-0.5' due to concrete at ground surface
584	2										
583	3										
582	4	moderate yellowish Brown to olive Black (5Y 2/1), with to little coarse gravel		DT	2	PUSH	NA	3.3/4		0.0	Sampled 5-7' (0507) (0810)
581	5										
580	6										
579	7	dry to wet									▽ Depth to water while drilling ▼ Depth to water after drilling
578	8										
577	9			DT	3	PUSH	NA	1.6/4		0.0	
576	10										
575	11	PEAT (PT), wet									
574	12										
573	13			DT	4	PUSH	NA	0.4/4		0.0	
572	14										
571	15	olive Gray (5Y 4/1) coarse to fine silty SAND (SM), trace fine gravel, wet									
570	16										
569	17			DT	5	PUSH	NA	3.2/4		0.0	
568	18	olive Gray (5Y 4/1) silty CLAY (CL), trace fine gravel, wet									
567	19										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number CG-SB01
Page 2 of 2
Date 12-12-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
565	21	olive Gray (5Y 4/1) silty CLAY (CL), trace fine gravel, wet		DT	6	PUSH	NA	3.4/4		0.0	
564	22										
563	23										
562	24			DT	7	PUSH	NA	2.7/4		0.0	
561	25										
560	26										
559	27										
558	28			DT	8	PUSH	NA	3.7/4		0.0	
557	29										
556	30										
555	31										
554	32			DT	9	PUSH	NA	3.2/4		0.0	
553	33										
552	34										
551	35										
550	36	End of boring at 36' bgs									
	37										
	38										
	39										
	40										
	41										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CG-SB02	
Coordinates: N 377462.6107 E 2559521.0148	Ground Elevation: 586.26	Page: 1 of 1	
Total Depth (feet): 12	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 12-2-08	To: 12-2-08	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
586	0	CONCRETE									
	1	FILL: dusky Brown (5YR 2/2) sandy silt, dry		DT	1	P U S H	NA	3.0/4		1.4	Sampled 0-0.5' (SS) (1150)
585	2										
584	3										
583	4										
582	5			DT	2	P U S H	NA	2.6/4		0.0	Sampled 5-6.5' (0565) (1200). CG-SBDUP003 also collected.
581	6										
580	7										
579	8	FILL: gravelly sand, wet									▽ Depth to water while drilling
578	9			DT	3	P U S H	NA	2.5/4		0.0	▼ Depth to water after drilling. Drilled to 8 feet using large-diameter dual tube and switched to small diameter dual-tube for remainder of boring.
577	10										
576	11										
575	12	End of boring at 12' bgs									
	13										
	14										
	15										
	16										
	17										
	18										
	19										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CG-SB03	
Coordinates: N 377405.3166 E 2559370.1759	Ground Elevation: 587.08	Page: 1 of 1	
Total Depth (feet): 12	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 12-2-08	To: 12-2-08	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
				SAMPLING							▽ Depth to water while drilling; ▼ Depth to water after drilling
586	1	FILL: dusky Brown (5YR 2/2) topsoil, dry CONCRETE									Sampled 0-0.5' (SS) (1300)
585	2	FILL: olive Black (5Y 2/1) sandy silt, little coarse gravel, moist		DT	1	PUSH	NA	3.0/4		0.0	
584	3										
583	4	FILL: grayish Brown (5YR 3/2) sandy silt, little coarse gravel, moist									
582	5										
581	6	FILL: grayish Brown (5YR 3/2) clayey silt, little coarse gravel, moist		DT	2	PUSH	NA	3.2/4		0.0	
580	7										
579	8										Sampled 8-9' (0809) (1305)
578	9	grayish Brown to medium light Gray (N6), little to some coarse gravel, moist to saturated									▽
577	10	medium light Gray to dark Gray (N3)		DT	3	PUSH	NA	3.0/4		0.0	
576	11										
	12	End of boring at 12' bgs									
	13										
	14										
	15										
	16										
	17										
	18										
	19										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CG-SB04	
Coordinates: N 377294.5316 E 2559500.8469	Ground Elevation: 587.51	Page: 1 of 1	
Total Depth (feet): 16	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 12-12-08	To: 12-12-08	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
587	0	CONCRETE									
	1	FILL: dusky Brown (5YR 2/2) sandy silt with coarse gravel, dry		DT	1	P U S H	NA	3.1/4		0.0	Sampled 0.5-1' (SS) (0920). Sample collected from below 0-0.5' due to concrete at ground surface.
586	2										
585	3										
584	4										
583	5	dusky Brown to dark yellowish Brown (10YR 4/2)		DT	2	P U S H	NA	1.8/4		0.0	Sampled 4-6' (0406) (0940)
582	6	dark yellowish Brown to dark Gray (N3) dry to wet									
581	7										
580	8	heavy sheen, odors (8-9)		DT	3	P U S H	NA	2.6/4		0.0	Drilled to 8 feet using large-diameter dual tube and switched to small diameter dual-tube for remainder of boring.
579	9										
578	10										
577	11										
576	12	olive Gray (5Y 4/1) silty CLAY (CL), trace fine gravel, wet		DT	4	P U S H	NA	3.6/4		0.0	
575	13										
574	14										
573	15										
572	16	End of boring at 16' bgs									
	17										
	18										
	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CG-SB05	
Coordinates: N 377207.4412 E 2559600.9901	Ground Elevation: 587.45	Page: 1 of 1	
Total Depth (feet): 8	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 12-2-08 To: 12-2-08	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
587	0	FILL: dusky Brown (5YR 2/2) topsoil, dry		DT	1	P U S H	NA	3.0/4		0.0	Sampled 0-0.5' (SS) (1040)
586	1	FILL: olive Black (5Y 2/1) sandy silt, dry									
585	2										
584	3										
583	4	FILL: olive Black (5Y 2/1) clayey silt, moist		DT	2	P U S H	NA	3.0/4		16.3	Sampled 5-6' (0506) (1050)
582	5										
581	6	slight odor, sheen, staining									
580	7										
	8	End of boring at 8' bgs									
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CG-SB06	
Coordinates: N 377163.2938 E 2559479.1236	Ground Elevation: 589.12	Page: 1 of 1	
Total Depth (feet): 8	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 12-2-08	To: 12-2-08	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
589	0	Field boring log for this boring location was misplaced. Field notes indicate that the boring was advanced to 8 feet bgs with a total of 4.7 feet of recovery and water was encountered at approximately 5 feet bgs. In this area of the site It is assumed that the lithology in the boring is all fill.		DT	1	PUSH	NA	NA/4			Sampled 0-0.5' (SS) (1350). CG-SBDUP004 also collected.
588	1										
587	2										
586	3										
585	4			DT	2	PUSH	NA	NA/4			Sampled 4-5' (0405) (1400). MS/MSD also collected.
584	5										
583	6										
582	7										
	8	End of boring at 8' bgs									
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CG-SB07	
Coordinates: N 377083.7519 E 2559772.418	Ground Elevation: 587.60	Page: 1 of 1	
Total Depth (feet): 16	Hole Size (inches): 2	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 12-11-08 To: 12-11-08	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
587	0	CONCRETE									Sampled 0-0.5' (SS) (1340)
586	1	FILL: dark yellowish Brown (10YR 6/2) sandy silt, dry		DT	1	PUSH	NA	0.6/4		0.0	
585	2										
584	3										
583	4	dark yellowish Brown to dusky Brown (5YR 2/2), some coarse gravel		DT	2	PUSH	NA	0.9/4		41.6	Sampled 4-5' (0405) (1350)
582	5										
581	6										
580	7										
579	8			DT	3	PUSH	NA	0.8/4		0.0	Drilled to 8 feet using large-diameter dual tube and switched to small diameter dual-tube for remainder of boring.
578	9										
577	10										
576	11										
575	12			DT	4	PUSH	NA	1.6/4		4.1	
574	13										
573	14										
572	15										
	16	End of boring at 16' bgs									
	17										
	18										
	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CG-SB07B
Coordinates	**Ground Elevation**	**Page**
N 377122.6903 E 2559779.7853	588.07	1 of 2
Total Depth (feet) 24	**Hole Size (inches)** 2	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 12-11-08 **To** 12-11-08	**Logged By:** Libby Northrip	**Reviewed by:** **Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
		CONCRETE									▽ Depth to water while drilling; ▼ Depth to water after drilling
587	1	FILL: olive Black (5Y 2/1) sandy silt, little coarse gravel, dry									
586	2			DT	1	PUSH	NA	2.0/4		2.3	
585	3										
584	4										
583	5										
582	6			DT	2	PUSH	NA	1.1/4		6.2	
581	7										
580	8	strong tar odor, staining, sheen, dry to wet									
579	9										
578	10			DT	3	PUSH	NA	1.5/4		77	
577	11										
576	12	strong tar odor, staining, sheen									
575	13										
574	14			DT	4	PUSH	NA	1.2/4		52.5	
573	15										
572	16										
571	17	light olive Gray (5Y 6/1) coarse to fine silty SAND (SM), wet									
570	18			DT	5	PUSH	NA	0/4			
569	19										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number CG-SB07B
Page 2 of 2
Date 12-11-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
567	21	light olive Gray (5Y 6/1) coarse to fine silty SAND (SM), wet		DT	6	P U S H	NA	2.6/4		0.0	
566	22										
565	23										
	24	End of boring at 24' bgs									
	25										
	26										
	27										
	28										
	29										
	30										
	31										
	32										
	33										
	34										
	35										
	36										
	37										
	38										
	39										
	40										
	41										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CG-SB08
Coordinates	**Ground Elevation**	**Page**
N 377005.5067 E 2559382.506	587.87	1 of 1
Total Depth (feet) 8	**Hole Size (inches)** 3	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 12-2-08	**To** 12-2-08	**Logged By:** Libby Northrip
Reviewed by:		**Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
587	1	FILL: dusky Brown (5YR 2/2) topsoil, dry		DT	1	PUSH	NA	3.1/4		0.0	Sampled 0-0.5' (SS) (0930)
586	2	FILL: olive Black (5Y 2/1) sandy silt with coarse gravel, dry wood (2-2.25)									
585	3										
584	4										
583	5	gravel (5-5.5), wet		DT	2	PUSH	NA	3.1/4		0.0	Sampled 4-5' (0405) (0940)
582	6										
581	7										
580	8	End of boring at 8' bgs									
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CG-SB09A
Coordinates	**Ground Elevation**	**Page**
N 376997.4501 E 2559537.96	589.54	1 of 1
Total Depth (feet) 10	**Hole Size (inches)** 2	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe Inc.
Date 10-14-08 **To** 10-14-08	**Logged By:** Sindy Panagiotopoulos	**Reviewed by:** **Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
589	0	FILL: Brown silt, gravel, sand, cinders, brick, slag, crushed concrete, dry		MC	1	PUSH	NA	3.8/4		0.6	Sampled 0-0.5' (SS) (0820)
588	1										
587	2										
586	3	dry to moist									
585	4			MC	2	PUSH	NA	2.4/4		0.8	
584	5	moist to wet, slight tar odor, sheen									
583	6										
582	7										
581	8			MC	3	PUSH	NA	2/2		0.8	
580	9	slight tar odor, sheen									
	10	End of boring at 10' bgs - refusal									
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CG-SB09B
Coordinates	**Ground Elevation**	**Page**
N 376997.4501 E 2559537.96	589.54	1 of 3
Total Depth (feet) / **Hole Size (inches)**	**Driller (s)**	
48 / 2	Eduardo DeAlba	
Drilling Rig	**Drilling Company**	
Geoprobe 6610DT	GeoServe Inc.	
Date / **To** / **Logged By:**	**Reviewed by:**	**Approved by:**
10-14-08 / 10-14-08 / Sindy Panagiotopoulos		

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
589	1	FILL: Brown silt, gravel, sand, cinders, brick, slag, crushed concrete, dry		MC	1	PUSH	NA	1.8/4		0.4	
588	2										
587	3										
586	4										
585	5			MC	2	PUSH	NA	1.8/4		0.6	
584	6										
583	7	slight tar odor moist to wet									
582	8										
581	9			MC	3	PUSH	NA	1.3/4		0.6	
580	10										
579	11	wet to saturated, slight tar odor, sheen									
578	12			MC	4	PUSH	NA	/4			Sampled 12-13' (1213) (0846) Recovery and PID not recorded in the field between 12 and 16 feet bgs; however at least one foot of material was recovered and sampled
577	13										
576	14										
575	15	Brown to Gray, slight tar odor									
574	16										
573	17			MC	5	PUSH	NA	2.2/4			PID not recorded in the field between 16 and 20 feet bgs
572	18										
571	19	Gray to Yellowish Brown SILT (ML), low plasticity, moist									
570											

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 5/11/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site
Project Number: 49804

Boring/Monitoring Well Number: CG-SB09B
Page: 2 of 3
Date: 10-14-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
				SAMPLING							
569	21	Gray to Yellowish Brown SILT (ML), low plasticity, moist									
568	22			MC	6	PUSH	NA	4.0/4		2.6	
567	23	saturated to moist									
566	24										
565	25			MC	7	PUSH	NA	4.0/4		0.6	
564	26										
563	27	trace fine gravel									
562	28										
561	29			MC	8	PUSH	NA	4.0/4		0.3	
560	30										
559	31										
558	32										
557	33			MC	9	PUSH	NA	4.0/4		0.3	
556	34										
555	35										
554	36	Yellowish Brown clayey SILT (ML), medium plasticity, moist									
553	37										
552	38			MC	10	PUSH	NA	4.0/4	0.5	0.3	
551	39	Pale Olive Gray silty CLAY (CL), medium plasticity, very soft, moist									
550	40										
549	41			MC	11	P	NA	4.0/4			

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 5/11/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site
Project Number: 49804

Boring/Monitoring Well Number: CG-SB09B
Page: 3 of 3
Date: 10-14-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
548	42	Pale Olive Gray silty CLAY (CL), medium plasticity, very soft, moist		MC	11	U S H	NA	4.0/4	0.5	0.5	
547	43										
546	44										
545	45			MC	12	P U S H	NA	3.4/4	0.5	0.7	
544	46										
543	47										
542	48	End of boring at 48' bgs									Boring advanced adjacent to CG-SB09A so same coordinates and elevation used for both.
	49										
	50										
	51										
	52										
	53										
	54										
	55										
	56										
	57										
	58										
	59										
	60										
	61										
	62										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 5/11/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CG-SB10	
Coordinates: N 376845.5032 E 2559486.6413	Ground Elevation: 589.13	Page: 1 of 1	
Total Depth (feet): 12	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 11-20-08 To: 11-20-08	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
589	0	FILL: dusky yellowish Brown (10YR 2/2) topsoil, some coke fragments, little brick, dry		DT	1	P U S H	NA	2.7/4		0.0	Sampled 0-0.5' (SS) (1140)
588	1										
587	2										
586	3	FILL: moderate yellowish Brown (10YR 5/4) sandy silt, dry									
585	4			DT	2	P U S H	NA	2.4/4		0.0	
584	5	moderate yellowish Brown to dusky yellowish Brown (10YR 2/2) with fine gravel, dry to moist									
583	6	moderate yellowish Brown (10YR 5/4) silt, soft, dry									
582	7										
581	8	moderate yellowish Brown to dark Gray (N3) with coarse gravel		DT	3	P U S H	NA	2.4/4		0.0	Sampled 8-9' (0809) (1150)
580	9	sewer odor, dry to wet									
579	10										
578	11										
	12	End of boring at 12' bgs									
	13										
	14										
	15										
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CG-SB11	
Coordinates: N 376888.9647 E 2559644.9088	Ground Elevation: 588.36	Page: 1 of 1	
Total Depth (feet): 16	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 11-20-08 To: 11-20-08	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
588	0	FILL: dusky yellowish Brown (10YR 2/2) topsoil, dry		DT	1	P U S H	NA	3.7/4		0.0	Sampled 0-0.5' (SS) (1220)
587	1	FILL: yellowish Gray (5Y 8/1) coarse to fine gravel, dry									
586	2	FILL: olive Black (5Y 2/1) silty sand with coarse gravel, dry									
585	3										
584	4	little brick		DT	2	P U S H	NA	3.1/4		0.0	Sampled 5-6' (0506) (1240)
583	5										
582	6	FILL: olive Black (5Y 2/1) sandy silt, wet									
581	7										
580	8	faint tar odor olive Black to dark Gray (N3), some fine gravel		DT	3	P U S H	NA	2.8/4		3.0	
579	9										
578	10										
577	11	moderate tar odor, wet to saturated									
576	12	some fine to with coarse gravel, sheen		DT	4	P U S H	NA	0.6/4		1.3	
575	13										
574	14	with coarse to little coarse gravel									
573	15										
	16	End of boring at 16' bgs									
	17										
	18										
	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CG-SB12
Coordinates	**Ground Elevation**	**Page**
N 376759.3444 E 2559588.155	591.21	1 of 2
Total Depth (feet) 20	**Hole Size (inches)** 3	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 11-20-08	**To** 11-20-08	**Logged By:** Libby Northrip
Reviewed by:		**Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
591	0	FILL: dusky Brown (5YR 2/2) topsoil, dry									Sampled 0-0.5' (SS) (1330)
590	1	FILL: yellowish Gray (5Y 8/1) coarse to fine gravel, dry		DT	1	P U S H	NA	3.5/4		0.8	
589	2										
588	3										
587	4										
586	5	wood at 5.3 feet		DT	2	P U S H	NA	1.3/4		1.4	Sampled 4-5' (0405) (1345)
585	6										
584	7	FILL: olive Black (5Y 2/1) silty clay, some fine gravel, dry									
583	8	wood at 8.4 feet		DT	3	P U S H	NA	0.5/4		1.3	
582	9										
581	10										
580	11										
579	12	olive Black to olive Gray (5Y 4/1)		DT	4	P U S H	NA	0.2/4		14.0	
578	13										
577	14										
576	15										
575	16			DT	5	P U S H	NA	0.1/4		0.0	
574	17										
573	18										
572	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name	Milwaukee Solvay Coke & Gas Site
Project Number	49804
Boring/Monitoring Well Number	CG-SB12
Page	2 of 2
Date	11-20-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
	20	End of boring at 20' bgs									
	21										
	22										
	23										
	24										
	25										
	26										
	27										
	28										
	29										
	30										
	31										
	32										
	33										
	34										
	35										
	36										
	37										
	38										
	39										
	40										
	41										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CG-SB13
Coordinates	**Ground Elevation**	**Page**
N 376794.7299 E 2559364.6582	589.03	1 of 1
Total Depth (feet) 8	**Hole Size (inches)** 3	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 12-2-08	**To** 12-2-08	**Logged By:** Libby Northrip
Reviewed by:		**Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
588	1	FILL: dusky Brown (5YR 2/2) topsoil, dry		DT	1	PUSH	NA	3.1/4		0.0	Sampled 0-0.5' (SS) (0900). CG-SBDUP002 also collected.
587	2	FILL: olive Black (5Y 2/1) sandy silt, dry									
586	3										
585	4	olive Gray (5Y 4/1) silty clay									
584	5	coarse gravel, saturated		DT	2	PUSH	NA	2.7/4		0.0	Sampled 4-5' (0405) (0910)
583	6										
582	7										
	8	End of boring at 8' bgs									Boring advanced adjacent to CG-SB13B so same coordinates and elevation used for both.
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CG-SB13B
Coordinates	**Ground Elevation**	**Page**
N 376794.7299 E 2559364.6582	589.03	1 of 2
Total Depth (feet) 36	**Hole Size (inches)** 2	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 12-12-08 **To** 12-12-08	**Logged By:** Libby Northrip	**Reviewed by:** **Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
		FILL: dusky Brown (5YR 2/2) topsoil, dry									▽ Depth to water while drilling; ▼ Depth to water after drilling
588	1	FILL: dusky Brown (5YR 2/2) sandy silt, little fine gravel, dry		DT	1	PUSH	NA	2.4/4		0.0	
587	2										
586	3	FILL: moderate yellowish Brown (10YR 5/4) silty clay, dry									
585	4										
584	5	FILL: olive Black (5Y 2/1) silty sand, some fine gravel, wet		DT	2	PUSH	NA	2.4/4		0.0	▽
583	6										
582	7										
581	8	moderate odors (8-9)		DT	3	PUSH	NA	1.8/4		0.0	
580	9										
579	10										
578	11										
577	12			DT	4	PUSH	NA	1.1/4		0.0	
576	13										
575	14										
574	15	PEAT (PT), wet									
573	16			DT	5	PUSH	NA	1.5/4		0.0	
572	17										
571	18										
570	19	olive Gray (5Y 4/1) clayey SILT (ML), trace fine gravel, wet									

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number CG-SB13B
Page 2 of 2
Date 12-12-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
568	21	olive Gray (5Y 4/1) clayey SILT (ML), trace fine gravel, wet									
567	22			DT	6	PUSH	NA	2.8/4		0.0	
566	23										
565	24										
564	25			DT	7	PUSH	NA	3.9/4	1.5	0.0	
563	26	olive Gray (5Y 4/1) silty CLAY (CL), trace fine gravel, stiff, wet									
562	27										
561	28										
560	29										
559	30	olive Gray to light olive Gray (5Y 6/1)		DT	8	PUSH	NA	3.5/4	1.5	0.0	
558	31	little fine sand									
557	32	light olive Gray (5Y 6/1) fine silty SAND (SM), trace fine gravel, wet									
556	33										
555	34			DT	9	PUSH	NA	3.8/4		0.0	
554	35										
	36	End of boring at 36' bgs									
	37										
	38										
	39										
	40										
	41										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CG-SB14	
Coordinates: N 376605.6968 E 2559394.8361	Ground Elevation: 589.80	Page: 1 of 1	
Total Depth (feet): 12	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 12-1-08	To: 12-1-08	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
589	1	FILL: dusky Brown (5YR 2/2) topsoil, dry little coarse gravel olive Black (5Y 2/1) sandy silt, dry		DT	1	PUSH	NA	3.7/4		0.0	Sampled 0-0.5' (SS) (1020)
588	2										
587	3										
586	4										
585	5			DT	2	PUSH	NA	2.0/4		0.0	Sampled 5-6' (0506) (1030)
584	6										
583	7										
582	8	No recovery - wet		DT	3	PUSH	NA	0/4			▼ Depth to water after drilling
581	9										
580	10										
579	11										
578	12	End of boring at 12' bgs									
	13										
	14										
	15										
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CG-SB15
Coordinates	**Ground Elevation**	**Page**
N 376613.3585 E 2559696.857	591.01	1 of 3
Total Depth (feet) 48 / **Hole Size (inches)** 2	Driller (s) Eduardo DeAlba	
Drilling Rig Geoprobe 6610DT	Drilling Company GeoServe Inc.	
Date 10-13-08 To 10-13-08	Logged By: Sindy Panagiotopoulos	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
590	1	FILL: Brown silt, gravel, sand, cinders, brick, slag, dry		MC	1	PUSH	NA	2.0/4		0.2	Sampled 0-0.5' (SS) (1340)
589	2										
588	3										
587	4			MC	2	PUSH	NA	3.0/4		0.3	Sampled 6-8' (0608) (1350)
586	5										
585	6										
584	7										
583	8			MC	3	PUSH	NA	3.5/4			
582	9	slight odor									
581	10										
580	11										
579	12	dry to saturated, slight odor		MC	4	PUSH	NA	0.5/4		21	
578	13										
577	14										
576	15										
575	16			MC	5	PUSH	NA	1.0/4		0.5	
574	17	timber, slight odor									
573	18										
572	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number CG-SB15
Page 2 of 3
Date 10-13-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
570	21	FILL: Brown silt, gravel, sand, cinders, brick, slag, dry									
569	22			MC	6	PUSH	NA	4.0/4		0.0	
568	23										
567	24	Brown PEAT (PT), some silt, moist									
566	25										
565	26			MC	7	PUSH	NA	3.0/4		0.0	
564	27										
563	28	Yellow Brown silty CLAY (CL), soft, moist									
562	29										
561	30			MC	8	PUSH	NA	3.8/4		0.3	
560	31										
559	32										
558	33										
557	34	Light Olive Gray, trace fine sand, no plasticity, very soft, moist		MC	9	PUSH	NA	3.0/4	1	0.3	
556	35										
555	36										
554	37										
553	38			MC	10	PUSH	NA	3.8/4	0.5	0.0	
552	39										
551	40										
550	41			MC	11	P	NA	4.0/4			

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number CG-SB15
Page 3 of 3
Date 10-13-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
549	42	Yellow Brown silty CLAY (CL), soft, moist Pale Olive Gray silty CLAY (CL), very soft to soft		MC	11	U S H	NA	4.0/4	1	0.0	
548	43										
547	44										
546	45			MC	12	P U S H	NA	/4			
545	46										
544	47										
	48	End of boring at 48' bgs									
	49										
	50										
	51										
	52										
	53										
	54										
	55										
	56										
	57										
	58										
	59										
	60										
	61										
	62										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CG-SB16	
Coordinates: N 376504.5927 E 2559576.0617	Ground Elevation: 589.92	Page: 1 of 2	
Total Depth (feet): 36	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 12-11-08 To: 12-11-08	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
589	1	FILL: dusky Brown (5YR 2/2) topsoil, dry		DT	1	PUSH	NA	2.7/4		0.0	Sampled 0-0.5' (SS) (0815)
588	2	FILL: dusky Brown (5YR 2/2) silty clay, dry									
587	3	FILL: olive Black (5Y 2/1) sandy silt, dry									
586	4										
585	5			DT	2	PUSH	NA	2.0/4		0.0	Sampled 4-6' (0406) (0825)
584	6	dry to wet									
583	7										
582	8			DT	3	PUSH	NA	2.6/4		0.0	Drilled to 8 feet using large-diameter dual tube and switched to small diameter dual-tube for remainder of boring.
581	9										
580	10										
579	11										
578	12			DT	4	PUSH	NA	0.2/4		0.0	
577	13										
576	14										
575	15										
574	16										
573	17			DT	5	PUSH	NA	0.1/4		0.0	
572	18	PEAT (PT), strong odors, tar staining, wet									
571	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number CG-SB16
Page 2 of 2
Date 12-11-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
569	21	olive Gray (5Y 4/1) silty CLAY (CL), trace fine gravel, wet		DT	6	PUSH	NA	3.9/4		52	
568	22										
567	23										
566	24										
565	25			DT	7	PUSH	NA	4.0/4		2.1	
564	26										
563	27										
562	28	olive Gray to light olive Gray (5Y 6/1)		DT	8	PUSH	NA	3.9/4		0.0	
561	29										
560	30										
559	31										
558	32										
557	33	olive Gray (5Y 4/1) silty SAND (SM), wet		DT	9	PUSH	NA	1.0/4		0.0	
		olive Gray (5Y 4/1) silty CLAY (CL), trace fine gravel, wet									
556	34										
555	35										
554	36	End of boring at 36' bgs									
	37										
	38										
	39										
	40										
	41										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CG-SB17
Coordinates	**Ground Elevation**	**Page**
N 376414.3574 E 2559715.047	588.65	1 of 1
Total Depth (feet) 8	**Hole Size (inches)** 3	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 12-1-08	**To** 12-1-08	**Logged By:** Libby Northrip
Reviewed by:		**Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
588	1	FILL: dusky Brown (5YR 2/2) topsoil, dry some coarse gravel									Sampled 0-0.5' (SS) (1410)
587	2	FILL: dusky Brown (5YR 2/2) sandy silt, dry		DT	1	PUSH	NA	3.3/4		0.0	
586	3										
585	4										
584	5	dusky Brown to olive Black (5Y 2/1) dry to wet									Sampled 4-5' (0405) (1420)
583	6			DT	2	PUSH	NA	2.7/4		138	
582	7										
581	8	End of boring at 8' bgs									
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CG-SB18	
Coordinates: N 376320.4812 E 2559552.3849	Ground Elevation: 589.52	Page: 1 of 2	
Total Depth (feet): 36	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 12-11-08	To: 12-11-08	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
589	0	FILL: dusky Brown (5YR 2/2) topsoil, dry									Depth to water while drilling; Depth to water after drilling
	1	FILL: dusky Brown (5YR 2/2) sandy silt, dry									Sampled 0-0.5' (SS) (0950). MS/MSD also collected.
588	2			DT	1	P U S H	NA	3.1/4		0.0	
587		with brick fragments (2.2-2.7)									
	3	with coarse gravel									
586	4										
		dusky Brown to olive Black (5Y 2/1)									Sampled 4-6' (0406) (1010)
585	5										
584	6			DT	2	P U S H	NA	2.1/4		24.6	
583		tar odor, staining, saturated									
	7										
582	8										
		slight odor, sheen									Drilled to 8 feet using large-diameter dual tube and switched to small diameter dual-tube for remainder of boring.
581	9										
580	10			DT	3	P U S H	NA	2.0/4		9.6	
579	11										
578	12										
		sheen									
577	13										
		PEAT (PT), wet									
576	14			DT	4	P U S H	NA	1.9/4		0.0	
575	15										
574	16										
573	17										
572	18			DT	5	P U S H	NA	1.8/4		0.0	
571	19										
		olive Gray (5Y 4/1) silty CLAY (CL), trace fine gravel, stiff, wet									
570											

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number CG-SB18
Page 2 of 2
Date 12-11-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
569	21	olive Gray (5Y 4/1) silty CLAY (CL), trace fine gravel, stiff, wet		DT	6	PUSH	NA	3.6/4	1.5	0.0	
568	22										
567	23										
566	24	light olive Gray (5Y 6/1) clayey SILT (ML), wet		DT	7	PUSH	NA	3.2/4	4	0.0	
565	25	light olive Gray (5Y 6/1) silty CLAY (CL), very stiff, wet									
564	26										
563	27										
562	28			DT	8	PUSH	NA	3.8/4	4	0.0	
561	29										
560	30										
559	31										
558	32			DT	9	PUSH	NA	4.0/4	4	0.0	
557	33										
556	34										
555	35										
554	36	End of boring at 36' bgs									
	37										
	38										
	39										
	40										
	41										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898	Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CG-SB19
	Coordinates: N 376309.3409 E 2559412.721	Ground Elevation: 588.02	Page: 1 of 1
	Total Depth (feet): 8 / Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 12-1-08	To: 12-1-08 / Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
587	1	FILL: dusky Brown (5YR 2/2) topsoil, dry little coarse gravel		DT	1	PUSH	NA	3.4/4		0.0	Sampled 0-0.5' (SS) (0930)
586	2	olive Black (5Y 2/1) sandy silt, dry									
585	3										
584	4										
583	5	dry to wet		DT	2	PUSH	NA	2.1/4		0.0	Sampled 4-5' (0405) (0935)
582	6										
581	7										
	8	End of boring at 8' bgs									
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CG-SB20
Coordinates	**Ground Elevation**	**Page**
N 376205.8869 E 2559407.1663	589.00	1 of 1
Total Depth (feet) 8	**Hole Size (inches)** 3	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 12-1-08	**To** 12-1-08	**Logged By:** Libby Northrip
Reviewed by:		**Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
588	1	FILL: dusky Brown (5YR 2/2) topsoil, dry									Sampled 0-0.5' (SS) (0900)
		little coarse gravel									
587	2	olive Black (5Y 2/1) sandy silt, dry		DT	1	PUSH	NA	3.1/4		0.0	
586	3										
585	4										
584	5										
583	6	sheen, staining, dry to wet		DT	2	PUSH	NA	2.7/4		0.0	Sampled 5-6' (0506) (0910)
582	7										
581	8	End of boring at 8' bgs									
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CG-SB21	
Coordinates: N 376176.8387 E 2559658.556	Ground Elevation: 589.80	Page: 1 of 1	
Total Depth (feet): 16	Hole Size (inches): 2	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe Inc.	
Date: 10-13-08	To: 10-13-08	Logged By: Sindy Panagiotopoulos	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
589	1	FILL: Brown silt, gravel, sand, cinders, brick, slag, crushed concrete, dry		MC	1	PUSH	NA	2.5/4		0.2	Sampled 0-0.5' (SS) (1205)
588	2										
587	3										
586	4										
585	5	No recovery									
584	6		NR	MC	2	PUSH	NA	0/4		NA	
583	7										
582	8										
581	9	No recovery									
580	10		NR	MC	3	PUSH	NA	0/4		NA	
579	11										
578	12										
577	13	FILL: Brown silt, gravel, sand, cinders, brick, slag, crushed concrete, slight tar odor, sheen, free product, wet		MC	4	PUSH	NA	0.25/4		11.5	
576	14										
575	15										
574	16										
	17	End of boring at 16' bgs									
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CG-SB22	
Coordinates: N 376092.3341 E 2559445.3826	Ground Elevation: 590.26	Page: 1 of 1	
Total Depth (feet): 8	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 12-1-08 To: 12-1-08	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
590	0	FILL: dusky Brown (5YR 2/2) topsoil, dry									Sampled 0-0.5' (SS) (1130)
	1	some coarse gravel									
589		olive Black (5Y 2/1) sandy silt, dry									
	2			DT	1	P U S H	NA	2.6/4		0.0	
588											
	3										
587											
	4										
586											
	5										
585											Sampled 5-7' (0507) (1140). MS/MSD also collected.
	6			DT	2	P U S H	NA	2.9/4		0.0	
584											
	7	slight odor, dry to wet									
583											
	8	End of boring at 8' bgs									
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CG-SB23
Coordinates	**Ground Elevation**	**Page**
N 376107.2711 E 2559558.7538	589.74	1 of 2
Total Depth (feet) 24	**Hole Size (inches)** 3	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 12-11-08 **To** 12-11-08	**Logged By:** Libby Northrip	**Reviewed by:** **Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
589	1	FILL: dusky Brown (5YR 2/2) topsoil, dry		DT	1	PUSH	NA	1.8/4		0.0	Sampled 0-0.5' (SS) (1150)
		FILL: olive Black (5Y 2/1) sandy silt, little coarse gravel, dry									
588	2										
587	3										
586	4										
585	5	little to some coarse gravel		DT	2	PUSH	NA	2.8/4		264	Sampled 5-7' (0507) (1200). CG-SBDUP005 also collected.
584	6	strong tar and petroleum odor, staining									
583	7										
582	8	dry to wet									▽ Depth to water while drilling
581	9	PEAT (PT), stained dark greenish gray		DT	3	PUSH	NA	2.2/4		42.9	Drilled to 8 feet using large-diameter dual tube and switched to small diameter dual-tube for remainder of boring. ▼ Depth to water after drilling
580	10										
579	11										
578	12	olive Black (5Y 2/1) silty SAND (SM), wet		DT	4	PUSH	NA	0.4/4		5.1	
577	13										
576	14										
575	15										
574	16	olive Black to light olive Gray (5Y 6/1)		DT	5	PUSH	NA	1.2/4		1.8	
573	17										
572	18										
571	19										
570											

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name	Milwaukee Solvay Coke & Gas Site
Project Number	49804
Boring/Monitoring Well Number	CG-SB23
Page	2 of 2
Date	12-11-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	SAMPLING: Sample Interval	SAMPLING: Blow Counts per 0.5'	SAMPLING: N Value	SAMPLING: Sample Recovery/Length (feet)	SAMPLING: Penetrometer (TSF)	PID Reading (PPM)	Remarks
569	21	olive Black (5Y 2/1) silty SAND (SM), wet				P					
568	22			DT	6	U	NA	3.8/4		10.9	
567	23					S					
566	24					H					
	24	End of boring at 24' bgs									
	25										
	26										
	27										
	28										
	29										
	30										
	31										
	32										
	33										
	34										
	35										
	36										
	37										
	38										
	39										
	40										
	41										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CG-SB24
Coordinates	**Ground Elevation**	**Page**
N 376009.9791 E 2559743.5737	586.10	1 of 1
Total Depth (feet) 8	**Hole Size (inches)** 3	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 12-1-08	**To** 12-1-08	**Logged By:** Libby Northrip
Reviewed by:		**Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
585	1	FILL: dusky Brown (5YR 2/2) topsoil, dry some coarse gravel									Sampled 0-0.5' (SS) (1320)
584	2	FILL: dusky Brown (5YR 2/2) sandy silt, dry		DT	1	P U S H	NA	3.0/4		74.3	Sampled 2-3' (0203) (1330)
583	3										
582	4	dusky Brown to olive Black (5Y 2/1), dry to wet									
581	5			DT	2	P U S H	NA	1.5/4		95.9	
580	6										
579	7										
	8	End of boring at 8' bgs									
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CG-SB25
Coordinates	**Ground Elevation**	**Page**
N 375980.5449 E 2559553.409	590.23	1 of 3
Total Depth (feet) 48	**Hole Size (inches)** 2	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe Inc.
Date 10-13-08 **To** 10-13-08	**Logged By:** Sindy Panagiotopoulos	**Reviewed by:** **Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
590	0	Asphalt (2") FILL: Brown silt, gravel, sand, cinders, brick, slag, crushed concrete, dry		MC	1	PUSH	NA	2.0/4		0.2	Sampled 2-4' (0204) (1015)
589	1										
588	2										
587	3										
586	4	Brown to Black		MC	2	PUSH	NA	1.8/4			Sampled 6-8' (0608) (1025)
585	5										
584	6										
583	7										
582	8	No recovery	NR	MC	3	PUSH	NA	0/4			
581	9										
580	10										
579	11										
578	12	Olive Gray SAND (SP), fine, trace fine gravel, moist		MC	4	PUSH	NA	2.9/4		0.0	
577	13										
576	14										
575	15	moist to wet									
574	16			MC	5	PUSH	NA	4.0/4		0.0	
573	17										
572	18										
571	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number CG-SB25
Page 2 of 3
Date 10-13-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
570	21	Olive Gray SAND (SP), fine, trace fine gravel, moist		MC	6	PUSH	NA	3.2/4		0.0	
569	22										
568	23										
567	24			MC	7	PUSH	NA	3.2/4		0.0	
566	25										
565	26										
564	27			MC	8	PUSH	NA	3.0/4		0.0	
563	28										
562	29	Olive Gray to Light Olive Gray									
561	30										
560	31										
559	32										
558	33	Yellowish Brown silty CLAY (CL), trace gravel, soft, moist		MC	9	PUSH	NA	4.0/4	1.5	0.0	
557	34										
556	35	moist to wet, trace fine sand, soft to hard									
555	36										
554	37			MC	10	PUSH	NA	3.0/4	2	0.0	
553	38										
552	39										
551	40			MC	11	P	NA	3.8/4			
550	41										
549											

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number CG-SB25
Page 3 of 3
Date 10-13-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
548	42	Yellowish Brown silty CLAY (CL), trace gravel, soft, moist		MC	11	U S H	NA	3.8/4	2.5	0.0	
547	43										
546	44			MC	12	P U S H	NA	2.0/4	3.25	0.0	
545	45										
544	46										
543	47										
	48	End of boring at 48' bgs									
	49										
	50										
	51										
	52										
	53										
	54										
	55										
	56										
	57										
	58										
	59										
	60										
	61										
	62										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CG-SB26	
Coordinates: N 375908.0575 E 2559453.7813	Ground Elevation: 590.69	Page: 1 of 1	
Total Depth (feet): 12	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 12-1-08	To: 12-1-08	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
590	1	FILL: dusky Brown (5YR 2/2) topsoil, dry									Sampled 0-0.5' (SS) (1230)
589	2	dusky Brown (5YR 2/2) sandy silt, some coarse gravel, dry		DT	1	PUSH	NA	3.1/4		0.0	
588	3										
587	4										
586	5			DT	2	PUSH	NA	1.6/4		0.0	
585	6										
584	7										
583	8	dusky Brown to olive Black (5Y 2/1)									Sampled 8-9' (0809) (1240)
582	9	sheen, slight odor, dry to wet									▽ Depth to water while drilling
581	10			DT	3	PUSH	NA	1.1/4		5.2	▼ Depth to water after drilling
580	11										
579	12	End of boring at 12' bgs									
	13										
	14										
	15										
	16										
	17										
	18										
	19										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CG-SB27	
Coordinates: N 375806.077 E 2559419.4964	Ground Elevation: 591.83	Page: 1 of 1	
Total Depth (feet): 12	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 11-25-08	To: 11-25-08	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
591	1	FILL: dark yellowish Brown (10YR 4/2) topsoil, dry									Sampled 0-0.5' (SS) (1420)
590	2	FILL: olive Black (5Y 2/1) sandy silt, dry		DT	1	PUSH	NA	2.8/4		1.3	
589	3										
588	4	CONCRETE									
587	5	FILL: dusky Brown (5YR 2/2) sandy silt, dry little brick fragments									
586	6	some fine gravel, dry to moist		DT	2	PUSH	NA	3.2/4		0.0	
585	7										
584	8	olive Black (5Y 2/1) silty SAND (SM), some fine gravel, wet									
583	9										Sampled 8-9' (0809) (1430). CG-SBDUP001 also collected.
582	10	wet to saturated		DT	3	PUSH	NA	2.7/4		0.0	
581	11										
580	12	End of boring at 12' bgs									
	13										
	14										
	15										
	16										
	17										
	18										
	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CG-SB28	
Coordinates: N 375811.1875 E 2559556.816	Ground Elevation:	Page: 1 of 1	
Total Depth (feet): 8	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 12-3-08	To: 12-3-08	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
	1–4	FILL: dusky Brown (5YR 2/2) topsoil, little coarse gravel, dry		DT	1	PUSH	NA	3.1/4		0.0	Sampled 0-0.5' (SS) (1240)
	4–8	no recovery - all water in sample barrel		DT	2	PUSH	NA	0/4			
	8	End of boring at 8' bgs									

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CG-SB28B	
Coordinates: N 375756.3134 E 2559559.9807	Ground Elevation: 589.62	Page: 1 of 1	
Total Depth (feet): 12	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 12-3-08	To: 12-3-08	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
589	0	FILL: dusky Brown (5YR 2/2) topsoil, dry									
	1	FILL: dusky Brown (5YR 2/2) sandy silt, little coarse gravel, moist concrete fragments (1-1.3)		DT	1	PUSH	NA	2.6/4		0.0	
588	2										
587	3										
586	4										
585	5	wood (5-5.4)		DT	2	PUSH	NA	2.8/4		0.0	Sampled 6-7' (0607) (1305)
584	6	trace brick fragments									
583	7	moist to wet									
582	8	with fine gravel, wet to saturated		DT	3	PUSH	NA	1.8/4		0.0	
581	9										
580	10										
579	11										
578	12	End of boring at 12' bgs									
	13										
	14										
	15										
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CG-SB29
Coordinates	**Ground Elevation**	**Page**
N 377050.596 E 2559489.3824	589.69	1 of 1
Total Depth (feet) 8	**Hole Size (inches)** 2	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 12-3-08 **To** 12-3-08	**Logged By:** Libby Northrip	**Reviewed by:** **Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
589	0	FILL: dusky Brown (5YR 2/2) topsoil, dry									
	1	FILL: olive Black (5Y 2/1) sandy silt, little coarse gravel, dry		DT	1	PUSH	NA	3.2/4		0.0	
588	2										
587	3										
586	4										
585	5	FILL: medium Gray (N5) clayey silt, trace fine gravel, moist		DT	2	PUSH	NA	3.9/4		0.0	
584	6										
583	7	medium Gray to grayish Black (N2), trace to some fine gravel moist to wet									
582	8	End of boring at 8' bgs									
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CG-SB30A
Coordinates	**Ground Elevation**	**Page**
N 377035.59 E 2559571.53	590.69	1 of 1
Total Depth (feet) 5.5	**Hole Size (inches)** 2	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 12-3-08	**To** 12-3-08	**Logged By:** Libby Northrip
Reviewed by:		**Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
590	1	FILL: dusky Brown (5YR 2/2) topsoil, dry				PUSH					Depth to water while drilling ▽
589	2	FILL: olive Black (5Y 2/1) sandy silt with coarse gravel, dry		DT	1		NA	2.6/4		0.0	Depth to water after drilling ▼
588	3										
587	4	FILL: olive Black (5Y 2/1) clayey silt, some fine gravel, moist									
586	5	olive Black to dark Gray (N3), some fine to with coarse gravel, sheen, odor		DT	2	PUSH	NA	1.3/1.5		13.2	
	6	End of boring at 5.5' bgs - refusal									
	7										
	8										
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CG-SB30B
Coordinates	**Ground Elevation**	**Page**
N 377035.59 E 2559571.53	590.69	1 of 1
Total Depth (feet) 8	**Hole Size (inches)** 2	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 12-3-08 **To** 12-3-08	**Logged By:** Libby Northrip	**Reviewed by:** **Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
590	1	FILL: dusky Brown (5YR 2/2) topsoil with coarse gravel, dry CONCRETE									▽ Depth to water while drilling ▼ Depth to water after drilling
589	2	FILL: dusky Brown (5YR 2/2) sandy silt with coarse gravel, some brick, dry		DT	1	PUSH	NA	2.8/4		0.0	
588	3										
587	4	CONCRETE									
586	5	FILL: moderate Brown (5YR 4/4) sandy silt, some coarse gravel, dry dry to wet moderate Brown to dark Gray (N3), strong odors, sheen, staining		DT	2	PUSH	NA	2.2/4		98.6	▽
585	6										
584	7										
583	8	End of boring at 8' bgs									Boring advanced adjacent to CG-SB30A so same coordinates and elevation used for both.
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CG-SB31	
Coordinates: N 377096.5024 E 2559649.2534	Ground Elevation: 587.99	Page: 1 of 1	
Total Depth (feet): 8	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 12-3-08	To: 12-3-08	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
		FILL: gravel				P					▽ Depth to water while drilling
587	1	FILL: olive Black (5Y 2/1) sandy silt, moist				U					▼ Depth to water after drilling
586	2			DT	1	S	NA	3.0/4		0.0	
585	3					H					
584	4	moist to wet				P					
583	5	wet to saturated				U				▽	
582	6			DT	2	S	NA	2.7/4		0.0	
581	7	sheen				H					
580	8	End of boring at 8' bgs									
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CG-SB32
Coordinates	**Ground Elevation**	**Page**
N 376997.6272 E 2559721.6811	589.16	1 of 1
Total Depth (feet) 8	**Hole Size (inches)** 2	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 12-3-08	**To** 12-3-08	**Logged By:** Libby Northrip
Reviewed by:		**Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
589		FILL: dusky Brown (5YR 2/2) topsoil, dry				P					▽ Depth to water while drilling
588	1	FILL: olive Black (5Y 2/1) sandy silt, dry little coarse gravel				U					▼ Depth to water after drilling
587	2			DT	1	S	NA	3.0/4		0.0	
586	3	dry to moist				H					
585	4	FILL: pale Brown (5YR 5/2) silty sand, dry				P					
584	5	FILL: moderate yellowish Brown (10YR 5/4) clayey silt, little fine gravel, wet				U					
583	6	little fine to little coarse gravel sheen		DT	2	S	NA	3.1/4		0.0 ▽	
582	7	moderate yellowish Brown to dark Gray (N3), little to some coarse gravel, wet to saturated				H					
	8	End of boring at 8' bgs									
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CG-SB33
Coordinates	**Ground Elevation**	**Page**
N 376966.73 E 2559699.6	586.80	1 of 1
Total Depth (feet) 8	**Hole Size (inches)** 2	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 12-3-08	**To** 12-3-08	**Logged By:** Libby Northrip
Reviewed by:		**Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
586	1	FILL: dusky Brown (5YR 2/2) topsoil, dry									
		FILL: olive Black (5Y 2/1) sandy silt, little coarse gravel, dry		DT	1	PUSH	NA	2.6/4		0.0	
585	2										
584	3										
583	4	dry to wet									
				DT	2	PUSH	NA	2.1/4		0.0	
582	5										
581	6										
580	7										
579	8	End of boring at 8' bgs									
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CG-SB34A	
Coordinates: N 376914.64 E 2559527.36	Ground Elevation: 591.42	Page: 1 of 1	
Total Depth (feet): 5	Hole Size (inches): 2	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 12-3-08	To: 12-3-08	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
591	0	FILL: dusky Brown (5YR 2/2) topsoil, dry									
		FILL: light olive Gray (5Y 6/1) concrete fragments and coarse gravel									
590	1	FILL: moderate yellowish Brown (10YR 5/4) sandy silt with coarse gravel, dry									
	2	moderate yellowish Brown to olive Black (5Y 2/1)		DT	1	P U S H	NA	2.3/4		0.0	
589	3										
588	4										
587	5	dry to moist		DT	2	P U S H	NA	1.0/1		2.4	
		End of boring at 5' bgs - refusal									
	6										
	7										
	8										
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CG-SB34B
Coordinates	**Ground Elevation**	**Page**
N 376914.64 E 2559527.36	591.42	1 of 1
Total Depth (feet) 8	**Hole Size (inches)** 2	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 12-3-08 **To** 12-3-08	**Logged By:** Libby Northrip	**Reviewed by:** **Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
591	1	FILL: dusky Brown (5YR 2/2) topsoil with coarse gravel, little brick, dry		DT	1	PUSH	NA	2.8/4		0.0	
590	2										
589	3										
588	4										
587	5	FILL: pale Brown (5YR 5/2) clayey silt with coarse gravel, moist moist to wet		DT	2	PUSH	NA	1.8/4		0.0	
586	6										
585	7										
584	8	End of boring at 8' bgs									Boring advanced adjacent to CG-SB34A so same coordinates and elevation used for both.
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CG-SB35	
Coordinates: N 377125.0175 E 2559692.2132	Ground Elevation: 587.34	Page: 1 of 1	
Total Depth (feet): 8	Hole Size (inches): 2	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 12-3-08 To: 12-3-08	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
587	1	Field boring log for this boring location was misplaced. Field notes indicate that the boring was advanced to 8 feet bgs with a total of 5.8 feet of recovery and water was encountered at approximately 6 feet bgs. In this area of the site It is assumed that the lithology in the boring is all fill.		DT	1	P U S H	NA	NA/4			
586	2										
585	3										
584	4										
583	5			DT	2	P U S H	NA	NA/4			▽ Depth to water while drilling; ▼ Depth to water after drilling
582	6										
581	7										
580	8	End of boring at 8' bgs									
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CG-SB36	
Coordinates: N 375986.4001 E 2559703.322	Ground Elevation: 587.63	Page: 1 of 2	
Total Depth (feet): 36	Hole Size (inches): 2	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 12-9-08	To: 12-9-08	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
587	1	FILL: dusky Brown (5YR 2/2) topsoil, dry									
586	2	FILL: olive Black (5Y 2/1) silty sand, dry		DT	1	PUSH	NA	2.1/4		0.0	
585	3										
584	4										
583	5			DT	2	PUSH	NA	2.5/4		19.6	
582	6	olive Black to moderate yellowish Brown (10YR 5/4)									
581	7	moderate yellowish Brown to dark Gray (N3), sheen									
580	8										
579	9	dark Gray to olive Black (5Y 2/1)		DT	3	PUSH	NA	2.5/4		0.0	
578	10										
577	11	PEAT (PT)									
576	12										
575	13			DT	4	PUSH	NA	3.5/4		0.0	
574	14										
573	15	olive Gray (5Y 4/1) silty CLAY (CL), wet									
572	16	olive Gray (5Y 4/1) silty SAND (SM), wet		DT	5	PUSH	NA	3.4/4		0.0	
571	17										
570	18										
569	19										
568											

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number CG-SB36
Page 2 of 2
Date 12-9-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
567	21	olive Gray (5Y 4/1) silty SAND (SM), wet little coarse gravel		DT	6	PUSH	NA	2.3/4		0.0	
566	22										
565	23										
564	24										
563	25			DT	7	PUSH	NA	2.7/4	4	0.0	
562	26	olive Gray (5Y 4/1) silty CLAY (CL), trace fine gravel, very stiff, wet									
561	27										
560	28			DT	8	PUSH	NA	2.7/4	2.5	0.0	
559	29										
558	30										
557	31										
556	32			DT	9	PUSH	NA	2.5/4	2.5	0.0	
555	33										
554	34										
553	35										
552	36	End of boring at 36' bgs									Boring advanced adjacent to CG-DS27 so same coordinates and elevation used for both.
	37										
	38										
	39										
	40										
	41										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CG-SB37	
Coordinates: N 376209.2367 E 2559703.855	Ground Elevation: 589.09	Page: 1 of 2	
Total Depth (feet): 20	Hole Size (inches): 2	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 12-9-08	To: 12-9-08	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
588	1	FILL: dusky Brown (5YR 2/2) topsoil, dry									
		FILL: dusky Brown (5YR 2/2) sandy silt, little coarse gravel, dry		DT	1	PUSH	NA	2.6/4		0.0	
587	2										
586	3										
585	4										
584	5			DT	2	PUSH	NA	2.1/4		43.7	
583	6	dusky Brown to dark Gray (N3), strong odor, staining									
582	7										
581	8	dry to wet									▽
580	9			DT	3	PUSH	NA	1.8/4		59.8	
579	10										
578	11	PEAT (PT), wet									
577	12			DT	4	PUSH	NA	1.0/4		3.1	
576	13										
575	14										
574	15										
573	16			DT	5	PUSH	NA	3.4/4		0.0	
572	17										
571	18	olive Gray (5Y 4/1) silty CLAY (CL), trace fine gravel, stiff, wet									
570	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number CG-SB37
Page 2 of 2
Date 12-9-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
	20	End of boring at 20' bgs									Boring advanced adjacent to CG-DS24 so same coordinates and elevation used for both.
	21										
	22										
	23										
	24										
	25										
	26										
	27										
	28										
	29										
	30										
	31										
	32										
	33										
	34										
	35										
	36										
	37										
	38										
	39										
	40										
	41										

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CG-SB38
Coordinates	**Ground Elevation**	**Page**
N 376479.066 E 2559634.472	591.26	1 of 2
Total Depth (feet) 36	**Hole Size (inches)** 2	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 12-9-08	**To** 12-9-08	**Logged By:** Libby Northrip
Reviewed by:		**Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
591	0	FILL: dusky Brown (5YR 2/2) topsoil, little coarse gravel, dry									
590	1	FILL: dusky Brown (5YR 2/2) sandy silt, some fine gravel, dry		DT	1	P U S H	NA	2.9/4		0.0	
589	2										
588	3										
587	4			DT	2	P U S H	NA	1.2/4		0.0	
586	5										
585	6										
584	7	FILL: olive Black (5Y 2/1) clayey silt, little fine gravel, moist		DT	3	P U S H	NA	3.0/4		4.8	
583	8	slight odors, moist to wet									
582	9										
581	10										
580	11			DT	4	P U S H	NA	3.0/4		3.7	
579	12										
578	13										
577	14										
576	15			DT	5	P U S H	NA	1.2/4		6.2	
575	16										
574	17										
573	18										
572	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number CG-SB38
Page 2 of 2
Date 12-9-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
571	21	FILL: olive Black (5Y 2/1) clayey silt, little fine gravel, moist some coarse gravel, sheen, staining, odors		DT	6	PUSH	NA	2.7/4		9.6	
570	22	olive Black to dark yellowish Brown (10YR 4/2)									
569	23										
568	24	dark yellowish Brown to olive Gray (5Y 4/1)		DT	7	PUSH	NA	4.0/4	2	0.0	
567	25										
566	26										
565	27	olive Gray (5Y 4/1) silty CLAY (CL), trace fine gravel, stiff, wet		DT	8	PUSH	NA	4.0/4	2	0.0	
564	28										
563	29										
562	30										
561	31										
560	32										
559	33			DT	9	PUSH	NA	3.6/4		0.0	
558	34										
557	35										
556	36	End of boring at 36' bgs									Boring advanced adjacent to CG-DS16 so same coordinates and elevation used for both.
	37										
	38										
	39										
	40										
	41										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CG-SB39
Coordinates	**Ground Elevation**	**Page**
N 376896.1651 E 2559546.608	591.51	1 of 1
Total Depth (feet) 16	**Hole Size (inches)** 2	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 12-12-08 **To** 12-12-08	**Logged By:** Libby Northrip	**Reviewed by:** **Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
591	0	FILL: brick fragments with coarse gravel, dry									▽ Depth to water while drilling ▼ Depth to water after drilling
590	1	FILL: olive Black (5Y 2/1) sandy silt, dry		DT	1	PUSH	NA	2.5/4		0.0	
589	2										
588	3										
587	4										
586	5	dry to wet		DT	2	PUSH	NA	2.2/4		193	
585	6										
584	7	FILL: dark Gray (N3) silty clay, little fine gravel, wet									
583	8										
582	9			DT	3	PUSH	NA	1.9/4		25.2	
581	10										
580	11	PEAT (PT)									
579	12										
578	13			DT	4	PUSH	NA	2.3/4		63.1	
577	14	wood pieces (14-14.3)									
576	15										
	16	End of boring at 16' bgs									Boring advanced adjacent to CG-DS11 so same coordinates and elevation used for both.
	17										
	18										
	19										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CS-SB01	
Coordinates: N 376830.0587 E 2559705.9105	Ground Elevation: 588.10	Page: 1 of 1	
Total Depth (feet): 12	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 11-19-08 To: 11-19-08	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
587	1	FILL: dusky Brown (5YR 2/2) topsoil, dry									Sampled 0-0.5' (SS) (1400)
		FILL: Black (N1) sandy silt, some fine gravel, dry									
586	2			DT	1	PUSH	NA	3.4/4		0.0	
585	3										
584	4										
		Black to dark yellowish Brown (10YR 4/2), some fine to with coarse gravel									
583	5										
582	6			DT	2	PUSH	NA	2.5/4		0.0	
581	7										
580	8										Sampled 7-8' (0708) (1415)
		dry to saturated									
579	9										
578	10			DT	3	PUSH	NA	1.9/4		0.0	
577	11										
	12	End of boring at 12' bgs									
	13										
	14										
	15										
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CS-SB02
Coordinates	**Ground Elevation**	**Page**
N 376882.8441 E 2559973.7166	587.34	1 of 1
Total Depth (feet) 10	**Hole Size (inches)** 3	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 11-19-08 **To** 11-19-08	**Logged By:** Libby Northrip	**Reviewed by:** **Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
587	0	FILL: dusky Brown (5YR 2/2) topsoil, dry									Sampled 0-0.5' (SS) (1120)
586	1	FILL: Black (N1) silty sand with coarse gravel, dry		DT	1	PUSH	NA	3/4		0.0	
585	2										
584	3										
583	4	FILL: dark yellowish Brown (10YR 4/2) silty clay with coarse gravel, moist		DT	2	PUSH	NA	2.7/4		0.0	
582	5										
581	6										
580	7										
579	8			DT	3	PUSH	NA	2/2		0.0	Sampled 9-10' (0910) (1130)
578	9	some coal									
	10	End of boring at 10' bgs - refusal									
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CS-SB03	
Coordinates: N 376782.3623 E 2559938.9029	Ground Elevation: 587.41	Page: 1 of 1	
Total Depth (feet): 12	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 11-19-08	To: 11-19-08	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
587	0	FILL: dusky Brown (5YR 2/2) topsoil, dry									Sampled 0-0.5' (SS) (1030)
586	1	FILL: dark yellowish Brown (10YR 4/2) silty sand with medium gravel, dry									
585	2	dark yellowish Brown to light olive Gray (5Y 6/1)		DT	1	P U S H	NA	3.5/4		0.0	
584	3										
583	4	some brick									
582	5	light olive Gray to olive Black (5Y 2/1), some coal fragments									
581	6	olive Black to Black (N1)		DT	2	P U S H	NA	3.7/4		101	
580	7										Sampled 7-7.7' (0777) (1035)
579	8	dry to moist									
578	9										
577	10			DT	3	P U S H	NA	3.3/4		67.5	
576	11										
	12	End of boring at 12' bgs									
	13										
	14										
	15										
	16										
	17										
	18										
	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CS-SB04	
Coordinates: N 376790.0578 E 2560039.0999	Ground Elevation: 587.53	Page: 1 of 2	
Total Depth (feet): 36	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 12-8-08 To: 12-8-08	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
587	1	FILL: dark yellowish Brown (10YR 6/2) topsoil, dry									Sampled 0-0.5' (SS) (0810)
586	2	dark yellowish Brown to dusky yellowish Brown (10YR 2/2) with coarse gravel		DT	1	P U S H	NA	2.6/4		0.0	
585	3	CONCRETE									
584	4	FILL: dusky Brown (5YR 2/2) sandy silt, little fine gravel, dry									
583	5			DT	2	P U S H	NA	3.9/4		0.0	Sampled 6-8' (0608) (0820)
582	6										
581	7	grayish Brown (5YR 3/2) clayey silt, some coarse gravel, moist									
580	8			DT	3	P U S H	NA	2.1/4		0.0	Drilled to 8 feet using large-diameter dual tube and switched to small diameter dual-tube for remainder of boring.
579	9	moist to wet									
578	10										
577	11										
576	12	FILL: moderate yellowish Brown (10YR 5/4) silty clay, very stiff, wet		DT	4	P U S H	NA	3.6/4	4	0.0	
575	13										
574	14										
573	15										
572	16			DT	5	P U S H	NA	3.6/4	2.5	0.0	
571	17										
570	18										
569	19	moderate yellowish Brown to olive Gray (5Y 4/1)									
568											

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number CS-SB04
Page 2 of 2
Date 12-8-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
567	21	FILL: moderate yellowish Brown (10YR 5/4) silty clay, very stiff, wet olive Gray to olive Black (5Y 2/1) PEAT (PT), wet		DT	6	PUSH	NA	1.8/4	2	0.0	
566	22										
565	23	olive Gray (5Y 4/1) silty CLAY (CL), trace fine gravel, stiff, wet									
564	24										
563	25			DT	7	PUSH	NA	3.7/4	1.5	0.0	
562	26										
561	27	trace to with fine sandy gravel									
560	28										
559	29			DT	8	PUSH	NA	3.3/4	2.5	0.0	
558	30	with to some fine gravel, stiff to very stiff									
557	31	some to little fine gravel									
556	32										
555	33	little to trace fine gravel		DT	9	PUSH	NA	3.9/4	2	0.0	
554	34										
553	35										
552	36	End of boring at 36' bgs									
	37										
	38										
	39										
	40										
	41										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CS-SB05	
Coordinates: N 376672.6877 E 2559784.4172	Ground Elevation: 587.74	Page: 1 of 1	
Total Depth (feet): 12	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 11-19-08 To: 11-19-08	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
587	1	FILL: dark yellowish Brown (10YR 4/2) sandy silt with coarse gravel, dry		DT	1	PUSH	NA	2.2/4		0.0	Sampled 0-0.5' (SS) (1315)
586	2	FILL: dark yellowish Brown (10YR 4/2) coarse to fine gravel, dry									
585	3										
584	4	FILL: Black (N1) sandy silt, some fine gravel, moist		DT	2	PUSH	NA	3.4/4		0.0	
583	5										
582	6										
581	7	moist to wet									
580	8			DT	3	PUSH	NA	2.8/4		0.0	Sampled 10-10.8' (10108) (1325)
579	9	wet to moist									
578	10										
577	11										
576	12	End of boring at 12' bgs									
	13										
	14										
	15										
	16										
	17										
	18										
	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CS-SB06
Coordinates	**Ground Elevation**	**Page**
N 376683.1162 E 2559984.1451	587.27	1 of 1
Total Depth (feet) 7	**Hole Size (inches)** 3	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 11-19-08	**To** 11-19-08	**Logged By:** Libby Northrip
Reviewed by:		**Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
587	0	FILL: dusky Brown (5YR 2/2) topsoil, dry									Sampled 0-0.5' (SS) (1220). CS-SBDUP001 also collected.
586	1	FILL: dark yellowish Brown (10YR 4/2) silty sand with coarse gravel, dry		DT	1	P U S H	NA	2.6/4		0.0	
585	2										
584	3	dark yellowish Brown to Black (N1), dry to moist									
583	4	FILL: Black (N1) silty gravel, wet									
582	5			DT	2	P U S H	NA	1.4/3		0.0	Sampled 4.4-5.4' (4454) (1225)
581	6										
	7	End of boring at 7' bgs - refusal									
	8										
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CS-SB07
Coordinates	**Ground Elevation**	**Page**
N 376693.5447 E 2560183.8731	587.72	1 of 1
Total Depth (feet) 8	**Hole Size (inches)** 3	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 11-20-08	**To** 11-20-08	**Logged By:** Libby Northrip
Reviewed by:		**Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
587	1	FILL: pale Brown (5YR 5/2) sandy silt with coarse gravel, dry		DT	1	PUSH	NA	4/4		0.0	Sampled 0-0.5' (SS) (0840). CS-SBDUP002 also collected.
586	2										
585	3	pale Brown to yellowish Gray (5Y 8/1) yellowish Gray to dark yellowish Brown (10YR 4/2)									
584	4										
583	5	FILL: dusky Brown (5YR 2/2) coarse to fine coal and coke fragments, dry		DT	2	PUSH	NA	2.5/4		0.0 ▽	Sampled 5-6' (0506) (0850)
582	6	dry to saturated									
581	7										
580	8	End of boring at 8' bgs									
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CS-SB08
Coordinates	**Ground Elevation**	**Page**
N 376578.0364 E 2559889.4653	588.29	1 of 2
Total Depth (feet) 36	**Hole Size (inches)** 2	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 12-8-08	**To** 12-8-08	**Logged By:** Libby Northrip
Reviewed by:		**Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
588	0	FILL: grayish Brown (5YR 3/2) topsoil with coarse gravel, dry									Sampled 0-0.5' (SS) (1000)
587	1	FILL: coarse to fine gravel and concrete fragments, dry		DT	1	P U S H	NA	3.3/4		0.0	
586	2										
585	3										
584	4	pale yellowish Brown (10YR 6/2) sandy silt with coarse gravel, dry		DT	2	P U S H	NA	1.6/4		0.0	Sampled 4-5' (0405) (1040)
583	5										
582	6										
581	7										
580	8	pale yellowish Brown to olive Black (5Y 2/1), some fine gravel, dry to wet		DT	3	P U S H	NA	1.3/4		0.0	
579	9										
578	10										
577	11	moderate yellowish Brown (10YR 5/4) clayey SILT (ML), some fine gravel, wet		DT	4	P U S H	NA	2.4/4		0.0	
576	12										
575	13										
574	14										
573	15	olive Gray (5Y 4/1) silty CLAY (CL), some fine gravel, very stiff, wet		DT	5	P U S H	NA	3.2/4	3.5	0.0	
572	16										
571	17										
570	18										
569	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number CS-SB08
Page 2 of 2
Date 12-8-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
568	21	olive Gray (5Y 4/1) silty CLAY (CL), some fine gravel, very stiff, wet some to trace fine gravel		DT	6	P U S H	NA	3.9/4	4	0.0	
567											
566	22										
565	23										
564	24			DT	7	P U S H	NA	3.6/4	3.5	0.0	
563	25										
562	26										
561	27										
560	28			DT	8	P U S H	NA	3.9/4	3.5	0.0	
559	29										
558	30										
557	31										
556	32			DT	9	P U S H	NA	3.4/4		0.0	
555	33										
554	34										
553	35										
	36	End of boring at 36' bgs									
	37										
	38										
	39										
	40										
	41										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CS-SB09	
Coordinates: N 376589.2841 E 2560089.1504	Ground Elevation: 588.89	Page: 1 of 1	
Total Depth (feet): 7	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 11-19-08 To: 11-19-08	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
588	1	FILL: dark yellowish Brown (10YR 4/2) sandy silt with coarse gravel, dry		DT	1	PUSH	NA	3.2/4		0.0	Sampled 0-0.5' (SS) (1510)
587	2	little brick fragments									
586	3	dark yellowish Brown to Black (N1), with asphalt, dry to moist									
585	4										
584	5			DT	2	PUSH	NA	2.9/3		0.0	
583	6										Sampled 6-7' (0607) (1520)
582	7	End of boring at 7' bgs - refusal									
	8										
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CS-SB10
Coordinates	**Ground Elevation**	**Page**
N 376472.9582 E 2559794.8155	590.03	1 of 1
Total Depth (feet) 6	**Hole Size (inches)** 3	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 11-20-08	**To** 11-20-08	**Logged By:** Libby Northrip
Reviewed by:		**Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
589	1	FILL: dusky yellowish Brown (10YR 2/2) topsoil with coarse gravel, dry		DT	1	PUSH	NA	3.9/4		0.0	Sampled 0-0.5' (SS) (1440)
588	2	FILL: dusky yellowish Brown (10YR 2/2) coarse to fine gravel, dry									
587	3	FILL: dusky yellowish Brown (10YR 2/2) silty sand, trace fine gravel, dry yellowish Gray (5Y 8/1)									
586	4	coarse to fine gravel and concrete fragments		DT	2	PUSH	NA	1.3/2		0.0	Sampled 4-5' (0405) (1450)
585	5										
	6	End of boring at 6' bgs - refusal									
	7										
	8										
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CS-SB11
Coordinates	**Ground Elevation**	**Page**
N 376493.8152 E 2560194.2714	588.78	1 of 1
Total Depth (feet) 12	**Hole Size (inches)** 3	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 11-20-08	**To** 11-20-08	**Logged By:** Libby Northrip
Reviewed by:		**Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
588	1	FILL: dark yellowish Brown (10YR 4/2) silty sand with coarse to fine gravel, dry		DT	1	P U S H	NA	3.8/4		0.0	Sampled 0-0.5' (SS) (0800)
587	2										
586	3	dark yellowish Brown to dusky Brown (5YR 2/2)									
585	4										
584	5	FILL: Black (N1) coarse to fine coal and coke fragments		DT	2	P U S H	NA	3.1/4		0.0	
583	6										
582	7										
581	8	FILL: olive Gray (5Y 4/1) silty clay with coarse gravel, dry		DT	3	P U S H	NA	3.6/4		0.0	Sampled 10-11' (1011) (0810)
580	9										
579	10										
578	11	FILL: olive Gray (5Y 4/1) coarse gravel with clay, saturated									
577	12	End of boring at 12' bgs									
	13										
	14										
	15										
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CS-SB12	
Coordinates: N 376425.3539 E 2560244.4805	Ground Elevation: 587.59	Page: 1 of 1	
Total Depth (feet): 5	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 11-20-08	To: 11-20-08	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
587	0	FILL: dark yellowish Brown (10YR 4/2) silty sand, dry				P U S H					Sampled 0-0.5' (SS) (0915). MS/MSD also collected.
586	2	some coarse gravel		DT	1		NA	3.9/4		0.0	
585	3										
584	4										
583	5	FILL: Black (N1) coarse to fine coal and coke fragments, moist moist to saturated End of boring at 5' bgs - refusal		DT	2	P S H	NA	1/1		0.0	Sampled 4-5' (0405) (0930)
	6										
	7										
	8										
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898	Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CS-SB13
	Coordinates: N 376388.737 E 2560099.6217	Ground Elevation: 589.09	Page: 1 of 1
	Total Depth (feet): 2 / Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 11-20-08	To: 11-20-08 / Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
588	1	FILL: dark yellowish Brown (10YR 4/2) silty sand, dry		DT	1	PUSH	NA	1.8/2		0.0	Sampled 0-0.5' (SS) (1000)
	2	some coarse gravel End of boring at 2' bgs - refusal									
	3										
	4										
	5										
	6										
	7										
	8										
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CS-SB14	
Coordinates: N 376273.2303 E 2559805.244	Ground Elevation: 587.11	Page: 1 of 1	
Total Depth (feet): 12	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 11-21-08 To: 11-21-08	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
586	1	FILL: pale Brown (5YR 5/2) and yellowish Gray (5Y 8/1) coarse to fine gravel, dry		DT	1	P U S H	NA	3.8/4		0.0	Sampled 0-0.5' (SS) (0840)
		FILL: dusky Brown (5YR 2/2) sandy silt, little fine gravel, dry									
585	2	dusky Brown to moderate Brown (5YR 3/4), little fine to little coarse gravel, dry to moist									
584	3										
583	4	FILL: olive Black (5Y 2/1) silty clay, little coarse gravel, moist		DT	2	P U S H	NA	3.3/4		0.0	
582	5										
581	6										
580	7	little to with coarse gravel									
579	8			DT	3	P U S H	NA	2.9/4		0.0	Sampled 8-9' (0809) (0850)
578	9	FILL: olive Black (5Y 2/1) gravelly sand, saturated									
577	10	FILL: olive Black (5Y 2/1) silt, some coarse gravel, saturated									
576	11										
	12	End of boring at 12' bgs									
	13										
	14										
	15										
	16										
	17										
	18										
	19										

Depth to water while drilling ▽

Depth to water after drilling ▼

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CS-SB15
Coordinates	**Ground Elevation**	**Page**
N 376283.6588 E 2560004.972	588.05	1 of 2
Total Depth (feet) / **Hole Size (inches)**	**Driller (s)**	
36 / 2	Eduardo DeAlba	
Drilling Rig	**Drilling Company**	
Geoprobe 6610DT	GeoServe, Inc.	
Date / **To** / **Logged By:**	**Reviewed by:**	**Approved by:**
12-8-08 / 12-8-08 / Libby Northrip		

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
587	1	FILL: pale yellowish Brown (10YR 6/2) topsoil, dry									Sampled 0-0.5' (SS) (1210)
586	2	FILL: pale yellowish Brown (10YR 6/2) sandy silt, dry		DT	1	PUSH	NA	3.8/4		0.0	
585	3										
584	4	pale yellowish Brown to olive Black (5Y 2/1), some fine gravel									
583	5										
582	6			DT	2	PUSH	NA	4/4		0.0	
581	7	FILL: olive Gray (5Y 4/1) silty clay, trace fine gravel, moist									
580	8										
579	9										Sampled 8-10' (0810) (1220)
578	10			DT	3	PUSH	NA	3.2/4		0.0	▽ Depth to water while drilling
577	11	olive Gray to olive Black (5Y 2/1), trace to little fine gravel, moist to wet									▼ Depth to water after drilling
576	12										
575	13			DT	4	PUSH	NA	1.1/4		0.0	
574	14										
573	15										
572	16										
571	17			DT	5	PUSH	NA	0.4/4		0.0	
570	18										
569	19										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number CS-SB15
Page 2 of 2
Date 12-8-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
567	21	FILL: olive Gray (5Y 4/1) silty clay, trace fine gravel, moist olive Black to olive Gray (5Y 4/1), little to trace fine gravel									
566	22	PEAT (PT), wet		DT	6	PUSH	NA	3.8/4		0.0	
565	23										
564	24										
563	25			DT	7	PUSH	NA	3.9/4		0.0	
562	26										
561	27	olive Gray (5Y 4/1) silty SAND (SM), trace fine gravel, wet									
560	28										
559	29			DT	8	PUSH	NA	3.9/4		0.0	
558	30										
557	31										
556	32	olive Gray (5Y 4/1) clayey SILT (ML), wet									
555	33										
554	34	olive Gray (5Y 4/1) silty CLAY (CL), wet		DT	9	PUSH	NA	2.9/4		0.0	
553	35										
	36	End of boring at 36' bgs									
	37										
	38										
	39										
	40										
	41										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CS-SB16
Coordinates	**Ground Elevation**	**Page**
N 376294.0873 E 2560204.6999	587.87	1 of 1
Total Depth (feet) 6.5	**Hole Size (inches)** 3	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 11-20-08	**To** 11-20-08	**Logged By:** Libby Northrip
Reviewed by:		**Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
587	1	FILL: dark yellowish Brown (10YR 4/2) silty sand, dry									Sampled 0-0.5' (SS) (1020)
586	2	FILL: dusky Brown (5YR 2/2) sandy silt, dry		DT	1	PUSH	NA	3.6/4		0.0	
585	3										Sampled 3-4' (0304) (1040)
584	4	dry to saturated									▽ Depth to water while drilling
583	5			DT	2	PUSH	NA	1.8/2.5		0.0	▼ Depth to water after drilling
582	6										
	7	End of boring at 6.5' bgs - refusal									
	8										
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CS-SB17	
Coordinates: N 376251.5731 E 2559902.5982	Ground Elevation: 588.35	Page: 1 of 1	
Total Depth (feet): 12	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 11-21-08	To: 11-21-08	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
588	0	FILL: dusky Brown (10YR 2/2) sandy silt with coarse gravel, dry		DT	1	P U S H	NA	3.8/4		0.8	Sampled 0-0.5' (SS) (0800)
587	1	FILL: yellowish Gray (5Y 8/1) coarse to fine gravel, dry									
586	2	FILL: moderate Brown (5YR 3/4) sandy silt with coarse gravel, moist									
585	3										
584	4			DT	2	P U S H	NA	2.7/4		0.0	
583	5	FILL: olive Black (5Y 2/1) silty clay, moist									
582	6										
581	7										
580	8	with coarse gravel		DT	3	P U S H	NA	3.4/4		0.0	Sampled 8-9' (0809) (0820)
579	9	FILL: coarse to fine gravel, saturated									
578	10	FILL: olive Black (5Y 2/1) silt, some coarse gravel, saturated									
577	11										
	12	End of boring at 12' bgs									
	13										
	14										
	15										
	16										
	17										
	18										
	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CS-SB18	
Coordinates: N 376073.5024 E 2559815.6725	Ground Elevation: 587.48	Page: 1 of 1	
Total Depth (feet): 12	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 11-21-08 To: 11-21-08	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
587	0	FILL: dusky Brown (5YR 2/2) topsoil, dry									Sampled 0-0.5' (SS) (1220). MS/MSD also collected.
	1	gravel									
586		coarse to fine brick fragments									
	2	FILL: dusky Brown (5YR 2/2) sandy silt with coarse gravel, dry		DT	1	PUSH	NA	3.5/4		0.0	
585	3										
584	4										
583	5	olive Gray (5Y 4/1) coarse to fine gravel (4.4-5)									
582	6			DT	2	PUSH	NA	1.2/4		0.0	
581		FILL: dusky Brown (5YR 2/2) silt, little fine gravel, moist									
580	7										
579	8										Sampled 8-9' (0708) (1240)
	9	FILL: dusky Brown (5YR 2/2) silty sand, little fine gravel, wet wet to saturated									
578	10			DT	3	PUSH	NA	4.0/4		0.0	
577		FILL: dusky Brown (5YR 2/2) silt, saturated									
576	11										
	12	End of boring at 12' bgs									
	13										
	14										
	15										
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CS-SB19
Coordinates	**Ground Elevation**	**Page**
N 376083.8706 E 2560015.4036	587.29	1 of 1
Total Depth (feet) 8	**Hole Size (inches)** 3	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 11-21-08 **To** 11-21-08	**Logged By:** Libby Northrip	**Reviewed by:** **Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
587	0	FILL: dusky Brown (5YR 2/2) sandy silt, with coarse gravel, dry		DT	1	P U S H	NA	3.6/4		0.0	Sampled 0-0.5' (SS) (1025)
586	1										
585	2	dusky Brown to moderate Brown (5YR 3/4)									
584	3										
583	4	FILL: olive Black (5Y 2/1) silty clay, moist		DT	2	P U S H	NA	3.9/4		0.0	Sampled 4-5' (0405) (1035)
582	5	moist to saturated									
581	6										
580	7										
	8	End of boring at 8' bgs									
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CS-SB20	
Coordinates: N 375978.8526 E 2559920.7508	Ground Elevation: 586.31	Page: 1 of 1	
Total Depth (feet): 4	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 11-21-08 To: 11-21-08	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
586	0	FILL: dusky Brown (5YR 2/2) sandy silt, with coarse gravel, dry		DT	1	P U S H	NA	2.8/4		0.0	Sampled 0-0.5' (SS) (1100). CS-SBDUP003 also collected.
585	1										
584	2	dusky Brown to moderate Brown (5YR 3/4)									
583	3										
	4	End of boring at 4' bgs - refusal									
	5										
	6										
	7										
	8										
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CS-SB21	
Coordinates: N 375873.7744 E 2559826.101	Ground Elevation: 587.23	Page: 1 of 1	
Total Depth (feet): 12	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 11-21-08 To: 11-21-08	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
587	0	FILL: olive Black (5Y 2/1) sandy silt, some coal fragments, dry		DT	1	P U S H	NA	2.8/4		0.0	Sampled 0-0.5' (SS) (1130)
586	1										
585	2	some coarse to fine gravel									
584	3										
583	4			DT	2	P U S H	NA	2.3/4		0.0	
582	5	dry to moist									
581	6	moist to wet									
580	7	FILL: olive Black (5Y 2/1) gravelly sand, saturated									Sampled 7-8' (0708) (1140)
579	8			DT	3	P U S H	NA	1.1/4		0.0	
578	9										
577	10										
576	11										
	12	End of boring at 12' bgs									
	13										
	14										
	15										
	16										
	17										
	18										
	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CS-SB22	
Coordinates: N 376974.674 E 2559817.0737	Ground Elevation: 587.33	Page: 1 of 1	
Total Depth (feet): 12	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 11-21-08 To: 11-21-08	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
				SAMPLING							▽ Depth to water while drilling; ▼ Depth to water after drilling
587	0	FILL: pale Brown (5YR 5/2) topsoil with coarse gravel, dry		DT	1	P U S H	NA	3.9/4		0.0	
586	1	FILL: yellowish Gray (5Y 8/1) coarse to fine gravel									
585	2	FILL: dusky Brown (5YR 2/2) silty sand, some fine gravel, dry									
584	3										
583	4	FILL: moderate Brown (5YR 4/4) silty clay, trace coarse gravel, moist		DT	2	P U S H	NA	3.5/4		0.0	
582	5										
581	6	FILL: olive Black (5Y 2/1) sandy silt, little fine gravel, moist									
580	7										
579	8	moist to saturated		DT	3	P U S H	NA	2.7/4		22.4	
578	9	sheen, moderate petroleum odor (9-9.5)									
577	10										
576	11										
	12	End of boring at 12' bgs									
	13										
	14										
	15										
	16										
	17										
	18										
	19										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	CS-SB23
Coordinates	**Ground Elevation**	**Page**
N 376486.0928 E 2560330.639	586.80	1 of 2
Total Depth (feet) / **Hole Size (inches)**	**Driller (s)**	
36 / 2	Eduardo DeAlba	
Drilling Rig	**Drilling Company**	
Geoprobe 6610DT	GeoServe, Inc.	
Date / **To** / **Logged By:**	**Reviewed by:**	**Approved by:**
12-10-08 / 12-10-08 / Libby Northrip		

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
586	1	FILL: pale yellowish Brown (10YR 6/2) topsoil with coarse gravel, dry									▽ Depth to water while drilling
		FILL: dusky Brown (5YR 2/2) sandy silt, dry									▼ Depth to water after drilling
585	2			DT	1	PUSH	NA	1.8/4		0.0	
584	3	moderate yellowish Brown (10YR 5/4) clayey silt, dry									
583	4										
582	5			DT	2	PUSH	NA	1.3/4		0.0	
581	6										
580	7										
579	8	moderate yellowish Brown to pale Brown (10YR 6/2), trace fine gravel, dry to wet								▼	
578	9										
577	10			DT	3	PUSH	NA	1.9/4	1.5	0.0	
576	11										
575	12										
574	13										
573	14	PEAT (PT)		DT	4	PUSH	NA	1.8/4	2	0.0	
572	15	olive Gray (5Y 4/1) silty CLAY (CL), trace fine gravel, stiff, wet									
571	16										
570	17			DT	5	PUSH	NA	2.9/4	2	0.0	
569	18										
568	19										
567											

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number CS-SB23
Page 2 of 2
Date 12-10-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
566	21	olive Gray (5Y 4/1) silty CLAY (CL), trace fine gravel, stiff, wet									
565	22			DT	6	PUSH	NA	3.8/4	2	0.0	
564	23										
563	24										
562	25										
561	26			DT	7	PUSH	NA	3.8/4	2.5	0.0	
560	27	stiff to very stiff									
559	28	olive Gray to light olive Gray (5Y 6/1), very stiff to soft, wet to saturated									
558	29										
557	30			DT	8	PUSH	NA	3.9/4	1.5	0.0	
556	31	soft to stiff									
555	32										
554	33										
553	34			DT	9	PUSH	NA	3.6/4	2	0.0	
552	35										
551	36										
	36	End of boring at 36' bgs									Boring advanced adjacent to CS-DS06 so same coordinates and elevation used for both.
	37										
	38										
	39										
	40										
	41										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CS-SB24	
Coordinates: N 376155.6298 E 2560208.708	Ground Elevation: 587.06	Page: 1 of 2	
Total Depth (feet): 36	Hole Size (inches): 2	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 12-10-08 To: 12-10-08	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
586	1	FILL: dusky Brown (5YR 2/2) topsoil with coarse gravel, dry									
585	2	FILL: dark yellowish Brown (10YR 4/2) sandy silt, dry		DT	1	PUSH	NA	3.0/4		0.0	
584	3	dark yellowish Brown to olive Black (5Y 2/1)									
583	4										
582	5			DT	2	PUSH	NA	2.4/4		0.0	
581	6	FILL: dark yellowish Brown (10YR 4/2) clayey silt, dry									
580	7										
579	8										
578	9	dark yellowish Brown (10YR 4/2) silty CLAY (CL), some coarse to fine sand, some fine gravel, stiff, moist		DT	3	PUSH	NA	2.5/4	1.5	0.0	
577	10										
576	11										
575	12	dark yellowish Brown to olive Gray (5Y 4/1), some fine to no gravel		DT	4	PUSH	NA	3.8/4	1.5	0.0	
574	13										
573	14										
572	15										
571	16										
570	17										
569	18	olive Gray (5Y 4/1) silty SAND (SM), wet		DT	5	PUSH	NA	2.6/4	1	0.0	
568	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number CS-SB24
Page 2 of 2
Date 12-10-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
		olive Gray (5Y 4/1) silty SAND (SM), wet									
566	21	olive Gray (5Y 4/1) silty CLAY (CL), some coarse to fine sand, stiff, wet									
565	22			DT	6	PUSH	NA	1.9/4	1	0.0	
564	23										
563	24										
562	25			DT	7	PUSH	NA	3.9/4	1.5	0.0	
561	26										
560	27										
559	28			DT	8	PUSH	NA	2.7/4	2	0.0	
558	29										
557	30										
556	31										
555	32			DT	9	PUSH	NA	3.9/4	1.5	0.0	
554	33										
553	34										
552	35										
	36	End of boring at 36' bgs									Boring advanced adjacent to CS-DS12 so same coordinates and elevation used for both.
	37										
	38										
	39										
	40										
	41										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CS-SB25	
Coordinates: N 376607.9565 E 2559695.212	Ground Elevation: 591.49	Page: 1 of 3	
Total Depth (feet): 48	Hole Size (inches): 2	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 12-10-08 To: 12-10-08	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
591	1	FILL: dark yellowish Brown (10YR 4/2) topsoil with coarse gravel, dry									
590	2	CONCRETE		DT	1	PUSH	NA	2.6/4		0.0	
589	3	FILL: moderate yellowish Brown (10YR 5/4) silty sand, dry									
588	4	FILL: moderate yellowish Brown (10YR 5/4) sandy silt with coarse gravel, dry									
587	5			DT	2	PUSH	NA	2.7/4		0.0	
586	6										
585	7										
584	8										
583	9	moderate yellowish Brown to olive Gray (5Y 4/1), with coarse to little fine gravel, dry to wet		DT	3	PUSH	NA	2.9/4		0.0	
582	10										
581	11										
580	12	light olive Gray (5Y 6/1) clayey SILT (ML), wet		DT	4	PUSH	NA	2.2/4		0.0	
579	13										
578	14										
577	15										
576	16										
575	17	PEAT (PT)		DT	5	PUSH	NA	2.1/4		0.0	
574	18										
573	19										
572		olive Gray (5Y 4/1) silty CLAY (CL), trace fine gravel, wet									

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number CS-SB25
Page 2 of 3
Date 12-10-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
571	21	olive Gray (5Y 4/1) silty CLAY (CL), trace fine gravel, wet		DT	6	PUSH	NA	3.9/4	3	0.0	
570	22										
569	23										
568	24			DT	7	PUSH	NA	3.6/4	2.5	0.0	
567	25										
566	26										
565	27	olive Gray (5Y 4/1) silty SAND (SM), trace fine gravel, dense, wet		DT	8	PUSH	NA	3.9/4		0.0	
564	28										
563	29										
562	30	dense to loose									
561	31	loose to dense									
560	32	olive Gray (5Y 4/1) silty CLAY (CL), trace fine gravel, very stiff, wet		DT	9	PUSH	NA	4.0/4	2.5	0.0	
559	33										
558	34										
557	35			DT	10	PUSH	NA	3.5/4	4	0.0	
556	36										
555	37										
554	38										
553	39										
552	40			DT	11	P	NA	1.7/4			
551	41										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number CS-SB25
Page 3 of 3
Date 12-10-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
				SAMPLING							
549	42	olive Gray (5Y 4/1) silty CLAY (CL), trace fine gravel, very stiff, wet		DT	11	U S H	NA	1.7/4	2	0.0	
548	43										
547	44			DT	12	P U S H	NA	3.4/4	2	0.0	
546	45										
545	46										
544	47										
	48	End of boring at 48' bgs									Boring advanced adjacent to CS-DS13 so same coordinates and elevation used for both.
	49										
	50										
	51										
	52										
	53										
	54										
	55										
	56										
	57										
	58										
	59										
	60										
	61										
	62										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: CS-SB26	
Coordinates: N 375982.9674 E 2560155.323	Ground Elevation: 587.05	Page: 1 of 2	
Total Depth (feet): 36	Hole Size (inches): 2	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 12-9-08	To: 12-9-08	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
		FILL: dusky Brown (5YR 2/2) topsoil, dry									▽ Depth to water while drilling; ▼ Depth to water after drilling
586	1	FILL: dusky Brown (5YR 2/2) sandy silt, dry									
585	2			DT	1	PUSH	NA	3.9/4		0.0	
584	3										
583	4	dusky Brown to olive Black (5Y 2/1)									
582	5										
581	6	olive Black to moderate yellowish Brown (10YR 5/4)		DT	2	PUSH	NA	2.2/4		0.0	
580	7	PEAT (PT), wet									
579	8										▼
578	9										
577	10			DT	3	PUSH	NA	0/4		0.0	
576	11	olive Gray (5Y 4/1) clayey SILT (ML), wet									
575	12										
574	13										
573	14			DT	4	PUSH	NA	3.7/4		0.0	
572	15										
571	16										
570	17										
569	18			DT	5	PUSH	NA	2.7/4		0.0	
568	19										
		olive Gray (5Y 4/1) silty SAND (SM), wet									

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number CS-SB26
Page 2 of 2
Date 12-9-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
566	21	olive Gray (5Y 4/1) silty SAND (SM), wet		DT	6	PUSH	NA	2.7/4		0.0	
565	22										
564	23										
563	24			DT	7	PUSH	NA	0.6/4		0.0	
562	25										
561	26										
560	27	olive Gray (5Y 4/1) silty CLAY (CL), trace fine gravel, stiff, wet		DT	8	PUSH	NA	2.6/4		0.0	
559	28										
558	29										
557	30			DT	9	PUSH	NA	4.0/4		0.0	
556	31										
555	32										
554	33										
553	34										
552	35										
	36	End of boring at 36' bgs									Boring advanced adjacent to CS-DS14 so same coordinates and elevation used for both.
	37										
	38										
	39										
	40										
	41										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: FT-SB01	
Coordinates: N 375723.8097 E 2559652.7021	Ground Elevation: 587.87	Page: 1 of 2	
Total Depth (feet): 24	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 12-3-08	To: 12-3-08	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
587	1	FILL: dusky Brown (5YR 2/2) topsoil, dry		DT	1	PUSH	NA	3.8/4		0.0	Sampled 0-0.5' (SS) (1340)
586	2	FILL: olive Black (5Y 2/1) sandy silt, some coarse gravel, dry									
585	3										
584	4			DT	2	PUSH	NA	2.7/4		0.0	Sampled 6-7' (0607) (1350)
583	5										
582	6										
581	7										
580	8			DT	3	PUSH	NA	1.3/4		30.1	
579	9	PEAT (PT) wet									
578	10										
577	11	pale yellowish Brown (10YR 6/2) silty SAND (SM), wet									
576	12			DT	4	PUSH	NA	4.0/4		0.0	
575	13										
574	14	pale yellowish Brown (10YR 6/2) silty CLAY (CL), very stiff, wet									
573	15										
572	16			DT	5	PUSH	NA	4.0/4		0.0	
571	17										
570	18										
569	19										
568											

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number FT-SB01
Page 2 of 2
Date 12-3-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	SAMPLING: Sample Interval	SAMPLING: Blow Counts per 0.5'	SAMPLING: N Value	SAMPLING: Sample Recovery/Length (feet)	SAMPLING: Penetrometer (TSF)	PID Reading (PPM)	Remarks
567	21	pale yellowish Brown (10YR 6/2) silty CLAY (CL), very stiff, wet				P					
566	22			DT	6	U	NA	4.0/4		0.0	
565	23					S					
564	24					H					
	24	End of boring at 24' bgs									
	25										
	26										
	27										
	28										
	29										
	30										
	31										
	32										
	33										
	34										
	35										
	36										
	37										
	38										
	39										
	40										
	41										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: FT-SB01A	
Coordinates: N 375723.8097 E 2559652.7021	Ground Elevation: 587.87	Page: 1 of 2	
Total Depth (feet): 36	Hole Size (inches): 2	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 12-4-08	To: 12-4-08	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
587	1	Drilled without sampling from ground surface to 24 feet bgs.									▽ Depth to water while drilling; ▼ Depth to water after drilling
586	2										
585	3										
584	4										
583	5										
582	6										
581	7										
580	8										
579	9										
578	10		NR								
577	11										
576	12										
575	13										
574	14										
573	15										
572	16										
571	17										
570	18										
569	19										
568											

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number FT-SB01A
Page 2 of 2
Date 12-4-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
567	21	Drilled without sampling from ground surface to 24 feet bgs.									
566	22		NR								
565	23										
564	24										
563	25	olive Gray (5Y 4/1) silty CLAY (CL), very stiff, wet									
562	26			DT	1	PUSH	NA	4.0/4	2.5	0.0	
561	27										
560	28										
559	29										
558	30			DT	2	PUSH	NA	4.0/4	2.5	0.0	
557	31										
556	32										
555	33										
554	34			DT	3	PUSH	NA	4.0/4	3.5	0.0	
553	35										
552	36										
	36	End of boring at 36' bgs									Boring advanced adjacent to FT-SB01 so same coordinates and elevation used for both.
	37										
	38										
	39										
	40										
	41										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: FT-SB02	
Coordinates: N 375619.6096 E 2559354.135	Ground Elevation: 592.14	Page: 1 of 1	
Total Depth (feet): 12	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 11-24-08 To: 11-24-08	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
592	0	FILL: dusky Brown (5YR 2/2) topsoil, dry		DT	1	P U S H	NA	2.7/4		0.0	Sampled 0-0.5' (SS) (0930)
591	1	FILL: dusky Brown (5YR 2/2) silty sand with fine gravel, dry									
		dusky Brown to moderate Brown (5YR 3/4), dry to moist									
590	2	FILL: olive Black (5Y 2/1) sandy silt with fine gravel, moist									
589	3										
588	4			DT	2	P U S H	NA	1.7/4		0.0	
587	5	FILL: moderate Brown (5YR 4/4) silty clay, trace fine gravel concrete fragments									
586	6										
585	7	olive Black (5Y 2/1) silty clay, trace fine gravel, moist									
584	8			DT	3	P U S H	NA	3.2/4		0.0	Sampled 9-10' (0910) (0950)
583	9	olive Black to moderate Brown (5YR 3/4)									
582	10	moderate yellowish Brown (10YR 5/4) silty sand, saturated									
581	11										
	12	End of boring at 12' bgs									
	13										
	14										
	15										
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	FT-SB03
Coordinates	**Ground Elevation**	**Page**
N 375622.4162 E 2559554.1153	589.53	1 of 1
Total Depth (feet) 12	**Hole Size (inches)** 3	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 11-24-08	**To** 11-24-08	**Logged By:** Libby Northrip
Reviewed by:		**Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
589	1	FILL: dusky Brown (5YR 2/2) topsoil with coarse gravel, dry		DT	1	PUSH	NA	4.0/4		0.0	Sampled 0-0.5' (SS) (0830)
588	2										
587	3										
586	4	FILL: olive Black (5Y 2/1) sandy silt, moist		DT	2	PUSH	NA	3.4/4		0.0	
585	5										
584	6										
583	7										
582	8			DT	3	PUSH	NA	2.8/4		0.0	Sampled 8-9' (0809) (0845)
581	9	moist to saturated									
580	10										
579	11										
578	12	End of boring at 12' bgs									
	13										
	14										
	15										
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: FT-SB04	
Coordinates: N 375625.2229 E 2559754.0956	Ground Elevation: 585.28	Page: 1 of 1	
Total Depth (feet): 12	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 11-24-08 To: 11-24-08	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
585	0	FILL: dusky Brown (5YR 2/2) topsoil, dry									Sampled 0-0.5' (SS) (1340)
584	1	FILL: olive Black (5Y 2/1) coal and coke fragments, dry									
583	2	with coarse gravel		DT	1	P U S H	NA	3.4/4		0.0	
582	3										
581	4	FILL: silty sand, moist									Sampled 4-5' (0405) (1400)
580	5	FILL: olive Black (5Y 2/1) gravelly sand, wet									
579	6			DT	2	P U S H	NA	1.7/4		0.0	
578	7	PEAT (PT), wet									
577	8										
576	9										
575	10	olive Gray (5Y 4/1) silty SAND (SM), wet		DT	3	P U S H	NA	3.2/4		9.5	
574	11										
	12	End of boring at 12' bgs									
	13										
	14										
	15										
	16										
	17										
	18										
	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: FT-SB05	
Coordinates: N 375555.8288 E 2559860.1972	Ground Elevation: 585.28	Page: 1 of 1	
Total Depth (feet): 12	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 11-24-08 To: 11-24-08	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
585	0	FILL: dusky Brown (5YR 2/2) topsoil, dry		DT	1	P U S H	NA	3.1/4		0.0	Sampled 0-0.5' (SS) (1420). MS/MSD sample also collected.
584	1	FILL: coarse to fine gravel, dry									
		FILL: olive Black (5Y 2/1) sandy silt, dry									
583	2										
582	3										
	4	FILL: moderate yellowish Brown (10YR 5/4) silt, moist		DT	2	P U S H	NA	2.6/4		0.0	Sampled 4-5' (0405) (1440)
581	5										
580	6	FILL: olive Black (5Y 2/1) gravelly sand, little brick, wet									
579	7										
578	8	olive Gray (5Y 4/1) sandy SILT (ML), some fine gravel, trace wood, saturated		DT	3	P U S H	NA	1.3/4		0.0	
577	9										
576	10										
575	11										
574	12	End of boring at 12' bgs									
	13										
	14										
	15										
	16										
	17										
	18										
	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: FT-SB06	
Coordinates: N 375730.4429 E 2558602.8692	Ground Elevation: 590.65	Page: 1 of 1	
Total Depth (feet): 12	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 11-24-08 To: 11-24-08	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
590	0	FILL: dusky Brown (5YR 2/2) topsoil, dry									Sampled 0-0.5' (SS) (1000). FT-SBDUP001 also collected.
	1	FILL: dusky Brown (5YR 2/2) silty sand with fine gravel, dry									
589	2	FILL: olive Black (5Y 2/1) sandy silt with fine gravel, moist		DT	1	PUSH	NA	3.0/4		0.0	
588	3										
587	4										
586	5			DT	2	PUSH	NA	2.0/4		0.0	
585	6										
584	7	moderate yellowish Brown (10YR 5/4) silty sand with fine gravel, moist									
583	8										
582	9	moist to saturated									Sampled 8-9' (0809) (1010)
581	10			DT	3	PUSH	NA	3.0/4		0.0	
580	11										
579	12	End of boring at 12' bgs									
	13										
	14										
	15										
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: FT-SB07	
Coordinates: N 375422.4359 E 2559556.9219	Ground Elevation: 589.76	Page: 1 of 2	
Total Depth (feet): 36	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 12-4-08 To: 12-4-08	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
589	1	FILL: dusky Brown (5YR 2/2) topsoil, dry		DT	1	PUSH	NA	2.6/4		0.0	Sampled 0-0.5' (SS) (1115)
588	2	FILL: dusky Brown (5YR 2/2) sandy silt, dry									
587	3										
586	4			DT	2	PUSH	NA	3.3/4		0.0	
585	5										
584	6	FILL: clayey silt									
583	7										
582	8			DT	3	PUSH	NA	3.0/4		0.0	Sampled 9-11' (0911) (1130)
581	9	PEAT (PT), moist									
580	10										
579	11	olive Gray (5Y 4/1) silty SAND (SM), moist									
578	12	moist to wet		DT	4	PUSH	NA	4.0/4	2.5	0.0	Drilled to 12 feet using large-diameter dual tube and switched to small diameter dual-tube for remainder of boring.
577	13										
576	14	olive Gray (5Y 4/1) clayey SILT (ML)									
575	15	olive Gray (5Y 4/1) silty CLAY (CL), trace fine gravel, very stiff, wet									
574	16										
573	17			DT	5	PUSH	NA	4.0/4	2.5	0.0	
572	18										
571	19										
570											

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number FT-SB07
Page 2 of 2
Date 12-4-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
569	21	olive Gray (5Y 4/1) silty CLAY (CL), trace fine gravel, very stiff, wet									
568	22			DT	6	PUSH	NA	4.0/4	2	0.0	
567	23										
566	24										
565	25	trace to some fine gravel, very stiff to hard									
564	26			DT	7	PUSH	NA	3.6/4	4	0.0	
563	27										
562	28										
561	29										
560	30	some to trace fine gravel, hard to very stiff		DT	8	PUSH	NA	4.0/4	2.5	0.0	
559	31										
558	32										
557	33										
556	34			DT	9	PUSH	NA	4.0/4	3	0.0	
555	35										
554	36										
	36	End of boring at 36' bgs									
	37										
	38										
	39										
	40										
	41										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	FT-SB08
Coordinates	**Ground Elevation**	**Page**
N 375495.4138 E 2559756.9023	586.01	1 of 1
Total Depth (feet) 12	**Hole Size (inches)** 3	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 11-25-08	**To** 11-25-08	**Logged By:** Libby Northrip
Reviewed by:		**Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
585	1	FILL: dusky Brown (5YR 2/2) topsoil with coarse gravel, dry									Sampled 0-0.5' (SS) (1300)
584	2	FILL: dusky Brown (5YR 2/2) silty sand, dry		DT	1	PUSH	NA	3.2/4		0.0	
583	3										
582	4	dusky Brown to moderate Brown (5YR 4/4), trace fine gravel									
581	5										Sampled 4.6-5.6' (4656) (1315)
580	6			DT	2	PUSH	NA	1.6/4		0.0	
579	7										
578	8	moderate Brown to olive Black (5Y 2/1)									
577	9	olive Black (5Y 2/1) sandy GRAVEL (GWS), saturated									
576	10			DT	3	PUSH	NA	2.8/4		0.0	
575	11	olive Gray (5Y 4/1) silty SAND (SM), trace fine gravel, saturated									
	12	End of boring at 12' bgs									
	13										
	14										
	15										
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: FT-SB09	
Coordinates: N 375428.0492 E 2559956.8826	Ground Elevation: 584.67	Page: 1 of 1	
Total Depth (feet): 12	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 12-5-08	To: 12-5-08	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
584	0	FILL: dusky Brown (5YR 2/2) topsoil, dry									Sampled 0-0.5' (SS) (1355)
583	1	FILL: dusky Brown (5YR 2/2) sandy silt with coarse gravel, dry		DT	1	PUSH	NA	2.6/4		0.0	
582	2										
581	3										
580	4	with to little coarse gravel		DT	2	PUSH	NA	1.3/4		0.0	Sampled 4-5' (0405) (1410)
579	5										
578	6										
577	7										
576	8	dry to wet		DT	3	PUSH	NA	1.3/4		0.0	
575	9	little to with coarse gravel									
574	10										
573	11										
	12	End of boring at 12' bgs									
	13										
	14										
	15										
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	FT-SB10
Coordinates	**Ground Elevation**	**Page**
N 375323.8491 E 2559658.3154	588.91	1 of 1
Total Depth (feet) 16	**Hole Size (inches)** 3	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 11-24-08	**To** 11-24-08	**Logged By:** Libby Northrip
Reviewed by:		**Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
588	1	FILL: dusky Brown (5YR 2/2) topsoil, dry									Sampled 0-0.5' (SS) (1210)
		FILL: olive Black (5Y 2/1) coal and coke fragments with coarse gravel, dry		DT	1	PUSH	NA	4.0/4		0.0	
587	2										
586	3										
585	4			DT	2	PUSH	NA	2.8/4		0.0	
584	5										
583	6	FILL: olive Black (5Y 2/1) silt, moist									
582	7										
581	8	trace fine gravel		DT	3	PUSH	NA	2.1/4		0.0	
580	9	moderate yellowish Brown (10YR 5/4) PEAT (PT), moist									
579	10										
578	11	olive Gray (5Y 4/1) silty SAND (SM), wet									Sampled 11-12' (1112) (1220)
577	12			DT	4	PUSH	NA	3.1/4		0.0	
576	13										
575	14										
574	15	SILT (ML)									
573	16	End of boring at 16' bgs									
	17										
	18										
	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: FT-SB11	
Coordinates: N 375219.6489 E 2559359.7483	Ground Elevation: 591.97	Page: 1 of 1	
Total Depth (feet): 12	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 11-24-08	To: 11-24-08	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
				SAMPLING							▽ Depth to water while drilling; ▼ Depth to water after drilling
591	1	FILL: dusky Brown (5YR 2/2) topsoil with coarse gravel, dry		DT	1	PUSH	NA	3.5/4		0.0	Sampled 0-0.5' (SS) (1040)
590	2										
589	3										
588	4	FILL: moderate yellowish Brown (10YR 5/4) silty clay, trace fine gravel, moist		DT	2	PUSH	NA	4.0/4		0.0	
587	5										
586	6										
585	7										
584	8			DT	3	PUSH	NA	4.0/4		0.0	
583	9										
582	10										
581	11										Sampled 11-12' (1112) (1050)
580	12	moist to wet End of boring at 12' bgs									
	13										
	14										
	15										
	16										
	17										
	18										
	19										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: FT-SB12	
Coordinates: N 375222.4556 E 2559559.7286	Ground Elevation: 589.12	Page: 1 of 1	
Total Depth (feet): 12	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 11-24-08	To: 11-24-08	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
589	0	FILL: dusky Brown (5YR 2/2) topsoil with coarse gravel, dry		DT	1	PUSH	NA	2.7/4		0.0	Sampled 0-0.5' (SS) (1120)
588	1										
587	2										
586	3	FILL: pale yellowish Brown (10YR 6/2) silty sand, some coarse gravel, dry		DT	2	PUSH	NA	2.9/4		0.0	
585	4										
584	5										
583	6										
582	7										Sampled 7-8' (0708) (1140)
581	8										
580	9	moderate yellowish Brown (10YR 5/4) SILT (ML), wet		DT	3	PUSH	NA	2.6/4		0.0	
579	10	moderate yellowish Brown (10YR 5/4) coarse to fine silty SAND (SM), wet									
578	11										
	12	End of boring at 12' bgs									
	13										
	14										
	15										
	16										
	17										
	18										
	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: FT-SB13	
Coordinates: N 375251.5129 E 2559723.617	Ground Elevation: 586.72	Page: 1 of 1	
Total Depth (feet): 12	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 11-24-08 To: 11-24-08	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
586	0	FILL: dusky Brown (5YR 2/2) topsoil, dry		DT	1	P U S H	NA	3.1/4		0.0	Sampled 0-0.5' (SS) (1300)
585	1	FILL: olive Black (5Y 2/1) coal and coke fragments with coarse gravel, dry									
584	2										
583	3	olive Black (5Y 2/1) sandy silt, moist									Sampled 3-4' (0304) (1320)
582	4	olive Black to pale Brown (5YR 5/2), with coarse gravel, moist to wet		DT	2	P U S H	NA	3.2/4		0.0	
581	5										
580	6	pale Brown to moderate yellowish Brown (10YR 5/4)									
579	7	moderate yellowish Brown to olive Gray (5Y 4/1)									
578	8	PEAT (PT)		DT	3	P U S H	NA	1.3/4		0.0	
577	9	silty SAND (SM)									
576	10										
575	11										
	12	End of boring at 12' bgs									
	13										
	14										
	15										
	16										
	17										
	18										
	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: FT-SB14	
Coordinates: N 375121.0621 E 2559461.1418	Ground Elevation: 589.88	Page: 1 of 2	
Total Depth (feet): 36	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 12-5-08	To: 12-5-08	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
589	1	FILL: dusky Brown (5YR 2/2) topsoil, dry with coarse gravel									Sampled 0-0.5' (SS) (0900)
588	2	FILL: dusky Brown (5YR 2/2) sandy silt, some fine gravel, dry		DT	1	P U S H	NA	2.7/4		0.0	
587	3										
586	4	with coarse gravel									
585	5	FILL: moderate yellowish Brown (10YR 5/4) clayey silt, trace fine gravel, moist		DT	2	P U S H	NA	3.1/4		0.0	
584	6										
583	7										
582	8										
581	9										Sampled 8-10' (0810) (0910)
580	10			DT	3	P U S H	NA	4.0/4	4.5	0.0	▽
579	11	moderate yellowish Brown (10YR 5/4) silty CLAY (CL), hard, wet									
578	12										Drilled to 12 feet using large-diameter dual tube and switched to small diameter dual-tube for remainder of boring.
577	13	moderate yellowish Brown to olive Gray (5Y 4/1), trace fine gravel									
576	14			DT	4	P U S H	NA	3.7/4	4.5	0.0	
575	15										
574	16										
573	17	hard to very stiff									
572	18			DT	5	P U S H	NA	2.7/4	2.5	0.0	
571	19										
570											

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number FT-SB14
Page 2 of 2
Date 12-5-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
569	21	moderate yellowish Brown (10YR 5/4) silty CLAY (CL), hard, wet		DT	6	PUSH	NA	4.0/4	2.5	0.0	
568	22										
567	23										
566	24			DT	7	PUSH	NA	4.0/4	2.5	0.0	
565	25										
564	26										
563	27			DT	8	PUSH	NA	4.0/4	1.5	0.0	
562	28										
561	29	very stiff to stiff									
560	30										
559	31										
558	32			DT	9	PUSH	NA	3.8/4	2.5	0.0	
557	33	stiff to very stiff									
556	34										
555	35										
554	36										
	36	End of boring at 36' bgs									
	37										
	38										
	39										
	40										
	41										

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	FT-SB15
Coordinates	**Ground Elevation**	**Page**
N 375019.6686 E 2559362.555	591.91	1 of 1
Total Depth (feet) 16	**Hole Size (inches)** 3	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 11-25-08 **To** 11-25-08	**Logged By:** Libby Northrip	**Reviewed by:** **Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
591	1	FILL: dusky Brown (5YR 2/2) topsoil, dry		DT	1	PUSH	NA	3.9/4		0.0	Sampled 0-0.5' (SS) (1150)
590	2	FILL: dusky Brown (5YR 2/2) silty sand, trace fine gravel, dry									
589	3										
588	4										
587	5			DT	2	PUSH	NA	3.7/4		0.0	
586	6	moderate yellowish Brown (10YR 5/4) clayey SILT (ML), some fine gravel, moist									
585	7										
584	8			DT	3	PUSH	NA	4.0/4		0.0	Sampled 7-8' (0708) (1200)
583	9										
582	10										
581	11										
580	12			DT	4	PUSH	NA	3.9/4		0.0	
579	13										
578	14										
577	15										
576	16	End of boring at 16' bgs									
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	FT-SB16
Coordinates	**Ground Elevation**	**Page**
N 375022.4753 E 2559562.5353	590.84	1 of 1
Total Depth (feet) 3.5	**Hole Size (inches)** 3	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 11-25-08 **To** 11-25-08	**Logged By:** Libby Northrip	**Reviewed by:** **Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
590	1	FILL: dusky Brown (5YR 2/2) topsoil, with coarse gravel, dry		DT	1	P U S H	NA	2.7/3.5		0.0	Sampled 0-0.5' (SS) (1115). FT-SBDUP003 also collected.
589	2										
588	3										
	4	End of boring at 3.5' bgs - refusal									
	5										
	6										
	7										
	8										
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	FT-SB17
Coordinates	**Ground Elevation**	**Page**
N 375044.5404 E 2559837.517	586.19	1 of 3
Total Depth (feet) 48 / **Hole Size (inches)** 2	Driller (s) Eduardo DeAlba	
Drilling Rig Geoprobe 6610DT	Drilling Company GeoServe Inc.	
Date 10-14-08 To 10-14-08	Logged By: Sindy Panagiotopoulos	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
586	0	FILL: Brown silt, gravel, sand, cinders, brick, slag, crushed concrete, dry		MC	1	PUSH	NA	3.0/4		0.0	Sampled 0-0.5' (SS) (1050)
585	1										
584	2										
583	3										
582	4			MC	2	PUSH	NA	1.8/4			
581	5										
580	6										
579	7										
578	8			MC	3	PUSH	NA	2.0/4			
577	9	Gray coarse SAND (SP) with shell pieces, moist									
576	10										
575	11	Brown PEAT (PT), moist									
574	12			MC	4	PUSH	NA	3.0/4		0.2	Sampled 12-13' (1213) (1110)
573	13										
572	14	Gray coarse to medium SAND (SW), some shell material, wet									
571	15										
570	16			MC	5	PUSH	NA	/4		0.0	
569	17	Gray silty CLAY (CL), soft									
568	18	Gray medium to fine SAND (SW), trace shell material, wet									
567	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number FT-SB17
Page 2 of 3
Date 10-14-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
				SAMPLING							
566		Gray medium to fine SAND (SW), trace shell material, wet									
565	21										
564	22			MC	6	P U S H	NA	/4		0.0	
563	23										
562	24										
561	25										
560	26			MC	7	P U S H	NA	4.0/4		0.0	
559	27										
558	28										
557	29										
556	30	pale Olive CLAY (CL), soft, medium plasticity, moist		MC	8	P U S H	NA	3.2/4	1.5	0.0	
555	31										
554	32										
553	33										
552	34			MC	9	P U S H	NA	3.9/4	1.5		
551	35										
550	36										
549	37										
548	38			MC	10	P U S H	NA	3.8/4	1.5		
547	39										
546	40										
545	41			MC	11	P	NA	3.8/4			

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number FT-SB17
Page 3 of 3
Date 10-14-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
544	42	pale Olive CLAY (CL), soft, medium plasticity, moist		MC	11	USH	NA	3.8/4	2		
543	43										
542	44										
541	45										
540	46	some fine sand, moist to wet		MC	12	PUSH	NA	4.0/4	2	0.0	
539	47										
	48	End of boring at 48' bgs									
	49										
	50										
	51										
	52										
	53										
	54										
	55										
	56										
	57										
	58										
	59										
	60										
	61										
	62										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: FT-SB18A	
Coordinates: N 374819.6883 E 2559365.3616	Ground Elevation: 593.75	Page: 1 of 1	
Total Depth (feet): 16	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 11-25-08	To: 11-25-08	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
593	1	FILL: dusky Brown (5YR 2/2) topsoil, dry		DT	1	PUSH	NA	3.1/4		0.0	Sampled 0-0.5' (SS) (0900)
592	2	FILL: moderate yellowish Brown (10YR 5/4) sandy silt, trace fine gravel, dry									
591	3	CONCRETE									
590	4	FILL: moderate yellowish Brown (10YR 5/4) sandy silt, trace fine gravel, dry		DT	2	PUSH	NA	2.1/4		0.0	Sampled 5-6' (0506) (0910)
589	5										
588	6										
587	7	FILL: wood									
586	8										
585	9	no recovery		DT	3	PUSH	NA	0.7/4		2.2	
584	10										
583	11										
582	12		NR								
581	13			DT	4	PUSH	NA	0/4			
580	14										
579	15										
578	16	End of boring at 16' bgs									
	17										
	18										
	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	FT-SB18B
Coordinates	**Ground Elevation**	**Page**
N 374819.6883 E 2559365.3616	593.75	1 of 1
Total Depth (feet) 16	**Hole Size (inches)** 3	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 11-25-08	**To** 11-25-08	**Logged By:** Libby Northrip
Reviewed by:		**Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
593	1	FILL: dusky Brown (5YR 2/2) topsoil, dry									
		FILL: moderate yellowish Brown (10YR 5/4) sandy silt, some coarse gravel, dry		DT	1	PUSH	NA	3.5/4		0.0	
592	2										
591	3	CONCRETE									
590	4	moderate yellowish Brown (10YR 5/4) silty SAND (SM), trace fine gravel, moist		DT	2	PUSH	NA	3.1/4		0.0	
589	5										
588	6										
587	7			DT	3	PUSH	NA	2.5/4		0.0	
586	8										
585	9										
584	10	moist to wet									
583	11										
582	12	wet to saturated		DT	4	PUSH	NA	2.4/4		0.0	
581	13										
580	14										
579	15										
578	16	End of boring at 16' bgs									Boring advanced adjacent to FT-SB18A so same coordinates and elevation used for both.
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: FT-SB19	
Coordinates: N 374822.495 E 2559565.3419	Ground Elevation: 587.51	Page: 1 of 1	
Total Depth (feet): 16	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 11-25-08	To: 11-25-08	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
587	1	FILL: dark yellowish Brown (10YR 4/2) topsoil with coarse gravel, dry									Sampled 0-0.5' (SS) (0950)
586	2	FILL: dusky Brown (5YR 2/2) sandy silt with coarse gravel, dry		DT	1	PUSH	NA	3.7/4		0.0	
585	3	FILL: pale yellowish Brown (10YR 6/2) silty sand, some fine gravel, dry									
584	4										
583	5	medium light Gray (N6) fine sandy gravel, dry									
582	6	PEAT (PT), little wood		DT	2	PUSH	NA	1.9/4		1.3	Sampled 5-6' (0506) (1000)
581	7										
580	8	no recovery									
579	9										
578	10		NR	DT	3	PUSH	NA	0/4			
577	11										
576	12	olive Gray (5Y 4/1) silty SAND (SM), little fine gravel, saturated									
575	13										
574	14			DT	4	PUSH	NA	2.3/4		0.0	
573	15										
572	16										
	17	End of boring at 16' bgs									
	18										
	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: FT-SB20	
Coordinates: N 374767.9692 E 2559684.1648	Ground Elevation: 586.81	Page: 1 of 1	
Total Depth (feet): 12	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 11-25-08 To: 11-25-08	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
586	1	FILL: dusky Brown (5YR 2/2) topsoil, little coarse gravel, dry		DT	1	P U S H	NA	2.5/4		0.0	Sampled 0-0.5' (SS) (1030)
585	2	FILL: dusky Brown (5YR 2/2) sandy silt, little coarse gravel, dry									
584	3										
583	4	FILL: dark yellowish Brown (10YR 4/2) sandy silt, moist									
582	5	dark yellowish Brown to moderate Brown (5YR 4/4) with coarse gravel		DT	2	P U S H	NA	1.6/4		0.0	
581	6										
580	7	olive Gray (5Y 4/1) silty SAND (SM), trace fine gravel, wet									
579	8										
578	9										Sampled 8-9' (0809) (1040)
577	10	wet to saturated		DT	3	P U S H	NA	3.1/4		0.0	
576	11										
575	12	End of boring at 12' bgs									
	13										
	14										
	15										
	16										
	17										
	18										
	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	FT-SB21
Coordinates	**Ground Elevation**	**Page**
N 374721.1015 E 2559466.7551	588.53	1 of 2
Total Depth (feet) 36	**Hole Size (inches)** 2	**Driller (s)** Eduardo DeAlba
Drilling Rig Geoprobe 6610DT		**Drilling Company** GeoServe, Inc.
Date 12-5-08 **To** 12-5-08	**Logged By:** Libby Northrip	**Reviewed by:** **Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
588	0	FILL: dusky Brown (5YR 2/2) topsoil with coarse gravel, dry									Depth to water while drilling ▽
587	1	FILL: dusky Brown (5YR 2/2) sandy silt, dry		DT	1	PUSH	NA	3.0/4		0.0	Depth to water after drilling ▼
586	2										Sampled 0-0.5' (SS) (1140)
585	3										
584	4			DT	2	PUSH	NA	2.0/4		0.0	
583	5										
582	6										
581	7	moderate yellowish Brown (10YR 5/4) silty SAND (SM), trace fine gravel, moist		DT	3	PUSH	NA	3.0/4		0.0	Sampled 8-10' (0810) (1200)
580	8										
579	9										
578	10	moist to wet									
577	11			DT	4	PUSH	NA	2.0/4		0.0	
576	12										
575	13										
574	14										
573	15			DT	5	PUSH	NA	3.0/4		0.0	
572	16	moderate yellowish Brown to olive Gray (5Y 4/1)									
571	17										
570	18										
569	19										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number FT-SB21
Page 2 of 2
Date 12-5-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
568	21	moderate yellowish Brown (10YR 5/4) silty SAND (SM), trace fine gravel, moist		DT	6	PUSH	NA	2.1/4		0.0	
567	22										
566	23										
565		olive Gray (5Y 4/1) clayey SILT (ML), wet									
564	24			DT	7	PUSH	NA	2.1/4		0.0	
563	25										
562	26										
561	27										
560	28			DT	8	PUSH	NA	2.6/4		0.0	
559	29										
558	30										
557	31										
556	32			DT	9	PUSH	NA	3.7/4		0.0	
555	33										
554	34										
553	35										
	36	End of boring at 36' bgs									
	37										
	38										
	39										
	40										
	41										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: FT-SB22	
Coordinates: N 374659.8514 E 2559441.198	Ground Elevation: 589.25	Page: 1 of 1	
Total Depth (feet): 12	Hole Size (inches): 3	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 11-25-08	To: 11-25-08	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
				SAMPLING							▽ Depth to water while drilling; ▼ Depth to water after drilling
589	0	FILL: dusky Brown (5YR 2/2) topsoil, dry		DT	1	P U S H	NA	2.2/4		0.0	Sampled 0-0.5' (SS) (0820).
588	1	FILL: dusky Brown (5YR 2/2) sandy silt with coarse gravel, dry									
587	2										
586	3										
585	4	with to some coarse gravel		DT	2	P U S H	NA	2.9/4		0.0	
584	5										
583	6										
582	7										
581	8			DT	3	P U S H	NA	2.4/4		0.0	Sampled 8-9' (0809) (0830). FT-SBDUP002 also collected.
580	9	olive Gray (5Y 4/1) silty SAND (SM), trace fine gravel, saturated									
579	10										
578	11										
	12	End of boring at 12' bgs									
	13										
	14										
	15										
	16										
	17										
	18										
	19										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: FT-SB23	
Coordinates: N 375530.5728 E 2560000.872	Ground Elevation: 584.18	Page: 1 of 2	
Total Depth (feet): 36	Hole Size (inches): 2	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 12-10-08 To: 12-10-08	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
584	0	FILL: dusky Brown (5Y 2/2) topsoil, some fine gravel, dry		DT	1	P U S H	NA	2.1/4		0.0	
583	1										
582	2										
581	3	FILL: olive Black (5Y 2/1) sandy silt, dry		DT	2	P U S H	NA	2.6/4		0.0	
580	4										
579	5										
578	6										
577	7	PEAT (PT)		DT	3	P U S H	NA	2.5/4		0.0	
576	8										
575	9										
574	10	olive Gray (5Y 4/1) coarse to fine silty SAND (SM), moist		DT	4	P U S H	NA	1.2/4		0.0	
573	11										
572	12	moist to wet									
571	13										
570	14										
569	15										
568	16	coarse to fine to fine		DT	5	P U S H	NA	1.7/4		0.0	
567	17										
566	18										
565	19	olive Gray (5Y 4/1) clayey SILT (ML), trace fine gravel, wet									

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number FT-SB23
Page 2 of 2
Date 12-10-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
564	21	olive Gray (5Y 4/1) clayey SILT (ML), trace fine gravel, wet		DT	6	PUSH	NA	1.5/4		0.0	
563	22										
562	23	olive Gray (5Y 4/1) silty CLAY (CL), trace fine gravel									
561	24			DT	7	PUSH	NA	1.7/4	1	0.0	
560	25										
559	26										
558	27			DT	8	PUSH	NA	2.3/4	1	0.0	
557	28										
556	29										
555	30			DT	9	PUSH	NA	2.8/4	1	0.0	
554	31										
553	32										
552	33										
551	34										
550	35										
549	36	End of boring at 36' bgs									
	37										
	38										
	39										
	40										
	41										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: FT-SB24	
Coordinates: N 374968.4091 E 2559814.76	Ground Elevation: 586.81	Page: 1 of 2	
Total Depth (feet): 36	Hole Size (inches): 2	Driller (s): Eduardo DeAlba	
Drilling Rig: Geoprobe 6610DT		Drilling Company: GeoServe, Inc.	
Date: 12-10-08 To: 12-10-08	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
586	1	FILL: Black (N1) topsoil, dry									
		FILL: dusky Brown (5YR 2/2) sandy silt, some coarse gravel, dry		DT	1	PUSH	NA	2.8/4		0.0	
585	2										
584	3										
583	4										
582	5			DT	2	PUSH	NA	2.5/4		0.0	
581	6	brick fragments, dry									
		medium dark Gray (N4) coarse to fine sandy gravel, dry									
580	7										
579	8										
578	9			DT	3	PUSH	NA	1.1/4		0.0	
577	10										
576	11										
575	12	slight sewer odor, dry to wet									
574	13										
573	14			DT	4	PUSH	NA	1.2/4		0.0	
572	15										
571	16										
570	17										
569	18			DT	5	PUSH	NA	0.5/4		0.0	
		olive Gray (5Y 4/1) silty SAND (SM), wet									
568	19										
567											

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number FT-SB24
Page 2 of 2
Date 12-10-08

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
566	21	olive Gray (5Y 4/1) silty SAND (SM), wet		DT	6	PUSH	NA	2.2/4		0.0	
565	22										
564	23										
563	24										
562	25			DT	7	PUSH	NA	2.1/4		0.0	
561	26										
560	27										
559	28	PEAT (PT)									
558	29	olive Gray (5Y 4/1) silty SAND (SM), wet		DT	8	PUSH	NA	1.6/4		0.0	
557	30										
556	31										
555	32										
554	33			DT	9	PUSH	NA	2.7/4		0.0	
553	34	olive Gray (5Y 4/1) silty CLAY (CL)									
552	35										
551	36	End of boring at 36' bgs									
	37										
	38										
	39										
	40										
	41										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: MW01	
Coordinates: N 376950.2624 E 2559367.3175	Ground Elevation: 587.29	Page: 1 of 1	
Total Depth (feet): 14.5	Hole Size (inches): 8.25	Driller (s): Alex Plummer	
Drilling Rig: Diedrich D120		Drilling Company: Badger State Drilling Company, Inc.	
Date: 1-26-09	To: 1-26-09	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
587	0	FILL: dusky Brown (5YR 2/2) topsoil, dense, dry									
586	1	FILL: olive Black (5Y 2/1) sandy silt, dense, dry		SS	1	45 19 22 20	41	1.7/2		0.0	Sampled 0-0.5' (SS) (1410). MS/MSD also collected.
585	2										
584	3	olive Black to moderate yellowish Brown (10YR 5/4), little coarse gravel		SS	2	21 17 13 9	30	1.6/2		0.0	Sampled 3-4' (0304) (1430)
583	4	dry to wet									▽ Depth to water while drilling
582	5			SS	3	17 17 100/5	NA	0.7/2		0.0	▼ Depth to water after drilling
581	6	no recovery - wood									
580	7			SS	4	50/0	NA	0/2			
579	8										
578	9	dense to medium dense		SS	5	22 9 9 20	18	0.4/2		0.0	
577	10	little to with coarse gravel									
576	11			SS	6	4 8 7 22	15	0.6/2		0.0	
575	12										
574	13	PEAT (PT), wet		SS	7	10 11 9 6	20	0.6/2		0.0	
573	14										
	15	End of boring at 14' bgs. Overdrill to 14.5' bgs to set sand below well screen at 14' bgs.									
	16										
	17										
	18										
	19										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: MW02	
Coordinates: N 377067.3469 E 2559853.7225	Ground Elevation: 587.67	Page: 1 of 1	
Total Depth (feet): 14.5	Hole Size (inches): 8.25	Driller (s): Alex Plummer	
Drilling Rig: Diedrich D120		Drilling Company: Badger State Drilling Company, Inc.	
Date: 1-19-09 To: 1-19-09	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
587	1	FILL: dusky Brown (5YR 2/2) topsoil, dry		SS	1	200/6	NA	0.8/2		0.0	Sampled 0-0.5' (SS) (1040)
586	2	FILL: dusky Brown (5YR 2/2) sandy silt, some coarse gravel, very dense, dry		SS	2	36 34 21 21	55	1.4/2		0.0	
585	3										
584	4										
583	5	moist to wet		SS	3	26 35 27 31	62	1.5/2		0.0	Sampled 4-5' (0405) (1110). MWDUP003 also collected.
582	6	FILL: olive Gray (5Y 4/1) silty clay, little fine gravel, stiff, wet									
581	7			SS	4	10 6 7 9	13	1.3/2	3	0.0	
580	8										
579	9			SS	5	3 6 11 13	17	0.8/2	2.5	0.0	
578	10	olive Gray to light olive Gray (5Y 6/1)									
577	11			SS	6	3 6 9 13	15	1.6/2	3	0.0	
576	12										
575	13			SS	7	3 9 14 15	23	1.0/2		0.0	
574	14										
	15	End of boring at 14' bgs. Overdrill to 14.5' bgs to set sand below well screen at 14' bgs.									
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	MW03
Coordinates	**Ground Elevation**	**Page**
N 376717.6154 E 2560103.505	587.23	1 of 1
Total Depth (feet) 10	**Hole Size (inches)** 8.25	**Driller (s)** Alex Plummer
Drilling Rig Diedrich D120		**Drilling Company** Badger State Drilling Company, Inc.
Date 1-12-09	**To** 1-12-09	**Logged By:** Libby Northrip
Reviewed by:		**Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
587	0	FILL: dusky Brown (5YR 2/2) topsoil with coarse gravel, extremely dense, dry		SS	1	200/6	NA	0.3/2		0.0	
586	1										
585	2	FILL: olive Gray (5Y 4/1) clayey silt, some coarse gravel, extremely dense, dry		SS	2	200/5	NA	0.6/2		0.0	Sampled 2-2.5' (SS) (1150). Sample collected from below 0-0.5' due to poor surface soil conditions and very hard material.
584	3										
583	4	FILL: dusky Brown (5YR 2/2) sandy silt, some coarse gravel, extremely dense, dry		SS	3	75/3	NA	0.5/2		0.0	
582	5										
581	6			SS	4	24 125/4	NA	0.7/2		0.0	Sampled 6-7' (0607) (1230)
580	7										
579	8	No recovery	NR	SS	5	100/0	NA	0/2			
578	9										
	10	End of boring at 10' bgs.									
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

Depth to water while drilling

Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: MW03B	
Coordinates: N 376723.2118 E 2560111.1504	Ground Elevation: 587.57	Page: 1 of 1	
Total Depth (feet): 16.5	Hole Size (inches): 8.25	Driller (s): Alex Plummer	
Drilling Rig: Diedrich D120		Drilling Company: Badger State Drilling Company, Inc.	
Date: 1-13-09	To: 1-13-09	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
587	1	FILL: coarse gravel, extremely dense		SS	1	200/5	NA	0.5/2		0.0	
586	2	FILL: olive Gray (5Y 4/1) clayey silt, some coarse gravel, extremely dense, dry		SS	2	100/3	NA	0.5/2		0.0	
585	3										
584	4			SS	3	108 31 100/3	NA	1.4/2		0.0	
583	5										
582	6	FILL: olive Gray (5Y 4/1) silty clay, some coarse gravel, hard, moist		SS	4	36 38 91 50	129	1.4/2		0.0	
581	7										
580	8										
579	9	moist to wet wet to saturated		SS	5	13 30 100/3	NA	1.1/2		0.0	▽
578	10	olive Black (5Y 2/1) sandy silt, very dense, wet		SS	6	25 64 14 13	78	0.5/2		0.0	
577	11										
576	12	FILL: olive Gray (5Y 4/1) silty clay, trace fine gravel, very stiff, wet		SS	7	4 9 14 19	23	1.3/2	3	0.0	
575	13										
574	14										
573	15	very stiff to hard		SS	8	5 13 18 24	31	1.4/2		0.0	
572	16										
	17	End of boring at 16' bgs. Overdrill to 16.5' bgs to set sand below well screen at 16' bgs.									
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	MW04
Coordinates	**Ground Elevation**	**Page**
N 376511.2799 E 2560346.955	586.85	1 of 1
Total Depth (feet) 6	**Hole Size (inches)** 8.25	**Driller (s)** Robert Rector
Drilling Rig Diedrich D120		**Drilling Company** Badger State Drilling Company, Inc.
Date 12-16-08 **To** 12-16-08	**Logged By:** Libby Northrip	**Reviewed by:** **Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
586	1	FILL: dusky Brown (5YR 2/2) topsoil with coarse gravel, medium dense, dry		SS	1	9 6 4 8	10	1.5/2		0.0	Sampled 0-0.5' (SS) (0835)
585	2										
584	3	FILL: olive Black (5Y 2/1) sandy silt, some coarse gravel, moist		SS	2	5 50/5	NA	0.6/2		0.0	
583	4	coal fragments									
582	5			SS	3	4 5 50/3	NA	0.8/2		0.0	
581	6	End of boring at 6' bgs - refusal									
	7										
	8										
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: MW04B	
Coordinates: N 376504.7302 E 2560338.1331	Ground Elevation: 587.04	Page: 1 of 1	
Total Depth (feet): 14.5	Hole Size (inches): 8.25	Driller (s): Robert Rector	
Drilling Rig: Diedrich D120		Drilling Company: Badger State Drilling Company, Inc.	
Date: 12-16-08 To: 12-16-08	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
		Drill without sampling to 4 feet bgs									
586	1										
585	2										
584	3										
583	4	FILL: olive Black (5Y 2/1) sandy silt, some coarse gravel, coal fragments, moist									
582	5	moderate yellowish Brown (10YR 5/4) silty CLAY (CL), stiff, moist		SS	1	5 5 5 4	10	1.6/2		0.0	Sampled 4-6' (0406) (1040)
581	6	brown PEAT (PT), moist									
580	7	olive Gray (5Y 4/1) silty SAND (SM), loose, wet		SS	2	3 2 2 2	4	1.2/2		0.0	
579	8	olive Gray (5Y 4/1) silty CLAY (CL), trace fine gravel, very soft, wet									
578	9			SS	3	1 1 1 2	2	0.8/2		0.0	
577	10										
576	11			SS	4	0 0 1 1	1	1.1/2		0.0	
575	12										
574	13			SS	5	0 0 1 2	1	1.1/2		0.0	
573	14										
	15	End of boring at 14' bgs. Overdrill to 14.5' bgs to set sand below well screen at 14' bgs.									
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	MW05
Coordinates	**Ground Elevation**	**Page**
N 376406.1459 E 2559388.5988	589.54	1 of 1
Total Depth (feet) 14.5	**Hole Size (inches)** 8.25	**Driller (s)** Alex Plummer
Drilling Rig Diedrich D120		**Drilling Company** Badger State Drilling Company, Inc.
Date 1-23-09	**To** 1-23-09	**Logged By:** Jason Blazier
Reviewed by:		**Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
589	1	FILL: Black (N1) fine sand, cinders, brick fragments, dense, wet		SS	1	99 37 13 10	50	1.4/2		0.0	Sampled 0-0.5' (SS) (0852)
588	2	dense to medium dense									
587	3			SS	2	10 11 11 17	22	1.6/2		0.0	
586	4										
585	5	FILL: moderate yellowish Brown (10YR 5/4) coarse to fine sand, little fine gravel, very dense, moist moist to wet		SS	3	19 34 28 15	62	1.6/2		0.0	Sampled 4.5-5.5' (4555) (0910)
584	6										
583	7			SS	4	19 28 29 31	57	1.2/2		0.0	
582	8	FILL: Black (N1) fine sand, little coarse sand, little cinders, trace coal fragments, medium dense, saturated									
581	9			SS	5	9 5 5 4	10	0.9/2		0.0	
580	10										
579	11			SS	6	5 5 14 42	19	0.8/2		0.0	
578	12										
577	13			SS	7	22 8 8 6	16	1.3/2		0.0	
576	14	brown PEAT (PT), moist									
	15	End of boring at 14' bgs. Overdrill to 14.5' bgs to set sand below well screen at 14' bgs.									
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	MW06
Coordinates	**Ground Elevation**	**Page**
N 376150.1662 E 2560195.9335	587.30	1 of 1
Total Depth (feet) 15.5	**Hole Size (inches)** 8.25	**Driller (s)** Robert Rector
Drilling Rig Diedrich D120		**Drilling Company** Badger State Drilling Company, Inc.
Date 12-15-08 **To** 12-15-08	**Logged By:** Libby Northrip	**Reviewed by:** **Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
587	0	FILL: dusky Brown (5YR 2/2) topsoil, medium dense, dry		SS	1	11, 13, 11, 6	24	1.7/2		0.0	Sampled 0-0.5' (SS) (1320)
586	1	FILL: dusky Brown (5YR 2/2) sandy silt with coarse gravel, medium dense, moist									
585	2			SS	2	6, 13, 13, 10	26	1.9/2		0.0	
584	3	little coal fragments									
583	4			SS	3	5, 7, 6, 5	13	1.9/2		0.0	
582	5										
581	6	moderate yellowish Brown (10YR 5/4) clayey SILT (ML), little fine gravel, loose, moist		SS	4	2, 2, 4, 3	6	1.7/2		0.0	Sampled 7-8' (0708) (1340)
580	7										
579	8	moderate yellowish Brown to olive Gray (5Y 4/1), loose to very loose, wet		SS	5	1, 0, 0, 1	0	1.6/2		0.0	
578	9										
577	10	some coarse to fine sand		SS	6	1, 0, 1, 0	1	1.7/2		0.0	
576	11										
575	12			SS	7	1, 0, 2, 1	2	1.6/2		0.0	
574	13										
573	14			SS	8	WOH	NA	0.9/1		0.0	
572	15										
	16	End of boring at 15' bgs. Overdrill to 15.5' bgs to set sand below well screen at 15' bgs.									
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: MW07	
Coordinates: N 376217.1322 E 2559691.098	Ground Elevation: 589.81	Page: 1 of 1	
Total Depth (feet): 14.5	Hole Size (inches): 8.25	Driller (s): Robert Rector	
Drilling Rig: Diedrich D120		Drilling Company: Badger State Drilling Company, Inc.	
Date: 12-18-08 To: 12-18-08	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
589	1	FILL: dusky Brown (5YR 2/2) topsoil, medium dense, dry FILL: dusky Brown (5YR 2/2) sandy silt, little coarse gravel, medium dense, dry		SS	1	15 9 14 28	23	2.0/2		0.0	Sampled 0-0.5' (SS) (1120). MWDUP001 also collected.
588	2										
587	3	wood (2.5-3) dusky Brown to olive Black (5Y 2/1)		SS	2	8 32 15 13	47	1.5/2		0.0	
586	4										
585	5			SS	3	7 6 9 5	15	1.8/2		0.0	Sampled 5-6' (0506) (1150)
584	6										
583	7	medium dense to loose, dry to wet		SS	4	4 5 2 4	7	1.7/2		1.0	▽ Depth to water while drilling
582	8	sheen, moderate odors									
581	9	staining		SS	5	3 4 3 3	7	1.1/2		22.4	▼ Depth to water after drilling
580	10	slight odors, loose to very loose									
579	11			SS	6	2 1 1 1	2	0.9/2		8.2	
578	12										
577	13	brown PEAT (PT), very loose, moist		SS	7	1 0 1 0	1	1.3/2		2.6	
576	14										
	15	End of boring at 14' bgs. Overdrill to 14.5' bgs to set sand below well screen at 14' bgs.									
	16										
	17										
	18										
	19										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: MW08	
Coordinates: N 375877.4676 E 2560027.667	Ground Elevation: 586.44	Page: 1 of 1	
Total Depth (feet): 15.5	Hole Size (inches): 8.25	Driller (s): Robert Rector	
Drilling Rig: Diedrich D120		Drilling Company: Badger State Drilling Company, Inc.	
Date: 12-16-08 To: 12-16-08	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
586	0	FILL: dusky Brown (5YR 2/2) topsoil, little fine gravel, loose, dry		SS	1	3 4 6 6	10	1.8/2		0.0	Sampled 0-0.5' (SS) (1230)
585	1	FILL: dusky Brown (5YR 2/2) sandy silt, loose, dry									
584	2	moderate yellowish Brown (10YR 5/4) silty clay, medium stiff, dry		SS	2	4 3 4 4	7	1.6/2		0.0	
583	3	FILL: dusky Brown (5YR 2/2) sandy silt, loose, dry									
582	4	loose to very loose		SS	3	1 1 2 1	3	1.4/2		0.0	
581	5										
580	6			SS	4	0 0 1 0	1	1.5/2		0.0	Sampled 6-7.5' (0675) (1300)
579	7										
578	8	dry to wet		SS	5	0 1 1 0	2	1.0/2		0.0	
577	9	brown PEAT (PT), very loose, moist									
576	10			SS	6	0 0 1 0	1	0.9/2		0.0	
575	11										
574	12			SS	7	1 1 1 1	2	1.9/2		0.0	
573	13										
572	14	olive Gray (5Y 4/1) clayey SILT (ML), very loose, wet		SS	8	WOH	NA	1.0/1		0.0	
571	15										
	16	End of boring at 15' bgs. Overdrill to 15.5' bgs to set sand below well screen at 15' bgs.									
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: MW09	
Coordinates: N 375720.2557 E 2559443.3925	Ground Elevation: 591.32	Page: 1 of 1	
Total Depth (feet): 16.5	Hole Size (inches): 8.25	Driller (s): Alex Plummer	
Drilling Rig: Diedrich D120		Drilling Company: Badger State Drilling Company, Inc.	
Date: 1-6-09 To: 1-6-09	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
591	0	FILL: dusky Brown (5YR 2/2) topsoil, little coarse gravel, extremely dense, dry		SS	1	105 80 32 28	112	1.9/2		0.0	Sampled 0-0.5' (SS) (0830)
590	1										
589	2	FILL: dark Gray (N3) sandy silt, dense, dry some coarse gravel		SS	2	21 20 18 15	38	1.6/2		0.0	
588	3	dusky Brown to moderate yellowish Brown (10YR 5/4)									
587	4	moderate yellowish Brown to dark Gray (N3), some to little coarse gravel		SS	3	3 18 27 20	45	1.7/2		0.0	
586	5	wood									
585	6			SS	4	69 23 13 13	36	1.2/2		0.0	Sampled 6-8' (0608) (0900)
584	7	brick (6.8-7)									
583	8	dark Gray to olive Gray (5Y 4/1), little to with coarse gravel, dense to medium dense, dry to wet		SS	5	9 6 8 10	14	0.0/2		0.0	
582	9										
581	10	with to little coarse gravel		SS	6	6 9 7 5	16	1.6/2		0.0	
580	11	FILL: olive Gray (5Y 4/1) clayey silt, medium dense, wet									
579	12			SS	7	6 9 10 16	19	1.5/2		4.0	
578	13	brown PEAT (PT), medium dense, wet									
577	14			SS	8	8 9 7 10	16	1.6/2		1.5	
576	15	olive Gray (5Y 4/1) silty SAND (SM), some fine gravel, medium dense, wet									
575	16	olive Gray (5Y 4/1) silty CLAY (CL), trace fine gravel, very stiff, wet									
	17	End of boring at 16' bgs. Overdrill to 16.5' bgs to set sand below well screen at 16' bgs.									
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: MW10	
Coordinates: N 375724.1055 E 2559744.4238	Ground Elevation: 587.07	Page: 1 of 1	
Total Depth (feet): 14.5	Hole Size (inches): 8.25	Driller (s): Robert Rector	
Drilling Rig: Diedrich D120		Drilling Company: Badger State Drilling Company, Inc.	
Date: 12-17-08 To: 12-17-08	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
586	1	FILL: dusky Brown (5YR 2/2) topsoil, loose, dry FILL: olive Gray (5Y 4/1) silty sand, some coarse gravel, loose, dry		SS	1	8 4 4 6	8	1.4/2		0.0	Sampled 0-0.5' (SS) (0830)
585	2	FILL: dusky Brown (5YR 2/2) sandy silt, little coarse gravel, medium dense, moist									
584	3			SS	2	13 9 8 11	17	1.3/2		0.0	
583	4	medium dense to loose									
582	5			SS	3	3 6 5 4	11	0.4/2		0.0	
581	6										
580	7	moist to wet brown PEAT (PT), very loose, moist		SS	4	1 2 1 1	3	0.8/2		0.0	Sampled 6-7' (0607) (0930)
579	8										
578	9			SS	5	0 1 1 1	2	0.4/2		4.8	
577	10										
576	11	light olive Gray (5Y 6/1) silty SAND (SM), trace fine gravel, loose, wet		SS	6	1 4 5 3	9	1.4/2		1.6	
575	12										
574	13	light olive Gray (5Y 6/1) silty CLAY (CL), trace fine gravel, very stiff, wet		SS	7	2 1 2 4	3	1.7/2	3	0.0	
573	14										
	15	End of boring at 14' bgs. Overdrill to 14.5' bgs to set sand below well screen at 14' bgs.									
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: MW11	
Coordinates: N 375496.1218 E 2559989.8241	Ground Elevation: 583.89	Page: 1 of 1	
Total Depth (feet): 14.5	Hole Size (inches): 8.25	Driller (s): Alex Plummer	
Drilling Rig: Diedrich D120		Drilling Company: Badger State Drilling Company, Inc.	
Date: 1-8-09 To: 1-8-09	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
583	1	FILL: dusky Brown (5YR 2/2) topsoil, dense, dry little coarse gravel		SS	1	31 18 30 27	48	1.7/2		0.0	Sampled 0-0.5' (SS) (1500)
582	2	FILL: moderate yellowish Brown (10YR 5/4) sandy silt, very dense, dry									
581	3	moderate yellowish Brown to dusky Brown (5YR 2/2)		SS	2	9 13 18 16	31	1.5/2		0.0	
580	4	FILL: dusky Brown (5YR 2/2) clayey silt, very dense, dry dusky Brown to olive Gray (5Y 4/1)									
579	5			SS	3	8 10 12 14	22	1.1/2		0.0	Sampled 4-5' (0405) (1520)
578	6	little coarse gravel, dry to wet									▽ Depth to water while drilling
577	7			SS	4	3 3 3 4	6	0.4/2		0.0	▼ Depth to water after drilling
576	8										
575	9	FILL: olive Gray (5Y 4/1) silty sand, medium dense, wet		SS	5	12 9 6 5	15	1.3/2		0.0	
574	10	FILL: olive Gray (5Y 4/1) clayey silt, trace fine gravel, loose, wet									
573	11	little fine sand		SS	6	1 1 3 6	4	1.7/2		0.0	
572	12										
571	13			SS	7	3 5 21 18	26	1.7/2		0.0	
570	14	FILL: olive Gray (5Y 4/1) silty clay, trace fine gravel, very stiff, wet									
	15	End of boring at 14' bgs. Overdrill to 14.5' bgs to set sand below well screen at 14' bgs.									
	16										
	17										
	18										
	19										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: MW12	
Coordinates: N 375312.841 E 2559348.8594	Ground Elevation: 591.60	Page: 1 of 1	
Total Depth (feet): 14.5	Hole Size (inches): 8.25	Driller (s): Alex Plummer	
Drilling Rig: Diedrich D120		Drilling Company: Badger State Drilling Company, Inc.	
Date: 1-6-09	To: 1-6-09	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
591	1	FILL: dusky Brown (5YR 2/2) topsoil, very dense, dry		SS	1	85 39 23 42	62	1.9/2		0.0	Sampled 0-0.5' (SS) (1100)
		FILL: dusky Brown (5YR 2/2) sandy silt, some coarse gravel, very dense, dry									
590	2			SS	2	17 39 36 70	75	1.8/2		0.0	
589	3										
588	4	wood dusky Brown to olive Black (5Y 2/1)		SS	3	7 6 6 12	12	1.6/2	3.5	0.0	Sampled 4-5.5' (0455) (1130)
587	5	FILL: olive Gray (5Y 4/1) silty CLAY (CL), trace fine gravel, very stiff, moist									
586	6	moist to wet		SS	4	9 19 25 34	44	1.9/2	4	0.0	
585	7										
584	8			SS	5	8 17 21 50/0	38	1.9/2	4	0.0	
583	9										
582	10	No recovery - large rock		SS	6	100/0	NA	0/2			
581	11										
580	12	olive Gray (5Y 4/1) silty CLAY (CL), trace fine gravel, very stiff, wet		SS	7	10 13 17 22	30	1.9/2	3.5	0.0	
579	13										
578	14										
	15	End of boring at 14' bgs. Overdrill to 14.5' bgs to set sand below well screen at 14' bgs.									
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: MW13	
Coordinates: N 375243.6884 E 2559908.7271	Ground Elevation: 583.95	Page: 1 of 1	
Total Depth (feet): 14.5	Hole Size (inches): 8.25	Driller (s): Alex Plummer	
Drilling Rig: Diedrich D120		Drilling Company: Badger State Drilling Company, Inc.	
Date: 1-8-09 To: 1-8-09	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
583	1	FILL: dusky Brown (5YR 2/2) topsoil, extremely dense, dry									Sampled 0-0.5' (SS) (0820)
		FILL: dusky Brown (5YR 2/2) sandy silt, little coarse gravel, very dense, dry		SS	1	13 33 60 27	93	1.9/2		0.0	
582	2										
581	3			SS	2	27 21 22 14	43	1.5/2		0.0	
580	4										
579	5	FILL: moderate yellowish Brown (10YR 5/4) silty sand, little fine gravel, medium dense, moist		SS	3	16 8 4 5	12	1.3/2		0.0	Sampled 4-6' (0406) (0840)
578	6	moderate yellowish Brown to olive Gray (5Y 4/1), moist to wet									▽ Depth to water while drilling
577	7			SS	4	4 7 4 5	11	1.1/2		0.0	▼ Depth to water after drilling
576	8	FILL: olive Gray (5Y 4/1) clayey silt, loose, wet									
575	9			SS	5	1 3 5 2	8	1.4/2		0.0	
574	10										
573	11	FILL: olive Gray (5Y 4/1) silty sand, loose, wet		SS	6	0 1 3 4	4	1.5/2		0.0	
572	12										
571	13	brown PEAT (PT), wet		SS	7	4 6 10 13	16	1.5/2		0.0	
570	14										
	15	End of boring at 14' bgs. Overdrill to 14.5' bgs to set sand below well screen at 14' bgs.									
	16										
	17										
	18										
	19										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	MW14
Coordinates	**Ground Elevation**	**Page**
N 374999.9413 E 2559835.3915	586.89	1 of 1
Total Depth (feet) 15.5	**Hole Size (inches)** 8.25	**Driller (s)** Alex Plummer
Drilling Rig Diedrich D120		**Drilling Company** Badger State Drilling Company, Inc.
Date 1-8-09	**To** 1-8-09	**Logged By:** Libby Northrip
Reviewed by:		**Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
586	1	FILL: dusky Brown (5YR 2/2) topsoil, extremely dense, dry FILL: dusky Brown (5YR 2/2) sandy silt, some coarse gravel, extremely dense, dry		SS	1	73 177 108 48	285	2.0/2		0.0	Sampled 0-0.5' (SS) (1050)
585	2	dusky Brown to olive Black (5Y 2/1), some to trace coarse gravel									
584	3			SS	2	21 26 52 34	78	1.4/2		0.0	
583	4	trace to little coarse gravel, extremely dense to very dense									
582	5	some brick fragments		SS	3	36 36 21 14	57	1.4/2		0.0	
581	6										
580	7	FILL: Blue coarse to fine gravel, very dense, dry dry to wet		SS	4	46 18 17 13	35	1.1/2		0.0	Sampled 6-7' (0607) (1140)
579	8	very dense to medium dense									
578	9			SS	5	11 9 9 9	18	0.6/2		0.0	
577	10	medium dense to very dense									
576	11			SS	6	12 30 18 19	48	1.0/2		0.0	
575	12										
574	13			SS	7	16 33 34 30	67	0.5/2		0.0	
573	14										
572	15										
	16	End of boring at 15' bgs. Overdrill to 15.5' bgs to set sand below well screen at 15' bgs.									
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	MW15
Coordinates	**Ground Elevation**	**Page**
N 374915.4408 E 2559369.529	592.11	1 of 1
Total Depth (feet) 17.5	**Hole Size (inches)** 8.25	**Driller (s)** Alex Plummer
Drilling Rig Diedrich D120		**Drilling Company** Badger State Drilling Company, Inc.
Date 1-7-09	**To** 1-7-09	**Logged By:** Libby Northrip
Reviewed by:		**Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
591	1	FILL: dusky Brown (5YR 2/2) topsoil, very dense, dry little coarse gravel		SS	1	64 42 31 10	73	1.5/2		0.0	Sampled 0-0.5' (SS) (1400)
590	2	FILL: dusky Brown (5YR 2/2) sandy silt, extremely dense, dry									
589	3	some coarse gravel		SS	2	14 16 80 22	96	1.7/2		0.0	
588	4	extremely dense to very dense									
587	5			SS	3	20 18 13 10	31	1.4/2		0.0	
586	6	very dense to extremely dense									
585	7			SS	4	100/4	NA	0.2/2		0.0	
584	8	moderate yellowish Brown (10YR 5/4) silty SAND (SM), trace fine gravel, dense, moist									
583	9			SS	5	29 21 28 27	49	1.4/2		0.0	Sampled 8-9.5' (0895) (1410). MS/MSD also collected.
582	10	olive Gray (5Y 4/1) clayey SILT (ML), trace fine gravel, medium dense, wet									
581	11			SS	6	13 9 4 4	13	1.3/2		0.0	
580	12										
579	13			SS	7	3 9 10 13	19	1.6/2		0.0	
578	14	olive Gray (5Y 4/1) silty SAND (SM), medium dense, wet									
577	15			SS	8	5 7 9 9	16	1.4/2		0.0	
576	16	medium dense to very loose									
575	17			SS	9	1 0 4	4	1.3/1.5		0.0	
	18	End of boring at 17.5' bgs. Set sand below well screen at 17' bgs.									
	19										

Depth to water while drilling ▽

Depth to water after drilling ▼

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898	Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: MW16
	Coordinates: N 374757.1679 E 2559599.8075	Ground Elevation: 587.04	Page: 1 of 1
	Total Depth (feet): 16.5 / Hole Size (inches): 8.25	Driller (s): Alex Plummer	
Drilling Rig: Diedrich D120		Drilling Company: Badger State Drilling Company, Inc.	
Date: 1-7-09	To: 1-7-09 / Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
											▽ Depth to water while drilling ▼ Depth to water after drilling
		CONCRETE					NA	/1			Sampled 1-2' (SS) (0820). Sample collected from below 0-0.5' due to concrete at ground surface.
586	1	FILL: coarse to fine gravel base									
		FILL: dusky Brown (5YR 2/2) sandy silt, some coarse gravel, dense, dry		SS	1	78 23 15 13	38	1.3/2		0.0	
585	2										
584	3	little coarse gravel, dense to medium dense		SS	2	4 7 10 15	17	1.5/2		0.0	
583	4										
582	5	brown PEAT (PT)		SS	3	5 24 30 31	54	1.7/2		0.0	
581	6	dusky Brown (5YR 2/2) clayey SILT (ML), very dense, moist									
580	7			SS	4	15 25 69 31	94	1.7/2		0.0	Sampled 8-9' (0809) (0910)
579	8	dark Gray (N3) sandy SILT (ML), little coarse gravel, extremely dense, moist									
578	9	olive Gray (5Y 4/1) silty SAND (SM), little fine gravel, medium dense, wet		SS	5	16 13 11 10	24	1.3/2		0.0	
577	10										
576	11			SS	6	2 8 5 8	13	1.6/2		0.0	
575	12										
574	13			SS	7	0 8 6 9	14	1.2/2		0.0	
573	14										
572	15	little to trace fine gravel, medium dense to loose		SS	8	0 1	NA	1.0/1		0.0	
571	16										
	17	End of boring at 16' bgs. Overdrill to 16.5' bgs to set sand below well screen at 16' bgs.									
	18										
	19										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	MW17
Coordinates	**Ground Elevation**	**Page**
N 375481.1817 E 2559548.084	590.47	1 of 1
Total Depth (feet) 14.5 / **Hole Size (inches)** 8.25	Driller (s) Alex Plummer	
Drilling Rig Diedrich D120	Drilling Company Badger State Drilling Company, Inc.	
Date 1-6-09 / To 1-6-09 / Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
590	0	FILL: dusky Brown (5YR 2/2) topsoil, extremely dense, dry									Sampled 0-0.5' (SS) (1400)
589	1	FILL: moderate yellowish Brown (10YR 5/4) sandy silt, some coarse gravel, extremely dense, dry		SS	1	69 112 75 26	187	1.6/2		0.0	
588	2			SS	2	36 27 71 32	98	1.1/2		0.0	
587	3										
586	4	moderate yellowish Brown to olive Black (5Y 2/1), some to trace coarse gravel, extremely dense to dense		SS	3	14 18 29 42	47	1.1/2		0.0	Sampled 4-5' (0405) (1420). MWDUP002 also collected.
585	5										
584	6	dry to wet		SS	4	25 24 25 74	49	1.3/2		0.0	
583	7	wood at end of spoon									
582	8	No recovery - wood, medium dense		SS	5	17 21 3 1	24	0/2			
581	9										
580	10	No recovery, loose saturated material		SS	6	4 3 3 4	6	0/2			
579	11										
578	12	olive Gray (5Y 4/1) silty SAND (SM), little fine gravel, dense, wet		SS	7	7 13 20 27	33	0.9/2		0.0	
577	13										
576	14	End of boring at 14' bgs. Overdrill to 14.5' bgs to set sand below well screen at 14' bgs.									
	15										
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	MW18
Coordinates	**Ground Elevation**	**Page**
N 376424.2011 E 2559838.3324	588.54	1 of 1
Total Depth (feet) 15.5	**Hole Size (inches)** 8.25	**Driller (s)** Robert Rector
Drilling Rig Diedrich D120		**Drilling Company** Badger State Drilling Company, Inc.
Date 12-17-08 **To** 12-18-08	**Logged By:** Libby Northrip	**Reviewed by:** **Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
588	0	FILL: dusky Brown (5YR 2/2) topsoil, extremely dense, dry									Depth to water while drilling ▽
	1	FILL: dark yellowish Brown (10YR 4/2) sandy silt, some coarse gravel, extremely dense, dry		SS	1	11 13 21 50/5	34	1.3/2		0.0	Sampled 0-0.5' (SS) (0930)
587	2	FILL: concrete and base									
586	3			SS	2	50/5	NA	0.3/2		0.0	
585	4	FILL: light olive Gray (5Y 6/1) silty sand, some coarse gravel, extremely dense, dry									
584	5			SS	3	50/2	NA	0.2/2		0.0	
583	6										
582	7			SS	4	48 50/5	NA	0.9/2		0.0	Sampled 6-7' (0607) (0950)
581	8	dry to wet									Depth to water after drilling ▼
580	9			SS	5	50/5	NA	0.3/2		0.0	
579	10										
578	11	light olive Gray to dark Gray (N3), extremely dense to medium dense		SS	6	5 5 6 6	11	1.0/2		0.0	
577	12										
576	13	dark Gray to olive Gray (5Y 4/1)		SS	7	2 8 7 9	15	1.3/2		0.0	
575	14										
574	15			SS	8	WOH	NA	0.4/1		0.0	
	16	End of boring at 15' bgs. Overdrill to 15.5' bgs to set sand below well screen at 15' bgs.									
	17										
	18										
	19										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: MW19	
Coordinates: N 376005.3128 E 2559798.9864	Ground Elevation: 586.96	Page: 1 of 1	
Total Depth (feet): 14.5	Hole Size (inches): 8.25	Driller (s): Alex Plummer	
Drilling Rig: Diedrich D120		Drilling Company: Badger State Drilling Company, Inc.	
Date: 1-5-09	To: 1-5-09	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
586	1	FILL: dusky Brown (5YR 2/2) topsoil, some coarse gravel, extremely dense, dry		SS	1	56 52 93 54	145	1.3/2		0.0	Sampled 0-0.5' (SS) (1145)
		CONCRETE: yellowish Gray (5Y 8/1)									
585	2	FILL: olive Black (5Y 2/1) sandy silt, some coarse gravel, extremely dense, dry									
584	3			SS	2	19 24 80 94	104	1.4/2		0.0	
583	4										
582	5			SS	3	105/5	NA	1.1/2		0.0	Sampled 4-5' (0405) (1245)
		FILL: olive Gray (5Y 4/1) clayey silt, some coarse gravel, extremely dense, wet									▽
581	6			SS	4	33 89 58 50/2	147	0.9/2		0.0	
580	7										
579	8										
578	9	trace fine gravel		SS	5	15 10 14 15	24	1.4/2		11.1	
		FILL: olive Black (5Y 2/1) sandy silt, trace fine gravel, medium dense, wet									
577	10										
576	11	FILL: olive Gray (5Y 4/1) silty clay, trace fine gravel, very stiff, wet		SS	6	6 12 6 4	18	1.6/2		8.7	
575	12	brown PEAT (PT), dense, moist									
574	13			SS	7	9 17 26 27	43	1.5/2		0.0	
573	14										
	15	End of boring at 14' bgs. Overdrill to 14.5' bgs to set sand below well screen at 14' bgs.									
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: NMW01D	
Coordinates: N 376001.1379 E 2559800.1347	Ground Elevation: 586.87	Page: 1 of 2	
Total Depth (feet): 28.5	Hole Size (inches): 8.25	Driller (s): Alex Plummer	
Drilling Rig: Diedrich D120		Drilling Company: Badger State Drilling Company, Inc.	
Date: 1-26-09	To: 1-26-09	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
586	1	FILL: dusky Brown (5YR 2/2) topsoil, dry yellowish Gray (5Y 8/1) CONCRETE		SS	1	66 92 100/3	NA	1.1/2		0.0	Sampled 0-0.5' (SS) (1030)
585	2	FILL: dusky Brown (5YR 2/2) clay, little coarse gravel, hard, dry									
584	3			SS	2	64 44 114 75	158	2.0/2		0.0	
583	4										
582	5			SS	3	24 21 32 63	53	1.5/2		0.0	Sampled 4-5.5' (0455) (1050)
581	6	dusky Brown to medium dark Gray (N4), little to with coarse gravel, dry to wet									▽ Depth to water while drilling
580	7	medium dark Gray to Black (N1)		SS	4	58 17 19 50	36	0.6/2		0.0	▼ Depth to water after drilling
579	8	Black (N1) clayey silt, little coarse to fine sand, trace fine gravel, slight odor, wet									
578	9			SS	5	16 19 26 19	45	1.3/2		16.6	
577	10	PEAT (PT), dense, wet									
576	11			SS	6	6 12 19 35	31	1.8/2		0.0	
575	12										
574	13	dense to medium dense		SS	7	3 9 19 28	28	1.8/2		0.0	
573	14										
572	15	olive Gray (5Y 4/1) clayey SILT (ML), trace fine gravel, medium dense, wet		SS	8	4 6 12 19	18	1.7/2		0.0	
571	16										
570	17			SS	9	3 5 9 13	14	2.0/2		0.0	
569	18										
568	19	little fine sand, medium dense to loose		SS	10	1 3 5 9	8	1.7/2		0.0	
567											

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name	Milwaukee Solvay Coke & Gas Site
Project Number	49804
Boring/Monitoring Well Number	NMW01D
Page	2 of 2
Date	1-26-09

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
566	21	olive Gray (5Y 4/1) clayey SILT (ML), trace fine gravel, medium dense, wet loose to medium dense		SS	11	3 5 7 14	12	1.9/2		0.0	
565	22	olive Gray (5Y 4/1) silty SAND (SM), little fine gravel, dense, wet		SS	12	2 18 29 20	47	1.3/2		0.0	
564	23										
563	24			SS	13	19 29 38 41	67	1.5/2		0.0	
562	25	dense to very dense									
561	26										
560	27	olive Gray (5Y 4/1) silty CLAY (CL), hard, wet		SS	14	22 40 37 41	77	1.6/2		0.0	
559	28										
	29	End of boring at 28' bgs. Overdrill to 28.5' bgs to set sand below well screen at 28' bgs.									
	30										
	31										
	32										
	33										
	34										
	35										
	36										
	37										
	38										
	39										
	40										
	41										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	NMW01S
Coordinates	**Ground Elevation**	**Page**
N 377605.2837 E 2559368.7662	586.03	1 of 1
Total Depth (feet) 14.5	**Hole Size (inches)** 8.25	**Driller (s)** Alex Plummer
Drilling Rig Diedrich D120		**Drilling Company** Badger State Drilling Company, Inc.
Date 1-23-09	**To** 1-23-09	**Logged By:** Jason Blazier
Reviewed by:		**Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
585	1	FILL: dusky Brown (5YR 2/2) silt, little sand, moist CONCRETE		SS	1	200/4	NA	0.3/2		0.0	Sampled 0-0.5' (SS) (1115)
584	2	FILL: Black (N1) coke fragments, little fine sand, trace brick, very dense, moist FILL: dark yellowish Brown (10YR 4/2) sandy silt, dense, moist		SS	2	11 22 45 51	67	1.8/2		0.0	
583	3										
582	4	FILL: Black (N1) coarse to fine sand, little silt, trace cinders and fine gravel, slight petroleum odor, dense, moist		SS	3	64 16 15 15	31	1.6/2		0.0	Sampled 4-5' (0405) (1144)
581	5	FILL: light olive Gray (5Y 6/1) silt, little medium to fine sand, little clay, loose, moist cinders and coal fragments (5-5.1), wet									
580	6	light olive Gray to dark Gray (N3)		SS	4	1 3 3 5	6	1.6/2		0.0	
579	7	dark Gray to olive Gray (5Y 4/1)									
578	8			SS	5	2 2 4 5	6	1.8/2		0.0	
577	9										
576	10	little wood fragments, little coarse sand		SS	6	3 4 3 5	7	1.0/2		0.0	
575	11										
574	12	trace coal fragments (12.3-12.6)		SS	7	4 6 4 6	10	1.3/2		0.0	
573	13	olive Gray (5Y 4/1) fine silty SAND (SM), loose, wet									
572	14	End of boring at 14' bgs. Overdrill to 14.5' bgs to set sand below well screen at 14' bgs.									
	15										
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898	Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: NMW02D
	Coordinates: N 376496.5542 E 2560053.0575	Ground Elevation: 590.22	Page: 1 of 2
	Total Depth (feet): 34.5	Hole Size (inches): 8.25	Driller (s): Alex Plummer
Drilling Rig: Diedrich D120			Drilling Company: Badger State Drilling Company, Inc.
Date: 1-22-09	To: 1-22-09	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
590	0	FILL: dusky Brown (5YR 2/2) topsoil with coarse gravel, extremely dense, dry				200/3					▽ Depth to water while drilling
589	1	No sample - drill without sampling through concrete		SS	1		NA	0.4/2		0.0	▼ Depth to water after drilling
588	2										
587	3										
586	4						NA	0/4			
585	5										
584	6	coarse gravel									
		FILL: dusky Brown (5YR 2/2) clayey silt, little coarse gravel, very dense, dry		SS	2	99 42 18 44	60	2.0/2		0.0	
583	7										
582	8	CONCRETE - drill through without sampling					NA	0/1			
581	9	FILL: dark yellowish Brown (10YR 4/2) clayey silt, wet		SS	3	50/2	NA	0.8/1		0.0	
580	10	CONCRETE - drill through without sampling									
579	11						NA	0/2			
		FILL: coarse to fine gravel base									
578	12	FILL: olive Gray (5Y 4/1) silty sand, some coarse gravel, wet		SS	4	50/1	NA	0.4/2		0.0	
577	13										
576	14										
		FILL: Black (N1) coal fragments with fine sand and silt, wet		SS	5	22 47 50/2	NA	0.8/2		0.0	
575	15	dark yellowish Brown (10YR 4/2) silty CLAY (CL), trace fine gravel, very stiff, wet									
574	16			SS	6	7 9 15 15	24	1.3/2		0.0	
573	17										
572	18	little wood		SS	7	5 9 17 19	26	1.5/2		0.0	
571	19	little sand									

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number NMW02D
Page 2 of 2
Date 1-22-09

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
570	21	dark yellowish Brown (10YR 4/2) silty CLAY (CL), trace fine gravel, very stiff, wet trace fine to little fine gravel, very stiff to stiff		SS	8	3 5 9 15	14	2.0/2		0.0	
569	22										
568	23			SS	9	3 9 20 18	29	1.4/2		0.0	
567	24										
566	25			SS	10	3 7 10 7	17	1.6/2		0.0	
565	26										
564	27			SS	11	7 9 15 19	24	2.0/2		0.0	
563	28	brown PEAT (PT)									
562		olive Gray (5Y 4/1) clayey SILT (ML), trace fine gravel, medium dense, wet		SS	12	7 12 16 17	28	1.8/2		0.0	
561	29										
560	30	olive Gray (5Y 4/1) silty SAND (SM), trace fine gravel, medium dense, wet		SS	13	5 9 16 27	25	1.7/2		0.0	
559	31										
558	32			SS	14	1 9 10 17	19	1.6/2		0.0	
557	33										
556	34	olive Gray (5Y 4/1) silty CLAY (CL), trace fine gravel, very stiff, wet									
	35	End of boring at 34' bgs. Overdrill to 34.5' bgs to set sand below well screen at 34' bgs.									
	36										
	37										
	38										
	39										
	40										
	41										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name	Project No.	Boring/Monitoring Well Number
Milwaukee Solvay Coke & Gas Site	49804	NMW02S
Coordinates	**Ground Elevation**	**Page**
N 376499.1316 E 2560050.2515	590.20	1 of 1
Total Depth (feet) 16.5	**Hole Size (inches)** 8.25	**Driller (s)** Alex Plummer
Drilling Rig Diedrich D120		**Drilling Company** Badger State Drilling Company, Inc.
Date 1-22-09	**To** 1-22-09	**Logged By:** Libby Northrip
Reviewed by:		**Approved by:**

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
590	0	FILL: dark yellowish Brown (10YR 4/2) topsoil with coarse gravel, extremely dense, dry		SS	1	200/6	NA	0.5/2		0.0	Sampled 0-0.5' (SS) (0820). MWDUP004 also collected.
589	1	No sample - drill without sampling through concrete									
588	2										
587	3						NA	0/2			
586	4	FILL: dark yellowish Brown (10YR 4/2) sandy clay with coarse gravel, extremely dense, dry		SS	2	100/4	NA	0.4/2		0.0	
585	5										
584	6	dark yellowish Brown to dusky Brown (5YR 2/2), with to some coarse gravel		SS	3	60 74 21 71	95	2.0/2		0.0	Sampled 7-8' (0708) (0940)
583	7										
582	8	dusky Brown to dark yellowish Brown (10YR 4/2)		SS	4	28 65 100/4	NA	1.3/2		0.0	▽ Depth to water while drilling
581	9	some to with coarse gravel and concrete fragments, dry to wet									▼ Depth to water after drilling
580	10	FILL: olive Gray (5Y 4/1) silty sand, some coarse gravel, extremely dense, wet		SS	5	24 100/3	NA	0.5/2		0.0	
579	11										
578	12			SS	6	50/0	NA	0.0/2			
577	13										
576	14			SS	7	41 100/5	NA	0.8/2		0.0	
575	15	FILL: Black (N1) coal fragments with fine sand and silt, wet									
574	16										
	17	End of boring at 16' bgs. Overdrill to 16.5' bgs to set sand below well screen at 16' bgs.									
	18										
	19										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: NMW03D	
Coordinates: N 376634.1203 E 2559511.0956	Ground Elevation: 589.56	Page: 1 of 2	
Total Depth (feet): 32	Hole Size (inches): 8.25	Driller (s): Alex Plummer	
Drilling Rig: Diedrich D120		Drilling Company: Badger State Drilling Company, Inc.	
Date: 1-21-09	To: 1-21-09	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
589	0	FILL: dusky Brown (5YR 2/2) topsoil, extremely dense, dry									▽ Depth to water while drilling; ▼ Depth to water after drilling
	1	FILL: dusky Brown (5YR 2/2) sandy silt, little coarse gravel, extremely dense, dry		SS	1	54, 60, 41, 30	101	1.7/2		0.0	
588	2	little coarse gravel									
587	3	little to some coarse gravel, extremely dense to dense		SS	2	22, 28, 10, 16	38	0.7/2		0.0	
586	4										
585	5	dense to very dense		SS	3	24, 50, 14, 17	64	0.6/2		0.0	
584	6										▽
583	7	some to with coarse gravel, very dense to medium dense, dry to wet		SS	4	10, 8, 8, 7	16	0.6/2		0.0	
582	8										
581	9	with to little coarse gravel, medium dense to dense		SS	5	16, 22, 14, 7	36	0.8/2		0.0	
580	10	FILL: dark Gray (N3) clayey silt, trace fine gravel, very loose, wet		SS	6	1, 1, 2, 1	3	1.3/2		0.0	
579	11										
578	12	very loose to loose		SS	7	2, 4, 4, 5	8	2.0/2		0.0	
577	13										
576	14	brown PEAT (PT), loose, wet		SS	8	2, 4, 5, 8	9	2.0/2		0.0	
575	15										
574	16	olive Gray (5Y 4/1) clayey SILT (ML), trace fine gravel, very loose, saturated		SS	9	1, 1, 2, 3	3	2.0/2		0.0	
573	17										
572	18			SS	10	0, 0, 0, 0	0	1.8/2		0.0	
571	19										
570											

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number NMW03D
Page 2 of 2
Date 1-21-09

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
569	21	olive Gray (5Y 4/1) clayey SILT (ML), trace fine gravel, very loose, saturated		SS	11	0 0 0 0	0	1.9/2		0.0	
568	22										
567	23			SS	12	0 0 0 4	0	1.7/2		0.0	
566	24										
565	25			SS	13	0 0 0 0	0	1.7/2		0.0	
564	26										
563	27			SS	14	0 0 0 0	0	1.6/2		0.0	
562	28										
561	29			SS	15	0 0 0 0	0	1.7/2		0.0	
560	30	olive Gray (5Y 4/1) silty CLAY (CL), trace fine gravel, soft, wet									
559	31			SS	16	0 0 4 5	4	1.9/2	2.5	0.0	
558	32	olive Gray (5Y 4/1) clayey SILT (ML), loose, wet									
	33	End of boring at 32' bgs. Set sand below well screen at 31.5' bgs.									
	34										
	35										
	36										
	37										
	38										
	39										
	40										
	41										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: NMW03S	
Coordinates: N 376637.9659 E 2559511.1118	Ground Elevation: 589.52	Page: 1 of 1	
Total Depth (feet): 14.5	Hole Size (inches): 8.25	Driller (s): Alex Plummer	
Drilling Rig: Diedrich D120		Drilling Company: Badger State Drilling Company, Inc.	
Date: 1-21-09 To: 1-21-09	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
589	0	FILL: dusky Brown (5YR 2/2) topsoil, extremely dense, dry									Sampled 0-0.5' (SS) (1100)
	1	FILL: dusky Brown (5YR 2/2) sandy clay, little coarse gravel, extremely dense, dry		SS	1	109 77 30 31	107	1.7/2		0.0	
588											
	2	FILL: dusky Brown (5YR 2/2) sandy silt, little coarse gravel, very dense, dry		SS	2	21 30 21 15	51	1.2/2		0.0	
587	3	some coarse gravel (3')									
586	4	very dense to medium dense		SS	3	12 8 8 7	16	0.7/2		0.0	Sampled 4-5' (0405) (1120)
585	5	dry to wet									
584	6			SS	4	5 4 7 8	11	0.6/2		0.0	
583	7										
582	8	FILL: dark Gray (N3) clayey silt, little fine gravel, very loose, wet		SS	5	4 3 1 1	4	1.3/2		0.0	
581	9										
580	10	dark Gray to olive Gray (5Y 4/1), little to trace fine gravel		SS	6	2 2 1 1	3	1.8/2		0.0	
579	11	olive Gray to olive Black (5Y 2/1)									
578	12			SS	7	2 4 5 8	9	1.8/2		0.0	
577	13	brown PEAT (PT), loose, wet									
576	14										
	15	End of boring at 14' bgs. Overdrill to 14.5' bgs to set sand below well screen at 14' bgs.									
	16										
	17										
	18										
	19										

▽ Depth to water while drilling

▼ Depth to water after drilling

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: NMW04D	
Coordinates: N 375117.0877 E 2559660.6854	Ground Elevation: 587.45	Page: 1 of 2	
Total Depth (feet): 34	Hole Size (inches): 8.25	Driller (s): Alex Plummer	
Drilling Rig: Diedrich D120		Drilling Company: Badger State Drilling Company, Inc.	
Date: 1-20-09 To: 1-20-09	Logged By: Libby Northrip	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
587	0	FILL: dusky Brown (5YR 2/2) topsoil, extremely dense, dry									▽ Depth to water while drilling
586	1	FILL: dusky Brown (5YR 2/2) sandy silt, little coarse gravel, extremely dense, dry		SS	1	34, 43, 53, 43	96	1.3/2		0.0	▼ Depth to water after drilling
585	2	dusky Brown to moderate yellowish Brown (10YR 5/4), little to no coarse gravel									
584	3	trace coarse gravel, extremely dense to very dense		SS	2	43, 34, 36, 57	70	1.2/2		0.0	
583	4	very dense to extremely dense									
582	5			SS	3	34, 46, 50/2	NA	0.3/2		0.0	
581	6	moderate yellowish Brown to olive Gray (5Y 4/1), trace to little coarse gravel, extremely dense to dense, dry to wet									▽
580	7			SS	4	32, 18, 12, 12	30	1.2/2		0.0	
579	8	olive Gray (5Y 4/1) silty SAND (SM), trace fine gravel, dense, wet									
578	9	little coarse gravel, dense to very dense		SS	5	12, 18, 29, 31	47	1.3/2		0.0	
577	10	olive Gray (5Y 4/1) clayey SILT (ML), trace fine gravel, loose, wet									
576	11			SS	6	8, 1, 3, 5	4	1.7/2		0.0	
575	12										
574	13	loose to medium dense		SS	7	5, 8, 6, 8	14	1.8/2		0.0	
573	14										
572	15	medium dense to very loose		SS	8	1, 0, 1, 1	1	1.9/2		0.0	
571	16										
570	17			SS	9	0, 0, 0, 3	0	2.0/2		0.0	
569	18	olive Gray (5Y 4/1) fine silty SAND (SM), some fine gravel, medium dense, wet									
568	19			SS	10	3, 6, 10, 31	16	1.7/2		0.0	

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log, continued

Burns & McDonnell SINCE 1898

Project Name Milwaukee Solvay Coke & Gas Site
Project Number 49804

Boring/Monitoring Well Number NMW04D
Page 2 of 2
Date 1-20-09

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
567	21	olive Gray (5Y 4/1) fine silty SAND (SM), some fine gravel, medium dense, wet some to little fine gravel		SS	11	4 6 7 7	13	1.1/2		0.0	
566	22										
565	23			SS	12	9 5 7 5	12	1.3/2		0.0	
564	24										
563	25			SS	13	10 35 101 50/2	136	0.6/2		0.0	
562	26	little to with fine gravel									
561	27	with coarse gravel, medium dense to extremely dense		SS	14	11 26 82 50/0	108	1.6/2		0.0	
560	28										
559	29			SS	15	25 83 50/1	NA	0.7/2		0.0	
558	30	olive Gray (5Y 4/1) clayey SILT (ML), very loose, saturated									
557	31			SS	16	0 0 0 0	0	1.5/2		0.0	
556	32	olive Gray (5Y 4/1) silty CLAY (CL), medium stiff, wet									
555	33			SS	17	0 3 4 6	7	2.0/2		0.0	
554	34	End of boring at 34' bgs. Backfill to 33' bgs to set sand below well screen at 32.5' bgs.									
	35										
	36										
	37										
	38										
	39										
	40										
	41										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Drilling Log

Burns & McDonnell SINCE 1898

Project Name: Milwaukee Solvay Coke & Gas Site	Project No.: 49804	Boring/Monitoring Well Number: NMW04S	
Coordinates: N 375121.2251 E 2559659.8051	Ground Elevation: 587.32	Page: 1 of 1	
Total Depth (feet): 14.5	Hole Size (inches): 8.25	Driller (s): Alex Plummer	
Drilling Rig: Diedrich D120		Drilling Company: Badger State Drilling Company, Inc.	
Date: 1-19-09	To: 1-19-09	Logged By: Libby Northrip	Reviewed by: / Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetrometer (TSF)	PID Reading (PPM)	Remarks
587	0	FILL: dusky Brown (5YR 2/2) topsoil, very dense, dry									Sampled 0-0.5' (SS) (1310)
586	1	FILL: dusky Brown (5YR 2/2) clayey silt, some coarse gravel, very dense, dry		SS	1	12, 32, 32, 34	64	1.6/2		0.0	
585	2	FILL: moderate yellowish Brown (10YR 5/4) silty sand, trace fine gravel, medium dense, moist		SS	2	29, 16, 11, 12	27	1.1/2		0.0	
584	3										
583	4			SS	3	14, 26, 52, 61	78	1.8/2		0.0	Sampled 5-6' (0506) (1340)
582	5	moderate yellowish Brown to olive Gray (5Y 4/1), medium dense to very dense									▽ Depth to water while drilling
581	6	moist to wet									▼ Depth to water after drilling
580	7	brown PEAT (PT), medium dense, wet		SS	4	22, 7, 4, 3	11	1.2/2		0.0	
579	8	olive Gray (5Y 4/1) silty SAND (SM), trace fine gravel, dense, wet		SS	5	10, 14, 18, 23	32	1.3/2		0.0	
578	9										
577	10	olive Gray (5Y 4/1) clayey SILT (ML), trace fine gravel, loose, wet		SS	6	4, 3, 2, 1	5	1.8/2		0.0	
576	11										
575	12			SS	7	1, 2, 1, 2	3	2.0/2		0.0	
574	13	loose to very loose									
573	14										
	15	End of boring at 14' bgs. Overdrill to 14.5' bgs to set sand below well screen at 14' bgs.									
	16										
	17										
	18										
	19										

ENVIRONMENTAL LOG DNR LOGS.GPJ NEW DATA TEMPLATE.GDT 4/27/11

Appendix C

Deep Soil Boring Logs (2012-2013)

Date Start/Finish: 1.10.13 - 1.10.13 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 377240.83 **Easting:** 2559675.20 **Casing Elevation:** NA **Borehole Depth:** 30' **Surface Elevation:** 587.15 **Descriptions By:** Stephen D. Pels	**Well/Boring ID:** **CG-MW22NW** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0					0.0	GM		SOIL FILL, FINE GRAVEL - black, 10YR2/1, angular, some fine to coarse sand, some silt, some metal fragments, loose, moist.	
	585	1		5	0.1			WOOD FRAGMENTS - concrete, possible foundation, loose, moist.	
					0.2	GM		SOIL FILL, GRAVEL - black, 10YR2/1, some fine to coarse sand, some silt, some metal fragments, possible little clinker, coal and coke fragments, loose, moist.	
5									
	580	2		5	0.1	CL		CLAY - gray, 10YR3/2, brown mottled, medium plasticity, pebbles, some wood fragment, soft, moist, medium plasticity, some staining at 9-10', some odor.	
10									
	575	3		5	0.3	OL		SILT and SAND - dark brown to black, 10YR2/1 to 10YR2/2, some wood fragments, loose, wet, trace odor.	
					0.2			SILT - black, 10YR2/1, soft, trace organics, some sand, moist, trace staining, some odor.	
15									
	570	4		5	0.0 0.1	OL/ PT		SILT and PEAT- dark brown, 10YR2/2, shells, little to trace clay, soft, moist, low plasticity, organic odor.	
20									
	565	5		5	0.2	GM		COARSE SAND and FINE GRAVEL - gray brown, 10YR4/1 to 10YR4/2, rounded, coarse and medium grained sand, trace silt, some shells (cone shaped, 1-inch), wet, no odor.	
25									

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Remarks:

Date Start/Finish: 1.10.13 - 1.10.13 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 377240.83 **Easting:** 2559675.20 **Casing Elevation:** NA **Borehole Depth:** 30' **Surface Elevation:** 587.15 **Descriptions By:** Stephen D. Pels	**Well/Boring ID:** **CG-MW22NW** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25 560 30	6		5	0.2	OL		SILT - gray brown, 10YR4/2, some clay, trace shells, soft, moist, low plasticity, organic odor.	

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Remarks:

Date Start/Finish: 1.10.13 - 1.10.13 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 377078.07 **Easting:** 2559865.39 **Casing Elevation:** NA **Borehole Depth:** 30' **Surface Elevation:** 587.52 **Descriptions By:** Stephen D. Pels	**Well/Boring ID:** **CG-MW22SE** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0								CONCRETE - brown, 10YR5/3, dry, some odor.	
	585	1		4	0.2				
					0.1	CL		CLAY - yellow brown, 10YR5/4, some gravel, some sand at 4' and 5', medium plasticity, moist, staining, odor.	
5								SOIL FILL, GRAVEL and SAND - brown, 10YR5/3, gravel, little silt, loose, moist some sheen, some odor.	
	580	2		3	0.1				
					0.3			SOIL FILL, FINE SAND and SILT - black, 10YR2/1, poor sorting, loose, wet, sheen, NAPL blebs	
10								CLAY - brown, 10YR5/3 to 10YR5/4, stiff to hard, some gravel, moist, medium plasticity.	
	575	3		5	0.3				
15						CL			
	570	4		5					
20								SILT and PEAT - dark brown, 10YR2/2, organics (shells), soft, moist, non plastic, no organics from 22-23'.	
	565	5		5	0.1	OL/ PT			
					0.1			SAND and GRAVEL - brown to gray, 10YR4/2, sub round, coarse sand, pebbles, some fine sand and silt, loose, wet, no shells from 25-28'.	
25									

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Remarks:

Date Start/Finish: 1.10.13 - 1.10.13 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 377078.07 **Easting:** 2559865.39 **Casing Elevation:** NA **Borehole Depth:** 30' **Surface Elevation:** 587.52 **Descriptions By:** Stephen D. Pels	**Well/Boring ID:** **CG-MW22SE** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25 560 30	6		5	0.1 0.1	GM OL/ PT		SILT - dark brown, 10YR2/2, some to little peat, soft, moist, low plasticity,	

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Remarks:

Date Start/Finish: 12.18.12 - 12.18.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376399.44 **Easting:** 2559382.18 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 589.71 **Descriptions By:** Stephen D. Pels	**Well/Boring ID:** **CG-MW24D** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0									
		1		4	0.0			SOIL FILL, GRAVEL - black, 10YR2/1, some fine to coarse sand, angular coke and coal fragments, loose, moist.	
5	585	2		5	0.0			SOIL FILL, COARSE SAND - tan, 10YR6/3, moderate well sorted, trace rock fragments or concrete, loose, moist.	
								SOIL FILL, GRAVEL - black, 10YR2/1, possible coal and coke fragments, no odor, some clinker fragments, some glass fragments from 10-12', loose, moist, sheen from 12-12.5', peat layer at 14'.	
10	580	3		4	0.0 1.1				
15	575	4		4	0.0 0.0 0.0	PT		PEAT - dark brown, 10YR2/2, some silt, some staining, soft, moist, some odor. SILT - gray brown, 10YR4/2, little fine sand, organics (shells), wet, low to non plastic. CLAY - gray brown, 10YR5/2 to 10YR5/3, hard, moist, high plasticity.	
20	570	5		5	0.0 0.0			CLAY - gray brown, 10YR5/2 to 10YR5/3, little silt , some mottling, trace pebbles, hard, moist, high plasticity, silt from 27.5-27.8'.	
25	565								

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Remarks: NM - Not Measured

Date Start/Finish: 12.18.12 - 12.18.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376399.44 **Easting:** 2559382.18 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 589.71 **Descriptions By:** Stephen D. Pels	**Well/Boring ID:** **CG-MW24D** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25		6		3	0.0	OH			
30	560	7		5					
35	555	8		5	0.0				
40	550	9		5	NM	CL		SILTY CLAY - gray brown 10YR5/2 to 10YR5/3, little fine sand, trace gravel, soft to medium stiff, moist, medium plasticity.	
45	545	10		5	NM				
50	540								

Remarks: NM - Not Measured

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Date Start/Finish: 12.18.12 - 12.18.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376399.44 **Easting:** 2559382.18 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 589.71 **Descriptions By:** Stephen D. Pels	**Well/Boring ID:** **CG-MW24D** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
50									
		11		5	NM				
	535								
55									
		12		5	NM	CL			
	530								
60									
		13		5	NM				
	525								
65									

Remarks: NM - Not Measured

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Date Start/Finish: 12.18.12 - 12.18.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376027.86 **Easting:** 2559403.44 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 591.24 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **CG-MW27D** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	590	1		4	0.0			SOIL FILL, GRAVEL - black, 10YR2/1, possible coal and coke fragments, possible clinker, wood from 0-2', some fine to coarse sand, moist, some odor, naphthalene-like odor in wood.	
5	585	2		5	0.0 0.0 0.0 7.4			CLAY - white, 10YR8/1, some gravel, hard, moist, low plasticity. WHITE PASTE - tan to white 10YR8/1, some wood material, possbile wood pulp like material at 9', moist, non plastic. SOIL FILL, GRAVEL - black, 10YR2/1, some silt, possible clinker, some peat and silt, moist, loose, odor in peat and silt.	
10	580	3		5	2.5	PT		PEAT - black, 10YR2/1, some wood and organics, some clinker, medium to fine grained sand, loose, wet, sheen, odor, trace NAPL blebs.	
15	575	4		5	5.0 0.0	SW/ SM		PEAT - dark brown, 10YR2/2, organics (shells), soft, moist, some organic odor. MEDIUM SAND - gray brown, 10YR4/2, some fine sand, trace coarse sand, with gravel, trace silt, dense, wet.	
20	570	5		5	0.1 3.5			SAND and GRAVEL - gray brown, 10YR4/2, some cobbles, some silt, dense, wet. SILTY CLAY - yellow brown, 10YR5/4, some fine sand, some mottling, soft to moderately stiff, moist, clay content increasing with depth, medium plasticity.	
25									

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Remarks: NM - Not Measured

Date Start/Finish: 12.18.12 - 12.18.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376027.86 **Easting:** 2559403.44 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 591.24 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **CG-MW27D** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25	565	6		5	0.0			SILTY CLAY - gray brown, 10YR5/2, fine sand seams at 26', 27.5' and 28.3', stiff, moist, medium plasticity.	
30	560	7		5	0.0			SILTY CLAY - gray brown, 10YR5/2, some to little fine sand, no odor, some pebbles and gravel from 35-38.8', stiff, moist, medium plasticity.	
35	555	8		5	0.0 0.0	CL		CLAY - brown, 10YR5/2, soft, wet, high plasticity, no odor. SILTY CLAY - gray brown, 10YR5/2, some to little fine sand, medium plasticity, some pebbles and gravel, moist, stiff, medium plasticity.	
40	550	9		5				CLAY - brown, 10YR5/2, gravel, hard, trace pebbles, moist, medium plasticity.	
45	545	10		5	0.0			CLAY - gray brown, 10YR5/2, some mottling, fine sand seams at 47.5', 48.1' and 48.7', trace gravel, stiff, moist, medium plasticity.	
50									

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Remarks: NM - Not Measured

Date Start/Finish: 12.18.12 - 12.18.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376027.86 **Easting:** 2559403.44 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 591.24 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **CG-MW27D** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
50	540	11		5	0.0			FINE SAND and CLAY - gray brown, 10YR5/2, some silt, soft, moist, non plastic.	
55	535	12		5	0.0			FINE SAND and CLAY - gray brown, soft, moist, low plasticity	
					0.0	SM		VERY FINE SAND - gray brown, 10YR5/2, some silt, wet.	
60	530	13		5	NM	CL		SILTY CLAY - gray brown, 10YR5/2, low plasticity, some fine sand, fine sand seams at 62.5', 63.2' and 64', soft, wet, medium plasticity.	
65									

Remarks: NM - Not Measured

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Date Start/Finish: 12.10.12 - 12.10.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 377293.02 **Easting:** 2559482.17 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 590.02 **Descriptions By:** Marcus Eriksson	**Well/Boring ID: CG-SB40** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	590				0.0			SOIL FILL, FINE SAND - black and dark brown, 10YR2/1 to 10YR2/2, little to some fine, medium and coarse gravel, little organics (roots), loose, moist.	
					0.0			SOIL FILL, FINE to MEDIUM SAND - dark brown, 10YR2/2, little to some fine, medium and coarse gravel, little red brick, loose, moist.	
		1		5					
					0.0			SOIL FILL, FINE to MEDIUM SAND - black, 10YR2/1, little fine to medium gravel, silt, loose, moist.	
					0.0			SOIL FILL, FINE to MEDIUM SAND - brown to dark brown, 10YR2/1, little fine to medium gravel, trace silt, trace fine brick, moist, loose.	
5	585							SOIL FILL, FINE to MEDIUM SAND - brown to gray, 10YR3/2, little fine to medium gravel, trace silt, trace fine brick, loose, moist.	
		2		5	0.0				
					0.0			SOIL FILL, FINE to MEDIUM SAND - dark brown to black, 10YR2/1 to 10YR2/2, little to some fine, medium and coarse gravel, gray to brown CLAY 10YR3/2, from 8-9', little silt, little red brick, fire brick, loose, wet at approximately 9'.	
10	580							SOIL FILL, FINE SAND and SILT - dark brown, 10YR2/2, some fine to medium gravel, little organics, ceramic pieces, trace clay, wet, no plasticity.	
		3		5	0.0	CL		SILTY CLAY - gray to brown, 10YR3/1 to 10YR4/2, little fine sand, increasing with depth, fine to medium gravel, soft, wet, medium plasticity.	
					0.0	GM		FINE to MEDIUM GRAVEL - dark brown,10YR2/2, some fine to medium sand, little silt, organics (shells), loose, wet.	
15	575								
		4		5	0.0	OL/ PT		FINE SAND and SILT - brown, 10YR4/3, little organics, (shells and trace roots), little clay, peat like material, trace fine gravel increasing with depth, dense, moist, non-plastic.	
20	570				0.0	SM		FINE SAND - dark brown, 10YR2/2, some silt, fine to medium gravel, trace organics (shells), soft, wet, non-plastic.	
		5		5					
					0.0	OL/ PT		FINE SAND and SILT - dark brown to gray brown, 10YR3/2 to 10YR2/2, little organics (shells and roots), peat-like material trace fine gravel, little clay, dense, moist, non-plastic.	
25	565								

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Remarks:

Date Start/Finish: 12.10.12 - 12.10.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 377293.02 **Easting:** 2559482.17 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 590.02 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CG-SB40** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25	565	6		5	0.0 0.0 0.0	OL		SILTY CLAY - gray to gray brown, 10YR4/1 to 10YR4/2, little fine sand, little to trace organics (shells and roots), fine gravel, stiff, moist, medium plasticity.	
						OL/ PT		FINE SAND and SILT - dark brown, 10YR2/2, little peat, organics (shells and roots), little clay, trace fine gravel, dense, moist, non-plastic.	
30	560	7		5	0.0 0.0	OL		SILT - gray to gray brown, 10YR3/2, little fine sand and clay, little to trace organics (shells and roots), stiff, moist, medium plasticity.	
35	555	8		5	0.0			SILTY CLAY - gray brown, 10YR3/2 to 10YR3/1, little organics (shells decreasing) with depth, soft, moist, low plasticity.	
40	550	9		5	0.0	OH		CLAY - gray to gray brown, 10YR5/2 to 10YR5/1, little silt, trace fine gravel, organics (shells), soft, wet, high plasticity.	
45	545	10		5	0.0 0.0	PT		PEAT - dark brown, 10YR3/2, organics (shells and roots) moist, non-plastic.	
						OH		SILTY CLAY - brown, 10YR4/3 to 10YR4/4, decreasing clay with depth, trace organics (shells), stiff, moist, high plasticity.	
50	540				0.0	SM		VERY FINE SAND - brown, 10YR4/3 to 10YR4/4, some silt, wet.	

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Remarks:

Date Start/Finish: 12.10.12 - 12.10.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 377293.02 **Easting:** 2559482.17 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 590.02 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CG-SB40** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
50	540	11		5	0.0	OH		CLAY - gray brown, 10YR3/2 to 10YR4/2, little silt, trace organics (shells), stiff, wet, high plasticity.	
					0.0	OH		SILTY CLAY - gray to gray brown, 10YR3/1 to 10YR3/2, little organics, (shells and roots), trace fine sand, stiff, moist, medium plasticity.	
55	535	12		5	0.0				
					0.0	SM		FINE SAND and SILT - brown to gray brown, 10YR5/3, little clay, wet.	
60	530	13		5	0.0	CL		CLAY - brown, 10YR5/3 to 10YR4/3, little silt increasing with depth, trace fine sand, stiff to soft, moist, medium plasticity.	
65									

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Remarks:

Date Start/Finish: 12.12.12 - 12.12.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 377070.53 **Easting:** 2559760.13 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 588.06 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CG-SB41** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0					0.0			CONCRETE	
					0.0			SOIL FILL, FINE SAND and concrete fragments, dark gray 10YR3/1, little fine to medium gravel, loose, moist, trace red brick.	
	585	1		5	28.7			SOIL FILL, FINE SAND and SILT - black, 10YR2/1, little rock fragments, clay, loose, moist, black staining, moderate MGP - like odor, black taffy like tar at 4'.	
5		2		5	159			SOIL FILL, FINE SAND and SILT - black, 10YR2/1, some fine gravel, little clay, dense, moist, wet at 7', black, staining throughout, little NAPL blebs throughout, strong odor.	
	580								
10		3		5	8.9				
	575				3.7			SOIL FILL, FINE SAND and SILT - black, 10YR2/1, some fine to medium gravel, trace coal and coke fragments, slag, saturated, little NAPL blebs, sheen in water.	
15		4		5	0.0	OL		SILT - dark grayish brown,10YR4/2, little fine sand, organics (roots and shells), fine gravels, medium stiff, moist, non-plastic, trace NAPL blebs at 15.5-16'.	
	570							SILT - dark gray brown, 10YR4/2, little fine sand, organics (roots and shells), fine gravels, medium stiff, moist, non-plastic.	
20		5		5	0.0			SILT - dark grayish brown,10YR4/2, little clay, fine sand, organics (shells and roots), soft to medium stiff, moist, low plasticity.	
	565								
25									

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Remarks:

Date Start/Finish: 12.12.12 - 12.12.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 377070.53 **Easting:** 2559760.13 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 588.06 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CG-SB41** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25									
	560	6		5	0.0	OL		SILTY CLAY -dark brown, 10YR2/2, little organics, (shells), trace fine sand, soft, moist, non-plastic.	
30		7		5		OH		SILTY CLAY - gray brown, 10YR4/2 to 10YR3/2, trace organics (shells), stiff to medium stiff, moist, medium plasticity.	
	555								
35		8		5	0.0				
	550								
40		9		5				CLAY - gray brown, 10YR5/2, soft, grades stiffer at depth, saturated, medium plasticity.	
	545								
45		10		5	0.0				
	540								
50									

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Remarks:

Date Start/Finish: 12.12.12 - 12.12.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 377070.53 **Easting:** 2559760.13 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 588.06 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CG-SB41** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
50									
	535	11		5		OH		CLAY - gray brown, 10YR5/2, medium stiff grades to stiff, moist to saturated, medium plasticity, little organics (shells).	
55					0.0				
		12		5					
	530								
60								FINE SAND - brown, little clay, dense, saturated, non-plastic.	
		13		5	0.0			CLAY - gray, stiff, saturated, medium plasticity.	
	525					SP		SAND - gray brown, 10YR5/2, fine to medium grained, little clay, dense, saturated, non-plastic.	
65									

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Remarks:

Date Start/Finish: 12.11.12 - 12.11.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376957.24 **Easting:** 2559493.20 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 589.90 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CG-SB42** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0		1		5	0.0			SOIL FILL, FINE to MEDIUM SAND - black, 10YR2/1, fine medium and coarse gravel, coal/coke, red brick, trace silt, slag, trace cobbles (possible concrete), trace wood fragments at 2', loose, moist.	
5	585	2		5	0.0 0.0 0.8			SILTY CLAY - gray brown to brown, 10YR5/2 to 10YR5/3, little fine gravel, fine sand, moist non-plastic. SOIL FILL, FINE to MEDIUM SAND - gray brown, 10YR4/2, some fine to medium gravel, little clay and silt, loose, wet at 8', solvent-like odor	
10	580	3		5	0.7	OL		SOIL FILL, FINE SAND - black, 10YR2/1, some fine, medium and coarse gravel, trace silt, loose, wet, non-plastic. FINE SAND and SILT - dark brown, 10YR2/2, little organics, (roots and shells) trace clay, peat like material, dense, moist, non-plastic.	
15	575	4		5	0.8	OL/ PT		FINE to MEDIUM SAND and GRAVEL - black, 10YR2/1, fine to medium gravel and fine sand, little silt, dense, wet, trace sheen and moderate NAPL like odor. SILT and FINE SAND - dark brown, 10YR2/1, little fine gravel, little peat like material, organics (roots, shells), clay, dense, moist, non-plastic.	
20	570	5		5	0.0			SILT and FINE SAND - gray brown, 10YR4/2, little fine gravel, organics (roots, shells), little clay, dense, moist, non-plastic, wood chips at 21' peat like material.	
25	565								

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Remarks:

Date Start/Finish: 12.11.12 - 12.11.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376957.24 **Easting:** 2559493.20 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 589.90 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CG-SB42** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25	565					GM		FINE SAND and GRAVEL - black, 10YR2/1, some silt, little organics (shells), non-plastic, wet, moderate sheen, no odor.	
		6		5	0.0	OL		SILT and FINE SAND - brown gray, 10YR3/2 to 10YR4/2, little organics (roots and shells), little clay, trace fine gravel, medium stiff, moist, non-plastic.	
30	560	7		5	0.0	OL/ CL		SILTY CLAY - gray brown, 10YR3/2 to 10YR4/2, little organics (roots and shells decreasing with depth), stiff, wet, non-plastic.	
35	555	8		5	0.0				
40	550	9		5	0.0				
45	545	10		5	0.0	OL/ PT		SILT and FINE SAND - gray brown, 10YR3/2, little organics (roots and shells) and peat like material, moist, non-plastic.	
50	540							FINE to MEDIUM SAND - brown to yellow brown, 10YR5/3 to 10YR5/4, little silt, trace fine gravel, wet, increasing coarse sand at 50-51.5'.	

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Remarks:

Date Start/Finish: 12.11.12 - 12.11.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376957.24 **Easting:** 2559493.20 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 589.90 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CG-SB42** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
50	540	11		5	0.0	SP / CL		SILTY CLAY - brown to gray brown, 10YR3/2 to 10YR5/3, decreasing silt with depth, stiff, moist to wet, high plasticity.	
55	535	12		5	0.0				
60	530	13		5	0.0				
65	525								

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Remarks:

Date Start/Finish: 12.11.12 - 12.11.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376957.93 **Easting:** 2559536.53 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 590.57 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CG-SB43** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	590	1		5	0.0 0.0 0.0			SOIL FILL, FINE SAND - yellowish to reddish brown, 10YR3/4 to 10YR3/6, some fine to medium gravel, red brick, fire brick, loose, moist. SOIL FILL, FINE SAND - black, 10YR2/1, little fine to medium gravel, little to trace coal and coke fragments, loose, moist. CONCRETE - gray, 10YR5/1 to 10YR7/1, some re-bar from 5-8.5', loose, wet at 9'.	
5	585	2		5	0.0				
10	580	3		5	28.7 62.3			CONCRETE - yellowish reddish brown, 5YR5/3, very loose, little NAPL blebs on surface, sheen. CONCRETE - gray brown, 10YR3/2, little fine sand, silt, very loose, NAPL blebs throughout, moderate staining, sheen	
15	575	4		5	16.3	OL/ PT		SILT - dark brown, 10YR2/2, some to little very fine sand, peat like material, little organics, shells and roots, clay, soft, moist, non-plastic, organic odor.	
20	570	5		5	4.7				
25									

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Remarks:

Date Start/Finish: 12.11.12 - 12.11.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376957.93 **Easting:** 2559536.53 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 590.57 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CG-SB43** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25	565	6		5	0.0	OH		SILTY CLAY - gray brown, 10YR3/2 to 10YR4/2, little organics (shells and roots decreasing with depth), soft, moist, medium plasticity.	
30	560	7		5	0.0				
35	555	8		5	0.0				
40	550	9		5	0.0	CL/ CH		CLAY - gray brown to brown, 10YR5/2 to 10YR5/3, trace silt, soft, moist, medium plasticity.	
45	545	10		5	0.0				
50									

Remarks:

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Date Start/Finish: 12.11.12 - 12.11.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376957.93 **Easting:** 2559536.53 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 590.57 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CG-SB43** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
50 / 540	11		5	0.0			SILT and FINE SAND - little peat, increasing clay with depth, soft to dense, wet, medium plasticity.	
55 / 535	12		5	0.0	SM		FINE to MEDIUM SAND - gray to gray brown, 10YR4/1 to 10YR4/2, some fine and medium gravel, little silt, trace clay, dense, wet.	
60 / 530	13		5	0.0	CH		CLAY - gray brown, 10YR4/2 to 10YR4/3, trace silt, mottled, hard, moist, high plasticity.	
65								

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Remarks:

Date Start/Finish: 12.11.12 - 12.11.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376793.82 **Easting:** 2559678.75 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 588.86 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CG-SB44** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0 / 585	1		5	0.0			CONCRETE SOIL FILL, FINE to MEDIUM SAND - black, 10YR2/1, little fine to medium gravel, silt, loose, moist, non-plastic.	
5 / 580	2		4	0.0			SOIL FILL, FINE to MEDIUM SAND and FINE to MEDIUM GRAVEL - black, 10YR2/1, little red brick, loose grades denser at depth, slag, trace fire brick, saturated at 7', non-plastic.	
10 / 575	3		4	1.8	OL		SILT - dark gray, 10YR4/1, some fine sand, little clay, fine to medium gravel, loose, saturated, non-plastic, faint MGP/NAPL like odor. SILT - gray to black, 10YR4/1 to 10YR2/1, some fine sand, little clay, fine to medium gravel, saturated, non-plastic, little NAPL blebs throughout, sheen and coal-tar like odor.	
15 / 570	4		2.5	3.3			WOODCHIPS - fine sand and silt, saturated, moderate NAPL throughout, sheen, strong odor. WOODCHIPS - coated with NAPL/coal tar material	
20 / 565	5		5	76.2 107.6	OL/ PT		SILTY CLAY - gray brown, 10YR4/1 to 10YR4/2, little peat interbedded throughout, organics (roots and shells), moist, low plasticity.	
25								

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Remarks:

Date Start/Finish: 12.11.12 - 12.11.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376793.82 **Easting:** 2559678.75 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 588.86 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CG-SB44** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25									
		6		5	0.0			SILTY CLAY - gray brown, 10YR3/1 to 10YR3/2, little organics, shells, soft to medium stiff, moist, low plasticity.	
	560								
30		7		5	0.0			CLAY - gray brown, 10YR4/1 to 10YR4/2 to 10YR4/3 at depth, increasing clay with depth, decreasing organics with depth, moist, medium stiff, medium plasticity (plasticity increases with depth).	
	555								
35		8		5	0.0	OL/ OH			
	550								
40		9		5	0.0				
	545								
45		10		5	0.0	CH		CLAY - gray brown, 10YR4/2 to 10YR4/3, medium stiff, saturated, high plasticity.	
	540								
50									

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Remarks:

Date Start/Finish: 12.11.12 - 12.11.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376793.82 **Easting:** 2559678.75 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 588.86 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CG-SB44** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
50					0.0	SM		FINE SAND - brown, 10YR4/3, little silt, trace clay, saturated, non-plastic.	
	535	11		5	0.0 0.0	CH		CLAY - brown to brown gray, 10YR4/2 to 10YR4/3, increasing stiffness with depth, saturated, high plasticity.	
55									
		12		5	0.0				
	530								
60									
		13		5	0.0				
	525								
65									

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Remarks:

Date Start/Finish: 12.12.12 - 12.12.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376751.67 **Easting:** 2559516.51 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 591.17 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CG-SB45** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	590	1		5	0.0 0.0			SOIL FILL, FINE to MEDIUM SAND - dark brown, 10YR3/3, some red brick, little silt, fine to medium gravel, loose, moist, non-plastic.	
								SOIL FILL, FINE to MEDIUM SAND - black, 10YR2/1, little to some fine to medium gravel, little silt, trace coal fragments, loose, moist, non-plastic.	
5	585	2		5	0.0			SOIL FILL, CLAY - brown gray, 10YR5/3 to 10YR5/2, little fine to medium to coarse gravel, silt, fine sand, trace red brick, stiff, moist, medium plasticity.	
10	580	3		5	0.0 28.4 127 2739	SW		SOIL FILL, SILT and CLAY - brown, 10YR4/3, little fine to medium gravel, organics (roots) trace fine sand, red brick, moist, wet at 10', low plasticity.	
								SOIL FILL, CLAY and WOOD - gray, 10YR5/1, little silt, fine to medium gravel, fine sand, faint to moderate odor (MGP like), green staining, moist, non-plastic.	
								SOIL FILL, CLAY and WOOD - gray, 10YR5/1, little silt, fine to medium gravel, fine sand, wet, possible concrete floor, from 12-13' approximately 0.5', faint to moderate odor (MGP like), green staining.	
15	575	4		5	9.5 127 13.8	OL/ PT OL		SOIL FILL, FINE to MEDIUM SAND and FINE to MEDIUM to COARSE GRAVEL - gray and black, 10YR22/1, little silt, wet, moderate NAPL blebs (30% of pore space NAPL), sheen, odor, staining.	
								FINE SAND and SILT - dark brown,10YR2/2, little organics (shells, peat and roots), trace fine gravel, loose, moist, non-plastic.	
								SILT - gray brown, 10YR4/2, little fine sand, organics (shells), trace clay, increasing with depth, soft, wet, non-plastic, little black stain, MGP like odor, sheen.	
								SILT - gray brown, 10YR4/2, little fine sand, organics (shells), trace clay, increasing with depth, wet, non-plastic.	
20	570	5		5	18			SILT - gray brown, 10YR4/12, little fine sand, organics (shells), trace clay, increasing with depth, soft, wet, low plasticity, trace black staining at 21'.	
25									

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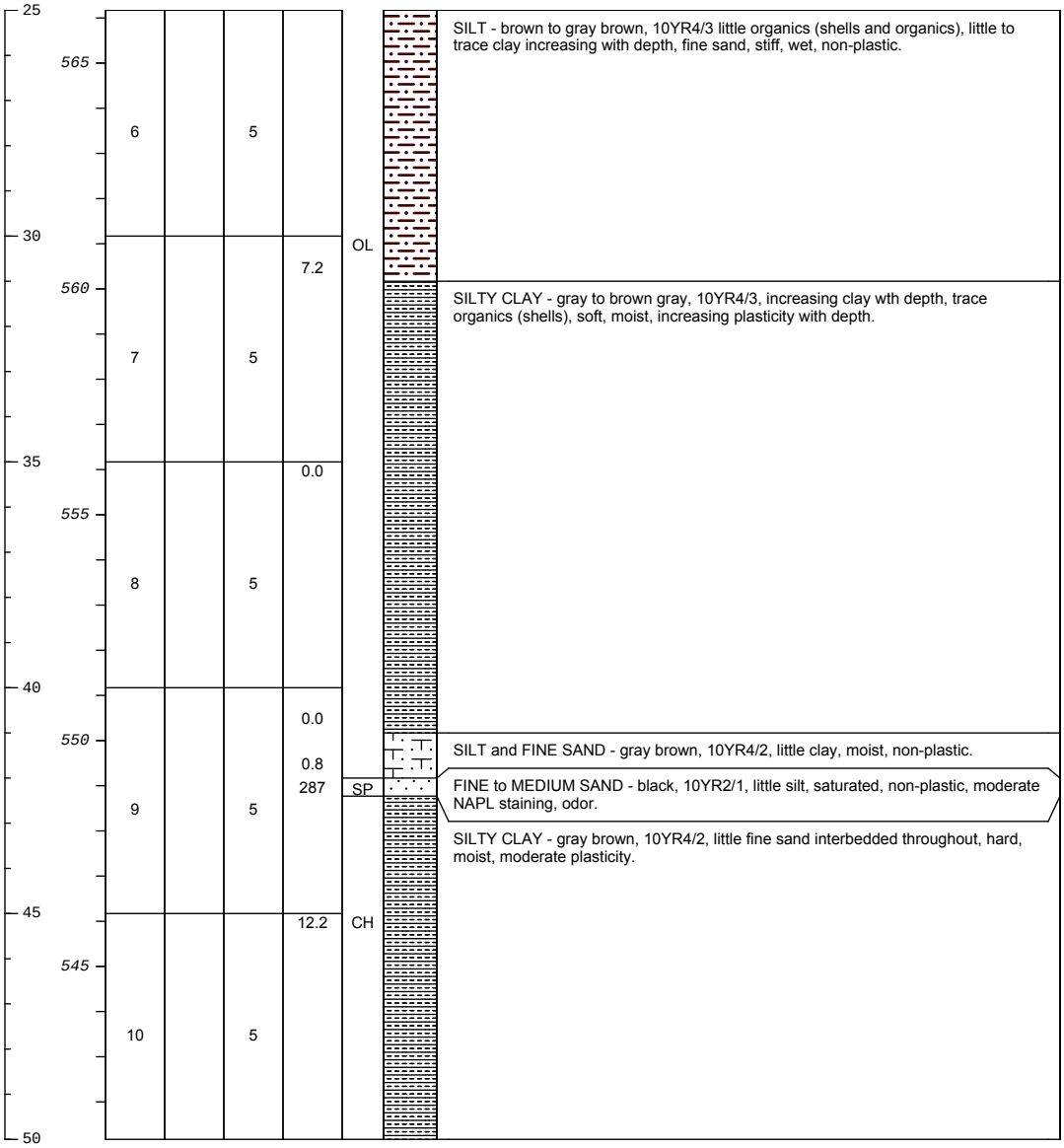
Remarks:

Date Start/Finish: 12.12.12 - 12.12.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376751.67 **Easting:** 2559516.51 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 591.17 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CG-SB45** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction



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Remarks:

Date Start/Finish: 12.12.12 - 12.12.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376751.67 **Easting:** 2559516.51 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 591.17 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CG-SB45** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
50	540	11		5	0.0	SP		FINE to MEDIUM SAND - brown, 10YR4/3, moist, non-plastic.	
55	535	12		5	0.0	CH		CLAY - gray brown, 10YR5/2, trace silt, mottled, stiff to hard, softer at 60-65' moist, plastic.	
60	530	13		5	0.0				
65									

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Remarks:

Date Start/Finish: 12.18.12 - 12.18.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376822.62 **Easting:** 2559487.36 **Casing Elevation:** NA **Borehole Depth:** 50' **Surface Elevation:** 589.38 **Descriptions By:** Stephen Pels	**Well/Boring ID:** **CG-SB45NW** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0 / 585	1		5	0.0			SOIL FILL - black, 10YR2/1, possible coal, coke, clinker fragments, some brick, organics and silt, loose, moist, trace odor.	
5	2		5	0.0	SM		COARSE SAND - yellow brown, 10YR5/4, little gravel, trace pebbles, some silt, loose, moist, no odor.	
				0.0	CL		CLAY - brown mottled, 10YR5/3, hard, little pebbles, some wood fragments, medium stiff, moist, low plasticity.	
580								
10							CLAY - gray brown, 10YR4/1, little silt, medium stiff, moist, medium plasticity, no odor.	
	3		5	0.0			SILT - black, 10YR2/1, wood fragments and some wood debris, pebbles, loose, wet, trace odor.	
				0.0				
575				0.0			CLAY - gray brown, 10YR5/2, trace silt and pebbles, moist, medium plasticity.	
15							SOIL FILL, SAND and GRAVEL - black, 10YR2/1 possible clinker or coke and coal fragments, medium dense, wet, NAPL sheen with blebs at 17.2-17.3'.	
	4		5	96.4			SOIL FILL, SAND and GRAVEL - black, 10YR2/1, with some silt, soft, loose, odor.	
570				20.4				
20							SILT - gray brown, 10YR4/1 to 10YR4/2 organics (shells), trace clay, soft, moist non plastic.	
	5		5	0.0				
				0.0	OL			
565								
25								

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Remarks:

Date Start/Finish: 12.18.12 - 12.18.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376822.62 **Easting:** 2559487.36 **Casing Elevation:** NA **Borehole Depth:** 50' **Surface Elevation:** 589.38 **Descriptions By:** Stephen Pels	**Well/Boring ID:** **CG-SB45NW** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25				0.0				
	6		5	0.0	PT		ORGANIC SILT and PEAT - brown to dark brown, 10YR2/2, moist, non plastic.	
560				0.0			SILT - gray brown, 10YR4/1to 10YR4/2, trace organics (shells), soft, moist, non plastic.	
30	7		5	0.0	OL		SILTY CLAY - brown to gray brown, trace organics (shells), soft, moist, medium plasticity, very soft at 34-41'.	
555								
35	8		5	0.0				
550								
40	9		5	0.0	SP		COARSE SAND - gray, 10YR5/1, some medium sand, organics (shells), little gravel, trace silt, dense, moist.	
545					CL		SILTY CLAY - gray brown, stiff, moist, non plastic.	
45	10		5	0.0	SP		FINE and MEDIUM SAND - gray, 10YR5/2, trace coarse sand, some silt, dense, moist, no odor.	
540				0.0	OL		SILT - gray, 10YR4/2, some organics (shells), soft, moist, low plasticity.	
50								

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Remarks:

Date Start/Finish: 12.19.12 - 12.19.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376700.25 **Easting:** 2559496.31 **Casing Elevation:** NA **Borehole Depth:** 47' **Surface Elevation:** 590.53 **Descriptions By:** Stephen Pels	**Well/Boring ID:** **CG-SB45SW** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	590	1		5	0.0 0.0	CL		SOIL FILL - black, 10YR2/1, angular possible coke and coal fragments with some medium sand, loose, moist. CLAY - pale brown, 10YR6/3, with silt and fine sand, some gravel, hard, moist, low plasticity.	
5	585	2		4	0.0 0.0			SOIL FILL, SILT - black, 10YR2/1, some coarse to medium sand, clay, fire brick and some wood fragments, moist, non-plastic. CLAY - brown, 10YR5/3, little silt, some pebbles, trace mottling, soft, moist, little silt.	
10	580	3		4	0.0 0.0 0.0			CLAY - light brown, 10YR5/3, some to little silt, soft to very soft, very soft from 15-20', moist.	
15	575	4		4	0.0 0.0	CL			
20	570	5		5	0.0 0.0 0.0			CLAY - light brown, 10YR5/3, some to little silt, some silt clasts, pebbles, soft, moist, high plasticity. PEAT and SILT - dark brown, soft, organics (shells), moist, non plastic.	
25									

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Remarks:

Date Start/Finish: 12.19.12 - 12.19.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376700.25 **Easting:** 2559496.31 **Casing Elevation:** NA **Borehole Depth:** 47' **Surface Elevation:** 590.53 **Descriptions By:** Stephen Pels	**Well/Boring ID:** **CG-SB45SW** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25	565	6		4	0.0 0.0			SILT - gray brown, 10YR4/2, organics (shells), some clay, soft, moist, low plasticity.	
30	560	7		5	0.0 0.0 0.0	OL/ OH		SILTY CLAY - gray brown 10YR4/2, soft to medium stiff, moist, high plasticity. SILTY CLAY - dark gray, 10YR4/1, trace organics (shells), soft, moist, low plasticity.	
35	555	8		5	0.0 0.0	GM		FINE SAND - gray brown, 10YR5/2, some medium sand, some silt, dense, moist to wet. SAND and GRAVEL - gray brown, 10YR5/2, some fine sand, silt, dense, moist.	
						OL		SILTY CLAY - brown to gray, 10YR4/3, stiff, moist, low plasticity.	
40	550	9		5	0.0 0.0 0.0	GM		SAND and GRAVEL - brown, 10YR4/3, some silt, pebbles, moist, to wet.	
						CL		CLAY - gray brown, 10YR5/2, little silt, medium plasticity, some sand and pebbles, hard, some mottling, moderately moist.	
45	545	10		2	0.0				

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Remarks:

Date Start/Finish: 1.9.13 - 1.9.13 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376691.87 **Easting:** 2559378.20 **Casing Elevation:** NA **Borehole Depth:** 45' **Surface Elevation:** 589.85 **Descriptions By:** Stephen D. Pels	**Well/Boring ID:** **CG-SB45W - Well Install** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0		1		4	0.2			SOIL FILL, FINE to COARSE GRAVEL - black, 10YR2/1, fine to coarse sand, trace silt, angular debris, little to some possible coal and coke fragments, possible clinker fragments, angular gray concrete fragments and re-bar fragments, loose, moist.	
5	585	2		3	0.1				
10	580	3		5	0.1 0.2 0.0 0.0	CL		CLAY - gray brown, 10YR5/2, some silt, stiff, moist, some mottling, low plasticity, trace odor. FINE to MEDIUM SAND - black, 10YR2/1, dense, wet, some odor. CLAY - gray brown to brown, 10YR4/2 to 10YR4/3, stiff, moist, some mottling, plasticity, trace odor.	
15	575	4		5	0.0 0.0	OL PT		SILT - dark brown, 10YR3/2, some fine sand, trace organics (shells), soft, moist, low plasticity. PEAT - dark brown, 10YR2/2, organics (shells, roots), soft, moist, non plastic, organic odor.	
20	570	5		5	0.0			SILT - gray brown, 10YR4/2, little clay, trace shells, trace fine sand, soft, moist, low plasticity.	
25	565								

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Remarks:

Date Start/Finish: 1.9.13 - 1.9.13 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376691.87 **Easting:** 2559378.20 **Casing Elevation:** NA **Borehole Depth:** 45' **Surface Elevation:** 589.85 **Descriptions By:** Stephen D. Pels	**Well/Boring ID:** **CG-SB45W - Well Install** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25	565	6		5	0.0	OL		SILTY CLAY - gray brown, 10YR4/2, high plasticity, trace shells, stiff, moist, high plasticity.	
30	560	7		4	0.2	SW		FINE to MEDIUM SAND - gray brown, 10YR4/2, little coarse sand, trace gravel, trace clay, dense wet.	
					0.0	CL		SILT and CLAY - gray brown, 10YR3/2, trace organics, soft, moist, low plasticity.	
35	555	8		5	0.0	SW		MEDIUM SAND - brown, 10YR4/2 to 10YR4/3, some fine grained sand, trace fine gravel and silt, trace organics, dense, wet, no odor.	
40	550	9		5	0.0				
45	545				0.0	CL		CLAY - brown, 10YR4/3, mottled, trace gravel at 40', hard, moist, medium plasticity.	

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Remarks:

Date Start/Finish: 12.14.12 - 12.14.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376582.35 **Easting:** 2559689.94 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 591.72 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CG-SB46** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	590	1		5	0.0 0.0			SOIL FILL, RED BRICK - little fine sand, fine to medium gravel, loose, moist non plastic. SOIL FILL, FINE SAND - black to dark brown,10YR2/2 to 10YR2/1, some fine gravel, trace coal and coke fragments, silt, loose, moist. SOIL FILL, FINE SAND - dark brown, 10YR2/2, some fine to medium gravel, little red brick, fire brick, trace silt, loose, moist.	
5	585	2		5	0.0 0.0			SOIL FILL, FINE SAND - some medium sand, dark brown, 10YR2/2, little fine to medium gravel, trace coal and coke fragments, loose, moist.	
10	580	3		5	17.2 0.0			SOIL FILL, FINE to MEDIUM SAND - 10YR3/1, gray some silt, little fine gravel, medium dense, wet at 10', moderate petroleum odor. FINE SAND - gray brown, 10YR3/2 - some peat, some organics (leaves, roots), little silt, organic odor, wet.	
15	575	4		5	13.0 3.2	OL/ PT		FINE SAND - gray to dark gray,10YR3/2, fine to medium gravel, little silt, saturated, petroleum like and MGP like odor, trace NAPL blebs, little sheen. SILT and FINE SAND - gray brown, 10YR3/2, little organics (roots and leaves), soft, moist, non-plastic.	
20	570	5		5				SILT - gray brown, 10YR3/2, little fine sand, organics (shells and roots), trace clay, soft, moist.	
25									

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Remarks:

Date Start/Finish: 12.14.12 - 12.14.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376582.35 **Easting:** 2559689.94 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 591.72 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CG-SB46** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25	565	6		5	0.0	OL			
30	560	7		5	0.0			SILT - gray brown, 10YR4/2, little fine sand, organics (shells and roots), trace to some clay, soft, moist, low plasticity, increasing clay with depth.	
35	555	8		5	0.0	CL		CLAY - gray brown, 10YR4/2, little silt decreasing with depth, soft moist, medium plasticity.	
40	550	9		5	0.0 0.0	SW		FINE to MEDIUM SAND - gray brown, 10YR5/2, dense, moist, non-plastic.	
45	545	10		5	0.0			CLAY - brown, 10YR4/3, little fine sand from 56-57', very stiff, moist, high plasticity.	
50									

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Remarks:

Date Start/Finish: 12.14.12 - 12.14.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376582.35 **Easting:** 2559689.94 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 591.72 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CG-SB46** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
50 / 540	11		5					
55 / 535	12		5	0.0	CH			
60 / 530	13		5	0.0				
65								

Remarks:

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Date Start/Finish: 12.18.12 - 12.18.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376580.47 **Easting:** 2559807.75 **Casing Elevation:** NA **Borehole Depth:** 40' **Surface Elevation:** 588.87 **Descriptions By:** Stephen Pels	**Well/Boring ID:** **CG-SB46E** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0 / 588.87				0.0			CONCRETE	
	1		5	0.0			SOIL FILL, SAND and GRAVEL - black, 10YR2/1, dry, no odor.	
585				0.0			CONCRETE	
5	2		5	0.0			SOIL FILL, SAND and GRAVEL - black, 10YR2/1, trace organics (wood, roots), dry, concrete at 10'.	
580								
10	3		5	17.2	CL		CLAY - brown, 10YR5/3, hard, trace gravel, moist, non-plastic.	
575				0.0			SOIL FILL, SAND and GRAVEL - black to dark brown, 10YR2/1 to 10YR2/2, possible coal and coke fragments, some silt, some wood fragments, debris, metal fragments, wet.	
15	4		5	13.0	OL/ PT		SILT and PEAT - dark brown to gray brown, 10YR2/2 to 10YR3/1, organics (shells), trace fine sand, soft, moist, non plastic.	
570				3.2			PEAT - brown, 10YR4/1 to 10YR4/2, trace organics (shells), soft, non plastic.	
20	5		5	0.0	OL		SILT - gray brown, 10YR4/1 to 10YR4/2, trace organics (shells), soft, moist, non plastic.	
565					SP		FINE SAND - gray brown 10YR4/1 to 10YR4/2, some silt, dense, moist.	
25				0.0			SILT - gray brown, 10YR4/1 to 10YR4/2, soft, moist, non plastic, organic odor.	

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Remarks:

Date Start/Finish: 12.18.12 - 12.18.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376580.47 **Easting:** 2559807.75 **Casing Elevation:** NA **Borehole Depth:** 40' **Surface Elevation:** 588.87 **Descriptions By:** Stephen Pels	**Well/Boring ID:** **CG-SB46E** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25 / 560	6		5	0.0			SILT - gray brown, 10YR4/1 to 10YR4/2, soft, trace organics (shells), little clay, trace fine sand, moist, non-plastic, no sand and no organics from 30-35', increasing clay.	
30 / 555	7		5	0.0				
35 / 550	8		5	0.0	OL		SILTY CLAY - gray brown to brown, 10YR4/2 to 10YR5/2, trace organics (shells), soft, moist, low plasticity.	
40								

Remarks:

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Date Start/Finish: 12.14.12 - 12.14.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376513.29 **Easting:** 2559625.74 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 590.25 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CG-SB47** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	590	1		5	1.6			SOIL FILL, FINE to MEDIUM SAND - black, 10YR2/1, some fine to medium gravel, silt, trace clay, coal, coke, fire brick, loose, moist, non-plastic moderate petroleum odor, trace sheen from 5-7'.	
5	585	2		5	24.2 3.2			FINE SAND - black to dark brown, 10YR2/1 to 10YR2/2, some silt, some fine to medium gravel, little organics (roots and wood fragments), some stiff clay, loose, moist.	
10	580	3		5	87.4 13.1	SM		FINE SAND - black to dark brown, 10YR2/1 to 10YR2/2, some silt, some fine to medium gravel, little organics (roots and wood fragments), some clay, moist, medium plasticity. Approximately 5mm of fine to medium sand lense at 11.5' with odor and trace sheen.	
15	575	4		5	88.3 581 101	OL PT		SILT and CLAY - gray brown, 10YR4/1 to 10YR4/2 little fine sand, organics (roots), soft, moist, low plasticity. WOODCHIPS - little dark staining, petroleum-like odor. PEAT - dark brown, 10YR2/2, mottled with gray brown, little silt, fine sand, organics (shells, roots), moist, non-plastic.	
20	570	5		5				SILT - gray brown, 10YR4/1 to 10YR4/2, little fine sand, organics (shells), shells, trace fine gravel, clay increasing with depth, moist, non-plastic to low plasticity.	
25									

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Remarks:

Date Start/Finish: 12.14.12 - 12.14.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376513.29 **Easting:** 2559625.74 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 590.25 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CG-SB47** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25	565	6		5	0.0	OL			
30	560	7		5				SILT and CLAY - gray brown to brown, 10YR4/2 to 10YR4/3, little organics (shells), soft to stiff, moist, medium plasticity.	
35	555	8		5	0.0	OH			
40	550	9		5				CLAY - brown to gray, 10YR5/2, hard, moist, medium plasticity.	
45	545	10		5	0.0	CH		CLAY - gray brown, 10YR5/2, little silt, trace to little fine sand (47-48'), soft moist, high plasticty.	
50									

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Remarks:

Date Start/Finish: 12.14.12 - 12.14.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376513.29 **Easting:** 2559625.74 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 590.25 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CG-SB47** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
50	540					SM		FINE SAND - gray brown, 10YR5/2, with silt, little fine to medium gravel, dense, wet, non-plastic.	
		11		5		CL		SILTY CLAY - gray brown, 10YR5/2, moist, medium plasticity.	
55	535	12		5	0.0				
60	530	13		5	0.0				
65									

Remarks:

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Date Start/Finish: 12.14.12 - 12.14.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376381.74 **Easting:** 2559544.14 **Casing Elevation:** NA **Borehole Depth:** 60' **Surface Elevation:** 590.49 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **CG-SB48** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	590	1		3	0.8			SOIL FILL, FINE to COARSE SAND - black to dark brown, 10YR2/1 to 10YR2/2, some silt, some fine to coarse gravel, loose, moist, gravel coal, organics (roots).	
5	585	2		3	3.9 6.1			CONCRETE - some wood fragments.	
10	580	3		5	225 60 72.4	PT		SOIL FILL, SILT - gray mottled, 10YR3/1 to 10YR3/2, some fine sand, medium density, wet low plasticity, staining, odor, organics (wood debris), nails, no staining at 14'. PEAT and SILT - dark brown, 10YR2/2, little fine sand, moist, non plastic.	
15	575	4		3	57.3 7.0	OL/ PT		SOIL FILL, SAND - gray, 10YR 3/2, some silt, fine to medium sand, moderately dense, wet, sheen, odor, debris (concrete and bricks). PEAT and SILT - dark brown, 10YR3/2, some fine sand, moist, organics (wood chips), soft, low plasticity.	
20	570	5		5	7.6 2.5	OL		SILT - gray brown, 10YR4/1 to 10YR4/2, some clay, trace sand, medium stiff, moist, medium plasticity. SILT - brown gray, 10YR4/1 to 10YR4/2, some fine to medium sand, little clay, organics (shells), moderately stiff, moist, low plasticity.	
25									

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Remarks:

Date Start/Finish: 12.14.12 - 12.14.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376381.74 **Easting:** 2559544.14 **Casing Elevation:** NA **Borehole Depth:** 60' **Surface Elevation:** 590.49 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **CG-SB48** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25	565	6		5	4.2	CL		CLAY - brown gray, 10YR4/2 to 10YR5/2 some silt, little fine sand, stiff, moist, medium plasticity.	
30	560	7		5	0.5 1.7			CLAY - gray brown, 10YR4/2 to 10YR5/2, some silt, trace fine sand, stiff, moist, medium plasticity.	
35	555	8		5	1.1				
40	550	9		5	1.6				
45	545	10		5	1.6			CLAY - gray brown, 10YR4/2 to 10YR5/2, some silt, very stiff, moist, gray, moderate plasticity.	
50									

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Remarks:

Date Start/Finish: 12.14.12 - 12.14.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376381.74 **Easting:** 2559544.14 **Casing Elevation:** NA **Borehole Depth:** 60' **Surface Elevation:** 590.49 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **CG-SB48** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
50 / 540	11		5	0.4				
55 / 535	12		5	0.4				
60								

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Remarks:

Date Start/Finish: 12.14.12 - 12.14.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376132.62 **Easting:** 2559525.77 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 590.94 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **CG-SB49** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	590	1		3	2.1			SOIL FILL, FINE to COARSE SAND - dark brown to black, 10YR2/1 to 10YR2/2, some gravel, some silt, some organics (wood), loose, wet, odor, possible coal and coke.	
5	585	2		3	104 388			SOIL FILL, FINE to COARSE SAND - dark gray, 10YR3/1, some gravel, some silt, wet, partially saturated NAPL from 5-10' and Saturated NAPL from 10-14'.	
10	580	3		5	181				
15	575	4		3	150 86.6 7.1	OL/ PT SW		SILT and PEAT - dark brown, 10YR2/2, some sand, some organics, (woodchips), soft, moist, low plasticity. MEDIUM SAND - gray, 10YR4/1 to 10YR4/2, little silt, little fine gravel, loose, moist, grades coarser from 20-21'.	
20	570	5		5	1.5 2.4	OL		SILT - gray, some fine sand, medium stiff, wet, low plasticity.	
25									

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Remarks:

Date Start/Finish: 12.14.12 - 12.14.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376132.62 **Easting:** 2559525.77 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 590.94 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **CG-SB49** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25	565	6		5	4.5	CL		SILT and CLAY - brown, 10YR5/3, little fine sand, stiff, moist, medium plasticity.	
30	560	7		5	14.7	OL		SILT - brown, 10YR5/3, some fine sand, loose, wet, non plastic.	
					16.4	CL		CLAY - brown, 10YR5/3, some silt, little fine sand, stiff, moist, low plasticity.	
35	555	8		5	12.1	SM		FINE SAND - brown, 10YR5/3, some silt, loose, wet.	
					21.9	CL		CLAY - brown, 10YR5/3, some silt, stiff, moist medium plasticity.	
					30.4	SM		FINE SAND - brown, 10YR5/3, some silt, loose, wet.	
40	550	9		5	19.1			SILT - gray, 10YR4/2, some fine sand, little clay, moderately stiff, 6" layers of clay, wet, moderate plasticity.	
45	545	10		5	12.1			SILT - gray brown, 10YR4/2, some clay, little fine sand, stiff, moist, moderate plasticity.	
50									

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Remarks:

Date Start/Finish: 12.14.12 - 12.14.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376132.62 **Easting:** 2559525.77 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 590.94 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **CG-SB49** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
50 / 540	11		5	9.1	CL			
55 / 535	12		5	26.8				
60 / 530	13		5	24.8	CL		CLAY - gray brown, 10YR4/2, some silt, stiff, moist, medium plasticity.	
65								

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Remarks:

Date Start/Finish: 12.15.12 - 12.15.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 375905.96 **Easting:** 2559759.50 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 588.33 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **CG-SB50** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0									
	585	1		3	0.9			SOIL FILL, SILT - dark gray to black, 10YR2/1 to 10YR3/1, some gravel, little fine to coarse sand, loose, some organics, coal from 0-2' moist, non plastic.	
5		2		3	1.3			SOIL FILL, SAND - brown to dark brown, 10YR4/3, some silt, little clay, moderately dense, moist, non plastic.	
	580				1.9			SOIL FILL, GRAVEL - dark brown to black, 10YR2/1 to 10YR2/2, some silt, fine to coarse sand, coke/coal gravel, debris (glass), loose, non plastic, sheen at 7-8' and 10-13'.	
10		3		5	0.9				
	575				1.6	OL		SILT - dark brown, 10YR2/2, some fine sand, some organics (wood chips), soft, moist, non plastic.	
15		4		3	1.0	SW		FINE to MEDIUM SAND - gray, little silt, coarse sand, some organics (shells), loose, wet, non plastic.	
					1.2	SP		FINE to COARSE GRAVEL - gray brown, 10YR4/2, little sand, fine to coarse sand, loose, wet.	
	570				1.8			FINE to MEDIUM SAND - gray brown, 10YR 4/2 to 10YR4/3, little silt, coarse sand, medium dense, wet, non plastic.	
20		5		5	2.9	SW		FINE to COARSE SAND - gray brown, 10YR4/2 to 10YR4/3, some fine gravel, little silt, loose, wet, non plastic.	
	565				1.1	OL		SILT - brown to gray, 10YR5/3, some fine to coarse sand, stiff, wet, medium plasticity.	
25									

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Remarks:

Date Start/Finish: 12.15.12 - 12.15.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 375905.96 **Easting:** 2559759.50 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 588.33 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **CG-SB50** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25									
		6		5	1.4	OL		CLAY - brown, 10YR5/3, some silt, trace fine to coarse gravel, very stiff, moist, medium plasticity.	
	560				1.3			SILTY CLAY - brown to gray, 10YR5/2, stiff, wet, medium plasticity.	
30		7		5	1.2			SILTY CLAY - brown to gray,10YR5/2, little fine sand, medium stiff tostiff, moist, medium plasticity.	
	555								
35		8		5	1.8				
	550				3.0			SILT - brown to gray, 10YR5/2, some fine sand and clay, soft, wet, low plasticity.	
40		9		5	1.5			SILTY CLAY - brown to gray, 10YR4/2, little fine sand, stiff, wet, medium plasticity.	
	545								
45		10		5	1.8	OL			
	540								
50									

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Remarks:

Date Start/Finish: 12.15.12 - 12.15.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 375905.96 **Easting:** 2559759.50 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 588.33 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **CG-SB50** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
50 / 535	11		5	1.1				
55 / 530	12		5	1.5				
60 / 525	13		5	1.6				
65								

Remarks:

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Date Start/Finish: 12.15.12 - 12.15.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 375775.39 **Easting:** 2559657.33 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 587.71 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **CG-SB51** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	585	1		3	0.9			SOIL FILL, SAND - black, 10YR2/1, some silt, some coal and coke gravel, loose, dry, non plastic.	
					7.4			SOIL FILL, GRAVEL - brown, 10YR3/3, bricks, some silt, loose, moist, non plastic.	
5	580	2		3	2.8			SOIL FILL, GRAVEL - black, 10YR2/1, some silt, fine to coarse sand, coke gravel, debris, loose, moist, non plastic, sheen at 5-7'.	
10		3		5	1.0	OL/ PT		SILT - dark brown, 10YR2/2, some organics, (wood chips), peat, soft, moist, non plastic.	
	575				2.4	GP		GRAVEL - gray, 10YR4/1, some medium to coarse sand, little silt, loose, wet.	
					2.4	OL		SILT - gray brown, some clay, little fine sand, medium stiff, wet, medium plasticity.	
15	570	4		3	2.1	CL		CLAY - gray brown, 10YR4/2, some silt, trace gravel, very stiff, moist, medium plasticity.	
20	565	5		5	1.4				
25					3.4	CL		SILT - brown gray, 10YR4/2, some fine to coarse sand, some clay, medium stiff, wet, medium plasticity.	

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Remarks:

Date Start/Finish: 12.15.12 - 12.15.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 375775.39 **Easting:** 2559657.33 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 587.71 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **CG-SB51** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25									
	560	6		5	2.0			CLAY - gray brown, 10YR4/2, some silt, trace fine to coarse gravel, stiff, wet, medium plasticity.	
30									
	555	7		5	2.4			CLAY - brown gray, 10YR5/2, some silt, little fine sand, very stiff, wet, medium plasticity, trace coarse gravel from 45-50'.	
35									
	550	8		5	1.2				
40									
	545	9		5	0.8				
45						CL			
	540	10		5	4.0				
50									

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Remarks:

Date Start/Finish: 12.15.12 - 12.15.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 375775.39 **Easting:** 2559657.33 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 587.71 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **CG-SB51** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
50									
	535	11		5	2.7			CLAY - brown gray, 10YR5/2, some silt, little fine sand, very stiff, wet, medium plasticty.	
55									
	530	12		5	2.0				
60									
	525	13		5	2.1				
65					1.8	SM		FINE SAND - gray brown, 10YR5/2, some silt and clay, dense, wet, non plastic.	

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Remarks:

Date Start/Finish: 1.14.13 - 1.14.13 **Drilling Company:** Giles **Driller's Name:** Chip **Drilling Method:** Geoprobe **Sampling Method:** Geoprobe	**Northing:** 376301.08 **Easting:** 2559557.27 **Casing Elevation:** NA **Borehole Depth:** 5' **Surface Elevation:** 589.49 **Descriptions By:** Stephen Pels	**Well/Boring ID:** **CG-SB52** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0 585 5	1		5	NM			SOIL FILL, GRAVEL - light brown to gray, 10YR7/2, aggregate (possible concrete) and sand and gravel. SOIL FILL, FINE GRAVEL - black, 10YR2/1, fine to coarse sand, gravel, some silt, possible little coal, coke and clinker fragments, loose, moist.	

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Remarks: NM - Not Measured.

Date Start/Finish: 12.17.12 - 12.17.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376736.22 **Easting:** 2560126.69 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 587.84 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **CS-MW23D** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0									
	585	1		5	1.1			SOIL FILL, COARSE to FINE SAND and GRAVEL - dark brown to pale brown, 10YR2/2 to 10YR6/2, dense, little cobbles, fire brick at 1.5' coal at 3-4', dry.	
5		2		5	2.1				
	580				3.2			CONCRETE - gray, 10YR6/1, some fine to coarse sand, loose, dry.	
					3.1			ORGANICS - black, 10YR2/1, (wood), some silt, loose, 3" wood plug at 10', wet, staining.	
10		3		4	1.5			SOIL FILL, FINE to COARSE GRAVEL - black, 10YR2/1, coal and coke fragments, some silt, little organics, (wood), dense, wet, staining.	
	575				2.3			SILT - brown, 10YR5/3 to 10YR4/3, some clay, trace gravel, medium stiff, moist, high plasticity.	
15		4		4	2.1				
	570								
20		5		4	1.7	OL/ PT			
	565				1.7			SILT and PEAT - dark brown, 10YR2/2, some organics (wood fragments, shells), some fine sand, loose to medium stiff, dry, non plastic.	
25									

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Remarks:

Date Start/Finish: 12.17.12 - 12.17.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376736.22 **Easting:** 2560126.69 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 587.84 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **CS-MW23D** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25									
	560	6		5	5.7				
					9.5	SW		FINE to COARSE GRAVEL - brown gray, 10YR6/2, some coarse sand, little organics (shells), loose, wet.	
30									
		7		5	3.1	OL		SILT - brown gray, 10YR3/2, some fine sand, little clay, little organics (wood, shells), medium stiff, moist.	
	555								
35									
		8		5	1.3	OL		CLAY - gray brown, 10YR4/2 to 10YR5/2, some silt, medium stiff, trace organics (shells), wet, high plasticity.	
	550				1.9			SILT- dark brown gray, 10YR3/2, some silt, some clay, medium stiff, trace organics (shells), moist, medium plasticity.	
40									
		9		5	6.0	CL		CLAY - gray brown, 10YR/2, some silt, stiff, moist, high plasticity.	
	545								
45									
		10			7.4				
	540								
50									

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Remarks:

Date Start/Finish: 12.17.12 - 12.17.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376736.22 **Easting:** 2560126.69 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 587.84 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **CS-MW23D** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
50 / 535	11			1.9				
55 / 530	12			2.0			SILT - gray brown, 10YR3/1, some clay, stiff, moist, non plastic.	
60 / 525	13			1.5				
65								

Remarks:

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Date Start/Finish: 12.17.12 - 12.17.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376456.24 **Easting:** 2560332.95 **Casing Elevation:** NA **Borehole Depth:** 50' **Surface Elevation:** 587.09 **Descriptions By:** Stephen D. Pels	**Well/Boring ID:** **CS-MW25D** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	585	1		4	0.0			SOIL FILL, SAND and GRAVEL - gray brown, 10YR3/2, mixed sand, cobbles, gravel, some silt and gravel, loose, moist.	
5	580	2		4	0.6			AGGREGATE - dark brown to light gray, 10YR2/2 to 10YR7/1, concrete pieces, some silt, sand moist.	
10	575	3		5	0.6	OL		SILT - dark brown, 10YR2/2, little peat, little clay, soft, trace shells, moist.	
15	570	4		5	463			WOOD - possible root/ tie back from bulkhead.	
20	565	5		5	0.6	OL		SILT - brown gray, 10YR3/2, little clay, trace organics (shells), soft, moist, non plastic.	
								CLAY - gray brown, 10YR4/2 to 10YR5/2, little silt, trace fine sand, soft, moist, high plasticity.	
25									

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Remarks:

Date Start/Finish: 12.17.12 - 12.17.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376456.24 **Easting:** 2560332.95 **Casing Elevation:** NA **Borehole Depth:** 50' **Surface Elevation:** 587.09 **Descriptions By:** Stephen D. Pels	**Well/Boring ID:** **CS-MW25D** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25									
	560	6		5	1.5	CH			
30		7		5	0.0	OL		SILT - brown to gray brown, 10YR4/2, little to some clay, trace gravel, trace organics (shells), soft, moist, no shells and pebbles from 35-40', low plasticity.	
	555								
35		8		5	0.0				
	550								
40		9		5	0.0	CL		SILTY CLAY - brown to gray, 10YR5/2, soft, moist, very soft from 45-50', medium plasticity.	
	545								
45		10		5	0.0				
	540								
50									

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Remarks:

Date Start/Finish: 12.12.12 - 12.12.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376935.49 **Easting:** 2559820.73 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 587.04 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CS-SB27** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	585	1		3	0.9 7.4 2.8			SOIL FILL, FINE SAND - pale brown, 10YR7/2-10YR7/3, fine, medium and coarse gravel, loose, moist. SOIL FILL, FINE and MEDIUM SAND - black, 10YR2/1, little fine gravel, coal fragments, loose, moist. SILTY CLAY - brown, 10YR4/2, little organics (roots), fine sand, moist, non plastic.	
5	580	2		3	1.0 2.4	OL		CLAY - black, 10YR2/1, little fine, medium and coarse gravel, fine sand, silt, organics (roots), very faint sweet odor, possible black staining, moist, non plastic. CLAY - brown, 10YR4/2 to 10YR5/2, little silt, organics (roots), fine to medium gravel, fine sand, saturated, stiff to hard, wet at 8', medium plasticity.	
10	575	3		5	2.4	SM OL		GRAVEL and SILT - dark gray, 10YR3/1, fine to medium gravel, little clay, fine sand, loose, saturated. CLAY - brown, 10YR4/2 to 10YR4/3, little organics, (roots and shells), silt, fine gravel, very stiff, moist, saturated at 16', medium plasticity.	
15	570	4		3	2.1 1.4 3.4	SM OL		FINE to MEDIUM SAND - dark gray, 10YR3/1, some fine to medium gravel, little silt, loose to dense, saturated, faint MGP like odor. SILTY CLAY - gray brown, 10YR3/12, little fine gravel, fine sand, hard, saturated, medium plasticity.	
20	565	5		1.5				CLAY - gray to gray brown, 10YR4/1 to 10YR4/2, mottled 10YR5/3, very stiff, trace silt, saturated, medium plasticity.	
25									

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Remarks:

Date Start/Finish: 12.12.12 - 12.12.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376935.49 **Easting:** 2559820.73 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 587.04 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CS-SB27** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25	560	6		1.5	2.0	OL			
30	555	7		5		OL		SILTY CLAY - dark gray, 10YR4/1, little organics (shells), fine gravel, soft grades to stiff, saturated, medium plasticity.	
35	550	8		5	2.4	OL			
40	545	9		5		CL		CLAY - dark gray brown, 10YR4/2, trace silt, stiff, saturated, plastic, increasing silt from 50-55'.	
45	540	10		5	1.2	CL			
50									

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Remarks:

Date Start/Finish: 12.12.12 - 12.12.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376935.49 **Easting:** 2559820.73 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 587.04 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CS-SB27** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
50	535	11		5	0.8				
55	530	12		5	4.0	CL		SILTY CLAY - gray brown, 10YR5/2, stiff, saturated, medium plasticity.	
60					2.7				
	525	13		3	2.0	SW		FINE SAND - brown, 10YR5/3, trace silt and clay, dense, saturated, non plastic.	
65									

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Remarks:

Date Start/Finish: 12.14.12 - 12.14.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376935.49 **Easting:** 2559820.73 **Casing Elevation:** NA **Borehole Depth:** 30' **Surface Elevation:** 587.04 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **CS-SB27 - 2nd Attempt** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	585							BLIND DRILLED	
5	580								
10	575								
15	570								
20	565	1		5	16.6	PT		SILT and PEAT - dark brown, 10YR2/2, little fine sand, little clay, some organics (wood chips, shells), medium stiff, moist, low plasticity.	
25									

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Remarks:

Date Start/Finish: 12.14.12 - 12.14.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376935.49 **Easting:** 2559820.73 **Casing Elevation:** NA **Borehole Depth:** 30' **Surface Elevation:** 587.04 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **CS-SB27 - 2nd Attempt** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25 560 30	2		5	6.2 14.7 29.1 12.1	SW OL SW OL		MEDIUM to COARSE SAND - gray brown, 10YR4/2, some to little fine gravel, trace silt, organics (shells - cone shaped, 1-inch), loose, wet. SILT - dark brown, 10YR3/2, some fine sand, little clay, moist, low plasticity. MEDIUM to COARSE SAND - gray to brown,10YR4/2, some organics (shells - cone shaped, 1-inch), little silt, loose, wet. SILT - dark brown, 10YR3/2, little fine sand, little clay, stiff, moist, medium plasticity.	

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Remarks:

Date Start/Finish: 12.11.12 - 12.11.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376864.53 **Easting:** 2559869.21 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 588.22 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CS-SB28** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0									
		1		4	0.0			SOIL FILL, FINE SAND - gray brown, 10YR3/2, fine, medium and coarse gravel, little organics (roots, shells), concrete fragments, loose, moist.	
	585				0.0			SOIL FILL, FINE SAND - black, 10YR2/1, little fine to medium gravel, coal fragments, moist.	
5		2		3	0.0			COAL and COKE - black, 10YR2/1, little fine sand, silt at decreasing depths, loose, moist.	
	580								
10		3		4				FINE SAND - black, 10YR2/1, some silt, little organics (roots, shells), wood at 13.9', overlaying clay, loose to medium dense, saturated, non plastic, moderate sulfur/organic odor.	
	575								
15		4		0	0.0	SM			
	570								
20		5		5	0.0	OL		CLAY - brown, 10YR4/3, little fine to medium gravel, stiff, saturated, plastic.	
	565								
25									

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Remarks:

Date Start/Finish: 12.11.12 - 12.11.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376864.53 **Easting:** 2559869.21 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 588.22 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CS-SB28** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25					0.0	PT		PEAT - dark brown, 10YR2/2, saturated, non plastic.	
		6		5	0.0	SM		FINE to MEDIUM SAND - gray brown, 10YR4/2, little silt, gravel, organics (shells), loose to medium dense, saturated, non plastic.	
	560				0.0	OL		SILT - brown gray, 10YR4/2, little fine sand, organics (shells, roots), clay, fine to medium gravel, stiff, moist non plastic.	
30		7		5	0.0	CL		CLAY - grayish brown, 10YR5/2, little silt, fine gravel, little fine sand at 34.5 - 35', medium stiff, moist, medium plasticity.	
	555								
35		8		5	0.0	OL		SILTY CLAY - brown, 10YR4/2, little organics (roots, shells), fine gravel, stiff, moist, non plastic.	
	550								
40		9		5				CLAY - gray, 10YR4/2, little to trace organics (shells) decreasing with depth, stiff to medium stiff, saturated, high plasticity.	
	545								
45		10		5	0.0	OL/ CL			
	540								
50									

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Remarks:

Date Start/Finish: 12.11.12 - 12.11.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376864.53 **Easting:** 2559869.21 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 588.22 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CS-SB28** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
50									
	535	11		5	0.0				
					0.0	SW		FINE to MEDIUM SAND - 10YR4/2, brown, dense, saturated, non plastic.	
55									
		12			0.0	CL		SILTY CLAY - gray brown, 10YR5/2 to 10YR5/3, little to trace silt, soft, saturated, high plasticity.	
	530								
60									
		13							
	525								
65									

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Remarks:

Date Start/Finish: 12.16.12 - 12.16.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376864.53 **Easting:** 2559869.21 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 588.22 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **CS-SB28 - 2nd Attempt** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0 / 588							BLIND DRILLED	
5 / 585								
10 / 580				3.0			SOIL FILL, SILT - gray brown, 10YR4/1 to 10YR4/2, mottled, some fine to coarse sand, some fine to coarse gravel, brick, concrete, soft, wet, low plasticity.	
	1		4.0					
15 / 575				0.1	SW		FINE to COARSE SAND - some fine to coarse gravel, coal, loose, wet to dry, trace sheen, odor.	
				2.6			SILT - gray brown, 10YR4/3 to 10YR3/4, little fine to medium gravel, trace cobbles, little clay, medium stiff, wet, medium plasticity.	
	2		5	2.0	OL		SILT - gray to gray brown, 10YR3/2 to 10YR3/4, some clay, very stiff, moist, medium plasticity.	
20 / 570								

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Remarks:

Date Start/Finish: 12.12.12 - 12.12.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376836.71 **Easting:** 2559816.90 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 586.73 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CS-SB29** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	585	1		5	0.0	SW		SOIL FILL, FINE SAND - brown, 10YR6/2, little medium sand, fine, medium, coarse gravel, little silt, little concrete, trace brick, organics (roots), loose, moist.	
					0.0			SOILL FILL, FINE SAND - black, 10YR2/1, little medium sand, little coal fragments, fine to medium gravel, losse, moist.	
5	580	2		5	0.0	OL		SILT and FINE SAND - brown to gray brown, 10YR4/2, some fine, medium and coarse gravel, little clay, coal fragments at 9', loose, moist, saturated at 13', non plastic.	
10	575	3		5	0.0			SOIL FILL, FINE to MEDIUM SAND - black, 10YR2/1, coal fragments, loose, moist.	
					0.0	SW		FINE SAND and SILT - gray, 10YR2/2, some fine to medium gravel, little clay, saturated.	
15	570	4		5	0.0	PT		PEAT - dark brown, 10YR2/2, little silt and clay, organics (roots, wood, organic), loose, saturated, organic odor.	
					0.0			SILT - brown to gray, 10YR4/2, little fine sand, organics, (shells, roots), clay, peat, medium dense, moist, non plastic, increasing clay with depth.	
20	565	5		5	0.0				
25									

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Remarks:

Date Start/Finish: 12.12.12 - 12.12.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376836.71 **Easting:** 2559816.90 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 586.73 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CS-SB29** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25	560	6		5	0.0				
30	555	7		5	0.0	OL		SILT - brown to gray, 10YR4/2, little clay, organics (shells), trace fine sand, medium stiff, moist, non plastic, increasing clay with depth.	
35	550	8		5	0.0				
40	545	9		5	0.0	OL		CLAY - gray brown,10YR5/2, medium stiff, saturated, high plasticity.	
45	540	10		5	0.0				
					0.0	SW		FINE SAND - brown, 10YR4/2, little silt, trace clay, organics (shells), dense, saturated.	
50					0.0			FINE SAND and SILT - brown, 10YR4/2, little clay (increasing with depth), organics (shells and roots), stiff, saturated, medium plasticity.	

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Remarks:

Date Start/Finish: 12.12.12 - 12.12.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376836.71 **Easting:** 2559816.90 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 586.73 **Descriptions By:** Marcus Eriksson	**Well/Boring ID:** **CS-SB29** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
50	535	11		5	0.0	OL		CLAY - gray to brown, 10YR4/3 to 10YR5/2, medium stiff to very stiff, saturated, high plasticity.	
55	530	12		5	0.0				
60	525	13		5	0.0 0.0	SW		FINE SAND - brown to gray brown, 10YR5/2, mottled yellow brown, little silt, medium sand, dense, saturated, non plastic.	
65									

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Remarks:

Date Start/Finish: 12.15.12 - 12.15.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 375792.32 **Easting:** 2559843.33 **Casing Elevation:** NA **Borehole Depth:** 70' **Surface Elevation:** 588.61 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **CS-SB30** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0									
	585	1		5	1.7			SOIL FILL, SILT - dark brown to black 10YR2/2, some gravel, little sand, fine to coarse gravel, fine to coarse sand, soft, coal and coke fragments from 4-5', moist, non plastic.	
5									
		2		5	2.3			SOIL FILL, SILT - dark brown gray, 10YR3/2, with some fine to coarse gravel, little fine to coarse sand, soft, moist, non plastic.	
	580				4.6			FINE to COARSE SAND - light brown, 10YR5/3, fine to coarse sand, little silt, loose, moist, non plastic.	
10		3		5	0.9	SW/ SP		FINE to MEDIUM SAND - gray, 10YR4/1, some silt, dense, wet, non plastic.	
	575				0.9			SILT - dark gray brown, 10YR4/1 to 10YR4/2, some fine sand, some organics (wood chips and shells), moist, low plasticity.	
15		4		5	1.0	OL			
					1.7	SP		FINE TO MEDIUM SAND - gray, 10YR5/1, some silt, little fine to coarse gravel, coarse sand, loose, gravel at base, saturated, non plastic.	
	570				1.0	OL/ CL		SILT - gray brown, 10YR5/2, some clay, organics (shells) medium stiff, moist, medium plasticity.	
20		5		5	0.7			CLAY - gray brown, 10YR5/2 to 10YR5/3, some silt, very stiff, moist, medium to high plasticity, sand from 43-44'.	
	565								
25									

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Remarks: NM - Not measured

Date Start/Finish: 12.15.12 - 12.15.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 375792.32 **Easting:** 2559843.33 **Casing Elevation:** NA **Borehole Depth:** 70' **Surface Elevation:** 588.61 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **CS-SB30** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25		6		5	1.5				
	560								
30		7		5	1.1				
	555								
35		8		5	0.9				
	550								
40		9		5	0.8				
	545								
45		10		5	0.7	OL		CLAY - brown gray, some silt, very stiff, moist, medium plasticity, soft and sand at 62-63'.	
	540								
50									

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Remarks: NM - Not measured

Date Start/Finish: 12.15.12 - 12.15.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 375792.32 **Easting:** 2559843.33 **Casing Elevation:** NA **Borehole Depth:** 70' **Surface Elevation:** 588.61 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **CS-SB30** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
50		11		5	1.0				
	535								
55		12		5	1.3				
	530								
60		13		5	NM				
	525								
65		14		5	NM				
	520								
70									

Remarks: NM - Not measured

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Date Start/Finish: 12.16.12 - 12.16.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 375561.10 **Easting:** 2559936.32 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 584.54 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **FT-SB25 - Well Install** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0		1		5	5.5			SOIL FILL, GRAVEL - dark gray, 10YR3/1, coal and coke fragments, some silt, little sand, loose, organics (roots), moist, non plastic.	
					5.1			SOIL FILL, GRAVEL - dark brown, 10YR2/2, brick and coal/coke, some silt, fine to coarse gravel, loose, moist, non plastic.	
	580								
5		2		5	3.1	SM		FINE to MEDIUM SAND - brown, 10YR3/3, some silt, medium dense, saturated, non plastic.	
					2.8	OL		SILT - dark gray, 10YR3/1, some organics (dark wood fragments, shells), little fine sand, soft, wet, non plastic.	
	575								
10		3		5	1.5	SM		FINE to MEDIUM SAND - brown gray, 10YR3/1 to 10YR3/2, some silt, loose, wet, non plastic.	
					2.1	OL		SILT - brown gray, 10YR3/1 to 10YR3/2, little fine sand, little organics (shells), medium dense, moist, low plasticity.	
	570				2.4			SAND and GRAVEL - gray, 10YR4/1, trace silt, medium to coarse sand, little organics (shells), loose, wet, non plastic.	
15		4		5	2.2	SW/SM		FINE SAND - gray, 10YR4/1, some silt, some organics (shells), medium dense, moist, non plastic.	
					2.8	OL		SILT - gray, 10YR4/1, some fine sand, soft, little organics (shells), moist, low plasticity.	
	565								
20		5		5	1.8				
	560				1.9			FINE to MEDIUM SAND - gray brown, 10YR4/2, little silt, loose, saturated, non plastic.	
25									

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Remarks:

Date Start/Finish: 12.16.12 - 12.16.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 375561.10 **Easting:** 2559936.32 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 584.54 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **FT-SB25 - Well Install** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25				2.1	SW		FINE SAND - gray brown, 10YR5/2, some silt, loose, saturated, non plastic.	
				3.0			FINE to COARSE SAND - gray, 10YR5/2, some gravel, fine to coarse sand, loose, saturated, non plastic.	
				2.9	GP		GRAVEL - gray brown,10YR5/2, some coarse sand, loose, saturated, non plastic.	
	6		5	1.5			MEDIUM to COARSE SAND - gray brown, 10YR5/2, little silt, trace gravel, loose, saturated, non plastic.	
555								
30	7		5	0.9	SW		MEDIUM to COARSE SAND - gray brown, some gravel, loose, saturated, non plastic.	
550								
35				0.1				
				0.1	GW		FINE GRAVEL - gray brown, some coarse sand, loose, saturated, non plastic.	
	8		5	0.0			FINE to COARSE SAND - gray brown, 10YR5/2 to 10YR5/3, little silt, trace gravel, loose, saturated, non plastic.	
				0.5	SW/ SM		FINE to COARSE SAND - gray brown, 10YR4/2, some silt, trace gravel, medium dense, saturated, non plastic.	
545								
40	9		5	0.1	OL		SILT - gray brown, 10YR4/2, some fine sand, soft, wet, low plasticity.	
540								
45	10		5	0.3			SILT - gray brown, 10YR4/2, some fine sand, soft, wet, low plasticity.	
535								
50								

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Remarks:

Date Start/Finish: 12.16.12 - 12.16.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 375561.10 **Easting:** 2559936.32 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 584.54 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **FT-SB25 - Well Install** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
50									
		11		5	0.1	CH/ CL		CLAY - gray brown, 10YR4/2, some silt, medium stiff, moist, wet from 55-57', medium plasticity, .	
	530								
55					0.2				
		12		5	0.2	OL		SILT - gray brown, 10YR4/1 to 10YR4/2, 60-61' mottled dark brown 10YR2/2, some clay, little organics (shells), very stiff, moist, low to medium plasticity.	
	525								
60					0.2			SILT - gray brown, 10YR5/2, some gravel, little coarse sand, soft, grades to silty gravel, wet, non plastic.	
		13		5	0.2				
	520								
65					0.2	CL		CLAY - gray brown, 10YR4/2, some silt, stiff, moist, medium plasticity.	

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Remarks:

Date Start/Finish: 1.8.13 - 1.8.13 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 375561.10 **Easting:** 2559936.31 **Casing Elevation:** NA **Borehole Depth:** 40' **Surface Elevation:** 584.54 **Descriptions By:** Stephen Pels	**Well/Boring ID:** **FT-SB25 - Well Install** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0								BLIND DRILLED	
		1							
5	580								
		2							
10	575								
		3							
15	570								
		4							
20	565								
		5							
25	560								

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Remarks:

Date Start/Finish: 1.8.13 - 1.8.13 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 375561.10 **Easting:** 2559936.31 **Casing Elevation:** NA **Borehole Depth:** 40' **Surface Elevation:** 584.54 **Descriptions By:** Stephen Pels	**Well/Boring ID:** **FT-SB25 - Well Install** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25					0.0	SW		FINE SAND - gray brown, 10YR4/2, well sorted, trace clay, loose, wet.	
					0.0	GM		MEDIUM and COARSE SAND - brown, 10YR4/2, medium and coarse sand, some fine sand, some gravel, sub rounded, loose, wet, no odor.	
		6		5					
	555								
30								FINE to MEDIUM SAND - gray brown, some coarse sand, poor sorting, some silt, some gravel at 31-31.25', grades finer with depth, dense, wet, no odor.	
		7		5	1.2	SM			
	550								
35					0.2				
					0.3	GP		SAND and GRAVEL - brown to gray, 10YR4/2, poor sorting, trace silt, sub rounded, wet, no odor.	
		8		5					
					0.0	OL		FINE SAND and SILT - brown gray, 10YR4/2, soft, moist, low plasticity.	
	545								
40									

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Remarks:

Date Start/Finish: 1.14.13 - 1.14.13
Drilling Company: Giles Engineering
Driller's Name: Chip
Drilling Method: Geoprobe
Sampling Method: Geoprobe

Northing: 375745.05
Easting: 2559456.41
Casing Elevation: NA

Borehole Depth: 5'
Surface Elevation: 590.47

Descriptions By: Stephen Pels

Well/Boring ID: **FT-SB26**

Client: Solvay RI/FS Group

Location: Milwaukee, WI

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0 / 590	1		4	NM			SOIL FILL, GRAVEL - black, 10YR2/1, some sand, some silt, trace brick, possible coal and coke fragments, loose, moist, trace odor.	
							SOIL FILL, GRAVEL and DEBRIS - black, 10YR2/1, railroad ties, moist, odor, black staining.	
5								

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Remarks: NM - Not Measured.

Date Start/Finish: 12.16.12 - 12.16.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 375660.45 **Easting:** 2559427.89 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 591.29 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID: FT-MW29D** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	590	1		4	2.3	OL		SOIL FILL, SAND and GRAVEL - dark brown to black, 10YR2/1 to 10YR2/2, some fine sand, some fire brick, , organics (roots), soft, wet.	
5	585	2		5	87.6 5.0	GM		CONCRETE - light gray to white, 10YR7/1 to 10YR8/1, gravel, fine to coarse gravel, loose, dry, odor. SOIL FILL, FINE to COARSE GRAVEL - dark gray to black, 10YR2/1 to 10YR3/1, some coarse sand, loose, moist.	
10	580	3		5	2.0 3.2 1.2			SOIL FILL, FINE to COARSE GRAVEL - dark gray to black, 10YR2/1 to 10YR 3/1, some coarse sand, little cobbles, loose, dry. SILTY CLAY - brown gray, 10YR6/2, mottled, soft, moist, medium plasticity. SILT and PEAT - dark brown, 10YR2/2, some organics (wood chips), little fine sand, soft, moist, non plastic.	
15	575	4		5	2.1	OL/ PT			
20	570	5		5	2.2			SILTY CLAY - gray brown, 10YR5/2, trace fine to little sand, stiff, moist.	
25									

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Remarks:

Date Start/Finish: 12.16.12 - 12.16.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 375660.45 **Easting:** 2559427.89 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 591.29 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **FT-MW29D** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25	565	6		5	2.1				
30	560	7		5	2.5				
35	555	8		5	1.5			SILT - brown gray, 10YR5/2, little clay, trace to little sand, soft, wet, medium plasticity.	
40	550	9		5	0.8 3.0	OL		SILT - gray brown, 10YR5/2, trace fine sand, soft, wet, non plastic. SILTY CLAY - brown gray, 10YR5/2, very stiff, moist, low to medium plasticity.	
45	545	10		5	7.6				
50									

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Remarks:

Date Start/Finish: 12.16.12 - 12.16.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 375660.45 **Easting:** 2559427.89 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 591.29 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **FT-MW29D** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
50	540	11		5	4.8			SILTY CLAY - gray brown, little fine sand, trace gravel from 55-60', stiff, moist, medium plasticity.	
55	535	12		5	5.1				
60	530	13		5	1.8			SILT - gray brown, 10YR5/2, some to little fine sand, medium stiff, wet, non plastic.	
65									

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Remarks:

Date Start/Finish: 1.8.13 - 1.8.13 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 377421.22 **Easting:** 2559612.27 **Casing Elevation:** NA **Borehole Depth:** 20' **Surface Elevation:** 586.24 **Descriptions By:** Stephen Pels	**Well/Boring ID:** **MW-20 - Well Install** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	585	1		4	1.6			CONCRETE - 10YR8/1.	
					1.5			SOIL FILL, SAND and GRAVEL - dark brown mottled, 10YR2/2 to 10YR3/6, little silt, clay, poor sorting, loose, moist.	
5	580	2			1.2	CL		SILT and CLAY - gray, 10YR3/1, trace gravel, soft, moist to wet, low plasticity.	
					3.7			SOIL FILL, SAND and GRAVEL - black, 10YR2/1, little silt and clay, poor sorting, wood fragments, loose, moist, trace odor.	
10	575	3			1.7			SOIL FILL, COARSE SAND and GRAVEL - black, 10YR2/1, trace brick, concrete, loose, wet, trace odor.	
15	570	4			1.3	OL/ PT		SILT and PEAT - dark brown, 10YR2/2, low plasticity, trace organics (shells), soft, moist, organic odor, non plastic.	
20									

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Remarks:

Date Start/Finish: 12.18.12 - 12.18.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376945.47 **Easting:** 2559369.13 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 587.15 **Descriptions By:** Stephen D. Pels	**Well/Boring ID:** **MW-21D** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	585	1		5	0.0			SOIL FILL, GRAVEL - black, 10YR2/1, some medium, coarse and fine sand, coke, coal fragments, loose, moist. Reddish brick and clinker material from 3-5'	
5	580	2		4	0.0			SOIL FILL, FINE to COARSE SAND - gray, 10YR4/1, some gravel, some wood and organics, some silt and clay, loose, wet, possible clinker, ceramics and metal shards from 10-14'.	
10	575	3		4	0.0 0.0				
						CL		CLAY - brown gray, 10YR4/2, little silt, trace sand, stiff, moist, low plasticity.	
15					0.0	GM		GRAVEL - gray brown, 10YR4/2, some silt, loose, moist.	
	570	4		4	0.0	OL		SILT - gray brown, 10YR4/1 to 10YR4/2, little clay, organics (shells), soft, moist, low plasticity, organic odor.	
					0.0	PT		SILT and PEAT - dark brown, 10YR2/2, soft, moist, organic odor.	
20	565	5		5	0.0	CL		SILTY CLAY - gray brown, 10YR4/1 to 10YR4/2, some fine sand, some organics (shells), moist, soft, low plasticity.	
25									

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Remarks: NM - Not Measured

Date Start/Finish: 12.18.12 - 12.18.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376945.47 **Easting:** 2559369.13 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 587.15 **Descriptions By:** Stephen D. Pels	**Well/Boring ID:** **MW-21D** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25									
	560	6		5	0.0	CL		SILTY CLAY - gray brown, 10YR4/1 to 10YR4/2, some fine sand, some organics (shells), moist, soft, medium plasticity.	
30									
	555	7		5	0.0	OH		CLAY - brown, 10YR5/2, trace silt, trace organics (shells), soft, moist, high plasticity.	
35					0.0				
	550	8		5	0.0				
					0.0	SM		COARSE SAND - brown, 10YR5/2, some gravel, some silt, moist to wet, organic odor.	
					0.0	SW		FINE to MEDIUM SAND - brown, 10YR5/3, well sorted, dense, wet.	
40									
					0.0	CL		FINE SAND and CLAY - yellow brown, mottling, 10YR5/3, hard to stiff, moist, medium plasticity.	
	545	9		4	0.0			FINE SAND - yellow brown, 10YR5/3, well sorted, dense, wet.	
						SW		FINE SAND and CLAY - yellow brown, 10YR5/3, mottling, some silt, hard to stiff, moist, medium plasticity.	
								FINE SAND - yellow brown, 10YR5/3, well sorted, wet, no odor.	
45									
					0.0	CL		FINE SAND and CLAY - yellow brown, 10YR5/3, hard to stiff, trace mottling, moist, medium plasticity.	
	540	10		4	0.0			SAND - yellow brown, 10YR5/3, medium grained, some coarse sand, wet, dense.	
					0.0	CL		SILTY CLAY - gray brown 10YR5/2, stiff, moist, medium plasticity.	
50									

Remarks: NM - Not Measured

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Date Start/Finish: 12.18.12 - 12.18.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376945.47 **Easting:** 2559369.13 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 587.15 **Descriptions By:** Stephen D. Pels	**Well/Boring ID:** **MW-21D** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
50									
	535	11		4	0.0 0.0	SM		MEDIUM to FINE SAND - yellow brown, 10YR5/4, interbedded silty fine sand at 52.8-53, coarse, poorly sorted sand at 53-55, trace clay, trace shells and organics, dense, moist to wet, no odor.	
55									
	530	12		5	0.0	CL		FINE SAND and CLAY - gray brown, 10YR4/1, firm, trace organics, medium sandy seam at 51-51.7', some gray clay, trace gravel, fine silty sand seam at 58.8-59', stiff, moist, medium plasticity.	
60									
	525	13		5	NM	CL		CLAY - gray brown, 10YR5/2, little silt, some mottling, stiff to hard moist, medium plasticity.	
65									

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Remarks: NM - Not Measured

Date Start/Finish: 1.9.13 - 1.9.13 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376945.47 **Easting:** 2559369.13 **Casing Elevation:** NA **Borehole Depth:** 45' **Surface Elevation:** 587.15 **Descriptions By:** Stephen Pels	**Well/Boring ID:** **MW-21D - Well Install** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	585	1						BLIND DRILLED	
5	580	2							
10	575	3							
15	570	4							
20	565	5							
25									

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Remarks: NM - Not Measured

Date Start/Finish: 1.9.13 - 1.9.13 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376945.47 **Easting:** 2559369.13 **Casing Elevation:** NA **Borehole Depth:** 45' **Surface Elevation:** 587.15 **Descriptions By:** Stephen Pels	**Well/Boring ID:** **MW-21D - Well Install** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25									
	560	6							
30									
	555	7							
35						OL		SILT - gray brown, 10YR4/2, cohesive, trace shells, soft, moist, medium plasticity.	
	550	8		5	NM	SW		MEDIUM to FINE SAND - gray brown, 10YR4/2, trace gravel, trace clay, wet, no odor.	
40								FINE SAND - brown, 10YR5/3 to 10YR5/4, some to little medium sand, trace sub rounded gravel, trace clay, dense, wet.	
	545	9		5	NM				
						CL		SILT and CLAY - brown, 10YR5/3, firm, low plasticity, some gray mottling, hard, moist, low plasticity.	
45									

Remarks: NM - Not Measured

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Date Start/Finish: 1.9.13 - 1.9.13 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 377167.78 **Easting:** 2559782.32 **Casing Elevation:** NA **Borehole Depth:** 20' **Surface Elevation:** 587.91 **Descriptions By:** Stephen Pels	**Well/Boring ID:** **MW-22 - Well Install** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0								BLIND DRILLED	
	585	1							
5								SOIL FILL, GRAVEL AND COBBLES - gray brown,10YR3/2, aggregate or concrete, wet.	
	580	2		4	0.2				
					0.5			WOOD FRAGMENTS - possible railroad ties, moist, some odor.	
10								SOIL FILL, GRAVEL and COBBLES - gray brown, 10YR3/2, aggregate or concrete, trace fine sand, loose, wet.	
					0.2				
	575	3		5	0.3			SOIL FILL, GRAVEL and SAND - dark gray 10YR3/1, some silt, glass and metal fragments, wood fragments, loose, wet, staining, some odor.	
					0.2	CL		CLAY - gray brown, 10YR3/2, stiff, moist, medium plasticity.	
15					1.0			SOIL FILL, SAND and GRAVEL - black, possible coke and coal fragments, loose, wet sheen, and NAPL blebs, possible clinker fragments from 15-16', staining, odor.	
	570	4		5	1.9				
					1.0	OL/ PT		SILT and PEAT - dark brown, 10YR2/2, trace shells, high organics, soft, moist, non plastic, some odor and staining at 17-18'.	
20									

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Remarks:

Date Start/Finish: 12.18.12 - 12.18.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 377169.78 **Easting:** 2559780.71 **Casing Elevation:** NA **Borehole Depth:** 45' **Surface Elevation:** 587.81 **Descriptions By:** Stephen D. Pels	**Well/Boring ID:** **MW-22D** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	585	1		5	0.0			SOIL FILL, GRAVEL and COBBLES - brown, 10YR4/3, trace silt, clay, sand, poor sorting, loose, moist, faint odor.	
5	580	2		5	0.0 0.0 0.0			GRAVEL and CONCRETE - tan, some silt, loose, wet, trace odor. GRAVEL and CONCRETE - black, 10YR2/1, some silt, wet, staining, odor. CONCRETE	
10	575	3		4	0.0 0.0			GRAVEL - concrete fragments, aggregate, some clay at 13', odor at 12.8-13'. SOIL FILL, GRAVEL - black, 10YR2/1, possible coal, coke and clinker, sheen, odor and some NAPL blebs.	
15	570	4		4	920.5 30.5 10.5	PT/OT		PEAT and SILT - dark brown, 10YR2/2, organics (shells), soft, staining, moist. non plastic, odor. PEAT - dark brown, 10YR2/2, soft, organics (shells), moist, non plastic, trace odor.	
20	565	5		4	0.0 0.0 0.0	OL SW		SILT and CLAY - brown, 10YR2/2, organics (shells), soft, moist, trace odor. COARSE to MEDIUM SAND - brown gray, coarse to medium, organics (shells), loose, wet. COARSE to MEDIUM SAND - brown gray, 10YR4/2 to 10YR4/3, loose, wet, grades finer with depth.	
25									

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Remarks:

Date Start/Finish: 12.18.12 - 12.18.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 377169.78 **Easting:** 2559780.71 **Casing Elevation:** NA **Borehole Depth:** 45' **Surface Elevation:** 587.81 **Descriptions By:** Stephen D. Pels	**Well/Boring ID:** **MW-22D** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25					0.0			SAND - gray, coarse to medium grained, shells.	
	560	6		5	0.0			SILTY CLAY - gray brown, 10YR4/2, trace organics (shells), moist, low plasticity.	
30					0.0			SILTY CLAY - brown, 10YR4/3, soft, wet, low plasticity.	
	555	7		5	0.0	OL		SILTY CLAY - gray brown, 10YR4/2, soft, non plastic, wet, trace organics, trace shells, trace roots.	
35								SILTY CLAY - brown, 10YR3/2 trace organics (shells), soft, moist non plastic.	
	550	8		5	0.0				
40									
	545	9		5	0.0	OL		SILTY CLAY - brown, 10YR4/3, soft to very soft, moist, medium plasticity.	
45									

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Remarks:

Date Start/Finish: 1.9.13 - 1.9.13 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 377169.78 **Easting:** 2559780.71 **Casing Elevation:** NA **Borehole Depth:** 30' **Surface Elevation:** 587.81 **Descriptions By:** Stephen Pels	**Well/Boring ID:** **MW-22D - Well Install** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	587.81							BLIND DRILLED	
	585	1							
5									
	580	2							
10									
	575	3							
15									
	570	4							
20						OL/PT		PEAT and SILT - dark brown, 10YR2/2, cohesive, trace organics (shells), soft, moist, low plasticity.	
	565	5		5		SW		COARSE SAND and GRAVEL - brown gray, 10YR3/2 to 10YR4/2, coarse from 21-23', medium 23-25', trace sub round gravel and shells, loose, wet.	
25									

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Remarks:

Date Start/Finish: 1.9.13 - 1.9.13 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 377169.78 **Easting:** 2559780.71 **Casing Elevation:** NA **Borehole Depth:** 30' **Surface Elevation:** 587.81 **Descriptions By:** Stephen Pels	**Well/Boring ID:** **MW-22D - Well Install** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25 560 30	6		5		OL		SILTY CLAY - gray to brown, 10YR4/2 to 10YR4/3, trace organics (shells), stiff, moist, low plasticity.	

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Remarks:

Date Start/Finish: 12.17.12 - 12.17.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376247.24 **Easting:** 2559673.85 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 589.74 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **MW-26D** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0									
		1		4	0.6			SOIL FILL, FINE to COARSE GRAVEL - brown to gray, 10YR6/2 to 10YR3/2, concrete, some fine to coarse sand, loose, dry.	
					0.9			SOIL FILL, FINE to COARSE GRAVEL - black, 10YR2/1, coal and coke fragments, fine to coarse gravel, some fine to coarse sand, loose, dry.	
5	585				4.0			SOIL FILL, FINE to COARSE SAND - dark brown, 10YR2/2, coal and coke fragments, organics (wood fragments) some silt, dense, wet, staining, odor.	
		2		4	8.6	OL		SILT - gray brown, 10YR3/2, little clay, little to some organics (shells), soft, wet, medium plasticity.	
10	580								
		3		5	36.0	SM		COARSE SAND - dark brown to dark gray, 10YR2/2 to 10YR3/1, some fine gravel, some silt, medium dense, organics (wood) staining from 11-12', wet.	
15	575				77.9			PEAT- dark brown, 10YR2/2, some fine sand, some organics (wood fragments), soft, dry, non plastic, possible sheen at 15'.	
		4		5	7.1	PT			
20	570				4.3			SILT - gray brown, 10YR3/2, litte clay, little organics (shells), medium stiff, moist, medium plasticity.	
					2.6			SILT - brown gray, 10YR4/2, little fine sand and clay, medium plasticity, trace organics (shells), medium stiff, moist.	
		5		5		OL		SILT - gray brown, 10YR3/2, little clay, trace organics (shells), medium stiff, moist, medium plasticity.	
25	565				2.8				

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Remarks:

Date Start/Finish: 12.17.12 - 12.17.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376247.24 **Easting:** 2559673.85 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 589.74 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **MW-26D** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25		6		5	2.4 2.6	OL		SILT - gray brown, 10YR5/2, little fine sand and clay, trace organics (shells), soft, wet, medium plasticity.	
30	560	7		5	0.8 1.2	GP		COARSE SAND and FINE to COARSE GRAVEL - gray brown, 10YR5/2, some medium sand, little silt, loose, wet.	
35	555	8		5	0.6	CL		SILTY CLAY - gray brown, 10YR5/2 to 10YR5/3, stiff, moist, medium plasticity.	
40	550	9		5	0.8	CL		SILTY CLAY - gray brown, 10YR5/2 to 10YR5/3, little fine sand, trace gravel, stiff, moist, 6" of very fine sand lenses at 58' and 59', medium plasticity.	
45	545	10		5	0.9	CL			
50	540								

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Remarks:

Date Start/Finish: 12.17.12 - 12.17.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376247.24 **Easting:** 2559673.85 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 589.74 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **MW-26D** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
50		11		5	3.2	CL			
55	535	12		5	2.1				
60	530	13		5	1.6			SILTY CLAY - gray brown, 10YR5/2, stiff, moist, medium plasticity.	
					1.5			SILT AND FINE SAND - gray brown, 10YR5/2, soft, wet, non plastic.	
65	525				1.4			SILTY CLAY - gray brown, 10YR5/2, little fine sand, stiff, moist, medium plasticity.	

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Remarks:

Date Start/Finish: 1.7.13 - 1.7.13 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376247.24 **Easting:** 2559673.85 **Casing Elevation:** NA **Borehole Depth:** 35' **Surface Elevation:** 589.74 **Descriptions By:** Stephen Pels	**Well/Boring ID:** **MW-26D - Well Install** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0								BLIND DRILLED	
		1							
5	585								
		2							
10	580								
		3							
15	575								
		4							
20	570								
		5							
25	565								

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Remarks:

Date Start/Finish: 1.7.13 - 1.7.13 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376247.24 **Easting:** 2559673.85 **Casing Elevation:** NA **Borehole Depth:** 35' **Surface Elevation:** 589.74 **Descriptions By:** Stephen Pels	**Well/Boring ID:** **MW-26D - Well Install** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25		6		5	0.0	OL		SILT - brown, soft, low plasticity, some shells, moist, no odor.	
					0.0	SM		FINE SAND - tan, some clay, wet, no odor.	
30	560	7		5	0.0	SW		SAND - tan, well rounded, well sorted, some pebbles, trace clay, trace silt, some sand and gravel at 31.5-32', wet, no odor.	
					0.0	CL		CLAY - tan, little mottling, hard, moist, no odor.	
35	555								

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Remarks:

Date Start/Finish: 1.8.13 - 1.8.13 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376001.75 **Easting:** 2559402.01 **Casing Elevation:** NA **Borehole Depth:** 20' **Surface Elevation:** 591.13 **Descriptions By:** Stephen Pels	**Well/Boring ID:** **MW-27 - Well Install** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	590	1		5	1.1			SOIL FILL, MEDIUM to COARSE GRAVEL - black, 10YR2/1, poor sorting, possible liitle coke and coal fragments, some fine to coarse sand, some silt, brick fragments from 5-10', moist.	
5	585	2		5	0.9				
10	580	3		5	1.5			SOIL FILL, GRAVEL - black, 10YR2/1, poor sorting, medium to coarse grained, possible little coke and coal fragments, some fine to coarse sand, some silt, brick fragments, some wood fragments,stained, some sheen, wet, odor.	
					1.6	OL/ PT		SILT and PEAT - dark brown, 10YR2/2, high organic content, soft, moist, non plastic, organic odor.	
15	575	4		5	3.9			MEDIUM SAND - brown gray, 10YR4/2, moderate sorting, little to trace gravel and coarse sand, dense, wet.	
					2.2	SM/ SW		FINE SAND - brown to yellow brown, 10YR5/4, fine grained, well sorted, some silt, dense, wet.	
20					3.6			MEDIUM SAND - brown to yellow brown, 10YR4/4, moderate sorting, some to trace gravel and coarse sand, dense, wet.	

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Remarks:

Date Start/Finish: 12.17.12 - 12.17.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 375857.11 **Easting:** 2560054.87 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 586.80 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **MW-28D** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	585	1		4	2.1			SOIL FILL, FINE GRAVEL and MEDIUM to COARSE SAND - black, 10YR2/1, coal and coke, loose, organics, moist, sheen and NAPL blebs from 8.5'-9.5'.	
5	580	2		5	2.0				
10	575	3		5	3.2			SOIL FILL, MEDIUM to COARSE SAND and GRAVEL - dark brown to black, 10YR2/1 to 10YR2/2, coal and coke, loose, wet.	
					2.7			SILT and PEAT - dark brown, 10YR2/2, some fine sand, trace organics, (shells, wood fragments), medium stiff, moist, non plastic.	
15	570	4		5	1.4	PT/ OL		SILT - gray brown, 10YR4/2, little clay, trace organics (shells), medium stiff, moist, non plastic.	
					3.9	SW		MEDIUM to COARSE SAND - gray brown, 10YR5/2, little gravel, little organics (shells), loose, wet.	
20	565	5		5	1.6	OL		SILT - gray brown, 10YR4/2, some clay, little fine sand, trace organics (shells), medium stiff, moist, non plastic.	
25									

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Remarks:

Date Start/Finish: 12.17.12 - 12.17.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 375857.11 **Easting:** 2560054.87 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 586.80 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **MW-28D** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25					1.6				
	560				1.6			SILT - gray brown, 10YR4/2 to 10YR4/3, some fine sand, little clay trace organics (shells), soft, wet, medium plasticity.	
		6		5					
					1.9			FINE to MEDIUM SAND - gray brown, 10YR4/3, some silt, loose, trace organics (shells), wet.	
30						SM/ SW		MEDIUM to COARSE SAND - gray brown, 10YR5/2, some fine to coarse gravel, loose, wet, grades to gravel at depth.	
	555				2.8				
		7		5				CLAY - gray brown, 10YR4/2, some silt, medium stiff, moist, high plasticity.	
					3.9	CH/ OL			
35									
						SW		MEDIUM to COARSE SAND - brown gray, 10YR5/2, some fine gravel, loose, wet.	
	550								
		8		5	3.9			SILT - gray brown, 10YR5/2, little clay, non plastic, soft, wet.	
					3.6			CLAY - gray brown, 10YR4/2 to 10YR5/3, little silt, very stiff, moist, medium to high plasticity.	
40									
	545								
		9		5	2.4				
45						CH			
	540								
		10		5	3.8				
50									

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Remarks:

Date Start/Finish: 12.17.12 - 12.17.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 375857.11 **Easting:** 2560054.87 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 586.80 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **MW-28D** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
50	535	11		5	1.8			CLAY - gray brown, 10YR5/3, some silt, stiff, wet, medium plasticity.	
55	530	12		5	0.8	CH		SILT and CLAY - gray brown, 10YR5/2, trace fine sand, medium stiff, wet, high plasticity.	
60	525	13		5	1.6			SILT - yellow to brown, some fine sand, little clay, very stiff, moist, medium to low plasticity.	
65									

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Remarks:

Date Start/Finish: 1.7.13 - 1.7.13 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 375857.11 **Easting:** 2560054.87 **Casing Elevation:** NA **Borehole Depth:** 35' **Surface Elevation:** 586.80 **Descriptions By:** Stephen Pels	**Well/Boring ID:** **MW-28D - Well Install** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0								BLIND DRILLED	
	585	1							
5									
	580	2							
10									
	575	3							
15									
	570	4							
20									
	565	5							
25									

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Remarks:

Date Start/Finish: 1.7.13 - 1.7.13 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 375857.11 **Easting:** 2560054.87 **Casing Elevation:** NA **Borehole Depth:** 35' **Surface Elevation:** 586.80 **Descriptions By:** Stephen Pels	**Well/Boring ID:** **MW-28D - Well Install** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25									
	560				0.0	OL		SILTY CLAY - brown, 10YR4/4, trace shells, sand and gravel at 25-25.25', soft to very soft, moist.	
		6		5				FINE to MEDIUM SAND - brown, 10YR4/4, well sorted, trace gravel, wet, no odor.	
					0.0	SW			
30									
	555				0.0	CL		CLAY - brown, 10YR4/3, trace silt, trace fine sand, stiff, moist, medium plasticity.	
		7		4				FINE to MEDIUM SAND - gray brown, 10YR5/2, trace to little fine gravel, trace silt, loose, wet.	
					0.0	GW			
35									

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Remarks:

Date Start/Finish: 1.8.13 - 1.8.13 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 375294.58 **Easting:** 2559360.70 **Casing Elevation:** NA **Borehole Depth:** 20' **Surface Elevation:** 591.66 **Descriptions By:** Stephen Pels	**Well/Boring ID:** **MW-30 - Well Intall** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	590	1		5	0.0 0.0	GM		SOIL FILL, GRAVEL - dark brown, 10YR2/2, little fine to coarse sand, silt, poor sorting, some brick from 2-4', loose, moist, no odor.	
5	585	2		5	0.0 0.3	CL		CLAY - brown, 10YR5/3, little silt, hard, moist, medium plasticity. CLAY - brown, 10YR5/3, trace silt, mottling, trace fine sand, stiff to hard moist.	
10	580	3		5	0.4				
15	575	4		5	0.0 0.0	GW CH		MEDIUM SAND - brown, 10YR5/3, some gravel, little silt, soft, wet. CLAY - brown, 10YR4/3, trace gravel, stiff to hard, moist, high plasticity.	
20									

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Remarks:

Date Start/Finish: 12.16.12 - 12.16.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 374769.03 **Easting:** 2559645.35 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 586.99 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **MW-31D** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	585	1		5	0.4			SOIL FILL, SILT - dark brown to yellow brown, 10YR2/2 to 10YR5/6, concrete, fire brick, fine sand, organics (roots and wood fragments), loose, moist.	
5	580	2		5	0.2 0.4	SM SW		SOIL FILL, FINE SAND - dark gray brown, 10YR3/2, some silt, debris (brick), loose, wet. FINE to MEDIUM SAND - brown, 10YR4/4, little silt, trace gravel, loose, dry to moist.	
10	575	3		5	0.3	SW		FINE to MEDIUM SAND - gray brown, 10YR6/2, little silt, trace coarse sand, organics (shells) increasing with depth, loose, wet.	
15	570	4		5	0.4 0.2	OL/ PT SW		SILT and PEAT - dark brown, 10YR2/2, little organics (wood fragments), medium stiff, moist, non plastic. COARSE SAND - gray brown, 10YR4/2 to 10YR5/2, some fine gravel, medium sand, loose, wet.	
20	565	5		5	0.3 0.2	SW		FINE SAND - gray brown, 10YR5/2, little silt, medium sand, loose, wet. SILT - gray brown, 10YR4/2, little clay, trace organics (shells), soft, wet, medium plasticity.	
25									

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Remarks:

Date Start/Finish: 12.16.12 - 12.16.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 374769.03 **Easting:** 2559645.35 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 586.99 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **MW-31D** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25	560	6		5		OL			
30	555	7		5	0.3 0.3 0.3	SM		FINE to MEDIUM SAND - gray brown, 10YR4/2, some silt, loose, wet.	
						OL		SILT - gray brown, 10YR4/2, little clay, little organics (dark wood), soft, wet, medium plasticity.	
35	550	8		5	0.1			SILT - gray brown, 10YR4/2 some clay, little fine sand, medium stiff, moist, medium plasticity.	
40	545	9		5	0.2			SILT - gray, 10YR3/2, trace clay, little fine sand, moist, (2-4" interbeds of fine sand, some silt (wet)), medium plasticity.	
45	540	10		5	0.2 0.1	SW		FINE to COARSE SAND - gray brown, 10YR4/2, some fine gravel, little silt, loose, wet.	
50								SILT - gray brown, 10YR4/2, some clay, medium stiff, moist, medium plasticity.	

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Remarks:

Date Start/Finish: 12.16.12 - 12.16.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 374769.03 **Easting:** 2559645.35 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 586.99 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **MW-31D** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
50					0.2	OL		SILTY CLAY - gray to brown, 10YR4/2, very stiff, moist, medium plasticity.	
	535	11		5	0.1			SILT - gray brown, 10YR5/2, some fine sand, soft, wet, non plastic.	
					0.1			SILTY CLAY - gray brown, 10YR5/2, medium stiff, moist, medium plasticity.	
55									
	530	12		5	0.2	CL/ CH		CLAY - gray brown, 10YR5/2, some silt, trace fine gravel, very stiff to hard, moist, medium to high plasticity.	
60									
					0.1	GM		FINE to COARSE GRAVEL - yellow brown, 10YR5/4, some silt, trace cobbles, medium dense, wet.	
	525	13		5		SW		FINE SAND - gray brown, 10YR5/2, fine sand, little silt, dense, wet.	
					0.8				
					1.9	CL		SILTY CLAY - gray brown, 10YR5/2, stiff, moist, medium plasticity.	
65									

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Remarks:

Date Start/Finish: 1.8.13 - 1.8.13 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 374769.03 **Easting:** 2559645.35 **Casing Elevation:** NA **Borehole Depth:** 50' **Surface Elevation:** 586.99 **Descriptions By:** Stephen Pels	**Well/Boring ID:** **MW-31D - Well Install** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	585	1						BLIND DRILLED	
5	580	2							
10	575	3							
15	570	4							
20	565	5							
25									

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Remarks:

Date Start/Finish: 1.8.13 - 1.8.13 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 374769.03 **Easting:** 2559645.35 **Casing Elevation:** NA **Borehole Depth:** 50' **Surface Elevation:** 586.99 **Descriptions By:** Stephen Pels	**Well/Boring ID:** **MW-31D - Well Install** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25	560	6							
30	555	7							
35	550	8							
40	545	9		5	0.0	OL		FINE SAND and SILT - gray brown, 10YR3/2, trace organics, soft, moist, low plasticity.	
					0.0	SM		FINE to MEDIUM SAND - brown to gray brown, 10YR3/2 to 10YR4/2, some silt, coarse sand at 45', wet.	
45	540	10		5	0.0	OL		SILT - gray brown, 10YR4/2 to 10YR3/2, little to some clay, soft, trace organics (shells), moist, medium plasticity, trace fine sand, some fine to medium sand from 46-46.25 (fine well sorted, rounded sand).	
50									

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Remarks:

Date Start/Finish: 12.16.12 - 12.16.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 375563.85 **Easting:** 2559934.65 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 584.54 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **MW-32D - Well Install** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0		1		5	5.5			SOIL FILL, GRAVEL - dark gray, 10YR3/1, coal and coke fragments, some silt, little sand, loose, organics (roots), moist, non plastic.	
					5.1			SOIL FILL, GRAVEL - dark brown, 10YR2/2, brick and coal/coke, some silt, fine to coarse gravel, loose, moist, non plastic.	
	580								
5		2		5	3.1	SM		FINE to MEDIUM SAND - brown, 10YR3/3, some silt, medium dense, saturated, non plastic.	
					2.8	OL		SILT - dark gray, 10YR3/1, some organics (dark wood fragments, shells), little fine sand, soft, wet, non plastic.	
	575								
10		3		5	1.5	SM		FINE to MEDIUM SAND - brown gray, 10YR3/1 to 10YR3/2, some silt, loose, wet, non plastic.	
					2.1	OL		SILT - brown gray, 10YR3/1 to 10YR3/2, little fine sand, little organics (shells), medium dense, moist, low plasticity.	
	570				2.4			SAND and GRAVEL - gray, 10YR4/1, trace silt, medium to coarse sand, little organics (shells), loose, wet, non plastic.	
15		4		5	2.2	SW/SM		FINE SAND - gray, 10YR4/1, some silt, some organics (shells), medium dense, moist, non plastic.	
					2.8	OL		SILT - gray, 10YR4/1, some fine sand, soft, little organics (shells), moist, low plasticity.	
	565								
20		5		5	1.8				
	560				1.9			FINE to MEDIUM SAND - gray brown, 10YR4/2, little silt, loose, saturated, non plastic.	
25									

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Remarks: MW-32D boring log from FT-SB25.

Date Start/Finish: 12.16.12 - 12.16.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 375563.85 **Easting:** 2559934.65 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 584.54 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **MW-32D - Well Install** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25					2.1	SW		FINE SAND - gray brown, 10YR5/2, some silt, loose, saturated, non plastic.	
					3.0			FINE to COARSE SAND - gray, 10YR5/2, some gravel, fine to coarse sand, loose, saturated, non plastic.	
					2.9	GP		GRAVEL - gray brown,10YR5/2, some coarse sand, loose, saturated, non plastic.	
		6		5	1.5			MEDIUM to COARSE SAND - gray brown, 10YR5/2, little silt, trace gravel, loose, saturated, non plastic.	
	555								
30		7		5	0.9	SW		MEDIUM to COARSE SAND - gray brown, some gravel, loose, saturated, non plastic.	
	550								
35					0.1				
					0.1	GW		FINE GRAVEL - gray brown, some coarse sand, loose, saturated, non plastic.	
		8		5	0.0	SW		FINE to COARSE SAND - gray brown, 10YR5/2 to 10YR5/3, little silt, trace gravel, loose, saturated, non plastic.	
					0.5	SW/ SM		FINE to COARSE SAND - gray brown, 10YR4/2, some silt, trace gravel, medium dense, saturated, non plastic.	
	545								
40		9		5	0.1	OL		SILT - gray brown, 10YR4/2, some fine sand, soft, wet, low plasticity.	
	540								
45		10		5	0.3			SILT - gray brown, 10YR4/2, some fine sand, soft, wet, low plasticity.	
	535								
50									

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Remarks: MW-32D boring log from FT-SB25.

Date Start/Finish: 12.16.12 - 12.16.12 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 375563.85 **Easting:** 2559934.65 **Casing Elevation:** NA **Borehole Depth:** 65' **Surface Elevation:** 584.54 **Descriptions By:** Mishal Al-Johar	**Well/Boring ID:** **MW-32D - Well Install** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
50 / 530	11		5	0.1	CH/CL		CLAY - gray brown, 10YR4/2, some silt, medium stiff, moist, wet from 55-57', medium plasticity, .	
55				0.2				
	12		5	0.2	OL		SILT - gray brown, 10YR4/1 to 10YR4/2, 60-61' mottled dark brown 10YR2/2, some clay, little organics (shells), very stiff, moist, low to medium plasticity.	
60 / 525				0.2				
	13		5	0.2			SILT - gray brown, 10YR5/2, some gravel, little coarse sand, soft, grades to silty gravel, wet, non plastic.	
65 / 520				0.2	CL		CLAY - gray brown, 10YR4/2, some silt, stiff, moist, medium plasticity.	

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Remarks: MW-32D boring log from FT-SB25.

Date Start/Finish: 1.9.13 - 1.9.13 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376691.62 **Easting:** 2559377.69 **Casing Elevation:** NA **Borehole Depth:** 45' **Surface Elevation:** 589.85 **Descriptions By:** Stephen D. Pels	**Well/Boring ID:** **MW-33D - Well Install** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0		1		4	0.2			SOIL FILL, FINE to COARSE GRAVEL - black, 10YR2/1, fine to coarse sand, trace silt, angular debris, little to some possible coal and coke fragments, possible clinker fragments, angular gray concrete fragments and re-bar fragments, loose, moist.	
5	585	2		3	0.1				
10	580	3		5	0.1 0.2 0.0 0.0	CL		CLAY - gray brown, 10YR5/2, some silt, stiff, moist, some mottling, low plasticity, trace odor. FINE to MEDIUM SAND - black, 10YR2/1, dense, wet, some odor. CLAY - gray brown to brown, 10YR4/2 to 10YR4/3, stiff, moist, some mottling, plasticity, trace odor.	
15	575	4		5	0.0 0.0	OL PT		SILT - dark brown, 10YR3/2, some fine sand, trace organics (shells), soft, moist, low plasticity. PEAT - dark brown, 10YR2/2, organics (shells, roots), soft, moist, non plastic, organic odor.	
20	570	5		5	0.0			SILT - gray brown, 10YR4/2, little clay, trace shells, trace fine sand, soft, moist, low plasticity.	
25	565								

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Remarks: MW-33D boring log from CG-SB45W.

Date Start/Finish: 1.9.13 - 1.9.13 **Drilling Company:** Boart Longyear **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Sonic	**Northing:** 376691.62 **Easting:** 2559377.69 **Casing Elevation:** NA **Borehole Depth:** 45' **Surface Elevation:** 589.85 **Descriptions By:** Stephen D. Pels	**Well/Boring ID:** **MW-33D - Well Install** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
25	565	6		5	0.0	OL		SILTY CLAY - gray brown, 10YR4/2, high plasticity, trace shells, stiff, moist, high plasticity.	
30	560	7		4	0.2	SW		FINE to MEDIUM SAND - gray brown, 10YR4/2, little coarse sand, trace gravel, trace clay, dense wet.	
					0.0	CL		SILT and CLAY - gray brown, 10YR3/2, trace organics, soft, moist, low plasticity.	
35	555	8		5	0.0	SW		MEDIUM SAND - brown, 10YR4/2 to 10YR4/3, some fine grained sand, trace fine gravel and silt, trace organics, dense, wet, no odor.	
40	550	9		5	0.0				
45	545				0.0	CL		CLAY - brown, 10YR4/3, mottled, trace gravel at 40', hard, moist, medium plasticity.	

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Remarks: MW-33D boring log from CG-SB45W.

Date Start/Finish: 1.14.13 - 1.14.13 **Drilling Company:** Giles **Driller's Name:** Chip **Drilling Method:** Geoprobe **Sampling Method:** Geoprobe	**Northing:** 376599.36 **Easting:** 2560100.74 **Casing Elevation:** NA **Borehole Depth:** 15 **Surface Elevation:** 588.76 **Descriptions By:** Stephen Pels	**Well/Boring ID:** **TP-02** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0	1		5	0.0	CL		CLAY - gray brown, 10YR4/2 to 10YR4/3, some fine sand, trace gravel, hard, moist, low plasticity.	
5	-5	1		5	0.0	GM		GRAVEL - black, 10YR2/1, possible coal fragments.	
		2		5	0.0				
						CL		CLAY - brown, 10YR5/4, trace silt, hard, moist, low plasticity.	
10	-10	3		5	0.0			CLAY - brown, 10YR5/4, trace gravel, stiff to hard wet at 14', high plasticity.	
15	-15				0.0				

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Remarks:

Date Start/Finish: 1.15.13 - 1.15.13 **Drilling Company:** Giles **Driller's Name:** Chip **Drilling Method:** Geoprobe **Sampling Method:** Geoprobe	**Northing:** 376652.02 **Easting:** 2560068.01 **Casing Elevation:** NA **Borehole Depth:** 15' **Surface Elevation:** 587.91 **Descriptions By:** Stephen Pels	**Well/Boring ID:** **TP-03** **Client:** Solvay RI/FS Group **Location:** Milwaukee, WI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0	1		5	NM	GM		CONCRETE - gray to gray brown, 10YR5/1 to 10YR5/2, crushed aggregate, angular, some sand, loose, moist.	
5	-5	2		4	NM	CL		CLAY - gray to gray brown, 10YR4/2, trace gravel, trace fine sand, little silt, hard, moist, medium plasticity.	
10	-10	3		5	NM			CLAY - brown, 10YR4/4, little clay, trace pebbles, hard, moist, wet at 12.5, medium plasticity,	
15	-15								

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Remarks: NM - Not Measured.

Appendix D

Monitoring Well MW-16 Abandonment Log

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT
Form 3300-5 2/2000 Page 1 of 2

Notice: Please complete Form 3300-5 and return it to the appropriate DNR office and bureau. Completion of this report is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See the instructions for more information.

Route to: ☐ Drinking Water ☐ Watershed/Wastewater ☐ Waste Management ☒ Remediation/Redevelopment ☐ Other _____

(1) GENERAL INFORMATION

WI Unique Well No.	DNR Well ID No.	County
		Milwaukee

Soil Boring or Well ID MW-16 _____ Gov't Lot (if applicable)

Grid Location NW 1/4 of NW 1/4 of Sec. 4 ; T. 6 N; R. 22 ☒ E ☐ W

374757 ft. ☒ N. ☐ S., 2559600 ft. ☒ E. ☐ W.

Local Grid Origin ☐ (estimated: ☒) or Well Location ☒

Lat ____ ° ____ ' ____ " Long ____ ° ____ ' ____ " or

State Plane _____ ft. N. _____ ft. E. S ☐ C ☐ N ☒ Zone

Reason For Abandonment	WI Unique Well No. of Replacement Well
Well Damaged	

(2) FACILITY /OWNER INFORMATION

Facility Name: Milwaukee Solvay Coke and Gas

Facility ID	License/Permit/Monitoring No.
241219880	WIN000508215

Street Address of Well: 311 East Greenfield Ave

City, Village, or Town: Milwaukee

Present Well Owner	Original Owner
Wisconsin Gas LLC DBA We Energies	

Street Address or Route of Owner: 333 W. Everett Street

City, State, Zip Code: Milwaukee, WI 53203

(3) WELL/DRILLHOLE/BOREHOLE INFORMATION

Original Construction Date 1/7/2009

☒ Monitoring Well
☐ Water Well
☐ Drillhole / Borehole

If a Well Construction Report is available, please attach.

Construction Type:
☒ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (Specify) _____

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft) 16.2 (From ground surface) Casing Diameter (in.) 2.07
Casing Depth (ft.) _____

Lower Drillhole Diameter (in.) _____

Was Well Annular Space Grouted? ☐ Yes ☒ No ☐ Unknown
If Yes, To What Depth? _____ Feet

Depth to Water (Feet) 8.5

(4) PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL

Pump & Piping Removed?	☐ Yes	☐ No	☒ Not Applicable
Liner(s) Removed?	☐ Yes	☐ No	☒ Not Applicable
Screen Removed?	☒ Yes	☐ No	☐ Not Applicable
Casing Left in Place?	☐ Yes	☒ No	
Was Casing Cut Off Below Surface?	☐ Yes	☒ No	
Did Sealing Material Rise to Surface?	☒ Yes	☐ No	
Did Material Settle After 24 Hours?	☐ Yes	☒ No	
If Yes, Was Hole Retopped?	☐ Yes	☒ No	

Required Method of Placing Sealing Material
☐ Conductor Pipe - Gravity ☐ Conductor Pipe - Pumped
☒ Screened & Poured ☐ Other (Explain)
(Bentonite Chips)

Sealing Materials
☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☒ Chipped Bentonite

For monitoring wells and monitoring well boreholes only
☐ Bentonite Chips
☐ Granular Bentonite
☐ Bentonite-Cement Grout
☐ Bentonite - Sand Slurry

(5) Sealing Material Used	From (Ft.)	To (Ft.)	Sacks Sealant	Mix Ratio or Mud Weight
Bentonite	Surface	16.2	1	

(6) Comments _____

(7) Name of Person or Firm Doing Sealing Work: Andrew Cawrse
Date of Abandonment: 7/11/17

Signature of Person Doing Work: Andrew Cawrse
Date Signed:

Street or Route: 234 W. Florida, Floor 5
Telephone Number: (414) 837-3607

City, State, Zip Code: Milwaukee,WI 53204

FOR DNR OR COUNTY USE ONLY
Noted By
Comments

Date Modified: 7/21/2017

Template: WDNR ABANDONMENT 2000 - Project: MILWAUKEE SOLVAY COKE AND GAS GINT.GPJ

Appendix E

Groundwater Levels and Contours

Table 1. Groundwater Elevation Summary

WEC Business Services, LLC - Former Milwaukee Solvay Coke and Gas Site
311 East Greenfield Avenue, Milwaukee, Wisconsin
USEPA WIN000508215 / BRRTS # 0241466662 / FID # 241219880

Well Data	MW-01		MW-02		MW-03		MW-04	
Well Depth from TOC (feet)	17.02		17.06		19.12		16.76	
Screen Length (feet)	10		10		10		10	
Ground Surface Elevation (MSL)	587.29		587.67		587.57		587.04	
Top of Inner Casing Elevation (MSL)	590.08		590.67		590.36		589.81	
Top of Screen Elevation (MSL)	583.1		583.61		581.24		583.05	
Bottom of Screen Elevation (MSL)	573.06		573.61		571.24		573.05	
Screened Formation	Soil fill, peat		Soil fill		Soil fill		Soil fill, peat, silt/clay	
Date	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**
	Constructed in 2008		Constructed in 2008		Constructed in 2008		Constructed in 2008	
2/12/2009	6.32	583.76	6.91	583.76	6.16	584.20	8.49	581.32
5/11/2009	5.11	584.97	5.52	585.15	5.34	585.02	8.36	581.45
8/4/2009	6.15	583.93	7.10	583.57	7.13	583.23	8.56	581.25
11/2/2009	6.56	583.52	6.3	584.37	5.81	584.55	8.37	581.44
2/15/2010	6.56	583.52	7.32	583.35	7.22	583.14	8.63	581.18
5/24/2010	5.90	584.18	6.38	584.29	6.20	584.16	8.42	581.39
10/3/2010	5.83	584.25	6.41	584.26	6.40	583.96	8.55	581.26
11/24/2010	7.00	583.08	8.00	582.67	7.85	582.51	9.00	580.81
1/28/2013	7.13	582.95	7.82	582.85	7.45	582.91	9.12	580.69
5/7/2013	4.83	585.25	5.69	584.98	5.79	584.57	8.8	581.01
7/26/2017	5.57	584.51	6.06	584.61	5.86	584.50	8.09	581.72
8/14/2017	NM	---	6.35	584.32	NM	---	NM	---

Well Data	MW-05		MW-06		MW-07		MW-08	
Well Depth from TOC (feet)	16.85		17.54		16.82		17.83	
Screen Length (feet)	10		10		10		10	
Ground Surface Elevation (MSL)	589.54		587.30		589.81		586.44	
Top of Inner Casing Elevation (MSL)	592.55		589.94		592.64		589.04	
Top of Screen Elevation (MSL)	585.70		582.40		585.82		581.21	
Bottom of Screen Elevation (MSL)	575.70		572.40		575.82		571.21	
Screened Formation	Soil fill, peat		Soil fill, silt		Soil fill, peat		Soil fill, peat, silt/clay	
Date	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**
	Constructed in 2008		Constructed in 2008		Constructed in 2008		Constructed in 2008	
2/12/2009	8.82	583.73	9.48	580.46	8.66	583.98	7.40	581.64
5/11/2009	7.61	584.94	9.23	580.71	7.24	585.40	6.53	582.51
8/4/2009	8.60	583.95	9.37	580.57	8.64	584.00	7.80	581.24
11/02/09	9.07	583.48	9.20	580.74	8.46	584.18	7.12	581.92
2/15/2010	9.00	583.55	9.51	580.43	9.13	583.51	8.00	581.04
5/24/2010	8.37	584.18	9.40	580.54	8.14	584.50	7.02	582.02
10/3/2010	8.29	584.26	9.44	580.50	8.21	584.43	7.47	581.57
11/24/2010	9.70	582.85	9.53	580.41	9.51	583.13	8.80	580.24
1/28/2013	9.64	582.91	9.68	580.26	9.70	582.94	8.52	580.52
5/7/2013	7.37	585.18	9.52	580.42	7.28	585.36	6.47	582.57
7/26/2017	8.06	584.49	8.30	581.64	8.44	584.20	6.52	582.52
8/14/2017	NM	---	NM	---	8.77	583.87	NM	---

Well Data	MW-9		MW-10		MW-11		MW-12	
Well Depth from TOC (feet)	18.82		16.91		17.23		17.28	
Screen Length (feet)	10		10		10		10	
Ground Surface Elevation (MSL)	591.32		587.07		583.89		591.60	
Top of Inner Casing Elevation (MSL)	593.93		589.83		586.80		594.63	
Top of Screen Elevation (MSL)	585.11		582.92		579.57		587.35	
Bottom of Screen Elevation (MSL)	575.11		572.92		569.57		577.35	
Screened Formation	Soil fill, peat, silt/clay		Soil fill, peat, silt/clay		Soil fill		Soil fill, silt/clay	
Date	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**
	Constructed in 2008		Constructed in 2008		Constructed in 2008		Constructed in 2008	
2/12/2009	11.19	582.74	8.64	581.19	7.69	579.11	3.35	591.28
5/11/2009	10.09	583.84	7.46	582.37	6.75	580.05	3.86	590.77
8/4/2009	11.12	582.81	8.37	581.46	7.09	579.71	7.84	586.79
11/02/09	11.50	582.43	8.77	581.06	7.11	579.69	3.71	590.92
2/15/2010	11.40	582.53	8.83	581.00	7.62	579.18	5.07	589.56
5/24/2010	10.82	583.11	8.27	581.56	7.25	579.55	4.44	590.19
10/3/2010	10.91	583.02	8.21	581.62	7.50	579.30	6.46	588.17
11/24/2010	12.21	581.72	9.46	580.37	8.39	578.41	5.96	588.67
1/28/2013	11.66	582.27	10.11	579.72	9.02	577.78	5.10	589.53
5/7/2013	9.88	584.05	7.90	581.93	7.41	579.39	4.24	590.39
7/26/2017	10.30	583.63	7.67	582.16	5.04	581.76	5.10	589.53
8/14/2017	NM	---	NM	---	NM	---	NM	---

Table 1. Groundwater Elevation Summary

WEC Business Services, LLC - Former Milwaukee Solvay Coke and Gas Site
311 East Greenfield Avenue, Milwaukee, Wisconsin
USEPA WIN000508215 / BRRTS # 0241466662 / FID # 241219880

Well Data	MW-13		MW-14		MW-15		MW-16	
Well Depth from TOC (feet)	17.22		18.02		20.43		18.91	
Screen Length (feet)	10		10		10		10	
Ground Surface Elevation (MSL)	583.95		586.89		592.11		587.04	
Top of InnerCasing Elevation (MSL)	586.87		589.00		594.48		589.78	
Top of Screen Elevation (MSL)	579.65		580.98		584.05		580.87	
Bottom of Screen Elevation (MSL)	569.65		570.98		574.05		570.87	
Screened Formation	Soil fill, peat		Soil fill		Sand, silt/clay		Silt, sand	
Date	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**
	Constructed in 2008		Constructed in 2008		Constructed in 2008		Constructed in 2008	
2/12/2009	8.32	578.55	10.70	578.30	14.38	580.10	11.31	578.47
5/11/2009	7.32	579.55	9.56	579.44	13.09	581.39	10.09	579.69
8/4/2009	7.25	579.62	9.40	579.60	14.12	580.36	10.19	579.59
11/02/09	7.37	579.50	9.68	579.32	14.16	580.32	10.25	579.53
2/15/2010	8.10	578.77	10.25	578.75	14.36	580.12	10.86	578.92
5/24/2010	7.73	579.14	9.96	579.04	13.57	580.91	10.55	579.23
10/3/2010	7.94	578.93	10.10	578.90	14.07	580.41	10.79	578.99
11/24/2010	8.81	578.06	11.05	577.95	15.14	579.34	11.72	578.06
1/28/2013	9.71	577.16	11.95	577.05	15.59	578.89	12.59	577.19
5/7/2013	8.39	578.48	10.82	578.18	13.51	580.97	11.27	578.51
7/26/2017	5.14	581.73	8.43	580.57	12.55	581.93	Well Damaged and Abandoned	
8/14/2017	NM	---	NM	---	NM	---		

Well Data	MW-17		MW-18		MW-19		MW-20	
Well Depth from TOC (feet)	17.06		17.84		16.87		17.71	
Screen Length (feet)	10		10		10		10	
Ground Surface Elevation (MSL)	590.47		588.54		586.96		586.24	
Top of Inner Casing Elevation (MSL)	593.30		591.13		589.58		588.67	
Top of Screen Elevation (MSL)	586.24		583.29		582.71		580.96	
Bottom of Screen Elevation (MSL)	576.24		573.29		572.71		570.96	
Screened Formation	Soil fill, sand		Soil fill		Soil fill, peat		Soil fill	
Date	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**
	Constructed in 2008		Constructed in 2008		Constructed in 2008			
2/12/2009	10.93	582.37	6.63	584.50	5.99	583.59		
05/11/09	9.23	584.07	5.30	585.83	4.80	584.78		
8/4/2009	11.12	582.18	7.05	584.08	6.61	582.97		
11/2/2009	11.80	581.50	5.96	585.17	5.64	583.94		
2/15/2010	11.29	582.01	7.12	584.01	6.46	583.12		
5/24/2010	10.21	583.09	6.05	585.08	5.57	584.01		
10/3/2010	10.97	582.33	6.21	584.92	5.61	583.97		
11/24/2010	12.82	580.48	7.97	583.16	7.51	582.07	Constructed in 2012	
1/28/2013	13.44	579.86	7.39	583.74	6.99	582.59	7.26	581.41
5/7/2013	9.25	584.05	5.40	585.73	4.82	584.76	4.41	584.26
7/26/2017	9.50	583.80	5.69	585.44	5.13	584.45	5.10	583.57
8/14/2017	NM	---	6.08	585.05	5.58	584.00	5.42	583.25

Well Data	MW-22		MW-27		MW-30		MW-21D	
Well Depth from TOC (feet)	19.52		24.16		20.70		45.06	
Screen Length (feet)	10		10		5		5	
Ground Surface Elevation (MSL)	587.91		591.13		591.66		587.15	
Top of Inner Casing Elevation (MSL)	590.26		593.46		593.83		589.53	
Top of Screen Elevation (MSL)	580.74		579.30		583.13		549.47	
Bottom of Screen Elevation (MSL)	570.74		569.30		573.13		544.47	
Screened Formation	Soil fill		Sand, peat		Sand gravel lense in clay		Sand lense in silt/ clay	
Date	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**
2/12/2009								
5/11/2009								
8/4/2009								
11/2/2009								
2/15/2010								
5/24/2010								
10/3/2010								
11/24/2010	Constructed in 2012		Constructed in 2012		Constructed in 2012		Constructed in 2012	
1/28/2013	8.03	582.23	12.60	580.86	4.65	589.18	12.73	576.80
5/7/2013	5.90	584.36	10.09	583.37	3.79	590.04	11.60	577.93
7/26/2017	6.03	584.23	9.89	583.57	5.30	588.53	9.99	579.54
8/14/2017	NM	---	NM	---	NM	---	NM	---

Table 1. Groundwater Elevation Summary

WEC Business Services, LLC - Former Milwaukee Solvay Coke and Gas Site
311 East Greenfield Avenue, Milwaukee, Wisconsin
USEPA WIN000508215 / BRRTS # 0241466662 / FID # 241219880

Well Data	MW-22D		MW-26D		MW-28D		MW-31D	
Well Depth from TOC (feet)	28.01		34.35		37.15		48.85	
Screen Length (feet)	5		5		5		5	
Ground Surface Elevation (MSL)	587.81		589.74		586.80		586.99	
Top of Inner Casing Elevation (MSL)	590.39		592.02		589.18		589.24	
Top of Screen Elevation (MSL)	567.38		562.67		557.03		545.39	
Bottom of Screen Elevation (MSL)	562.38		557.67		552.03		540.39	
Screened Formation	Sand lense in silt/ clay		Sand/gravel lense in silt/clay		Sand/gravel lense in silt/clay		Sand/ gravel lense in silt/clay	
Date	Depth to Water from TOC (feet)	Water Elevation (MSL)	Depth to Water from TOC (feet)	Water Elevation (MSL)	Depth to Water from TOC (feet)	Water Elevation (MSL)	Depth to Water from TOC (feet)	Water Elevation (MSL)
2/12/2009								
5/11/2009								
8/4/2009								
11/2/2009								
2/15/2010								
5/24/2010								
10/3/2010								
11/24/2010	Constructed in 2012		Constructed in 2012		Constructed in 2012		Constructed in 2012	
1/28/2013	12.34	578.05	12.98	579.04	11.29	577.89	12.81	576.43
5/7/2013	10.81	579.58	11.20	580.82	10.09	579.09	11.83	577.41
7/26/2017	8.45	581.94	10.05	581.97	7.35	581.83	9.17	580.07
8/14/2017	NM	---	10.14	581.88	NM	---	NM	---

Well Data	MW-32D		MW-33D		NMW-01D		NMW-01S	
Well Depth from TOC (feet)	39.40		44.10		31.48		17.13	
Screen Length (feet)	5		5		5		10	
Ground Surface Elevation (MSL)	584.5376		589.85		586.87		586.03	
Top of Inner Casing Elevation (MSL)	587.01		592.07		589.65		588.59	
Top of Screen Elevation (MSL)	552.61		552.97		563.17		581.46	
Bottom of Screen Elevation (MSL)	547.61		547.97		558.17		571.46	
Screened Formation	Sand and gravel		Sand lense in silt/clay		Silt/sand lense in silt/clay		Soil fill, silt/sand	
Date	Depth to Water from TOC (feet)	Water Elevation (MSL)	Depth to Water from TOC (feet)	Water Elevation (MSL)	Depth to Water from TOC (feet)	Water Elevation (MSL)	Depth to Water from TOC (feet)	Water Elevation (MSL)
					Constructed in 2008		Constructed in 2008	
2/12/2009					8.63	581.02	6.90	581.69
5/11/2009					7.32	582.33	6.01	582.58
8/4/2009					7.95	581.70	6.32	582.27
11/2/2009					8.54	581.11	6.66	581.93
2/15/2010					8.38	581.27	6.85	581.74
5/24/2010					7.96	581.69	6.39	582.20
10/3/2010					7.72	581.93	6.30	582.29
11/24/2010	Constructed in 2012		Constructed in 2012		9.20	580.45	7.54	581.05
1/28/2013	10.05	576.96	14.25	577.82	9.43	580.22	7.11	581.48
5/7/2013	8.44	578.57	13.04	579.03	7.20	582.45	6.32	582.27
7/26/2017	5.18	581.83	11.78	580.29	6.51	583.14	7.21	581.38
8/14/2017	NM	---	NM	---	6.70	582.95	6.33	582.26

Well Data	NMW-02D		NMW-02S		NMW-03D		NMW-03S	
Well Depth from TOC (feet)	36.61		19.37		34.79		16.76	
Screen Length (feet)	5		10		5		10	
Ground Surface Elevation (MSL)	590.22		590.20		589.56		589.52	
Top of Inner Casing Elevation (MSL)	592.85		592.89		592.09		592.29	
Top of Screen Elevation (MSL)	561.24		583.52		562.30		585.53	
Bottom of Screen Elevation (MSL)	556.24		573.52		557.30		575.53	
Screened Formation	Silt/sand lense in silt/clay		Soil fill		Silt/clay		Soil fill, peat	
Date	Depth to Water from TOC (feet)	Water Elevation (MSL)	Depth to Water from TOC (feet)	Water Elevation (MSL)	Depth to Water from TOC (feet)	Water Elevation (MSL)	Depth to Water from TOC (feet)	Water Elevation (MSL)
	Constructed in 2008		Constructed in 2008		Constructed in 2008		Constructed in 2008	
2/12/2009	12.40	580.45	8.81	584.08	11.86	580.23	8.38	583.91
5/11/2009	12.07	580.78	7.22	585.67	10.90	581.19	7.03	585.26
8/4/2009	11.81	581.04	8.96	583.93	11.24	580.85	8.26	584.03
11/2/2009	11.92	580.93	7.90	584.99	11.86	580.23	8.61	583.68
2/15/2010	12.01	580.84	9.02	583.87	11.48	580.61	8.68	583.61
5/24/2010	12.19	580.66	7.99	584.90	11.26	580.83	7.98	584.31
10/3/2010	11.43	581.42	8.11	584.78	10.23	581.86	7.86	584.43
11/24/2010	12.41	580.44	9.88	583.01	11.91	580.18	9.24	583.05
1/28/2013	12.44	580.41	9.28	583.61	12.91	579.18	9.33	582.96
5/7/2013	12.11	580.74	7.31	585.58	9.77	582.32	6.81	585.48
7/26/2017	10.45	582.40	7.54	585.35	9.78	582.31	7.51	584.78
8/14/2017	NM	---	NM	---	9.86	582.23	7.87	584.42

Table 1. Groundwater Elevation Summary

WEC Business Services, LLC - Former Milwaukee Solvay Coke and Gas Site
311 East Greenfield Avenue, Milwaukee, Wisconsin
USEPA WIN000508215 / BRRTS # 0241466662 / FID # 241219880

Well Data	NMW-04D		NMW-04S	
Well Depth from TOC (feet)	35.36		17.06	
Screen Length (feet)	5		10	
Ground Surface Elevation (MSL)	587.45		587.32	
Top of Inner Casing Elevation (MSL)	590.31		590.03	
Top of Screen Elevation (MSL)	559.95		582.97	
Bottom of Screen Elevation (MSL)	554.95		572.97	
Screened Formation	Sand		Sand	
Date	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**
	Constructed in 2008		Constructed in 2008	
2/12/2009	10.11	580.20	10.08	579.95
5/11/2009	8.70	581.61	8.36	581.67
8/4/2009	9.90	580.41	9.72	580.31
11/2/2009	9.79	580.52	9.29	580.74
2/15/2010	10.19	580.12	10.12	579.91
5/24/2010	9.28	581.03	9.06	580.97
10/3/2010	9.94	580.37	9.88	580.15
11/24/2010	11.22	579.09	11.19	578.84
1/28/2013	11.73	578.58	11.77	578.26
5/7/2013	9.19	581.12	8.90	581.13
7/26/2017	8.00	582.31	7.91	582.12
8/14/2017	NM	---	NM	---

(O:KJS 8/16/17, C:AGC 8/16/17)

Staff Gauge ID	Northing (feet)	Easting (feet)
Staff Gauges (Installed in 2008)		
SG-01-2008	376303.80	2560305.40
SG-02-2008	375478.50	2560022.90
SG-03-2008	374620.23	2559455.05
Staff Gauges (Installed in 2012)		
SG-01-2012	376522.48	2560417.75
SG-02-2012	375786.10	2560127.36
SG-03-2012	374649.32	2559556.82

TOC : Top of PVC well casing
NM: Not measured
MSL: Elevations are referenced to feet above Mean Sea Level
Horizontial Datum is Based on the Wisconsin State Plane Coordinate System, South Zone (NAD 27).
Vertical Datum is based on National Geodetic Vertical Datum of 1929.

Y:\Mapping\Projects\2121233\MXD\Groundwater_Flow_Map_July_2017.mxd Author: cushmatd Date/Time: 8/14/2017 10:42:04 AM

DRAWN BY/DATE:
TDC 8/14/17
REVIEWED BY/DATE:
JFK 8/14/17
APPROVED BY/DATE:
JMH 9/22/17

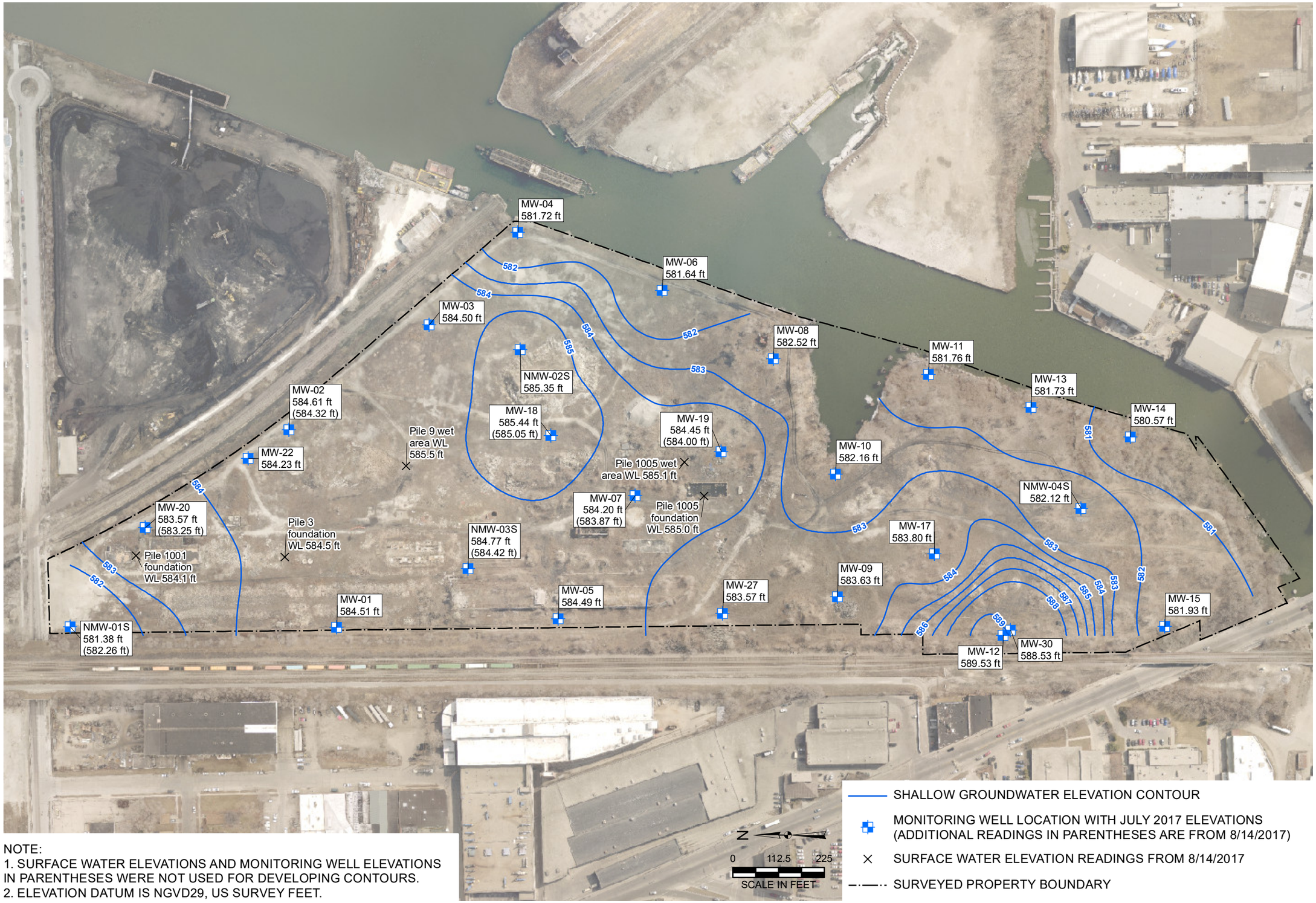
GROUNDWATER ELEVATION CONTOURS
DEEP GROUNDWATER - JULY 2017

FORMER MILWAUKEE SOLVAY COKE AND GAS SITE
311 EAST GREENFIELD AVENUE
MILWAUKEE, WISCONSIN

PROJECT NO: 2133

FIGURE NO: 1

Natural Resource Technology
AN OBG COMPANY



SHALLOW GROUNDWATER ELEVATION CONTOUR

MONITORING WELL LOCATION WITH JULY 2017 ELEVATIONS (ADDITIONAL READINGS IN PARENTHESES ARE FROM 8/14/2017)

SURFACE WATER ELEVATION READINGS FROM 8/14/2017

SURVEYED PROPERTY BOUNDARY

NOTE:
1. SURFACE WATER ELEVATIONS AND MONITORING WELL ELEVATIONS IN PARENTHESES WERE NOT USED FOR DEVELOPING CONTOURS.
2. ELEVATION DATUM IS NGVD29, US SURVEY FEET.

DRAWN BY/DATE: TDC 8/14/17
REVIEWED BY/DATE: JFK 8/14/17
APPROVED BY/DATE: JMH 9/22/17

GROUNDWATER ELEVATION CONTOURS SHALLOW GROUNDWATER - JULY 2017

FORMER MILWAUKEE SOLVAY COKE AND GAS SITE
311 EAST GREENFIELD AVENUE
MILWAUKEE, WISCONSIN

PROJECT NO: 2133

FIGURE NO: 1

Natural Resource Technology
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Y:\Mapping\Projects\21\2133\MXD\Groundwater_Flow_Map_July_2017.mxd Author: CushmaTD; Date/Time: 8/17/2017, 1:13:56 PM

Appendix F

Bulkhead Stability Inspection Summary

FIELD NOTE SUMMARY

Project Number / Task: 2133
Project Name: Solvay Coke

Date:	Thursday, May 4, 2017
Work Scope:	Bulkhead Survey
NRT Staff:	Andrew Cawrse and Kyle Schaefer
Contractors:	NA
Weather:	Sunny, 55 degrees
Equipment:	NA
Field Comments:	13:30 AGC and KJS on site, AGC and KJS drove to the northeast portion of the site and walked south along the Kinnickinnic River and inspected the concrete bulkhead and river bank. The concrete bulkhead is approximately 750 feet long and was in generally fair condition with small areas of deterioration. However, no significant cracks or deterioration were observed. Some areas of settlement were also observed behind the bulkhead, especially behind the most northern portion of the bulkhead. No rip rap was observed at the toe, no walers were present, and ponding behind the bulkhead was not observed. The concrete bulkhead changed to steel sheet piling which extended approximately 400 feet with a small area with no sheet piling. The sheet piling was in generally good condition and with small areas of deterioration. Walers were observed along the sheet piling. Some small areas of settlement were also observed behind the sheet piling. No rip rap was observed at the toe and ponding behind the sheet pile was not observed. Following the sheet piling, approximately 650 feet of the river bank was lined with concrete rubble and concrete posts. Timber dolphins were observed near the river bank. No significant settlement or erosion was observed. The remaining approximately 750 feet of the river bank extending to South Kinnickinnic Avenue consisted of vegetated earthen bank. No significant settlement or erosion was observed. See attached photos and figure noting photo locations. – AGC and KJS off site at 15:30
Scope Changes:	None

CITY:MANCHESTER DIV/GROUP:ENVCAD DB:T.HALLIWELL LD:T.HALLIWELL PIC:N.GRENSKY PM:P.VIANA
G:\ENVCAD\Manchester\ACT\CI001530\0009\00001\RI-UPLAND\UPLAND 1-3.dwg LAYOUT: 1-3 SAVED: 5/29/2014 11:25 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ---- PLOTTED: 5/29/2014 11:25 AM BY: HALLIWELL, TRISH
XREFS: IMAGES: PROJECTNAME: ----
X0TTL-RI-BM AERIAL-2011.jpg

OFFICE AND CHEMICAL LABORATORY
BLACKSMITH SHOP
STORE ROOM
MACHINE SHOP
CARPENTER SHOP
SOO LINE RAILROAD COMPANY C/O REAL ESTATE
CHICAGO NORTHERN WESTERN TRANSPORTATION CO
TRANSFORMER HOUSE
FORMER STRONG LIQUOR AND AMMONIA STORAGE AREA
FORMER COKE OVENS
FORMER POWER HOUSE
FORMER AMMONIA CONC. BLDG.
FORMER TAR TANK
FORMER WEAK LIQUOR TANK AREA
FORMER WATER PURIFICATION BLDG.
FORMER BY-PRODUCT BUILDING
STACK
FORMER BOILER HOUSE
SOUTH CONDENSER AND SCRUBBER BUILDING
FORMER GAS HOLDER
FORMER PIVOT HOUSE
GAS BOOSTER
FORMER 50,000 CU FT GAS HOLDER
FORMER CONVEYOR
FORMER LIGHT OIL TANK HOUSE
SHED
Area with Settlement near the Water Intake Pipe
FORMER WATER INTAKE STRUCTURE
SWING BRIDGE
FORMER COKE AND GAS PRODUCTION AREA
FORMER COAL STORAGE AREA
Area with No Sheet Piling
KINNICKINNIC RIVER
MUNICIPAL SLIP
DOLPHINS
SUNKEN BARGE
SUNKEN SAILBOAT
CAR FERRY SLIP
FORMER FURNACE AND TANNERY AREA
SKIPPER BUD'S SLIP
KINNICKINNIC AVENUE
1 2 2A 3 4 4A 4,5 5 6 7 8 9 10 11 12 13 14

LEGEND

- SITE BOUNDARY
- SITE AREAS
- RIVER BANK - BULKHEAD
- RIVER BANK - STEEL SHEET PILING RIVER
- BANK - EARTHEN WITH CONCRETE RUBBLE AND WOOD PILING
- RIVER BANK - CONCRETE
- RIVER BANK - EARTHEN BANK
- SITE PIPE LOCATION
- SITE WATER INTAKE LOCATION
- 9 PICTURE LOCATION

NOTES:

1. ELECTRONIC FILE SUPPLIED BY BURNS AND McDONNELL.

0 100' 200'
GRAPHIC SCALE

MILWAUKEE SOLVAY COKE AND GAS SITE
MILWAUKEE, WISCONSIN
REMEDIAL INVESTIGATION REPORT

CURRENT SITE LAYOUT

ARCADIS

FIGURE
1-3

Concrete bulkhead Looking south Photo 1

Concrete bulkhead Looking north Photo 2

Concrete bulkhead Looking north Photo 3

Settlement behind bulkhead Photo 4

Water intake pipe
Photo 5

Sheet pile
Looking south
Photo 6

Sheet pile
Looking north
Photo 7

Area with no sheet piling
Looking south
Photo 8

Concrete posts
Looking south
Photo 9

Concrete rubble
Looking south
Photo 10

Dolphins
Looking north
Photo 11

Vegetated earthen bank
Looking south
Photo 12

Vegetated earthen bank Looking southwest Photo 13

Vegetated earthen bank Looking northeast Photo 14

Signature: Andrew Cawrse Date: 5/9/17

Andrew Cawrse

Appendix G

2017 Analytical Data Packages

Table 1

ACM Testing Analytical Summary

Solvay Coke and Gas Plant Site

Sample ID	Date Collected	Date Analytical Results Received	Analytical Lab	Media	Results	Sample Location
SAVAGE-01	4/27/2017	5/4/2017	EMSL	Brick	No Asbestos Detected	Pile 1
SAVAGE-02				Brick	No Asbestos Detected	
10-XG-01				Brick	No Asbestos Detected	
ACME DP-01				Brick	No Asbestos Detected	
ST LOUIS DP-01				Brick	No Asbestos Detected	
NO2 SPLIT-01				Brick	No Asbestos Detected	
STANDARD-01				Brick	No Asbestos Detected	
BLANK-01				Brick	No Asbestos Detected	
METAL BEAM-01				Concrete	No Asbestos Detected	Former Coke Oven Doors
METAL BEAM-02				Concrete	No Asbestos Detected	
METAL BEAM-03				Concrete	No Asbestos Detected	
LUCLEDE KING-01				Brick	No Asbestos Detected	Pile 1
STERLING KING-01				Brick	No Asbestos Detected	
PRM&M CO-01				Brick	No Asbestos Detected	
FRANKLIN CROWN				Brick	No Asbestos Detected	
MEX R CO-01				Brick	No Asbestos Detected	
ACME 8X-01				Brick	No Asbestos Detected	
ST LOUIS LARGE				Brick	No Asbestos Detected	
WALSH-01				Brick	No Asbestos Detected	
WEDGE-01				Brick	No Asbestos Detected	
CONCRETE-01-01				Concrete	No Asbestos Detected	Former Concrete Block Building
CONCRETE-02-01				Concrete	No Asbestos Detected	
CONCRETE-03-01				Concrete	No Asbestos Detected	
BLOCK-01-01				Concrete Block	No Asbestos Detected	
BLOCK-02-01				Concrete Block	No Asbestos Detected	
BLOCK-03-01				Concrete Block	No Asbestos Detected	
Blank-02				Brick	No Asbestos Detected	Pile 1
Blank-03				Brick	No Asbestos Detected	
Brick 01-02				Brick	No Asbestos Detected	Former Gas Booster Building
Brick 02-02				Brick	No Asbestos Detected	
Brick 03-02				Brick	No Asbestos Detected	
Grout 01-02				Grout	No Asbestos Detected	
Grout 02-02				Grout	No Asbestos Detected	
Grout 03-02				Grout	No Asbestos Detected	
Concrete 01-02				Concrete	No Asbestos Detected	
Concrete 02-02				Concrete	No Asbestos Detected	
Concrete 03-02				Concrete	No Asbestos Detected	
Brick 01-03				Brick	No Asbestos Detected	Former Stacks
Brick 02-03				Brick	No Asbestos Detected	
Brick 03-03				Brick	No Asbestos Detected	
Grout 01-03				Grout	No Asbestos Detected	
Grout 02-03				Grout	No Asbestos Detected	
Grout 03-03				Grout	No Asbestos Detected	
Concrete 01-01-04				Concrete	No Asbestos Detected	Former By-Products Building
Concrete 02-01-04				Concrete	No Asbestos Detected	
Concrete 03-01-04				Concrete	No Asbestos Detected	
Concrete 01-02-04				Concrete	No Asbestos Detected	
Concrete 02-02-04				Concrete	No Asbestos Detected	
Concrete 03-02-04				Concrete	No Asbestos Detected	
Misc-1-1	5/12/2017	5/22/2017	EMSL	White Gasket	60% Chrysotile	Former By-Products Building
Misc-1-2				White Gasket	60% Chrysotile	
Misc-1-3				White Gasket	60% Chrysotile	
Misc-2-1				Brown Gasket	40% Chrysotile	
Misc-2-2				Brown Gasket	40% Chrysotile	
Misc-2-3				Brown Gasket	40% Chrysotile	
Misc-3-1				Silver Gasket	60% Chrysotile	
Misc-4-1				Roofing Material	60% Chrysotile	
Misc-4-2				Roofing Material	60% Chrysotile	
Misc-4-3				Roofing Material	60% Chrysotile	
Misc-5-1				Blue Fibrous Material	No Asbestos Detected	
Misc-6-1				Black Fibrous Material	60% Chrysotile	
Misc-6-2				Black Fibrous Material	60% Chrysotile	
Misc-6-3				Black Fibrous Material	60% Chrysotile	
Misc-7-1				Gray Gasket	60% Chrysotile	
Misc-8-1				Green Siding	No Asbestos Detected	Throughout Site
Misc-8-2				Green Siding	No Asbestos Detected	
Misc-8-3				Green Siding	No Asbestos Detected	
Misc-9-1	5/15/2017	5/25/2017	EMSL	Green Siding	No Asbestos Detected	Throughout Site
Misc-9-2				Green Siding	No Asbestos Detected	
Misc-9-3				Green Siding	No Asbestos Detected	
Misc-10-1				White Siding	No Asbestos Detected	
Misc-10-2				White Siding	No Asbestos Detected	
Misc-10-3				White Siding	No Asbestos Detected	
Misc-11-1				Roofing Material	10% Chrysotile	Former By-Products Building
Misc-11-2				Roofing Material	10% Chrysotile	
Misc-11-3				Roofing Material	10% Chrysotile	
Misc-12-1	5/16/2017			Rope	70% Chrysotile	
Misc-13-1				Circular Friable Fibrous Debris	20% Chrysotile	Pile 1002
Misc-14-1				Roofing Material	20% Chrysotile	Former By-Products Building
Misc-15-1				Siding	No Asbestos Detected	Pile 1005
Misc-16-1				Transite	20% Chrysotile	
Misc-17-1				Transite	60% Chrysotile	
Misc-18-1				Shed Metal Cladding	60% Chrysotile	Former Metal Shed
Misc-18-2				Shed Metal Cladding	60% Chrysotile	
Misc-19-1				Hopper Siding	No Asbestos Detected	Hopper
Misc-19-2				Hopper Siding	No Asbestos Detected	
Misc-20-1				Material Under Hopper	No Asbestos Detected	
Misc-21-1	5/24/2017	5/31/2017	EMSL	Caulk	No Asbestos Detected	Former Gas Booster Building
Misc-22-1				Miscellaneous Siding Material	No Asbestos Detected	Throughout Site
Misc-23	6/9/2017	6/15/2017	EMSL	Fabric	No Asbestos Detected	Pile 52
Misc-24				Concrete	No Asbestos Detected	Metal Cylinder Near Pile 56
Misc-25				White Caulk	No Asbestos Detected	
Misc-26				Black Caulk	No Asbestos Detected	
Misc-27				Insulation	No Asbestos Detected	

Natural Resource Technology
AN OBG COMPANY

Table 1

ACM Testing Analytical Summary

Solvay Coke and Gas Plant Site

Sample ID	Date Collected	Date Analytical Results Received	Analytical Lab	Media	Results	Sample Location
1-1	6/22/2017	6/30/2017	EMSL	Mortar	No Asbestos Detected	Pile 1
1-2				Mortar	No Asbestos Detected	
1-3				Mortar	No Asbestos Detected	
1-4				Mortar	No Asbestos Detected	
1-5				Brick	No Asbestos Detected	
1-6				Brick	No Asbestos Detected	
1-7				Brick	No Asbestos Detected	
1-8				Miscellaneous Building Material	No Asbestos Detected	
1-9				Miscellaneous Building Material	No Asbestos Detected	
1-10				Miscellaneous Building Material	No Asbestos Detected	
1-11				Miscellaneous Building Material	No Asbestos Detected	
1-12				Miscellaneous Building Material	No Asbestos Detected	
1-13	6/29/2017	7/1/2017	EMSL	Friable White Powder	No Asbestos Detected	
1-14				Friable White Powder	No Asbestos Detected	
1-15		7/6/2017		Brick	No Asbestos Detected	
1-16				Mortar	No Asbestos Detected	
1-17				Brick	No Asbestos Detected	
1-18				Mortar	No Asbestos Detected	
1-19				Brick	No Asbestos Detected	
1-20				Brick	No Asbestos Detected	
1-21				Brick	No Asbestos Detected	
1-22				Mortar	No Asbestos Detected	
1-23				Mortar	No Asbestos Detected	
1-24				Brick	No Asbestos Detected	
1-25				Mortar	No Asbestos Detected	
2-1-Brick	5/26/2017	6/1/2017	EMSL	Brick	No Asbestos Detected	Pile 2
2-1-Concrete				Concrete	No Asbestos Detected	
2-2-Brick				Brick	No Asbestos Detected	
2-2-Concrete				Concrete	No Asbestos Detected	
2-3				Concrete	No Asbestos Detected	
2-4				Concrete	No Asbestos Detected	
2-5				Concrete	No Asbestos Detected	
2-6				Concrete	No Asbestos Detected	
2-7				Concrete	No Asbestos Detected	
4-1				Concrete	No Asbestos Detected	Pile 4
4-2				Concrete	No Asbestos Detected	
5-1-Brick				Brick	No Asbestos Detected	Pile 5
5-1-Concrete				Concrete	No Asbestos Detected	
5-2				Concrete	No Asbestos Detected	
5-3				Concrete	No Asbestos Detected	
5-4				Concrete	No Asbestos Detected	
5-5				Concrete	No Asbestos Detected	
5-6				Concrete	No Asbestos Detected	
8-1				Concrete	No Asbestos Detected	Pile 8
8-2				Concrete	No Asbestos Detected	
9-1	5/25/2017	5/31/2017	EMSL	Concrete	No Asbestos Detected	Pile 9
9-2				Concrete	No Asbestos Detected	
9-3				Concrete	No Asbestos Detected	
9-4				Concrete	No Asbestos Detected	
9-5				Concrete	No Asbestos Detected	
9-6				Concrete	No Asbestos Detected	
9-7				Concrete	No Asbestos Detected	
9-8				Concrete	No Asbestos Detected	
9-9				Concrete	No Asbestos Detected	
12-1-Brick	5/26/2017	6/1/2017	EMSL	Brick	No Asbestos Detected	Pile 12
12-1-Concrete				Concrete	No Asbestos Detected	
12-2				Concrete	No Asbestos Detected	
12-3-Concrete				Concrete	No Asbestos Detected	
12-3-Adhesive				Adhesive	No Asbestos Detected	
12-4				Concrete	No Asbestos Detected	
13-1-Brick	5/24/2017	5/31/2017	EMSL	Brick	No Asbestos Detected	Pile 13
13-1-Mortar				Mortar	No Asbestos Detected	
13-2-Brick				Brick	No Asbestos Detected	
13-2-Concrete				Concrete	No Asbestos Detected	
13-3				Concrete	No Asbestos Detected	
13-4				Concrete	No Asbestos Detected	
13-5				Concrete	No Asbestos Detected	
13-6				Concrete	No Asbestos Detected	
13-7				Concrete	No Asbestos Detected	
16-1				Brick	No Asbestos Detected	Pile 16
16-2				Concrete	No Asbestos Detected	
16-3				Concrete	No Asbestos Detected	
16-4				Concrete	No Asbestos Detected	
16-5				Concrete	No Asbestos Detected	
16-6				Concrete	No Asbestos Detected	
16-7				Concrete	No Asbestos Detected	
16-8				Concrete	No Asbestos Detected	
16-9				Concrete	No Asbestos Detected	
19-1				Concrete	No Asbestos Detected	Pile 19
19-2				Concrete	No Asbestos Detected	
19-3				Concrete	No Asbestos Detected	
19-4				Concrete	No Asbestos Detected	
19-5				Concrete	No Asbestos Detected	
27-1	5/23/2017	5/30/2017	EMSL	Concrete	No Asbestos Detected	Pile 27
27-2				Concrete	No Asbestos Detected	
27-3				Concrete	No Asbestos Detected	
27-4				Concrete	No Asbestos Detected	
28-1				Concrete	No Asbestos Detected	Pile 28
28-2				Concrete	No Asbestos Detected	
29-1				Concrete	No Asbestos Detected	Pile 29
29-2				Concrete	No Asbestos Detected	
29-3				Concrete	No Asbestos Detected	
29-4				Concrete	No Asbestos Detected	
29-5	6/20/2017	6/26/2017	EMSL	Friable Black Roofing Material	No Asbestos Detected	

Table 1
ACM Testing Analytical Summary
Solvay Coke and Gas Plant Site

Sample ID	Date Collected	Date Analytical Results Received	Analytical Lab	Media	Results	Sample Location
34-1	5/23/2017	5/30/2017	EMSL	Concrete	No Asbestos Detected	Pile 34
34-2				Concrete	No Asbestos Detected	
34-3				Concrete	No Asbestos Detected	
35-1-Concrete				Concrete	No Asbestos Detected	Pile 35
35-1-Mortar				Mortar	No Asbestos Detected	
35-2				Concrete	No Asbestos Detected	
36-1				Concrete	No Asbestos Detected	Pile 36
36-2				Concrete	No Asbestos Detected	
38-1				Concrete	No Asbestos Detected	Pile 38
38-2				Concrete	No Asbestos Detected	
38-3				Concrete	No Asbestos Detected	
38-4				Concrete	No Asbestos Detected	
38-5				Concrete	No Asbestos Detected	
38-6				Concrete	No Asbestos Detected	
40-1				Concrete	No Asbestos Detected	Pile 40
40-2				Concrete	No Asbestos Detected	
42-1	5/26/2017	6/1/2017	EMSL	Concrete	No Asbestos Detected	Pile 42
42-2				Concrete	No Asbestos Detected	
42-3				Concrete	No Asbestos Detected	
42-4				Concrete	No Asbestos Detected	
44-1				Concrete	No Asbestos Detected	Pile 44
44-2				Concrete	No Asbestos Detected	
44-3				Concrete	No Asbestos Detected	
46-1-Brick	5/25/2017	5/31/2017	EMSL	Brick	No Asbestos Detected	Pile 46
46-1-Concrete				Concrete	No Asbestos Detected	
46-2				Concrete	No Asbestos Detected	
46-3				Concrete	No Asbestos Detected	
47-1				Concrete	No Asbestos Detected	Pile 47
47-2				Concrete	No Asbestos Detected	
47-3				Concrete	No Asbestos Detected	
48-1	5/26/2017	6/1/2017	EMSL	Concrete	No Asbestos Detected	Pile 48
48-2				Concrete	No Asbestos Detected	
48-3				Concrete	No Asbestos Detected	
49-1				Concrete	No Asbestos Detected	Pile 49
49-2				Concrete	No Asbestos Detected	
49-3				Concrete	No Asbestos Detected	
49-4				Concrete	No Asbestos Detected	
56-1	5/23/2017	5/30/2017	EMSL	Concrete	No Asbestos Detected	Pile 56
56-2				Concrete	No Asbestos Detected	
56-3				Concrete	No Asbestos Detected	
56-4				Concrete	No Asbestos Detected	
59-1	6/22/2017	6/30/2017	EMSL	Roofing Material	60% Chrysotile	Pile 59
59-2				Roofing Material	60% Chrysotile	
62-1	5/24/2017	5/31/2017	EMSL	Concrete	No Asbestos Detected	Pile 62
62-2				Concrete	No Asbestos Detected	
62-3	5/31/2017	6/5/2017	EMSL	Black Coating on Concrete	No Asbestos Detected	
62-4				Black Coating on Concrete	No Asbestos Detected	
62-5	6/6/2017	6/8/2017	EMSL	Metal Cable Covering	No Asbestos Detected	
62-6				Black Coating on Concrete	No Asbestos Detected	
63-1	5/23/2017	5/30/2017	EMSL	Concrete	No Asbestos Detected	Pile 63
63-2				Concrete	No Asbestos Detected	
63-3				Concrete	No Asbestos Detected	
1-1-02	6/7/2017	6/8/2017	EMSL	Caulk on Sheet Metal	5% Chrysotile	Former Gas Booster Building
1-2-02				Caulk on Sheet Metal	7% Chrysotile	
1-3-02				Caulk on Sheet Metal	7% Chrysotile	
2-1-02				Black Coating on Sheet Metal	35% Chrysotile	
P1-1-Brick	5/25/2017	5/26/2017 - 5/30/2017	EMSL	Brick	No Asbestos Detected	Pile 1001
P1-1-Adhesive				Adhesive	No Asbestos Detected	
P1-2				Roofing Material	No Asbestos Detected	
P1-3				Roofing Material	No Asbestos Detected	
P1-4				Roofing Material	No Asbestos Detected	
P1-5				Roofing Material	10% Chrysotile	
P1-6				Roofing Material	15% Chrysotile	
P1-7				Roofing Material	No Asbestos Detected	
P1-8				Roofing Material	No Asbestos Detected	
P1-9				Roofing Material	15% Chrysotile	
P1-10				Roofing Material	No Asbestos Detected	
P1-11				Roofing Material	No Asbestos Detected	
P1-12				Roofing Material	30% Chrysotile	
P1-13				Roofing Material	30% Chrysotile	
P1-14				Roofing Material	No Asbestos Detected	
P1-15				Roofing Material	No Asbestos Detected	
P1-16				Roofing Material	30% Chrysotile	
P1-17				Roofing Material	No Asbestos Detected	
P1-18				Roofing Material	No Asbestos Detected	
P1-19				Roofing Material	No Asbestos Detected	
P1-20				Roofing Material	5% Chrysotile	
P1-21				Roofing Material	40% Chrysotile	

Table 1

ACM Testing Analytical Summary

Solvay Coke and Gas Plant Site

Sample ID	Date Collected	Date Analytical Results Received	Analytical Lab	Media	Results	Sample Location
P2-1-Brick	5/25/2017	5/26/2017 - 5/30/2017	EMSL	Brick	No Asbestos Detected	Pile 1002
P2-1-Adhesive				Adhesive	No Asbestos Detected	
P2-2-Brick				Brick	No Asbestos Detected	
P2-2-Adhesive				Adhesive	No Asbestos Detected	
P2-3				Roofing Material	5% Chrysotile	
P2-4				Roofing Material	2% Chrysotile	
P2-5				Roofing Material	No Asbestos Detected	
P2-6				Roofing Material	No Asbestos Detected	
P2-7				Roofing Material	No Asbestos Detected	
P2-8				Roofing Material	3% Chrysotile	
P2-9				Roofing Material	No Asbestos Detected	
P2-10				Roofing Material	4% Chrysotile	
P2-11				Roofing Material	No Asbestos Detected	
P2-12				Roofing Material	No Asbestos Detected	
P2-13				Roofing Material	No Asbestos Detected	
P2-14				Roofing Material	40% Chrysotile	
P2-15				Roofing Material	No Asbestos Detected	
P2-16				Roofing Material	No Asbestos Detected	
P2-17				Roofing Material	40% Chrysotile	
P2-18				Roofing Material	No Asbestos Detected	
P2-19				Roofing Material	40% Chrysotile	
P2-20				Roofing Material	No Asbestos Detected	
P2-21				Roofing Material	No Asbestos Detected	
P2-22				Roofing Material	No Asbestos Detected	
P2-23				Roofing Material	No Asbestos Detected	
P3-1-Brick	5/25/2017	5/26/2017 - 5/30/2017	EMSL	Brick	No Asbestos Detected	Pile 1002
P3-1-Concrete				Concrete	No Asbestos Detected	
P3-2-Brick				Brick	No Asbestos Detected	
P3-2-Adhesive				Adhesive	No Asbestos Detected	
P3-3				Roofing Material	No Asbestos Detected	
P3-4				Roofing Material	No Asbestos Detected	
P3-5				Roofing Material	No Asbestos Detected	
P3-6				Roofing Material	No Asbestos Detected	
P3-7				Roofing Material	No Asbestos Detected	
P3-8				Roofing Material	No Asbestos Detected	
P3-9				Roofing Material	No Asbestos Detected	
P4-1-Brick	5/26/2017	6/1/2017	EMSL	Brick	No Asbestos Detected	Pile 1003
P4-1-Concrete				Concrete	No Asbestos Detected	
P4-2-Brick				Brick	No Asbestos Detected	
P4-2-Concrete				Concrete	No Asbestos Detected	
P4-3-Brick				Brick	No Asbestos Detected	
P4-3-Concrete				Concrete	No Asbestos Detected	
P4-4-Concrete				Concrete	No Asbestos Detected	
P4-4-Tar Paper				Tar Paper	25% Chrysotile	
P4-5				Roofing Material	No Asbestos Detected	
P4-6				Roofing Material	No Asbestos Detected	
P4-7				Roofing Material	No Asbestos Detected	
P4-8				Roofing Material	No Asbestos Detected	
P4-9				Roofing Material	No Asbestos Detected	
P4-10				Roofing Material	No Asbestos Detected	
P4-11				Roofing Material	No Asbestos Detected	

Table 2

Non-ACM Analytical Summary

Solvay Coke and Gas Plant Site

Sample ID	Date Collected	Analytical Lab	Parameters Analyzed	Media	Sample Rationale
051617001	5/16/2017	Pace	DRO, VOC	Tar	Tar Tank Sampling - Waste Profiling
051617002	5/16/2017	Pace	VOC	N/A	Trip Blank
060217001	6/2/2017	Pace	DRO	Soil	North of Former By-Products Building - Waste Profiling
060217002	6/2/2017	Pace	DRO	Soil	South of Former Light Oil Tank House - Waste Profiling
060717001	6/7/2017	Pace	DRO	Soil	Composite of ACM removal areas - Waste Profiling
061217001	6/12/2017	Pace	VOC, PAH, Metal, PCB	Soil	Composite of northern portion of pile 16 - Assess reuse options
061217002	6/12/2017	Pace	VOC, PAH, Metal, PCB	Soil	Composite of central portion of pile 16 - Assess reuse options
061217003	6/12/2017	Pace	VOC, PAH, Metal, PCB	Soil	Composite of southern portion of pile 16 - Assess reuse options
061217004	6/12/2017	Pace	VOC	N/A	Trip blank
061417001	6/14/2017	Pace	GRO	Soil	Composite of ACM removal areas - Waste Profiling
061517001	6/15/2017	Pace	Sulfur, sulfide, sulfate, TCLP RCRA 11 metals	Coal	Composite of coal piles 31 and 32 - Waste Profiling
061517002	6/15/2017	Pace	Sulfur, sulfide, sulfate, TCLP RCRA 11 metals	Coal	Composite of coal piles 33 and 61 - Waste Profiling
061617001	6/16/2017	Pace	PCB	Concrete	Concrete composite of northern portion of pile 16 - Assess if concrete can be crushed
061617002	6/16/2017	Pace	PCB	Concrete	Concrete composite of northern portion of pile 16 - Assess if concrete can be crushed
061617003	6/16/2017	Pace	PCB	Concrete	Concrete composite of northern portion of pile 16 - Assess if concrete can be crushed
061617004	6/16/2017	Pace	VOC, DRO	Tar	Composite of tar pile near KK Ave in southern portion of site - Waste profiling
061617005	6/16/2017	Pace	VOC	N/A	Trip Blank
061617006	6/16/2017	Pace	TCLP Benzene	Tar	Composite of former tank in northern portion of site - Waste Profiling
062117001	6/21/2017	Pace	Cyanide	Bricks	Blue stained soil and bricks by former coke ovens (pile 1) - Hazard and disposal assessment
062117002	6/21/2017	Pace	VOC, PAH, RCRA Metals, PCB	Soil	Pile 59 composite - Assess reuse options
062117003	6/21/2017	Pace	VOC, PAH, RCRA Metals, PCB	Soil	Pile 15 composite - Assess reuse options
062117004	6/21/2017	Pace	VOC	N/A	Trip blank
062217001	6/22/2017	Pace	Cyanide	Soil	Blue stained soil and concrete by pile 3 - Assess hazards and disposal options
062917001	6/29/2017	Pace	VOCs, RCRA Metals	Water	Water from basement of pile 1001 - Assess disposal options
062917002	6/29/2017	Pace	VOCs	Water	Trip blank
062917003	6/29/2017	Pace	VOCs, PAHs, RCRA Metals, PCBs	Soil	Debris on floor of tunnels under pile 1 - Assess disposal options
062917004	6/29/2017	Pace	VOCs	N/A	Trip blank
071817001	7/18/2017	Pace	Total Cyanide	Concrete	Debris on floor of tunnels under pile 1 - Assess disposal options
071817002	7/18/2017	Pace	Total Cyanide	Concrete	Trip blank

Natural Resource Technology
AN OBG COMPANY

Appendix G1

Analytical Data Reports - Asbestos Containing Material

EMSL Analytical, Inc.

4140 Litt Drive Hillside, IL 60162

Tel/Fax: (773) 313-0099 / (773) 313-0139

http://www.EMSL.com / chicagolab@emsl.com

EMSL Order:	261703532
Customer ID:	NRTC78
Customer PO:	
Project ID:	

Attention:	Andrew Cawrse	**Phone:**	(414) 837-3607
	Natural Resource Technology, Inc.	**Fax:**	(414) 837-3608
	234 W. Florida Street	**Received Date:**	04/28/2017 12:00 PM
	5th Floor	**Analysis Date:**	05/04/2017
	Milwaukee, WI 53204	**Collected Date:**	
Project:	2133		

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
SAVAGE-01 *261703532-0001*	BRICK	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
SAVAGE-02 *261703532-0002*	BRICK	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
10-XG-01 *261703532-0003*	BRICK	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ACME DP-01 *261703532-0004*	BRICK	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ST LOUIS DP-01 *261703532-0005*	BRICK	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
NO2 SPLIT-01 *261703532-0006*	BRICK	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
STANDARD-01 *261703532-0007*	BRICK	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
BLANK-01 *261703532-0008*	BRICK	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
METAL BEAM-01 *261703532-0009*	CONCRETE	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
METAL BEAM-02 *261703532-0010*	CONCRETE	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
METAL BEAM-03 *261703532-0011*	CONCRETE	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
LUCLEDE KING-01 *261703532-0012*	BRICK	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
STERLING KING-01 *261703532-0013*	BRICK	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
PRM&M CO-01 *261703532-0014*	BRICK	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
FRANKLIN CROWN *261703532-0015*	FRANKLIN CROWN 01-BRICK	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
MEX R CO-01 *261703532-0016*	BRICK	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 05/04/2017 14:00:13

EMSL Analytical, Inc.
4140 Litt Drive Hillside, IL 60162
Tel/Fax: (773) 313-0099 / (773) 313-0139
http://www.EMSL.com / chicagolab@emsl.com

EMSL Order: 261703532
Customer ID: NRTC78
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
ACME 8X-01 *261703532-0017*	BRICK	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ST LOUIS LARGE *261703532-0018*	ST LOUIS LARGE 01- BRICK	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
WALSH-01 *261703532-0019*	BRICK	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
WEDGE-01 *261703532-0020*	BRICK	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
CONCRETE-01-01 *261703532-0021*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
CONCRETE-02-01 *261703532-0022*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
CONCRETE-03-01 *261703532-0023*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
BLOCK-01-01 *261703532-0024*	CONCRETE BLOCK	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
BLOCK-02-01 *261703532-0025*	CONCRETE BLOCK	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
BLOCK 03-01 *261703532-0026*	CONCRETE BLOCK	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
BLANK-02 *261703532-0027*	BRICK	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
BLANK-03 *261703532-0028*	BRICK	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
BRICK 01-02 *261703532-0029*	BRICK	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
BRICK 02-02 *261703532-0030*	BRICK	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
BRICK 03-02 *261703532-0031*	BRICK	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
GROUT 01-02 *261703532-0032*	GROUT	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
GROUT 02-02 *261703532-0033*	GROUT	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
GROUT 03-02 *261703532-0034*	GROUT	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
CONCRETE 01-02 *261703532-0035*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 05/04/2017 14:00:13

EMSL Analytical, Inc.
4140 Litt Drive Hillside, IL 60162
Tel/Fax: (773) 313-0099 / (773) 313-0139
http://www.EMSL.com / chicagolab@emsl.com

EMSL Order: 261703532
Customer ID: NRTC78
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
CONCRETE 02-02 *261703532-0036*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
CONCRETE 03-02 *261703532-0037*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
BRICK 01-03 *261703532-0038* *Bag labeled as Block01-03*	BRICK	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
BRICK 02-03 *261703532-0039* *Bag labeled as Block02-03*	BRICK	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
BRICK 03-03 *261703532-0040* *Bag labeled as Block03-03*	BRICK	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
GROUT 01-03 *261703532-0041*	GROUT	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
GROUT 02-03 *261703532-0042*	GROUT	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
GROUT 03-03 *261703532-0043*	GROUT	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
CONCRETE 01-01 *261703532-0044*	CONCRETE 01-01-04 CONCRETE	Gray/Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
CONCRETE 02-01 *261703532-0045*	CONCRETE 02-01-04 CONCRETE	Gray/Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
CONCRETE 03-01 *261703532-0046*	CONCRETE 03-01-04 CONCRETE	Gray/Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
CONCRETE 01-02 *261703532-0047*	CONCRETE 01-02-04 CONCRETE	Various Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
CONCRETE 02-02 *261703532-0048*	CONCRETE 02-02-04 CONCRETE	Various Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
CONCRETE 03-02 *261703532-0049*	CONCRETE 03-02-04 CONCRETE	Various Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 05/04/2017 14:00:13

EMSL Analytical, Inc.
4140 Litt Drive Hillside, IL 60162
Tel/Fax: (773) 313-0099 / (773) 313-0139
http://www.EMSL.com / chicagolab@emsl.com

EMSL Order:	261703532
Customer ID:	NRTC78
Customer PO:	
Project ID:	

Analyst(s)
Brian Jolly (49)

James Hahn, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Hillside, IL NVLAP Lab Code 200399-0

Initial report from: 05/04/2017 14:00:13

OrderID: 261703532

EMSL Analytical, Inc
4140 Litt Drive

Hillside, IL 60162
PHONE: (773) 313-0099
FAX: (773) 313-0139

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 261703532

Company Name : Natural Resource Technology		**EMSL Customer ID:**	
Street: 234 West Florida Street, 5th Floor		**City:** Milwaukee	**State/Province:** WI
Zip/Postal Code: 53204	**Country:** US	**Telephone #:** 414-837-3645	**Fax #:**
Report To (Name): Andrew Cawrse		**Please Provide Results:** ☐ Fax ☑ Email	
Email Address: andrew.cawrse@obg.com		**Purchase Order:**	
Project Name/Number: 2133		**EMSL Project ID** *(Internal Use Only)*:	
U.S. State Samples Taken: WI		**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt	

EMSL-Bill to: ☐ Same ☑ Different - If Bill to is Different note instructions in Comments**
Third Party Billing requires written authorization from third party

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☒ 96 Hour ☐ 1 Week ☐ 2 Week

*For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.

PCM - Air ☐ Check if samples are from NY
☐ NIOSH 7400
☐ w/ OSHA 8hr TWA

PLM - Bulk (reporting limit)
☑ PLM EPA 600/R-93/116 (<1%)
☐ PLM EPA NOB (<1%)
Point Count
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
Point Count w/Gravimetric
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
☐ NYS 198 1 (friable in NY)
☐ NYS 198.6 NOB (non-friable-NY)
☐ NYS 198.8 SOF-V
☐ NIOSH 9002 (<1%)

TEM – Air ☐ 4-4.5hr TAT (AHERA only)
☐ AHERA 40 CFR, Part 763
☐ NIOSH 7402
☐ EPA Level II
☐ ISO 10312

TEM - Bulk
☐ TEM EPA NOB
☐ NYS NOB 198.4 (non-friable-NY)
☐ Chatfield SOP
☐ TEM Mass Analysis-EPA 600 sec. 2 5

TEM – Water: EPA 100.2
Fibers >10µm ☐ Waste ☐ Drinking
All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
☐ Microvac - ASTM D 5755
☐ Wipe - ASTM D6480
☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
☐ PLM EPA 600/R-93/116 with milling prep (<1%)
☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
☐ TEM EPA 600/R-93/116 with milling prep (<0 1%)
☐ TEM Qualitative via Filtration Prep
☐ TEM Qualitative via Drop Mount Prep
☐ Cincinnati Method EPA 600/R-04/004 – PLM/TEM (BC only)

Other:
☐

☐ **Check For Positive Stop – Clearly Identify Homogenous Group**

Filter Pore Size (Air Samples): ☐ 0.8µm ☐ 0.45µm

Samplers Name: Andrew Cawrse **Samplers Signature:** Andrew C

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
Savage-01	Brick		4/27/17
Savage-02	Brick		
10-XG-01	Brick		
Acme DP-01	Brick		
St Louis DP-01	Brick		

Client Sample # (s): - **Total # of Samples:**

Relinquished (Client): Andrew C **Date:** 4/27/17 **Time:** 16:00

Received (Lab): [signature] **Date:** 42817 **Time:** 1200

Comments/Special Instructions:
BillTo: Natural Resource Technology, 234 West Florida Street, 5th Floor, Milwaukee, WI, 53204, US
Attention: Andrew Cawrse Phone: 262-719-4508 Email: andrew.cawrse@obg.com Purchase Order:
FX Grnd

Controlled Document – Asbestos COC – R10 – 05/09/2016

19

EMSL Analytical, Inc
4140 Litt Drive

Hillside, IL 60162
PHONE: (773) 313-0099
FAX: (773) 313-0139

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 3532

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
No2 Split-01	Brick		4/27/17
Standard-01	Brick		
Blank-01	Brick		
Metal Beam-01	Concrete		
Metal Beam-02	Concrete		
Metal Beam-03	Concrete		
Luclede King-01	Brick		
Sterling King-01	Brick		
PRM&M Co-01	Brick		
Franklin Crown-01	Franklin Crown-01- Brick		
Mex R Co-01	Brick		
Acme 8X-01	Brick		
St Louis Large-01	St Louis Large-01- Brick		
Walsh-01	Brick		
Wedge-01	Brick		
Concrete-01-01	Concrete		
Concrete-02-01	Concrete		
Concrete-03-01	Concrete		
Block-01-01	Concrete Block		
Block-02-01	Concrete Block		
Block-03-01	Concrete Block		
Blank-02	Brick		
Blank-03	Brick		

***Comments/Special Instructions:**

BillTo: Natural Resource Technology, 234 West Florida Street, 5th Floor, Milwaukee, WI, 53204, US
Attention: Andrew Cawrse Phone: 262-719-4508 Email: andrew.cawrse@obg.com Purchase Order:

Page 2 of 3 pages

OrderID: 261703532

EMSL Analytical, Inc
4140 Litt Drive

Hillside, IL 60162
PHONE: (773) 313-0099
FAX: (773) 313-0139

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 3532

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
Brick-01-02	Brick		4/27/17
Brick-02-02	Brick		
Brick-03-02	Brick		
Grout-01-02	Grout		
Grout-02-02	Grout		
Grout-03-02	Grout		
Concrete-01-02	Concrete		
Concrete-02-02	Concrete		
Concrete-03-02	Concrete		
Brick-01-03	Brick		
Brick-02-03	Brick		
Brick-03-03	Brick		
Grout-01-03	Grout		
Grout-02-03	Grout		
Grout-03-03	Grout		
Concrete-01-01	Concrete-01-01-04- Concrete		
Concrete-02-01	Concrete-02-01-04- Concrete		
Concrete-03-01	Concrete-03-01-04- Concrete		
Concrete-01-02	Concrete-01-02-04- Concrete		
Concrete-02-02	Concrete-02-02-04- Concrete		
Concrete-03-02	Concrete-03-02-04- Concrete		

***Comments/Special Instructions:**

BillTo: Natural Resource Technology, 234 West Florida Street, 5th Floor, Milwaukee, WI, 53204, US
Attention: Andrew Cawrse Phone: 262-719-4508 Email: andrew.cawrse@obg.com Purchase Order:

Page 3 of 3 pages

EMSL Analytical, Inc.

4140 Litt Drive Hillside, IL 60162

Tel/Fax: (773) 313-0099 / (773) 313-0139

http://www.EMSL.com / chicagolab@emsl.com

EMSL Order:	261704119
Customer ID:	NRTC78
Customer PO:	
Project ID:	

Attention:	Andrew Cawrse	**Phone:**	(414) 837-3607
	Natural Resource Technology, Inc.	**Fax:**	(414) 837-3608
	234 W. Florida Street	**Received Date:**	05/16/2017 12:12 PM
	5th Floor	**Analysis Date:**	05/22/2017
	Milwaukee, WI 53204	**Collected Date:**	
Project:	2133/2.0		

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
MISC-1-1 *261704119-0001*	WHITE GASKET	Gray Fibrous Homogeneous		40% Non-fibrous (Other)	60% Chrysotile
MISC-1-2 *261704119-0002*	WHITE GASKET				Positive Stop (Not Analyzed)
MISC-1-3 *261704119-0003*	WHITE GASKET				Positive Stop (Not Analyzed)
MISC-2-1 *261704119-0004*	BROKEN GASKET	Gray/Black Fibrous Homogeneous		60% Non-fibrous (Other)	40% Chrysotile
MISC-2-2 *261704119-0005*	BROKEN GASKET				Positive Stop (Not Analyzed)
MISC-2-3 *261704119-0006*	BROKEN GASKET				Positive Stop (Not Analyzed)
MISC-3-1 *261704119-0007*	SILVER GASKET	Gray Non-Fibrous Homogeneous		40% Non-fibrous (Other)	60% Chrysotile
MISC-4-1 *261704119-0008*	ROOFING MATERIAL	Gray Non-Fibrous Homogeneous		40% Non-fibrous (Other)	60% Chrysotile
MISC-4-2 *261704119-0009*	ROOFING MATERIAL				Positive Stop (Not Analyzed)
MISC-4-3 *261704119-0010*	ROOFING MATERIAL				Positive Stop (Not Analyzed)
MISC-5-1 *261704119-0011*	BLUE MATERIAL	Blue Non-Fibrous Homogeneous	60% Glass	40% Non-fibrous (Other)	None Detected
MISC-6-1 *261704119-0012*	GRAY SIDING	Black Non-Fibrous Homogeneous		40% Non-fibrous (Other)	60% Chrysotile
MISC-6-2 *261704119-0013*	GRAY SIDING				Positive Stop (Not Analyzed)
MISC-6-3 *261704119-0014*	GRAY SIDING				Positive Stop (Not Analyzed)
MISC-7-1 *261704119-0015*	GRAY GASKET	Gray Non-Fibrous Homogeneous		40% Non-fibrous (Other)	60% Chrysotile
MISC-8-1 *261704119-0016*	GREEN SIDING	Green Fibrous Homogeneous	80% Glass	20% Non-fibrous (Other)	None Detected

Initial report from: 05/22/2017 13:22:14

EMSL Analytical, Inc.
4140 Litt Drive Hillside, IL 60162
Tel/Fax: (773) 313-0099 / (773) 313-0139
http://www.EMSL.com / chicagolab@emsl.com

EMSL Order:	261704119
Customer ID:	NRTC78
Customer PO:	
Project ID:	

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
MISC-8-2 *261704119-0017*	GREEN SIDING	Green Non-Fibrous Homogeneous	80% Glass	20% Non-fibrous (Other)	None Detected
MISC-8-3 *261704119-0018*	GREEN SIDING	Green Non-Fibrous Homogeneous	80% Glass	20% Non-fibrous (Other)	None Detected

Analyst(s)
Brian Jolly (10)

James Hahn, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Hillside, IL NVLAP Lab Code 200399-0

Initial report from: 05/22/2017 13:22:14

OrderID: 261704119

EMSL Analytical, Inc
4140 Litt Drive

Hillside, IL 60162
PHONE: (773) 313-0099
FAX: (773) 313-0139

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 261704119

Company Name : Natural Resource Technology		**EMSL Customer ID:**	
Street: 234 West Florida Street, 5th Floor		**City:** Milwaukee	**State/Province:** WI
Zip/Postal Code: 53204	**Country:** US	**Telephone #:** 414-837-3645	**Fax #:**
Report To (Name): Andrew Cawrse		**Please Provide Results:** ☐ Fax ☑ Email	
Email Address: andrew.cawrse@obg com		**Purchase Order:**	
Project Name/Number: 2133/2 0		**EMSL Project ID** *(Internal Use Only)*:	
U.S. State Samples Taken: WI		**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt	

EMSL-Bill to: ☑ Same ☐ Different - If Bill to is Different note instructions in Comments**
Third Party Billing requires written authorization from third party

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☑ 96 Hour ☐ 1 Week ☐ 2 Week

**For TEM Air 3 hr through 6 hr, please call ahead to schedule.*There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.*

PCM - Air ☐ Check if samples are from NY
☐ NIOSH 7400
☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
☑ PLM EPA 600/R-93/116 (<1%)
☐ PLM EPA NOB (<1%)
Point Count
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
Point Count w/Gravimetric
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
☐ NYS 198.1 (friable in NY)
☐ NYS 198.6 NOB (non-friable-NY)
☐ NYS 198.8 SOF-V
☐ NIOSH 9002 (<1%)

TEM – Air ☐ 4-4.5hr TAT (AHERA only)
☐ AHERA 40 CFR, Part 763
☐ NIOSH 7402
☐ EPA Level II
☐ ISO 10312

TEM - Bulk
☐ TEM EPA NOB
☐ NYS NOB 198 4 (non-friable-NY)
☐ Chatfield SOP
☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
Fibers >10µm ☐ Waste ☐ Drinking
All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
☐ Microvac - ASTM D 5755
☐ Wipe - ASTM D6480
☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
☐ PLM EPA 600/R-93/116 with milling prep (<1%)
☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)
☐ TEM Qualitative via Filtration Prep
☐ TEM Qualitative via Drop Mount Prep
☐ Cincinnati Method EPA 600/R-04/004 – PLM/TEM (BC only)

Other:
☐

☑ **Check For Positive Stop – Clearly Identify Homogenous Group** | **Filter Pore Size (Air Samples):** ☑ 0.8µm ☐ 0.45µm

Samplers Name: Andrew Cawrse | **Samplers Signature:**

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
MISC-1-1-3	White Gasket		5/12/17
misc-2-1-3	Brown Gasket		"
misc-3-1	Silver Gasket		"
misc-4-1-3	Roofing material		"
misc-5-1	Blue material		"

Client Sample # (s): | **Total # of Samples:**

Relinquished (Client): [signature] **Date:** 5/12/17 **Time:** 16:00

Received (Lab): [signature] **Date:** 5/16/17 **Time:** 12:12

Comments/Special Instructions: FX

Page 1 of ____ pages

Controlled Document – Asbestos COC – R10 – 05/09/2016

OrderID: 261704119

EMSL Analytical, Inc.
4140 Litt Drive

Hillside, IL 60162
PHONE: (773) 313-0099
FAX: (773) 313-0139

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 419

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
misc-6-1-3	Gray siding		5/12/17
misc-7-1	Gray gasket		↓
misc-8-1-3	Green siding		↓

***Comments/Special Instructions:**

Page _____ of _____ pages

Page 1 of 2

FROM: (414) 837-3607
Jenni Plamann
Natural Resource Technology, Inc
234 W Florida St
5th Floor
Milwaukee WI 53204
US

SHIP DATE: 12MAY17
ACTWGT: 1.00 LB
CAD. 8449231/INET3850

BILL SENDER

TO Sample Receiving
EMSL Analytical
4140 Litt Drive

HILLSIDE IL 60162 (US)
(773) 313-0099 REF:
INV:
PO: DEPT:

546J1/8734/53C1

FedEx Ground

G

J171117021401uv

TRK# 7791 3221 3393

60162

9622 0019 0 (000 000 0000) 0 00 7791 3221 3393

EMSL Analytical, Inc.

4140 Litt Drive Hillside, IL 60162

Tel/Fax: (773) 313-0099 / (773) 313-0139

http://www.EMSL.com / chicagolab@emsl.com

EMSL Order:	261704292
Customer ID:	NRTC78
Customer PO:	
Project ID:	

Attention:	Andrew Cawrse	**Phone:**	(414) 837-3607
	Natural Resource Technology, Inc.	**Fax:**	(414) 837-3608
	234 W. Florida Street	**Received Date:**	05/19/2017 12:38 PM
	5th Floor	**Analysis Date:**	05/25/2017
	Milwaukee, WI 53204	**Collected Date:**	
Project:	2133/2.0		

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
MISC-9 1 *261704292-0001*	GREEN SIDING	Green Fibrous Homogeneous	80% Glass	20% Non-fibrous (Other)	None Detected
MISC-9 2 *261704292-0002*	GREEN SIDING	Green Fibrous Homogeneous	80% Glass	20% Non-fibrous (Other)	None Detected
MISC-9 3 *261704292-0003*	GREEN SIDING	Green Fibrous Homogeneous	80% Glass	20% Non-fibrous (Other)	None Detected
MISC-10 1 *261704292-0004*	WHITE SIDING	Tan Fibrous Homogeneous	80% Glass	20% Non-fibrous (Other)	None Detected
MISC-10 2 *261704292-0005*	WHITE SIDING	Tan Fibrous Homogeneous	80% Glass	20% Non-fibrous (Other)	None Detected
MISC-10 3 *261704292-0006*	WHITE SIDING	Tan Fibrous Homogeneous	80% Glass	20% Non-fibrous (Other)	None Detected
MISC-11 1 *261704292-0007*	ROOFING MATERIAL	Black Fibrous Homogeneous	40% Cellulose	50% Non-fibrous (Other)	10% Chrysotile
MISC-11 2 *261704292-0008*	ROOFING MATERIAL				Positive Stop (Not Analyzed)
MISC-11 3 *261704292-0009*	ROOFING MATERIAL				Positive Stop (Not Analyzed)
MISC-12-1 *261704292-0010*	ROPE	Gray Fibrous Homogeneous		30% Non-fibrous (Other)	70% Chrysotile
MISC-13-1 *261704292-0011*	CIRCULAR FIBROUS DEBRIS	Gray Non-Fibrous Homogeneous		80% Non-fibrous (Other)	20% Chrysotile
MISC-14-1 *261704292-0012*	ROOFING MATERIAL	Black Fibrous Homogeneous	20% Cellulose	60% Non-fibrous (Other)	20% Chrysotile
MISC-15-1 *261704292-0013*	SIDING	White Fibrous Homogeneous	40% Glass	60% Non-fibrous (Other)	None Detected
MISC-16-1 *261704292-0014*	TRANSITE 1	Gray Non-Fibrous Homogeneous		80% Non-fibrous (Other)	20% Chrysotile
MISC-17-1 *261704292-0015*	TRANSITE 2	Gray Fibrous Homogeneous		40% Non-fibrous (Other)	60% Chrysotile
MISC-18-1 *261704292-0016*	SHED METAL CLADDING	Gray Fibrous Homogeneous		40% Non-fibrous (Other)	60% Chrysotile

Initial report from: 05/25/2017 14:50:23

EMSL Analytical, Inc.
4140 Litt Drive Hillside, IL 60162
Tel/Fax: (773) 313-0099 / (773) 313-0139
http://www.EMSL.com / chicagolab@emsl.com

EMSL Order:	261704292
Customer ID:	NRTC78
Customer PO:	
Project ID:	

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
MISC-18-2 *261704292-0017*	SHED METAL CLADDING				Positive Stop (Not Analyzed)
MISC-19-1 *261704292-0018*	HOPPER SIDING	Gray Fibrous Homogeneous	80% Glass	20% Non-fibrous (Other)	None Detected
MISC-19-2 *261704292-0019*	HOPPER SIDING	Gray Fibrous Homogeneous	80% Glass	20% Non-fibrous (Other)	None Detected
MISC-20-1 *261704292-0020*	MISC MATERIAL UNDER HOPPER	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Analyst(s)
Christine Stouffer (17)

James Hahn, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Hillside, IL NVLAP Lab Code 200399-0

Initial report from: 05/25/2017 14:50:23

OrderID: 261704292

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 261704292

4140 Litt Drive

Hillside, IL 60162

PHONE: (773) 313-0099
FAX: (773) 313-0139

Company Name : Natural Resource Technology		**EMSL Customer ID:**	
Street: 234 West Florida Street, 5th Floor		**City:** Milwaukee	**State/Province:** WI
Zip/Postal Code: 53204	**Country:** US	**Telephone #:** 414-837-3645	**Fax #:**
Report To (Name): Andrew Cawrse		**Please Provide Results:** ☐ Fax ☑ Email	
Email Address: andrew.cawrse@obg.com		**Purchase Order:**	
Project Name/Number: 2133/2 0		**EMSL Project ID** *(Internal Use Only)*:	
U.S. State Samples Taken: WI		**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt	

EMSL-Bill to: ☑ Same ☐ Different - If Bill to is Different note instructions in Comments**

Third Party Billing requires written authorization from third party

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour	☐ 6 Hour	☐ 24 Hour	☐ 48 Hour	☐ 72 Hour	☑ 96 Hour	☐ 1 Week	☐ 2 Week

**For TEM Air 3 hr through 6 hr, please call ahead to schedule.*There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.*

PCM - Air ☐ Check if samples are from NY
- ☐ NIOSH 7400
- ☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
- ☑ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)

Point Count
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)

Point Count w/Gravimetric
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
- ☐ NYS 198.1 (friable in NY)
- ☐ NYS 198.6 NOB (non-friable-NY)
- ☐ NYS 198.8 SOF-V
- ☐ NIOSH 9002 (<1%)

TEM – Air ☐ 4-4.5hr TAT (AHERA only)
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312

TEM - Bulk
- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (non-friable-NY)
- ☐ Chatfield SOP
- ☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
- Fibers >10µm ☐ Waste ☐ Drinking
- All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
- ☐ Microvac - ASTM D 5755
- ☐ Wipe - ASTM D6480
- ☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
- ☐ PLM EPA 600/R-93/116 with milling prep (<1%)
- ☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
- ☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)
- ☐ TEM Qualitative via Filtration Prep
- ☐ TEM Qualitative via Drop Mount Prep
- ☐ Cincinnati Method EPA 600/R-04/004 – PLM/TEM (BC only)

Other:
- ☐

☑ **Check For Positive Stop – Clearly Identify Homogenous Group**

Filter Pore Size (Air Samples): ☑ 0.8µm ☐ 0.45µm

Samplers Name: Andrew Cawrse **Samplers Signature:** [signature]

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
Misc-9-1,2,3	Green siding		5/15/17
Misc-10-1,2,3	White siding		↓
Misc-11-1,2,3	Roofing material		↓
Misc-12-1	Rope		5/16/17
Misc-13-1	Circular fibrous debris		↓

Client Sample # (s): [illegible] - **Total # of Samples:**

Relinquished (Client): [signature] **Date:** 5/17/17 **Time:** 12:00

Received (Lab): PT **Date:** 5/19/17 **Time:** 12 38pm

Comments/Special Instructions: EFX

Controlled Document – Asbestos COC – R10 – 05/09/2016

OrderID: 261704292

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 4292

4140 Litt Drive

Hillside, IL 60162
PHONE: (773) 313-0099
FAX: (773) 313-0139

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
Misc-14-1	Roofing material		5/16/17
Misc-15-1	Siding		
Misc-16-1	Transite1		
Misc-17-1	Transite2		
Misc-18-1,2	Shed metal cladding		
Misc-19-1,2	Hopper siding		
Misc-20-1	Misc material under hopper		

*Comments/Special Instructions:

EMSL Analytical, Inc.

4140 Litt Drive Hillside, IL 60162

Tel/Fax: (773) 313-0099 / (773) 313-0139

http://www.EMSL.com / chicagolab@emsl.com

EMSL Order:	261704355
Customer ID:	NRTC78
Customer PO:	
Project ID:	

Attention:	Andrew Cawrse	**Phone:**	(414) 837-3607
	Natural Resource Technology, Inc.	**Fax:**	(414) 837-3608
	234 W. Florida Street	**Received Date:**	05/24/2017 9:22 AM
	5th Floor	**Analysis Date:**	05/30/2017
	Milwaukee, WI 53204	**Collected Date:**	
Project:	2133		

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
27-1 *261704355-0001*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
27-2 *261704355-0002*	CONCRETE	Gray/Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
27-3 *261704355-0003*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
27-4 *261704355-0004*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
28-1 *261704355-0005*	CONCRETE	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
28-2 *261704355-0006*	CONCRETE	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
29-1 *261704355-0007*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
29-2 *261704355-0008*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
29-3 *261704355-0009*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
29-4 *261704355-0010*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
34-1 *261704355-0011*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
34-2 *261704355-0012*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
34-3 *261704355-0013*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
35-1-Concrete *261704355-0014*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
35-1-Mortar *261704355-0014A*	CONCRETE	Brown/Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
35-2 *261704355-0015*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 05/30/2017 16:44:11

EMSL Analytical, Inc.
4140 Litt Drive Hillside, IL 60162
Tel/Fax: (773) 313-0099 / (773) 313-0139
http://www.EMSL.com / chicagolab@emsl.com

EMSL Order: 261704355
Customer ID: NRTC78
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
36-1 *261704355-0016*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
36-2 *261704355-0017*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-1 *261704355-0018*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-2 *261704355-0019*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-3 *261704355-0020*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-4 *261704355-0021*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-5 *261704355-0022*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-6 *261704355-0023*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
40-1 *261704355-0024*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
40-2 *261704355-0025*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
56-1 *261704355-0026*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
56-2 *261704355-0027*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
56-3 *261704355-0028*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
56-4 *261704355-0029*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
63-1 *261704355-0030*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
63-2 *261704355-0031*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
63-3 *261704355-0032*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 05/30/2017 16:44:11

EMSL Analytical, Inc.
4140 Litt Drive Hillside, IL 60162
Tel/Fax: (773) 313-0099 / (773) 313-0139
http://www.EMSL.com / chicagolab@emsl.com

EMSL Order:	261704355
Customer ID:	NRTC78
Customer PO:	
Project ID:	

Analyst(s)
Brian Jolly (33)

James Hahn, Laboratory Manager
or Other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Hillside, IL NVLAP Lab Code 200399-0

Initial report from: 05/30/2017 16:44:11

OrderID: 261704355

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only).*

261704355

4140 Litt Drive

Hillside, IL 60162

PHONE: (773) 313-0099
FAX: (773) 313-0139

Company Name : Natural Resource Technology		**EMSL Customer ID:**	
Street: 234 West Florida Street, 5th Floor		**City:** Milwaukee	**State/Province:** WI
Zip/Postal Code: 53204	**Country:** US	**Telephone #:** 414-837-3645	**Fax #:**
Report To (Name): Andrew Cawrse		**Please Provide Results:** ☐ Fax ☑ Email	
Email Address: andrew cawrse@obg.com		**Purchase Order:**	
Project Name/Number: 2133		**EMSL Project ID** *(Internal Use Only):*	
U.S. State Samples Taken: WI		**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt	

EMSL-Bill to: ☑ Same ☐ Different - If Bill to is Different note instructions in Comments**

Third Party Billing requires written authorization from third party

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour	☐ 6 Hour	☐ 24 Hour	☐ 48 Hour	■ 72 Hour	☐ 96 Hour	☐ 1 Week	☐ 2 Week

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PCM - Air ☐ Check if samples are from NY
- ☐ NIOSH 7400
- ☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
- ☑ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)

Point Count
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)

Point Count w/Gravimetric
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
- ☐ NYS 198.1 (friable in NY)
- ☐ NYS 198.6 NOB (non-friable-NY)
- ☐ NYS 198.8 SOF-V
- ☐ NIOSH 9002 (<1%)

TEM – Air ☐ 4-4.5hr TAT (AHERA only)
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312

TEM - Bulk
- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (non-friable-NY)
- ☐ Chatfield SOP
- ☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
- Fibers >10µm ☐ Waste ☐ Drinking
- All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
- ☐ Microvac - ASTM D 5755
- ☐ Wipe - ASTM D6480
- ☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
- ☐ PLM EPA 600/R-93/116 with milling prep (<1%)
- ☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
- ☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)
- ☐ TEM Qualitative via Filtration Prep
- ☐ TEM Qualitative via Drop Mount Prep
- ☐ Cincinnati Method EPA 600/R-04/004 – PLM/TEM (BC only)

Other:
- ☐

☐ **Check For Positive Stop – Clearly Identify Homogenous Group**

Filter Pore Size (Air Samples): ☐ 0.8µm ☐ 0.45µm

Samplers Name: Andrew Cawrse **Samplers Signature:** Andrew C

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
27-1,2,3,4	Concrete		5/23/17
28-1,2	Concrete		
29-1,2,3,4	Concrete		
34-1,2,3	Concrete		
35-1,2	Concrete		

Client Sample # (s): - **Total # of Samples:**

Relinquished (Client): **Date:** **Time:**

Received (Lab): **Date:** 5.24.17 **Time:** 09:20

Comments/Special Instructions: FX.

Controlled Document – Asbestos COC – R10 – 05/09/2016

OrderID: 261704355

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Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only).*

C1355

4140 Litt Drive

Hillside, IL 60162
PHONE: (773) 313-0099
FAX: (773) 313-0139

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
36-1,2	Concrete		5/23/17
38-1,2,3,4,5,6	Concrete		
40-1,2	Concrete		
56-1,2,3,4	Concrete		
63-1,2,3	Concrete		

***Comments/Special Instructions:**

EMSL Analytical, Inc.

4140 Litt Drive Hillside, IL 60162

Tel/Fax: (773) 313-0099 / (773) 313-0139

http://www.EMSL.com / chicagolab@emsl.com

EMSL Order:	261704393
Customer ID:	NRTC78
Customer PO:	
Project ID:	

Attention:	Andrew Cawrse	**Phone:**	(414) 837-3607
	Natural Resource Technology, Inc.	**Fax:**	(414) 837-3608
	234 W. Florida Street	**Received Date:**	05/25/2017 9:15 AM
	5th Floor	**Analysis Date:**	05/31/2017
	Milwaukee, WI 53204	**Collected Date:**	
Project:	2133		

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
13-1-Brick *261704393-0001*	CONCRETE AND BRICK	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13-1-Mortar *261704393-0001A*	CONCRETE AND BRICK	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13-2-Brick *261704393-0002*	CONCRETE AND BRICK	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13-2-Concrete *261704393-0002A*	CONCRETE AND BRICK	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13-3 *261704393-0003*	CONCRETE AND BRICK	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13-4 *261704393-0004*	CONCRETE AND BRICK	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13-5 *261704393-0005*	CONCRETE AND BRICK	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13-6 *261704393-0006*	CONCRETE AND BRICK	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13-7 *261704393-0007*	CONCRETE AND BRICK	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
62-1 *261704393-0008*	CONCRETE WITH BLACK COATING	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
62-2 *261704393-0009*	CONCRETE WITH BLACK COATING	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
19-1 *261704393-0010*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
19-2 *261704393-0011*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
19-3 *261704393-0012*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
19-4 *261704393-0013*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
19-5 *261704393-0014*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 05/31/2017 13:04:32

EMSL Analytical, Inc.
4140 Litt Drive Hillside, IL 60162
Tel/Fax: (773) 313-0099 / (773) 313-0139
http://www.EMSL.com / chicagolab@emsl.com

EMSL Order: 261704393
Customer ID: NRTC78
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
16-1-Brick *261704393-0015*	CONCRETE AND BRICK	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
16-1-Concrete *261704393-0015A*	CONCRETE AND BRICK	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
16-2 *261704393-0016*	CONCRETE AND BRICK	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
16-3 *261704393-0017*	CONCRETE AND BRICK	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
16-4 *261704393-0018*	CONCRETE AND BRICK	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
16-5 *261704393-0019*	CONCRETE AND BRICK	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
16-6 *261704393-0020*	CONCRETE AND BRICK	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
16-7 *261704393-0021*	CONCRETE AND BRICK	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
16-8 *261704393-0022*	CONCRETE AND BRICK	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
16-9 *261704393-0023*	CONCRETE AND BRICK	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
MISC-21-1 *261704393-0024*	CAULK	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
MISC-22-1 *261704393-0025*	BUILDING MATERIAL	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Analyst(s)
Brian Jolly (28)

James Hahn, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Hillside, IL NVLAP Lab Code 200399-0

Initial report from: 05/31/2017 13:04:32

OrderID: 261704393

EMSL ANALYTICAL, INC.
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Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 261704393

4140 Litt Drive

Hillside, IL 60162

PHONE: (773) 313-0099
FAX: (773) 313-0139

Company Name : Natural Resource Technology		**EMSL Customer ID:**	
Street: 234 West Florida Street, 5th Floor		**City:** Milwaukee	**State/Province:** WI
Zip/Postal Code: 53204	**Country:** US	**Telephone #:** 414-837-3645	**Fax #:**
Report To (Name): Andrew Cawrse		**Please Provide Results:** ☐ Fax ☑ Email	
Email Address: andrew.cawrse@obg.com		**Purchase Order:**	
Project Name/Number: 2133		**EMSL Project ID** *(Internal Use Only)*:	
U.S. State Samples Taken: WI		**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt	

EMSL-Bill to: ☑ Same ☐ Different - If Bill to is Different note instructions in Comments**

Third Party Billing requires written authorization from third party

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour	☐ 6 Hour	☐ 24 Hour	☐ 48 Hour	☒ 72 Hour	☐ 96 Hour	☐ 1 Week	☐ 2 Week

**For TEM Air 3 hr through 6 hr, please call ahead to schedule.*There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide*

PCM - Air ☐ Check if samples are from NY
- ☐ NIOSH 7400
- ☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
- ☑ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)

Point Count
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)

Point Count w/Gravimetric
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
- ☐ NYS 198.1 (friable in NY)
- ☐ NYS 198.6 NOB (non-friable-NY)
- ☐ NYS 198.8 SOF-V
- ☐ NIOSH 9002 (<1%)

TEM – Air ☐ 4-4.5hr TAT (AHERA only)
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312

TEM - Bulk
- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (non-friable-NY)
- ☐ Chatfield SOP
- ☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
- Fibers >10µm ☐ Waste ☐ Drinking
- All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
- ☐ Microvac - ASTM D 5755
- ☐ Wipe - ASTM D6480
- ☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
- ☐ PLM EPA 600/R-93/116 with milling prep (<1%)
- ☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
- ☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)
- ☐ TEM Qualitative via Filtration Prep
- ☐ TEM Qualitative via Drop Mount Prep
- ☐ Cincinnati Method EPA 600/R-04/004 – PLM/TEM (BC only)

Other:
- ☐

☐ **Check For Positive Stop – Clearly Identify Homogenous Group**

Filter Pore Size (Air Samples): ☐ 0.8µm ☐ 0.45µm

Samplers Name: Andrew Cawrse

Samplers Signature:

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
13-1,2,3,4,5,6,7	Concrete and brick		5/24/17
62-1,2	Concrete with black coating		
19-1,2,3,4,5	Concrete		
16-1,2,3,4,5,6,7,8,9	Concrete and brick		
MISC-21-1	Caulk		

Client Sample # (s): -

Total # of Samples: 25

Relinquished (Client): **Date:** **Time:**

Received (Lab): **Date:** 05 25 17 **Time:** 09:15

Comments/Special Instructions: FX

OrderID: 261704393

EMSL ANALYTICAL, INC.
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Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*:

261393

4140 Litt Drive

Hillside, IL 60162
PHONE: (773) 313-0099
FAX: (773) 313-0139

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
MISC-22-1	Building Material		5/24/17

*Comments/Special Instructions:

EMSL Analytical, Inc.

4140 Litt Drive Hillside, IL 60162

Tel/Fax: (773) 313-0099 / (773) 313-0139

http://www.EMSL.com / chicagolab@emsl.com

EMSL Order:	261704406
Customer ID:	NRTC78
Customer PO:	
Project ID:	

Attention:	Andrew Cawrse	**Phone:**	(414) 837-3607
	Natural Resource Technology, Inc.	**Fax:**	(414) 837-3608
	234 W. Florida Street	**Received Date:**	05/26/2017 8:20 AM
	5th Floor	**Analysis Date:**	05/26/2017 - 05/30/2017
	Milwaukee, WI 53204	**Collected Date:**	
Project:	2133		

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
P1-1-Brick *261704406-0001*	BRICK WITH BLACK COATING/ROOFING MATERIAL	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P1-1-Adhesive *261704406-0001A*	BRICK WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P1-2 *261704406-0002*	BRICK WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P1-3 *261704406-0003*	BRICK WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous	20% Glass	80% Non-fibrous (Other)	None Detected
P1-4 *261704406-0004*	BRICK WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P1-5 *261704406-0005*	BRICK WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous		90% Non-fibrous (Other)	10% Chrysotile
P1-6 *261704406-0006*	BRICK WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous		85% Non-fibrous (Other)	15% Chrysotile
P1-7 *261704406-0007*	BRICK WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous	40% Glass	60% Non-fibrous (Other)	None Detected
P1-8 *261704406-0008*	BRICK WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous	40% Glass	60% Non-fibrous (Other)	None Detected
P1-9 *261704406-0009*	BRICK WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous		85% Non-fibrous (Other)	15% Chrysotile
P1-10 *261704406-0010*	BRICK WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P1-11 *261704406-0011*	BRICK WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous	10% Glass	90% Non-fibrous (Other)	None Detected
P1-12 *261704406-0012*	BRICK WITH BLACK COATING/ROOFING MATERIAL	Black Fibrous Homogeneous	30% Cellulose	40% Non-fibrous (Other)	30% Chrysotile
P1-13 *261704406-0013*	BRICK WITH BLACK COATING/ROOFING MATERIAL	Black Fibrous Homogeneous	30% Cellulose	40% Non-fibrous (Other)	30% Chrysotile
P1-14 *261704406-0014*	BRICK WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
P1-15 *261704406-0015*	BRICK WITH BLACK COATING/ROOFING MATERIAL	Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected

Initial report from: 05/30/2017 14:33:13

EMSL Analytical, Inc.
4140 Litt Drive Hillside, IL 60162
Tel/Fax: (773) 313-0099 / (773) 313-0139
http://www.EMSL.com / chicagolab@emsl.com

EMSL Order: 261704406
Customer ID: NRTC78
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
P1-16 *261704406-0016*	BRICK WITH BLACK COATING/ROOFING MATERIAL	Black Fibrous Homogeneous	30% Cellulose	40% Non-fibrous (Other)	30% Chrysotile
P1-17 *261704406-0017*	BRICK WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous	10% Glass	90% Non-fibrous (Other)	None Detected
P1-18 *261704406-0018*	BRICK WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous	10% Glass	90% Non-fibrous (Other)	None Detected
P1-19 *261704406-0019*	BRICK WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous	10% Glass	90% Non-fibrous (Other)	None Detected
P1-20 *261704406-0020*	BRICK WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
P1-21 *261704406-0021*	BRICK WITH BLACK COATING/ROOFING MATERIAL	Black Fibrous Homogeneous		60% Non-fibrous (Other)	40% Chrysotile
P2-1-Brick *261704406-0022*	BRICK/CONCRETE WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P2-1-Adhesive *261704406-0022A*	BRICK/CONCRETE WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P2-2-Brick *261704406-0023*	BRICK/CONCRETE WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P2-2-Adhesive *261704406-0023A*	BRICK/CONCRETE WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P2-3 *261704406-0024*	BRICK/CONCRETE WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
P2-4 *261704406-0025*	BRICK/CONCRETE WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
P2-5 *261704406-0026*	BRICK/CONCRETE WITH BLACK COATING/ROOFING MATERIAL	Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
P2-6 *261704406-0027*	BRICK/CONCRETE WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P2-7 *261704406-0028*	BRICK/CONCRETE WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P2-8 *261704406-0029*	BRICK/CONCRETE WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile

Initial report from: 05/30/2017 14:33:13

EMSL Analytical, Inc.
4140 Litt Drive Hillside, IL 60162
Tel/Fax: (773) 313-0099 / (773) 313-0139
http://www.EMSL.com / chicagolab@emsl.com

EMSL Order: 261704406
Customer ID: NRTC78
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
P2-9 *261704406-0030*	BRICK/CONCRETE WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P2-10 *261704406-0031*	BRICK/CONCRETE WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous		96% Non-fibrous (Other)	4% Chrysotile
P2-11 *261704406-0032*	BRICK/CONCRETE WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P2-12 *261704406-0033*	BRICK/CONCRETE WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P2-13 *261704406-0034*	BRICK/CONCRETE WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous	10% Glass	90% Non-fibrous (Other)	None Detected
P2-14 *261704406-0035*	BRICK/CONCRETE WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous		60% Non-fibrous (Other)	40% Chrysotile
P2-15 *261704406-0036*	BRICK/CONCRETE WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P2-16 *261704406-0037*	BRICK/CONCRETE WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P2-17 *261704406-0038*	BRICK/CONCRETE WITH BLACK COATING/ROOFING MATERIAL	Black Fibrous Homogeneous		60% Non-fibrous (Other)	40% Chrysotile
P2-18 *261704406-0039*	BRICK/CONCRETE WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P2-19 *261704406-0040*	BRICK/CONCRETE WITH BLACK COATING/ROOFING MATERIAL	Black Fibrous Homogeneous		60% Non-fibrous (Other)	40% Chrysotile
P2-20 *261704406-0041*	BRICK/CONCRETE WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous	25% Cellulose	75% Non-fibrous (Other)	None Detected
P2-21 *261704406-0042*	BRICK/CONCRETE WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
P2-22 *261704406-0043*	BRICK/CONCRETE WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected

Initial report from: 05/30/2017 14:33:13

EMSL Analytical, Inc.
4140 Litt Drive Hillside, IL 60162
Tel/Fax: (773) 313-0099 / (773) 313-0139
http://www.EMSL.com / chicagolab@emsl.com

EMSL Order: 261704406
Customer ID: NRTC78
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
P2-23 *261704406-0044*	BRICK/CONCRETE WITH BLACK COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
P3-1-Brick *261704406-0045*	BRICK/CONCRETE WITH COATING/ROOFING MATERIAL	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P3-1-Concrete *261704406-0045A*	BRICK/CONCRETE WITH COATING/ROOFING MATERIAL	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P3-2-Brick *261704406-0046*	BRICK/CONCRETE WITH COATING/ROOFING MATERIAL	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P3-2-Adhesive *261704406-0046A*	BRICK/CONCRETE WITH COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P3-3 *261704406-0047*	BRICK/CONCRETE WITH COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous	15% Glass	85% Non-fibrous (Other)	None Detected
P3-4 *261704406-0048*	BRICK/CONCRETE WITH COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous	15% Glass	85% Non-fibrous (Other)	None Detected
P3-5 *261704406-0049*	BRICK/CONCRETE WITH COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous	15% Glass	85% Non-fibrous (Other)	None Detected
P3-6 *261704406-0050*	BRICK/CONCRETE WITH COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
P3-7 *261704406-0051*	BRICK/CONCRETE WITH COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P3-8 *261704406-0052*	BRICK/CONCRETE WITH COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
P3-9 *261704406-0053*	BRICK/CONCRETE WITH COATING/ROOFING MATERIAL	Black Non-Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected

Initial report from: 05/30/2017 14:33:13

EMSL Analytical, Inc.
4140 Litt Drive Hillside, IL 60162
Tel/Fax: (773) 313-0099 / (773) 313-0139
http://www.EMSL.com / chicagolab@emsl.com

EMSL Order:	261704406
Customer ID:	NRTC78
Customer PO:	
Project ID:	

Analyst(s)

Brian Jolly (33)
Christine Stouffer (25)

James Hahn, Laboratory Manager
or Other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Hillside, IL NVLAP Lab Code 200399-0

Initial report from: 05/30/2017 14:33:13

OrderID: 261704406

EMSL ANALYTICAL, INC.
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Asbestos Chain of Custody

EMSL Order Number (*Lab Use Only*): 261704406

4140 Litt Drive

Hillside, IL 60162

PHONE: (773) 313-0099
FAX: (773) 313-0139

Company Name: Natural Resource Technology		**EMSL Customer ID:**	
Street: 234 West Florida Street, 5th Floor		**City:** Milwaukee	**State/Province:** WI
Zip/Postal Code: 53204	**Country:** US	**Telephone #:** 414-837-3645	**Fax #:**
Report To (Name): Andrew Cawrse		**Please Provide Results:** ☐ Fax ☑ Email	
Email Address: andrew cawrse@obg.com		**Purchase Order:**	
Project Name/Number: 2133		**EMSL Project ID** (*Internal Use Only*).	
U.S. State Samples Taken: WI		**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt	

EMSL-Bill to: ☑ Same ☐ Different - If Bill to is Different note instructions in Comments**

Third Party Billing requires written authorization from third party

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☑ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

**For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.*

PCM - Air ☐ Check if samples are from NY
☐ NIOSH 7400
☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
☑ PLM EPA 600/R-93/116 (<1%)
☐ PLM EPA NOB (<1%)
Point Count
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
Point Count w/Gravimetric
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
☐ NYS 198.1 (friable in NY)
☐ NYS 198.6 NOB (non-friable-NY)
☐ NYS 198.8 SOF-V
☐ NIOSH 9002 (<1%)

TEM – Air ☐ **4-4.5hr TAT (AHERA only)**
☐ AHERA 40 CFR, Part 763
☐ NIOSH 7402
☐ EPA Level II
☐ ISO 10312

TEM - Bulk
☐ TEM EPA NOB
☐ NYS NOB 198.4 (non-friable-NY)
☐ Chatfield SOP
☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
Fibers >10µm ☐ Waste ☐ Drinking
All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
☐ Microvac - ASTM D 5755
☐ Wipe - ASTM D6480
☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
☐ PLM EPA 600/R-93/116 with milling prep (<1%)
☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)
☐ TEM Qualitative via Filtration Prep
☐ TEM Qualitative via Drop Mount Prep
☐ Cincinnati Method EPA 600/R-04/004 – PLM/TEM (BC only)

Other:
☐

☐ **Check For Positive Stop – Clearly Identify Homogenous Group**

Filter Pore Size (Air Samples): ☐ 0.8µm ☐ 0.45µm

Samplers Name: Andrew Cawrse **Samplers Signature:** Andrew C

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
P1-1 thru P1-21	Brick with black coating/roofing material		5/25/17
P2-1 thru P2-23	Brick/Concrete with black coating/roofing material		
P3-1 thru P3-9	Brick/Concrete with coating/roofing material		

Client Sample # (s): - **Total # of Samples:**

Relinquished (Client): Andrew C **Date:** 5/25/17 **Time:** 15:30

Received (Lab): [signature] **Date:** 5.26.17 **Time:** 08:20

Comments/Special Instructions:
Rush 24 hr TAT

FX

Page 1 of 1 pages

After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

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4140 Litt Drive Hillside, IL 60162

Tel/Fax: (773) 313-0099 / (773) 313-0139

http://www.EMSL.com / chicagolab@emsl.com

EMSL Order:	261704433
Customer ID:	NRTC78
Customer PO:	
Project ID:	

Attention:	Andrew Cawrse	**Phone:**	(414) 837-3607
	Natural Resource Technology, Inc.	**Fax:**	(414) 837-3608
	234 W. Florida Street	**Received Date:**	05/26/2017 8:20 AM
	5th Floor	**Analysis Date:**	05/31/2017
	Milwaukee, WI 53204	**Collected Date:**	
Project:	2133		

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
47-1 *261704433-0001*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
47-2 *261704433-0002*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
47-3 *261704433-0003*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
46-1-Brick *261704433-0004*	BRICK/CONCRETE	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
46-1-Concrete *261704433-0004A*	BRICK/CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
46-2 *261704433-0005*	BRICK/CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
46-3 *261704433-0006*	BRICK/CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
9-1 *261704433-0007*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
9-2 *261704433-0008*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
9-3 *261704433-0009*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
9-4 *261704433-0010*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
9-5 *261704433-0011*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
9-6 *261704433-0012*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
9-7 *261704433-0013*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
9-8 *261704433-0014*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
9-9 *261704433-0015*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 05/31/2017 14:22:58

EMSL Analytical, Inc.

4140 Litt Drive Hillside, IL 60162

Tel/Fax: (773) 313-0099 / (773) 313-0139

http://www.EMSL.com / chicagolab@emsl.com

EMSL Order:	261704433
Customer ID:	NRTC78
Customer PO:	
Project ID:	

Analyst(s)

Brian Jolly (16)

James Hahn, Laboratory Manager
or Other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Hillside, IL NVLAP Lab Code 200399-0

Initial report from: 05/31/2017 14:22:58

OrderID: 261704433

EMSL ANALYTICAL, INC.
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Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 261704433

4140 Litt Drive

Hillside, IL 60162

PHONE: (773) 313-0099
FAX: (773) 313-0139

Company Name: Natural Resource Technology		**EMSL Customer ID:**	
Street: 234 West Florida Street, 5th Floor		**City:** Milwaukee	**State/Province:** WI
Zip/Postal Code: 53204	**Country:** US	**Telephone #:** 414-837-3645	**Fax #:**
Report To (Name): Andrew Cawrse		**Please Provide Results:** ☐ Fax ☑ Email	
Email Address: andrew.cawrse@obg com		**Purchase Order:**	
Project Name/Number: 2133		**EMSL Project ID** *(Internal Use Only)*:	
U.S. State Samples Taken: WI		**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt	

EMSL-Bill to: ☑ Same ☐ Different - If Bill to is Different note instructions in Comments**
Third Party Billing requires written authorization from third party

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour | ☐ 6 Hour | ☐ 24 Hour | ☒ 48 Hour | ☐ 72 Hour | ☐ 96 Hour | ☐ 1 Week | ☐ 2 Week

*For TEM Air 3 hr through 6 hr, please call ahead to schedule.*There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.

PCM - Air ☐ Check if samples are from NY
- ☐ NIOSH 7400
- ☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
- ☑ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)

Point Count
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)

Point Count w/Gravimetric
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
- ☐ NYS 198.1 (friable in NY)
- ☐ NYS 198.6 NOB (non-friable-NY)
- ☐ NYS 198.8 SOF-V
- ☐ NIOSH 9002 (<1%)

TEM – Air ☐ 4-4.5hr TAT (AHERA only)
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312

TEM - Bulk
- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (non-friable-NY)
- ☐ Chatfield SOP
- ☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
- Fibers >10µm ☐ Waste ☐ Drinking
- All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
- ☐ Microvac - ASTM D 5755
- ☐ Wipe - ASTM D6480
- ☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
- ☐ PLM EPA 600/R-93/116 with milling prep (<1%)
- ☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
- ☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)
- ☐ TEM Qualitative via Filtration Prep
- ☐ TEM Qualitative via Drop Mount Prep
- ☐ Cincinnati Method EPA 600/R-04/004 – PLM/TEM (BC only)

Other: ☐

☐ **Check For Positive Stop – Clearly Identify Homogenous Group**

Filter Pore Size (Air Samples): ☐ 0.8µm ☐ 0.45µm

Samplers Name: Andrew Cawrse **Samplers Signature:** [signature]

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
47-1,2,3	Concrete		5/25/17
46-1,2,3	Brick/Concrete		"
9-1 thru 9-9	Concrete		"
			"
			"

Client Sample # (s): - **Total # of Samples:** 15

Relinquished (Client): [signature] **Date:** 5/25/17 **Time:** 16:30

Received (Lab): [signature] **Date:** 5.26.17 **Time:** 08:20

Comments/Special Instructions:
Rush 24 hr TAT
FX

Page 1 of 1 pages

EMSL Analytical, Inc.

4140 Litt Drive Hillside, IL 60162

Tel/Fax: (773) 313-0099 / (773) 313-0139

http://www.EMSL.com / chicagolab@emsl.com

EMSL Order:	261704485
Customer ID:	NRTC78
Customer PO:	
Project ID:	

Attention:	Andrew Cawrse	**Phone:**	(414) 837-3607
	Natural Resource Technology, Inc.	**Fax:**	(414) 837-3608
	234 W. Florida Street	**Received Date:**	05/30/2017 8:10 AM
	5th Floor	**Analysis Date:**	06/01/2017
	Milwaukee, WI 53204	**Collected Date:**	
Project:	2133		

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
48-1 *261704485-0001*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
48-2 *261704485-0002*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
48-3 *261704485-0003*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
8-1 *261704485-0004*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
8-2 *261704485-0005*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
4-1 *261704485-0006*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
4-2 *261704485-0007*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
5-1-Brick *261704485-0008*	BRICK/CONCRETE	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
5-1-Concrete *261704485-0008A*	BRICK/CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
5-2 *261704485-0009* *No brick present*	BRICK/CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
5-3 *261704485-0010* *No brick present*	BRICK/CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
5-4 *261704485-0011* *No brick present*	BRICK/CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
5-5 *261704485-0012* *No brick present*	BRICK/CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
5-6 *261704485-0013* *No brick present*	BRICK/CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 06/01/2017 16:45:54

EMSL Analytical, Inc.
4140 Litt Drive Hillside, IL 60162
Tel/Fax: (773) 313-0099 / (773) 313-0139
http://www.EMSL.com / chicagolab@emsl.com

EMSL Order: 261704485
Customer ID: NRTC78
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
2-1-Brick *261704485-0014*	BRICK/CONCRETE	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
2-1-Concrete *261704485-0014A*	BRICK/CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
2-2-Brick *261704485-0015*	BRICK/CONCRETE	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
2-2-Concrete *261704485-0015A*	BRICK/CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
2-3 *261704485-0016* *No brick present*	BRICK/CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
2-4 *261704485-0017* *No brick present*	BRICK/CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
2-5 *261704485-0018* *No brick present*	BRICK/CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
2-6 *261704485-0019*	BRICK/CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
2-7 *261704485-0020*	BRICK/CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
49-1 *261704485-0021*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
49-2 *261704485-0022*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
49-3 *261704485-0023*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
49-4 *261704485-0024*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12-1-Brick *261704485-0025*	BRICK/CONCRETE	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12-1-Concrete *261704485-0025A*	BRICK/CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12-2 *261704485-0026*	BRICK/CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12-3-Concrete *261704485-0027*	BRICK/CONCRETE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12-3-Adhesive *261704485-0027A*	BRICK/CONCRETE	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 06/01/2017 16:45:54

EMSL Analytical, Inc.
4140 Litt Drive Hillside, IL 60162
Tel/Fax: (773) 313-0099 / (773) 313-0139
http://www.EMSL.com / chicagolab@emsl.com

EMSL Order: 261704485
Customer ID: NRTC78
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
12-4 *261704485-0028*	BRICK/CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
42-1 *261704485-0029*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
42-2 *261704485-0030*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
42-3 *261704485-0031*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
42-4 *261704485-0032*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
44-1 *261704485-0033*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
44-2 *261704485-0034*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
44-3 *261704485-0035*	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P4-1-Brick *261704485-0036*	BRICK/CONCRETE/ BUILDING MATERIAL	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P4-1-Concrete *261704485-0036A*	BRICK/CONCRETE/ BUILDING MATERIAL	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P4-2-Brick *261704485-0037*	BRICK/CONCRETE/ BUILDING MATERIAL	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P4-2-Concrete *261704485-0037A*	BRICK/CONCRETE/ BUILDING MATERIAL	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P4-3-Brick *261704485-0038*	BRICK/CONCRETE/ BUILDING MATERIAL	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P4-3-Concrete *261704485-0038A*	BRICK/CONCRETE/ BUILDING MATERIAL	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P4-4-Concrete *261704485-0039*	BRICK/CONCRETE/ BUILDING MATERIAL	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P4-4-Tar Paper *261704485-0039A*	BRICK/CONCRETE/ BUILDING MATERIAL	Black Non-Fibrous Homogeneous		75% Non-fibrous (Other)	25% Chrysotile
P4-5 *261704485-0040*	BRICK/CONCRETE/ BUILDING MATERIAL	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P4-6 *261704485-0041*	BRICK/CONCRETE/ BUILDING MATERIAL	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
P4-7 *261704485-0042*	BRICK/CONCRETE/ BUILDING MATERIAL	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 06/01/2017 16:45:54

EMSL Analytical, Inc.
4140 Litt Drive Hillside, IL 60162
Tel/Fax: (773) 313-0099 / (773) 313-0139
http://www.EMSL.com / chicagolab@emsl.com

EMSL Order:	261704485
Customer ID:	NRTC78
Customer PO:	
Project ID:	

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
P4-8	BRICK/CONCRETE/ BUILDING	Black Fibrous	30% Cellulose	70% Non-fibrous (Other)	None Detected
261704485-0043	MATERIAL	Homogeneous			
P4-9	BRICK/CONCRETE/ BUILDING	Black Fibrous	30% Cellulose	70% Non-fibrous (Other)	None Detected
261704485-0044	MATERIAL	Homogeneous			
P4-10	BRICK/CONCRETE/ BUILDING	Black Fibrous	60% Cellulose	40% Non-fibrous (Other)	None Detected
261704485-0045	MATERIAL	Homogeneous			
P4-11	BRICK/CONCRETE/ BUILDING	Black Fibrous	60% Cellulose	40% Non-fibrous (Other)	None Detected
261704485-0046	MATERIAL	Homogeneous			

Analyst(s)

Brian Jolly (28)
Christine Stouffer (23)
Dahlia Zyhowski (4)

James Hahn, Laboratory Manager
or Other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Hillside, IL NVLAP Lab Code 200399-0

Initial report from: 06/01/2017 16:45:54

OrderID: 261704485

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 261704485

4140 Litt Drive

Hillside, IL 60162

PHONE (773) 313-0099
FAX: (773) 313-0139

Company Name: Natural Resource Technology		**EMSL Customer ID:**	
Street: 234 West Florida Street, 5th Floor		**City:** Milwaukee	**State/Province:** WI
Zip/Postal Code: 53204	**Country:** US	**Telephone #:** 414-837-3645	**Fax #:**
Report To (Name): Andrew Cawrse		**Please Provide Results:** ☐ Fax ☑ Email	
Email Address: andrew.cawrse@obg com		**Purchase Order:**	
Project Name/Number: 2133		**EMSL Project ID** *(Internal Use Only)*:	
U.S. State Samples Taken: WI		**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt	

EMSL-Bill to: ☑ Same ☐ Different - If Bill to is Different note instructions in Comments**
Third Party Billing requires written authorization from third party

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour	☐ 6 Hour	☐ 24 Hour	☐ 48 Hour	☐ 72 Hour	☐ 96 Hour	☐ 1 Week	☐ 2 Week

**For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide*

PCM - Air ☐ Check if samples are from NY
- ☐ NIOSH 7400
- ☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
- ☑ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)

Point Count
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)

Point Count w/Gravimetric
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
- ☐ NYS 198.1 (friable in NY)
- ☐ NYS 198.6 NOB (non-friable-NY)
- ☐ NYS 198.8 SOF-V
- ☐ NIOSH 9002 (<1%)

TEM – Air ☐ 4-4.5hr TAT (AHERA only)
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312

TEM - Bulk
- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (non-friable-NY)
- ☐ Chatfield SOP
- ☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
- Fibers >10µm ☐ Waste ☐ Drinking
- All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
- ☐ Microvac - ASTM D 5755
- ☐ Wipe - ASTM D6480
- ☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
- ☐ PLM EPA 600/R-93/116 with milling prep (<1%)
- ☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
- ☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)
- ☐ TEM Qualitative via Filtration Prep
- ☐ TEM Qualitative via Drop Mount Prep
- ☐ *Cincinnati Method EPA 600/R-04/004 – PLM/TEM* (BC only)

Other:
- ☐

☐ Check For Positive Stop – Clearly Identify Homogenous Group

Filter Pore Size (Air Samples): ☐ 0.8µm ☐ 0.45µm

Samplers Name: Andrew Cawrse **Samplers Signature:** Andrew C

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
48-1,2,3	Concrete		5/26/17
8-1,2	Concrete		
4-1,2	Concrete		
5-1 thru 5-6	Brick/Concrete		
2-1 thru 2-7	Brick/Concrete		

Client Sample # (s): - **Total # of Samples:**

Relinquished (Client): Andrew C **Date:** 5/26/17 **Time:** 15:00

Received (Lab): [signature] **Date:** 5/30/17 **Time:** 8:10 am

Comments/Special Instructions:

Page 1 of 2 pages

OrderID: 261704485

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 4485

4140 Litt Drive

Hillside, IL 60162
PHONE: (773) 313-0099
FAX: (773) 313-0139

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
49-1,2,3,4	Concrete		5/26/17
12-1,2,3,4	Brick/Concrete		
42-1,2,3,4	Concrete		
44-1,2,3	Concrete		
P4-1 thru P4-11	Brick/Concrete/Building Material		

***Comments/Special Instructions:**

EMSL Analytical, Inc.

4140 Litt Drive Hillside, IL 60162

Tel/Fax: (773) 313-0099 / (773) 313-0139

http://www.EMSL.com / chicagolab@emsl.com

EMSL Order:	261704548
Customer ID:	NRTC78
Customer PO:	
Project ID:	

Attention:	Andrew Cawrse	**Phone:**	(414) 837-3607
	Natural Resource Technology, Inc.	**Fax:**	(414) 837-3608
	234 W. Florida Street	**Received Date:**	06/01/2017 8:15 AM
	5th Floor	**Analysis Date:**	06/05/2017
	Milwaukee, WI 53204	**Collected Date:**	
Project:	2133		

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
62-3 *261704548-0001*	BLACK COATING ON CONCRETE	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
62-4 *261704548-0002*	BLACK COATING ON CONCRETE	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Analyst(s)

Christine Stouffer (2)

James Hahn, Laboratory Manager
or Other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Hillside, IL NVLAP Lab Code 200399-0

Initial report from: 06/05/2017 09:06:13

OrderID: 261704548

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 261704548

4140 Litt Drive
Hillside, IL 60162
PHONE: (773) 313-0099
FAX: (773) 313-0139

Company Name: Natural Resource Technology		**EMSL Customer ID:**	
Street: 234 West Florida Street, 5th Floor		**City:** Milwaukee	**State/Province:** WI
Zip/Postal Code: 53204	**Country:** US	**Telephone #:** 414-837-3645	**Fax #:**
Report To (Name): Andrew Cawrse		**Please Provide Results:** ☐ Fax ☑ Email	
Email Address: andrew cawrse@obg com		**Purchase Order:**	
Project Name/Number: 2133		**EMSL Project ID** *(Internal Use Only)*:	
U.S. State Samples Taken: WI		**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt	

EMSL-Bill to: ☑ Same ☐ Different - If Bill to is Different note instructions in Comments**

Third Party Billing requires written authorization from third party

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour	☐ 6 Hour	☐ 24 Hour	☒ 48 Hour	☐ 72 Hour	☐ 96 Hour	☐ 1 Week	☐ 2 Week

**For TEM Air 3 hr through 6 hr, please call ahead to schedule.*There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.*

PCM - Air ☐ Check if samples are from NY
- ☐ NIOSH 7400
- ☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
- ☑ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)

Point Count
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)

Point Count w/Gravimetric
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
- ☐ NYS 198.1 (friable in NY)
- ☐ NYS 198.6 NOB (non-friable-NY)
- ☐ NYS 198.8 SOF-V
- ☐ NIOSH 9002 (<1%)

TEM – Air ☐ 4-4.5hr TAT (AHERA only)
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312

TEM - Bulk
- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (non-friable-NY)
- ☐ Chatfield SOP
- ☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
- Fibers >10µm ☐ Waste ☐ Drinking
- All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
- ☐ Microvac - ASTM D 5755
- ☐ Wipe - ASTM D6480
- ☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
- ☐ PLM EPA 600/R-93/116 with milling prep (<1%)
- ☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
- ☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)
- ☐ TEM Qualitative via Filtration Prep
- ☐ TEM Qualitative via Drop Mount Prep
- ☐ Cincinnati Method EPA 600/R-04/004 – PLM/TEM (BC only)

Other: ☐

☐ Check For Positive Stop – Clearly Identify Homogenous Group

Filter Pore Size (Air Samples): ☐ 0.8µm ☐ 0.45µm

Samplers Name: Andrew Cawrse **Samplers Signature:** Andrew

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
62-3,4	Black coating on concrete		5/31/17

Client Sample # (s): - **Total # of Samples:**

Relinquished (Client): Andrew **Date:** 5/31/17 **Time:**

Received (Lab): **Date:** 06.01.17 **Time:** 08.15

Comments/Special Instructions: FX

EMSL Analytical, Inc.

4140 Litt Drive Hillside, IL 60162

Tel/Fax: (773) 313-0099 / (773) 313-0139

http://www.EMSL.com / chicagolab@emsl.com

EMSL Order:	261704729
Customer ID:	NRTC78
Customer PO:	
Project ID:	

Attention:	Andrew Cawrse	**Phone:**	(414) 837-3607
	Natural Resource Technology, Inc.	**Fax:**	(414) 837-3608
	234 W. Florida Street	**Received Date:**	06/07/2017 8:25 AM
	5th Floor	**Analysis Date:**	06/08/2017
	Milwaukee, WI 53204	**Collected Date:**	
Project:	2133		

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
62-5 *261704729-0001*	BLACK CONCRETE COATING	Black Non-Fibrous Homogeneous	10% Glass	90% Non-fibrous (Other)	None Detected
62-6 *261704729-0002*	CABLE COVER	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Analyst(s)

Christine Stouffer (2)

James Hahn, Laboratory Manager
or Other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Hillside, IL NVLAP Lab Code 200399-0

Initial report from: 06/08/2017 10:50:34

OrderID: 261704729

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 261704729

4140 Litt Drive
Hillside, IL 60162
PHONE (773) 313-0099
FAX (773) 313-0139

Company Name: Natural Resource Technology		**EMSL Customer ID:**	
Street: 234 West Florida Street, 5th Floor		**City:** Milwaukee	**State/Province:** WI
Zip/Postal Code: 53204	**Country:** US	**Telephone #:** 414-837-3645	**Fax #:**
Report To (Name): Andrew Cawrse		**Please Provide Results:** ☐ Fax ☑ Email	
Email Address: andrew.cawrse@obg.com		**Purchase Order:**	
Project Name/Number: 2133		**EMSL Project ID** *(Internal Use Only)*:	
U.S. State Samples Taken: WI		**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt	

EMSL-Bill to: ☑ Same ☐ Different - If Bill to is Different note instructions in Comments**
Third Party Billing requires written authorization from third party

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour | ☐ 6 Hour | ☒ 24 Hour | ☐ 48 Hour | ☐ 72 Hour | ☐ 96 Hour | ☐ 1 Week | ☐ 2 Week

*For TEM Air 3 hr through 6 hr, please call ahead to schedule *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.

PCM - Air ☐ Check if samples are from NY
☐ NIOSH 7400
☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
☑ PLM EPA 600/R-93/116 (<1%)
☐ PLM EPA NOB (<1%)
Point Count
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
Point Count w/Gravimetric
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
☐ NYS 198.1 (friable in NY)
☐ NYS 198.6 NOB (non-friable-NY)
☐ NYS 198.8 SOF-V
☐ NIOSH 9002 (<1%)

TEM – Air ☐ 4-4.5hr TAT (AHERA only)
☐ AHERA 40 CFR, Part 763
☐ NIOSH 7402
☐ EPA Level II
☐ ISO 10312

TEM - Bulk
☐ TEM EPA NOB
☐ NYS NOB 198.4 (non-friable-NY)
☐ Chatfield SOP
☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
Fibers >10µm ☐ Waste ☐ Drinking
All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
☐ Microvac - ASTM D 5755
☐ Wipe - ASTM D6480
☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
☐ PLM EPA 600/R-93/116 with milling prep (<1%)
☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)
☐ TEM Qualitative via Filtration Prep
☐ TEM Qualitative via Drop Mount Prep
☐ Cincinnati Method EPA 600/R-04/004 – PLM/TEM (BC only)

Other:
☐

☐ **Check For Positive Stop – Clearly Identify Homogenous Group**

Filter Pore Size (Air Samples): ☐ 0.8µm ☐ 0.45µm

Samplers Name: Andrew Cawrse **Samplers Signature:** Andrew Cawrse

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
62-5	Black concrete coating		6/6/17
62-6	Cable cover		6/6/17

Client Sample # (s): - **Total # of Samples:**

Relinquished (Client): Andrew Cawrse **Date:** 6/6/17 **Time:**

Received (Lab): [signature] **Date:** 6.7.17 **Time:** 08:25

Comments/Special Instructions: FX

Page 1 of 1 pages

Controlled Document – Asbestos COC – R10 – 05/09/2016

After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
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Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

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EMSL Analytical, Inc.

4140 Litt Drive Hillside, IL 60162

Tel/Fax: (773) 313-0099 / (773) 313-0139

http://www.EMSL.com / chicagolab@emsl.com

EMSL Order:	261704779
Customer ID:	NRTC78
Customer PO:	
Project ID:	

Attention:	Andrew Cawrse	**Phone:**	(414) 837-3607
	Natural Resource Technology, Inc.	**Fax:**	(414) 837-3608
	234 W. Florida Street	**Received Date:**	06/08/2017 9:25 AM
	5th Floor	**Analysis Date:**	06/08/2017
	Milwaukee, WI 53204	**Collected Date:**	
Project:	2133		

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
1-1-02 *261704779-0001*	CAULK ON GAS BOOSTER SHEET METAL	Black Non-Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
1-2-02 *261704779-0002*	CAULK ON GAS BOOSTER SHEET METAL	Black Non-Fibrous Homogeneous		93% Non-fibrous (Other)	7% Chrysotile
1-3-02 *261704779-0003*	CAULK ON GAS BOOSTER SHEET METAL	Black Non-Fibrous Homogeneous		93% Non-fibrous (Other)	7% Chrysotile
2-1-02 *261704779-0004*	BLACK COATING ON GAS BOOSTER SHEEL METAL	Black Fibrous Homogeneous		65% Non-fibrous (Other)	35% Chrysotile

Analyst(s)

Dahlia Zyhowski (4)

James Hahn, Laboratory Manager
or Other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Hillside, IL NVLAP Lab Code 200399-0

Initial report from: 06/08/2017 17:46:53

OrderID: 261704779

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only).*

261704779

4140 Litt Drive

Hillside, IL 60162

PHONE (773) 313-0099
FAX (773) 313-0139

Company Name : Natural Resource Technology		**EMSL Customer ID:**	
Street: 234 West Florida Street, 5th Floor		**City:** Milwaukee	**State/Province:** WI
Zip/Postal Code: 53204	**Country:** US	**Telephone #:** 414-837-3645	**Fax #:**
Report To (Name): Andrew Cawrse		**Please Provide Results:** ☐ Fax ☑ Email	
Email Address: andrew.cawrse@obg.com		**Purchase Order:**	
Project Name/Number: 2133		**EMSL Project ID** *(Internal Use Only).*	
U.S. State Samples Taken: WI		**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt	

EMSL-Bill to: ☑ Same ☐ Different - If Bill to is Different note instructions in Comments**
Third Party Billing requires written authorization from third party

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☑ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

*For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.*

PCM - Air ☐ Check if samples are from NY
☐ NIOSH 7400
☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
☑ PLM EPA 600/R-93/116 (<1%)
☐ PLM EPA NOB (<1%)
Point Count
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
Point Count w/Gravimetric
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
☐ NYS 198.1 (friable in NY)
☐ NYS 198.6 NOB (non-friable-NY)
☐ NYS 198.8 SOF-V
☐ NIOSH 9002 (<1%)

TEM – Air ☐ **4-4.5hr TAT** (AHERA only)
☐ AHERA 40 CFR, Part 763
☐ NIOSH 7402
☐ EPA Level II
☐ ISO 10312

TEM - Bulk
☐ TEM EPA NOB
☐ NYS NOB 198.4 (non-friable-NY)
☐ Chatfield SOP
☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
Fibers >10µm ☐ Waste ☐ Drinking
All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
☐ Microvac - ASTM D 5755
☐ Wipe - ASTM D6480
☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
☐ PLM EPA 600/R-93/116 with milling prep (<1%)
☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)
☐ TEM Qualitative via Filtration Prep
☐ TEM Qualitative via Drop Mount Prep
☐ Cincinnati Method EPA 600/R-04/004 – PLM/TEM (BC only)

Other:
☐

☐ **Check For Positive Stop – Clearly Identify Homogenous Group**

Filter Pore Size (Air Samples): ☐ 0.8µm ☐ 0.45µm

Samplers Name: Andrew Cawrse **Samplers Signature:**

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
1-1-02	Caulk on gas booster sheet metal		6/7/17
1-2-02	Caulk on gas booster sheet metal		"
1-3-02	Caulk on gas booster sheet metal		"
2-1-02	Black coating on gas booster sheet metal		"

Client Sample # (s): - **Total # of Samples:**

Relinquished (Client): **Date:** 6/7/17 **Time:** 16:00

Received (Lab): **Date:** 6/8/17 **Time:** 9:25am

Comments/Special Instructions: EFX

Controlled Document – Asbestos COC – R10 – 05/09/2016

ORIGIN ID MKEA (414) 837-3607
JENNI PLAMANN
NATURAL RESOURCE TECHNOLOGY, INC.
234 W FLORIDA ST
5TH FLOOR
MILWAUKEE, WI 53204
UNITED STATES US

SHIP DATE: 07JUN17
ACTWGT: 1.00 LB
CAD: 8449231/INET3850

BILL SENDER

TO **SAMPLE RECEIVING**
EMSL ANALYTICAL
4140 LITT DRIVE

HILLSIDE IL 60162
(773) 313-0099 REF 21332.0
INV
PO DEPT

546J1/A502/53C1

FedEx Express

E

J1715178214011

THU - 08 JUN 10:30A
PRIORITY OVERNIGHT

TRK# 0201 **7793 2701 4118**

XH BDFA

60162
IL-US **ORD**

EMSL Analytical, Inc.

4140 Litt Drive Hillside, IL 60162

Tel/Fax: (773) 313-0099 / (773) 313-0139

http://www.EMSL.com / chicagolab@emsl.com

EMSL Order:	261704904
Customer ID:	NRTC78
Customer PO:	
Project ID:	

Attention:	Andrew Cawrse	**Phone:**	(414) 837-3607
	Natural Resource Technology, Inc.	**Fax:**	(414) 837-3608
	234 W. Florida Street	**Received Date:**	06/12/2017 8:12 AM
	5th Floor	**Analysis Date:**	06/15/2017
	Milwaukee, WI 53204	**Collected Date:**	
Project:	2133		

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
MISC-23 *261704904-0001*	FABRIC FROM WOOD PILE 52	Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
MISC-24 *261704904-0002*	CONCRETE FROM METAL CYLINDER	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
MISC-25 *261704904-0003*	WHITE CAULK FROM METAL CYLINDER	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
MISC-26 *261704904-0004*	BLACK CAULK FROM METAL CYLINDER	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
MISC-27 *261704904-0005*	INSULATION FROM METAL CYLINDER	Tan Non-Fibrous Homogeneous	20% Min. Wool	80% Non-fibrous (Other)	None Detected

Analyst(s)

Christine Stouffer (5)

James Hahn, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Hillside, IL NVLAP Lab Code 200399-0

Initial report from: 06/15/2017 09:20:35

OrderID: 261704904

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 261704904

4140 Litt Drive
Hillside, IL 60162
PHONE (773) 313-0099
FAX (773) 313-0139

Company Name: Natural Resource Technology	**EMSL Customer ID:**
Street: 234 West Florida Street, 5th Floor	**City:** Milwaukee **State/Province:** WI
Zip/Postal Code: 53204 **Country:** US	**Telephone #:** 414-837-3645 **Fax #:**
Report To (Name): Andrew Cawrse	**Please Provide Results:** ☐ Fax ☑ Email
Email Address: andrew cawrse@obg.com	**Purchase Order:**
Project Name/Number: 2133	**EMSL Project ID** *(Internal Use Only)*.
U.S. State Samples Taken: WI	**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt

EMSL-Bill to: ☑ Same ☐ Different - If Bill to is Different note instructions in Comments**
Third Party Billing requires written authorization from third party

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 48 Hour ☒ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

**For TEM Air 3 hr through 6 hr, please call ahead to schedule.*There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.*

PCM - Air ☐ Check if samples are from NY
☐ NIOSH 7400
☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
☑ PLM EPA 600/R-93/116 (<1%)
☐ PLM EPA NOB (<1%)
Point Count
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
Point Count w/Gravimetric
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
☐ NYS 198.1 (friable in NY)
☐ NYS 198.6 NOB (non-friable-NY)
☐ NYS 198.8 SOF-V
☐ NIOSH 9002 (<1%)

TEM – Air ☐ 4-4.5hr TAT (AHERA only)
☐ AHERA 40 CFR, Part 763
☐ NIOSH 7402
☐ EPA Level II
☐ ISO 10312

TEM - Bulk
☐ TEM EPA NOB
☐ NYS NOB 198.4 (non-friable-NY)
☐ Chatfield SOP
☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
Fibers >10µm ☐ Waste ☐ Drinking
All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
☐ Microvac - ASTM D 5755
☐ Wipe - ASTM D6480
☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
☐ PLM EPA 600/R-93/116 with milling prep (<1%)
☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)
☐ TEM Qualitative via Filtration Prep
☐ TEM Qualitative via Drop Mount Prep
☐ Cincinnati Method EPA 600/R-04/004 – PLM/TEM (BC only)

Other:
☐

☐ **Check For Positive Stop – Clearly Identify Homogenous Group**

Filter Pore Size (Air Samples): ☐ 0.8µm ☐ 0.45µm

Samplers Name: Andrew Cawrse **Samplers Signature:** [signature]

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
Misc-23	Fabric from wood pile 52		6/9/17
Misc-24	Concrete from metal cylinder		
Misc-25	White caulk from metal cylinder		
Misc-26	Black caulk from metal cylinder		
Misc-27	Insulation from metal cylinder		

Client Sample # (s): - **Total # of Samples:**

Relinquished (Client): [signature] **Date:** 6/9/17 **Time:** 1500

Received (Lab): [signature] **Date:** 6-12-17 **Time:** 8:12A

Comments/Special Instructions: w/ 6/12 Fed Ex

Controlled Document – Asbestos COC – R10 – 05/09/2016

OrderID: 261705318

EMSL Analytical, Inc.
4140 Litt Drive

Hillside, IL 60162
PHONE (773) 313-0099
FAX: (773) 313-0139

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 5318

Company Name : Natural Resource Technology		**EMSL Customer ID:**	
Street: 234 West Florida Street, 5th Floor		**City:** Milwaukee	**State/Province:** WI
Zip/Postal Code: 53204	**Country:** US	**Telephone #:** 414-837-3645	**Fax #:**
Report To (Name): Andrew Cawrse		**Please Provide Results:** ☐ Fax ☑ Email	
Email Address: andrew.cawrse@obg com		**Purchase Order:**	
Project Name/Number: 2133		**EMSL Project ID** *(Internal Use Only)*	
U.S. State Samples Taken: WI		**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt	

EMSL-Bill to: ☑ Same ☐ Different - If Bill to is Different note instructions in Comments**
Third Party Billing requires written authorization from third party

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour	☐ 6 Hour	☐ 24 Hour	☐ 48 Hour	☒ 72 Hour	☐ 96 Hour	☐ 1 Week	☐ 2 Week

**For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.*

PCM - Air ☐ Check if samples are from NY
- ☐ NIOSH 7400
- ☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
- ☑ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)

Point Count
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)

Point Count w/Gravimetric
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
- ☐ NYS 198.1 (friable in NY)
- ☐ NYS 198.6 NOB (non-friable-NY)
- ☐ NYS 198.8 SOF-V
- ☐ NIOSH 9002 (<1%)

TEM – Air ☐ **4-4.5hr TAT (AHERA only)**
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312

TEM - Bulk
- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (non-friable-NY)
- ☐ Chatfield SOP
- ☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
- Fibers >10µm ☐ Waste ☐ Drinking
- All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
- ☐ Microvac - ASTM D 5755
- ☐ Wipe - ASTM D6480
- ☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
- ☐ PLM EPA 600/R-93/116 with milling prep (<1%)
- ☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
- ☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)
- ☐ TEM Qualitative via Filtration Prep
- ☐ TEM Qualitative via Drop Mount Prep
- ☐ Cincinnati Method EPA 600/R-04/004 – PLM/TEM (BC only)

Other: ☐

☐ **Check For Positive Stop – Clearly Identify Homogenous Group**

Filter Pore Size (Air Samples): ☐ 0.8µm ☐ 0.45µm

Samplers Name: Andrew Cawrse **Samplers Signature:** Andrew Cawrse

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
29-5	Friable building material from pile 29		6/20/17

Client Sample # (s): - **Total # of Samples:**

Relinquished (Client): Andrew Cawrse **Date:** 6/20/17 **Time:** 15:00

Received (Lab): [illegible] **Date:** 6/21/17 **Time:** 08:15

Comments/Special Instructions: FX

Page 1 of 1 pages

Controlled Document – Asbestos COC – R10 – 05/09/2016

EMSL Analytical, Inc.

4140 Litt Drive Hillside, IL 60162

Tel/Fax: (773) 313-0099 / (773) 313-0139

http://www.EMSL.com / chicagolab@emsl.com

EMSL Order:	261705526
Customer ID:	NRTC78
Customer PO:	
Project ID:	

Attention:	Andrew Cawrse	**Phone:**	(414) 837-3607
	Natural Resource Technology, Inc.	**Fax:**	(414) 837-3608
	234 W. Florida Street	**Received Date:**	06/23/2017 10:15 AM
	5th Floor	**Analysis Date:**	06/30/2017
	Milwaukee, WI 53204	**Collected Date:**	
Project:	2133		

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
1-1 *261705526-0001*	PILE 1 OVENS GROUT	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1-2 *261705526-0002*	PILE 1 OVENS GROUT	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1-3 *261705526-0003*	PILE 1 OVENS GROUT	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1-4 *261705526-0004*	PILE 1 OVENS GROUT	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1-5 *261705526-0005*	PILE 1 OVENS BRICK	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1-6 *261705526-0006*	PILE 1 OVENS BRICK	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1-7 *261705526-0007*	PILE 1 OVENS BRICK	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1-8 *261705526-0008*	PILE 1 OVENS MISC BUILDING MATERIAL	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1-9 *261705526-0009*	PILE 1 OVENS MISC BUILDING MATERIAL	Black Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
1-10 *261705526-0010*	PILE 1 OVENS MISC BUILDING MATERIAL	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1-11 *261705526-0011*	PILE 1 OVENS MISC BUILDING MATERIAL	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1-12 *261705526-0012*	PILE 1 OVENS MISC BUILDING MATERIAL	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
59-1 *261705526-0013*	PILE 59 MISC BUILDING MATERIAL	Black Fibrous Homogeneous		40% Non-fibrous (Other)	60% Chrysotile
59-2 *261705526-0014*	PILE 59 MISC BUILDING MATERIAL	Black Fibrous Homogeneous		40% Non-fibrous (Other)	60% Chrysotile

Initial report from: 06/30/2017 09:51:07

EMSL Analytical, Inc.

4140 Litt Drive Hillside, IL 60162

Tel/Fax: (773) 313-0099 / (773) 313-0139

http://www.EMSL.com / chicagolab@emsl.com

EMSL Order:	261705526
Customer ID:	NRTC78
Customer PO:	
Project ID:	

Analyst(s)

Christine Stouffer (14)

James Hahn, Laboratory Manager
or Other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Hillside, IL NVLAP Lab Code 200399-0

Initial report from: 06/30/2017 09:51:07

OrderID: 261705526

EMSL Analytical, Inc
4140 Litt Drive

Hillside, IL 60162
PHONE: (773) 313-0099
FAX: (773) 313-0139

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 261705526

Company Name : Natural Resource Technology		**EMSL Customer ID:**	
Street: 234 West Florida Street, 5th Floor		**City:** Milwaukee	**State/Province:** WI
Zip/Postal Code: 53204	**Country:** US	**Telephone #:** 414-837-3645	**Fax #:**
Report To (Name): Andrew Cawrse		**Please Provide Results:** ☐ Fax ☑ Email	
Email Address: andrew.cawrse@obg.com		**Purchase Order:**	
Project Name/Number: 2133		**EMSL Project ID** *(Internal Use Only)*	
U.S. State Samples Taken: WI		**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt	

EMSL-Bill to: ☑ Same ☐ Different - If Bill to is Different note instructions in Comments**
Third Party Billing requires written authorization from third party

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour	☐ 6 Hour	☐ 24 Hour	☐ 48 Hour	☐ 72 Hour	☐ 96 Hour	☒ 1 Week	☐ 2 Week

**For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.*

PCM - Air ☐ Check if samples are from NY
☐ NIOSH 7400
☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
☑ PLM EPA 600/R-93/116 (<1%)
☐ PLM EPA NOB (<1%)
Point Count
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
Point Count w/Gravimetric
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
☐ NYS 198.1 (friable in NY)
☐ NYS 198.6 NOB (non-friable-NY)
☐ NYS 198.8 SOF-V
☐ NIOSH 9002 (<1%)

TEM – Air ☐ **4-4.5hr TAT (AHERA only)**
☐ AHERA 40 CFR, Part 763
☐ NIOSH 7402
☐ EPA Level II
☐ ISO 10312

TEM - Bulk
☐ TEM EPA NOB
☐ NYS NOB 198 4 (non-friable-NY)
☐ Chatfield SOP
☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100 2
Fibers >10µm ☐ Waste ☐ Drinking
All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
☐ Microvac - ASTM D 5755
☐ Wipe - ASTM D6480
☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
☐ PLM EPA 600/R-93/116 with milling prep (<1%)
☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)
☐ TEM Qualitative via Filtration Prep
☐ TEM Qualitative via Drop Mount Prep
☐ Cincinnati Method EPA 600/R-04/004 – PLM/TEM (BC only)

Other:
☐

☐ **Check For Positive Stop – Clearly Identify Homogenous Group**

Filter Pore Size (Air Samples): ☐ 0.8µm ☐ 0.45µm

Samplers Name: Andrew Cawrse **Samplers Signature:** Andrew C

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
1-1 thru 1-4	Pile 1 ovens grout		6/22/17
1-5 thru 1-7	Pile 1 ovens brick		"
1-8 thru 1-12	Pile 1 ovens misc building material		"
59-1 thru 59-2	Pile 59 misc building material		"

Client Sample # (s): Andrew C - **Total # of Samples:** 14

Relinquished (Client): Andrew C **Date:** 6/22/17 **Time:** 12:15

Received (Lab): [illegible] **Date:** 6/23/17 **Time:** 10:15

Comments/Special Instructions: FAX

Page 1 of 1 pages

Controlled Document – Asbestos COC – R10 – 05/09/2016

EMSL Analytical, Inc.

4140 Litt Drive Hillside, IL 60162

Tel/Fax: (773) 313-0099 / (773) 313-0139

http://www.EMSL.com / chicagolab@emsl.com

EMSL Order:	261705604
Customer ID:	NTRT34
Customer PO:	
Project ID:	

Attention:	Andrew Cawrse	**Phone:**	(312) 465-1740
	Natural Resource Technology, Inc.	**Fax:**	
	300 S. Wacker Dr.	**Received Date:**	06/30/2017 8:15 AM
	Suite 1300	**Analysis Date:**	07/01/2017
	Chicago, IL 60606	**Collected Date:**	
Project:	2133		

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
1-13 *261705604-0001*	NORTHERN PORTION OF PILE 1 - WHITE FRIABLE POWDER	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1-14 *261705604-0002*	NORTHERN PORTION OF PILE 1 - WHITE FRIABLE POWDER	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Analyst(s)

Dahlia Zyhowski (2)

James Hahn, Laboratory Manager
or Other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Hillside, IL NVLAP Lab Code 200399-0

Initial report from: 07/01/2017 16:11:21

OrderID: 261705604

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 261705604

4140 Litt Drive

Hillside, IL 60162

PHONE: (773) 313-0099
FAX: (773) 313-0139

Company Name : Natural Resource Technology		**EMSL Customer ID:**	
Street: 234 West Florida Street, 5th Floor		**City:** Milwaukee	**State/Province:** WI
Zip/Postal Code: 53204	**Country:** US	**Telephone #:** 414-837-3645	**Fax #:**
Report To (Name): Andrew Cawrse		**Please Provide Results:** ☐ Fax ☑ Email	
Email Address: andrew.cawrse@obg.com		**Purchase Order:**	
Project Name/Number: 2133		**EMSL Project ID** *(Internal Use Only)*:	
U.S. State Samples Taken: WI		**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt	

EMSL-Bill to: ☑ Same ☐ Different - If Bill to is Different note instructions in Comments**
Third Party Billing requires written authorization from third party

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour	☐ 6 Hour	■ 24 Hour	☐ 48 Hour	■ 72 Hour	☐ 96 Hour	■ 1 Week	☐ 2 Week

*For TEM Air 3 hr through 6 hr, please call ahead to schedule.*There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.

PCM - Air ☐ Check if samples are from NY
- ☐ NIOSH 7400
- ☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
- ☑ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)

Point Count
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)

Point Count w/Gravimetric
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
- ☐ NYS 198.1 (friable in NY)
- ☐ NYS 198.6 NOB (non-friable-NY)
- ☐ NYS 198.8 SOF-V
- ☐ NIOSH 9002 (<1%)

TEM – Air ☐ 4-4.5hr TAT (AHERA only)
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312

TEM - Bulk
- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (non-friable-NY)
- ☐ Chatfield SOP
- ☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
- Fibers >10µm ☐ Waste ☐ Drinking
- All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
- ☐ Microvac - ASTM D 5755
- ☐ Wipe - ASTM D6480
- ☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
- ☐ PLM EPA 600/R-93/116 with milling prep (<1%)
- ☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
- ☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)
- ☐ TEM Qualitative via Filtration Prep
- ☐ TEM Qualitative via Drop Mount Prep
- ☐ Cincinnati Method EPA 600/R-04/004 – PLM/TEM (BC only)

Other:
- ☐

☐ Check For Positive Stop – Clearly Identify Homogenous Group

Filter Pore Size (Air Samples): ☐ 0.8µm ☐ 0.45µm

Samplers Name: Andrew Cawrse **Samplers Signature:** Andrew C

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
1-13 thru 1-14	Northern portion of Pile 1 white friable powder		6/29/17
1-15	Northern portion of Pile 1 brick and mortar		
1-16	Northern portion of Pile 1 black grout		
1-17	Northern portion of Pile 1 brick		
1-18	Northern portion of Pile 1 grout		

Client Sample # (s): - **Total # of Samples:**

Relinquished (Client): Andrew C **Date:** 6/29/17 **Time:** 16:00

Received (Lab): [illegible] **Date:** 6/30/17 **Time:** 8:15A

Comments/Special Instructions:
24 hour TAT for samples 1-13 and 1-14. 72 hour TAT for the rest of the samples.

FX

TRK 7795 2912 4315

OrderID: 261705604

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: SL04

EMSL Analytical, Inc.
4140 Litt Drive
Hillside, IL 60162
PHONE: (773) 313-0099
FAX: (773) 313-0139

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
1-19	Northern portion of Pile 1 brick		6/29/17
1-20	Northern portion of Pile 1 brick		
1-21	Northern portion of Pile 1 brick		
1-22	Northern portion of Pile 1 grout		
1-23	Northern portion of Pile 1 grout		
1-24	Northern portion of Pile 1 brick		
1-25	Northern portion of Pile 1 grout		

***Comments/Special Instructions:**

EMSL Analytical, Inc.

4140 Litt Drive Hillside, IL 60162

Tel/Fax: (773) 313-0099 / (773) 313-0139

http://www.EMSL.com / chicagolab@emsl.com

EMSL Order:	261705663
Customer ID:	NRTC78
Customer PO:	
Project ID:	

Attention:	Andrew Cawrse	**Phone:**	(414) 837-3607
	Natural Resource Technology, Inc.	**Fax:**	(414) 837-3608
	234 W. Florida Street	**Received Date:**	06/30/2017 8:15 AM
	5th Floor	**Analysis Date:**	07/06/2017
	Milwaukee, WI 53204	**Collected Date:**	
Project:	2133		

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
1-15 *261705663-0001*	NORTHERN PORTION OF PILE 1 - BRICK AND MORTAR	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1-16 *261705663-0002*	NORTHERN PORTION OF PILE 1 - BLACK GROUT	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1-17 *261705663-0003*	NORTHERN PORTION OF PILE 1 - BRICK	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1-18 *261705663-0004*	NORTHERN PORTION OF PILE 1 - GROUT	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1-19 *261705663-0005*	NORTHERN PORTION OF PILE 1 - BRICK	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1-20 *261705663-0006*	NORTHERN PORTION OF PILE 1 - BRICK	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1-21 *261705663-0007*	NORTHERN PORTION OF PILE 1 - BRICK	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1-22 *261705663-0008*	NORTHERN PORTION OF PILE 1 - GROUT	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1-23 *261705663-0009*	NORTHERN PORTION OF PILE 1 - GROUT	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1-24 *261705663-0010*	NORTHERN PORTION OF PILE 1 - BRICK	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1-25 *261705663-0011*	NORTHERN PORTION OF PILE 1 - GROUT	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 07/06/2017 09:41:49

EMSL Analytical, Inc.

4140 Litt Drive Hillside, IL 60162

Tel/Fax: (773) 313-0099 / (773) 313-0139

http://www.EMSL.com / chicagolab@emsl.com

EMSL Order:	261705663
Customer ID:	NRTC78
Customer PO:	
Project ID:	

Analyst(s)

Christine Stouffer (11)

James Hahn, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Hillside, IL NVLAP Lab Code 200399-0

Initial report from: 07/06/2017 09:41:49

OrderID: 261705663

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 261705663

4140 Litt Drive

Hillside, IL 60162

PHONE: (773) 313-0099
FAX: (773) 313-0139

Company Name : Natural Resource Technology		**EMSL Customer ID:**	
Street: 234 West Florida Street, 5th Floor		**City:** Milwaukee	**State/Province:** WI
Zip/Postal Code: 53204	**Country:** US	**Telephone #:** 414-837-3645	**Fax #:**
Report To (Name): Andrew Cawrse		**Please Provide Results:** ☐ Fax ☑ Email	
Email Address: andrew cawrse@obg.com		**Purchase Order:**	
Project Name/Number: 2133		**EMSL Project ID** *(Internal Use Only)*.	
U.S. State Samples Taken: WI		**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt	

EMSL-Bill to: ☑ Same ☐ Different - If Bill to is Different note instructions in Comments**
Third Party Billing requires written authorization from third party

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour	☐ 6 Hour	☑ 24 Hour	☐ 48 Hour	☑ 72 Hour	☐ 96 Hour	☑ 1 Week	☐ 2 Week

*For TEM Air 3 hr through 6 hr, please call ahead to schedule *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.

PCM - Air ☐ Check if samples are from NY
☐ NIOSH 7400
☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
☑ PLM EPA 600/R-93/116 (<1%)
☐ PLM EPA NOB (<1%)
Point Count
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
Point Count w/Gravimetric
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
☐ NYS 198.1 (friable in NY)
☐ NYS 198.6 NOB (non-friable-NY)
☐ NYS 198.8 SOF-V
☐ NIOSH 9002 (<1%)

TEM – Air ☐ 4-4.5hr TAT (AHERA only)
☐ AHERA 40 CFR, Part 763
☐ NIOSH 7402
☐ EPA Level II
☐ ISO 10312

TEM - Bulk
☐ TEM EPA NOB
☐ NYS NOB 198.4 (non-friable-NY)
☐ Chatfield SOP
☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
Fibers >10µm ☐ Waste ☐ Drinking
All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
☐ Microvac - ASTM D 5755
☐ Wipe - ASTM D6480
☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
☐ PLM EPA 600/R-93/116 with milling prep (<1%)
☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)
☐ TEM Qualitative via Filtration Prep
☐ TEM Qualitative via Drop Mount Prep
☐ Cincinnati Method EPA 600/R-04/004 – PLM/TEM (BC only)

Other:
☐

☐ Check For Positive Stop – Clearly Identify Homogenous Group

Filter Pore Size (Air Samples): ☐ 0.8µm ☐ 0.45µm

Samplers Name: Andrew Cawrse **Samplers Signature:** Andrew C

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
1-13 thru 1-14	Northern portion of Pile 1 white friable powder		6/29/17
1-15	Northern portion of Pile 1 brick and mortar		
1-16	Northern portion of Pile 1 black grout		
1-17	Northern portion of Pile 1 brick		
1-18	Northern portion of Pile 1 grout		

Client Sample # (s): **Total # of Samples:**

Relinquished (Client): Andrew C **Date:** 6/29/17 **Time:** 16:00

Received (Lab): [illegible] **Date:** 6/30/17 **Time:** 8:15A

Comments/Special Instructions:
24 hour TAT for samples 1-13 and 1-14. 72 hour TAT for the rest of the samples
FX
RK 7795 2912 4315

Page 1 of 2 pages

OrderID: 261705663

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: ~5663

4140 Litt Drive

Hillside, IL 60162
PHONE: (773) 313-0099
FAX: (773) 313-0139

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
1-19	Northern portion of Pile 1 brick		6/29/17
1-20	Northern portion of Pile 1 brick		
1-21	Northern portion of Pile 1 brick		
1-22	Northern portion of Pile 1 grout		
1-23	Northern portion of Pile 1 grout		
1-24	Northern portion of Pile 1 brick		
1-25	Northern portion of Pile 1 grout		

***Comments/Special Instructions:**

EMSL Analytical, Inc.

4140 Litt Drive Hillside, IL 60162

Tel/Fax: (773) 313-0099 / (773) 313-0139

http://www.EMSL.com / chicagolab@emsl.com

EMSL Order:	261705874
Customer ID:	NRTC78
Customer PO:	
Project ID:	

Attention:	Andrew Cawrse	**Phone:**	(414) 837-3607
	Natural Resource Technology, Inc.	**Fax:**	(414) 837-3608
	234 W. Florida Street	**Received Date:**	07/11/2017 8:30 AM
	5th Floor	**Analysis Date:**	07/14/2017
	Milwaukee, WI 53204	**Collected Date:**	07/10/2017
Project:	2133		

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
1-26 *261705874-0001*	Pile 1 Concrete and Black Coating Slab	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1-27 *261705874-0002*	Pile 1 Misc Material Insulation	Gray Fibrous Homogeneous	90% Synthetic	10% Non-fibrous (Other)	None Detected
1-28 *261705874-0003*	Pile 1 Misc Material Black Coating	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Analyst(s)

Christine Stouffer (3)

James Hahn, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Hillside, IL NVLAP Lab Code 200399-0

Initial report from: 07/14/2017 09:21:06

OrderID: 261705874

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 5874.

4140 Litt Drive
Hillside, IL 60162
PHONE: (773) 313-0099
FAX: (773) 313-0139

Company Name: Natural Resource Technology	**EMSL Customer ID:**
Street: 234 West Florida Street, 5th Floor	**City:** Milwaukee **State/Province:** WI
Zip/Postal Code: 53204 **Country:** US	**Telephone #:** 414-837-3645 **Fax #:**
Report To (Name): Andrew Cawrse	**Please Provide Results:** ☐ Fax ☑ Email
Email Address: andrew.cawrse@obg com	**Purchase Order:**
Project Name/Number: 2133	**EMSL Project ID** *(Internal Use Only)*:
U.S. State Samples Taken: WI	**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt

EMSL-Bill to: ☑ Same ☐ Different - If Bill to is Different note instructions in Comments**
Third Party Billing requires written authorization from third party

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 48 Hour ☒ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

**For TEM Air 3 hr through 6 hr, please call ahead to schedule *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.*

PCM - Air ☐ Check if samples are from NY
☐ NIOSH 7400
☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
☑ PLM EPA 600/R-93/116 (<1%)
☐ PLM EPA NOB (<1%)
Point Count
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
Point Count w/Gravimetric
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
☐ NYS 198.1 (friable in NY)
☐ NYS 198.6 NOB (non-friable-NY)
☐ NYS 198.8 SOF-V
☐ NIOSH 9002 (<1%)

TEM – Air ☐ 4-4.5hr TAT (AHERA only)
☐ AHERA 40 CFR, Part 763
☐ NIOSH 7402
☐ EPA Level II
☐ ISO 10312

TEM - Bulk
☐ TEM EPA NOB
☐ NYS NOB 198.4 (non-friable-NY)
☐ Chatfield SOP
☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
Fibers >10µm ☐ Waste ☐ Drinking
All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
☐ Microvac - ASTM D 5755
☐ Wipe - ASTM D6480
☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
☐ PLM EPA 600/R-93/116 with milling prep (<1%)
☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)
☐ TEM Qualitative via Filtration Prep
☐ TEM Qualitative via Drop Mount Prep
☐ Cincinnati Method EPA 600/R-04/004 – PLM/TEM (BC only)

Other:
☐

☐ **Check For Positive Stop – Clearly Identify Homogenous Group**

Filter Pore Size (Air Samples): ☐ 0.8µm ☐ 0.45µm

Samplers Name: Andrew Cawrse **Samplers Signature:** Andrew C

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
1-26	Pile 1 concrete and black coating slab		7/10/17
1-27	Pile 1 misc. material - insulation		↓
1-28	Pile 1 misc. material - black coating		↓

Client Sample # (s): - **Total # of Samples:**

Relinquished (Client): Andrew C **Date:** 7/10/17 **Time:** 16:00

Received (Lab): R.C **Date:** 7.11.17 **Time:** 8:30cm

Comments/Special Instructions: Tesa.

Controlled Document – Asbestos COC – R10 – 05/09/2016

Appendix G2

Analytical Data Reports - Soil

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

May 19, 2017

Andrew Cawrse
Natural Resource Technology
234 W Florida St
Milwaukee, WI 53204

RE: Project: 2133 SOLVAY COKE
Pace Project No.: 40150126

Dear Andrew Cawrse:
Enclosed are the analytical results for sample(s) received by the laboratory on May 18, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brian Basten
brian.basten@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: NRT Data, Natural Resource Technologies
Brian Hennings, NATURAL RESOURCE TECHNOLOGY
Steve Wiskes, Natural Resources Technologies

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: 2133 SOLVAY COKE
Pace Project No.: 40150126

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: 2133 SOLVAY COKE
Pace Project No.: 40150126

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40150126001	**051617001**	Solid	05/16/17 15:30	05/18/17 10:00
40150126002	**051617002**	Solid	05/16/17 00:00	05/18/17 10:00

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Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: 2133 SOLVAY COKE
Pace Project No.: 40150126

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40150126001	**051617001**	WI MOD DRO	ABF	1
		EPA 8260	SMT	64
		ASTM D2974-87	AH	1
40150126002	**051617002**	EPA 8260	SMT	64

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 2133 SOLVAY COKE
Pace Project No.: 40150126

Sample: 051617001 **Lab ID: 40150126001** Collected: 05/16/17 15:30 Received: 05/18/17 10:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	**115000**	mg/kg	15200	4530	150	05/18/17 13:59	05/19/17 12:01		DC
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	630-20-6	W
1,1,1-Trichloroethane	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	71-55-6	W
1,1,2,2-Tetrachloroethane	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	79-34-5	L1,W
1,1,2-Trichloroethane	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	79-00-5	W
1,1-Dichloroethane	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	75-34-3	W
1,1-Dichloroethene	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	75-35-4	W
1,1-Dichloropropene	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	563-58-6	W
1,2,3-Trichlorobenzene	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	87-61-6	W
1,2,3-Trichloropropane	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	96-18-4	W
1,2,4-Trichlorobenzene	**<380000**	ug/kg	2000000	380000	8000	05/19/17 08:00	05/19/17 10:49	120-82-1	W
1,2,4-Trimethylbenzene	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	95-63-6	W
1,2-Dibromo-3-chloropropane	**<730000**	ug/kg	2000000	730000	8000	05/19/17 08:00	05/19/17 10:49	96-12-8	W
1,2-Dibromoethane (EDB)	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	106-93-4	W
1,2-Dichlorobenzene	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	95-50-1	W
1,2-Dichloroethane	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	107-06-2	W
1,2-Dichloropropane	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	78-87-5	W
1,3,5-Trimethylbenzene	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	108-67-8	W
1,3-Dichlorobenzene	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	541-73-1	W
1,3-Dichloropropane	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	142-28-9	W
1,4-Dichlorobenzene	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	106-46-7	W
2,2-Dichloropropane	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	594-20-7	W
2-Chlorotoluene	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	95-49-8	W
4-Chlorotoluene	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	106-43-4	W
Benzene	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	71-43-2	W
Bromobenzene	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	108-86-1	W
Bromochloromethane	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	74-97-5	W
Bromodichloromethane	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	75-27-4	W
Bromoform	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	75-25-2	W
Bromomethane	**<559000**	ug/kg	2000000	559000	8000	05/19/17 08:00	05/19/17 10:49	74-83-9	W
Carbon tetrachloride	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	56-23-5	W
Chlorobenzene	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	108-90-7	W
Chloroethane	**<536000**	ug/kg	2000000	536000	8000	05/19/17 08:00	05/19/17 10:49	75-00-3	W
Chloroform	**<372000**	ug/kg	2000000	372000	8000	05/19/17 08:00	05/19/17 10:49	67-66-3	W
Chloromethane	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	74-87-3	W
Dibromochloromethane	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	124-48-1	W
Dibromomethane	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	74-95-3	W
Dichlorodifluoromethane	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	75-71-8	W
Diisopropyl ether	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	108-20-3	W
Ethylbenzene	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	100-41-4	W
Hexachloro-1,3-butadiene	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	87-68-3	W
Isopropylbenzene (Cumene)	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	98-82-8	W
Methyl-tert-butyl ether	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	1634-04-4	W

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 2133 SOLVAY COKE
Pace Project No.: 40150126

Sample: 051617001 **Lab ID: 40150126001** Collected: 05/16/17 15:30 Received: 05/18/17 10:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Methylene Chloride	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	75-09-2	W
Naphthalene	**16200000**	ug/kg	2410000	386000	8000	05/19/17 08:00	05/19/17 10:49	91-20-3	
Styrene	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	100-42-5	W
Tetrachloroethene	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	127-18-4	W
Toluene	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	108-88-3	W
Trichloroethene	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	79-01-6	W
Trichlorofluoromethane	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	75-69-4	W
Vinyl chloride	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	75-01-4	W
cis-1,2-Dichloroethene	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	156-59-2	W
cis-1,3-Dichloropropene	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	10061-01-5	W
m&p-Xylene	**<400000**	ug/kg	960000	400000	8000	05/19/17 08:00	05/19/17 10:49	179601-23-1	W
n-Butylbenzene	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	104-51-8	W
n-Propylbenzene	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	103-65-1	W
o-Xylene	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	95-47-6	W
p-Isopropyltoluene	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	99-87-6	W
sec-Butylbenzene	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	135-98-8	W
tert-Butylbenzene	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	98-06-6	W
trans-1,2-Dichloroethene	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	156-60-5	W
trans-1,3-Dichloropropene	**<200000**	ug/kg	480000	200000	8000	05/19/17 08:00	05/19/17 10:49	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	0	%	68-126		8000	05/19/17 08:00	05/19/17 10:49	1868-53-7	S4
Toluene-d8 (S)	0	%	68-149		8000	05/19/17 08:00	05/19/17 10:49	2037-26-5	S4
4-Bromofluorobenzene (S)	0	%	58-141		8000	05/19/17 08:00	05/19/17 10:49	460-00-4	S4
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**17.1**	%	0.10	0.10	1		05/18/17 16:15		

Sample: 051617002 **Lab ID: 40150126002** Collected: 05/16/17 00:00 Received: 05/18/17 10:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	630-20-6	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	71-55-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	79-34-5	L1,W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	79-00-5	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	75-34-3	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	75-35-4	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	563-58-6	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	87-61-6	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	96-18-4	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	05/19/17 08:00	05/19/17 08:56	120-82-1	W

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(920)469-2436

ANALYTICAL RESULTS

Project: 2133 SOLVAY COKE
Pace Project No.: 40150126

Sample: 051617002 **Lab ID: 40150126002** Collected: 05/16/17 00:00 Received: 05/18/17 10:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	95-63-6	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	05/19/17 08:00	05/19/17 08:56	96-12-8	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	106-93-4	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	95-50-1	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	107-06-2	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	78-87-5	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	108-67-8	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	541-73-1	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	142-28-9	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	106-46-7	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	594-20-7	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	106-43-4	W
Benzene	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	05/19/17 08:00	05/19/17 08:56	74-83-9	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	05/19/17 08:00	05/19/17 08:56	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	05/19/17 08:00	05/19/17 08:56	67-66-3	W
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	74-87-3	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	124-48-1	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	74-95-3	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	75-71-8	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	98-82-8	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	1634-04-4	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	75-09-2	W
Naphthalene	**<40.0**	ug/kg	250	40.0	1	05/19/17 08:00	05/19/17 08:56	91-20-3	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	100-42-5	W
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	108-88-3	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	75-69-4	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	75-01-4	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	156-59-2	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	10061-01-5	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	05/19/17 08:00	05/19/17 08:56	179601-23-1	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	104-51-8	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	103-65-1	W

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ANALYTICAL RESULTS

Project: 2133 SOLVAY COKE
Pace Project No.: 40150126

Sample: 051617002 **Lab ID: 40150126002** Collected: 05/16/17 00:00 Received: 05/18/17 10:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	95-47-6	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	99-87-6	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	98-06-6	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	156-60-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	05/19/17 08:00	05/19/17 08:56	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	96	%	68-126		1	05/19/17 08:00	05/19/17 08:56	1868-53-7	
Toluene-d8 (S)	94	%	68-149		1	05/19/17 08:00	05/19/17 08:56	2037-26-5	
4-Bromofluorobenzene (S)	83	%	58-141		1	05/19/17 08:00	05/19/17 08:56	460-00-4	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY COKE
Pace Project No.: 40150126

QC Batch: 256190 Analysis Method: EPA 8260
QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List
Associated Lab Samples: 40150126001, 40150126002

METHOD BLANK: 1509978 Matrix: Solid
Associated Lab Samples: 40150126001, 40150126002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<13.7	50.0	05/19/17 08:33	
1,1,1-Trichloroethane	ug/kg	<14.4	50.0	05/19/17 08:33	
1,1,2,2-Tetrachloroethane	ug/kg	<17.5	50.0	05/19/17 08:33	
1,1,2-Trichloroethane	ug/kg	<20.2	50.0	05/19/17 08:33	
1,1-Dichloroethane	ug/kg	<17.6	50.0	05/19/17 08:33	
1,1-Dichloroethene	ug/kg	<17.6	50.0	05/19/17 08:33	
1,1-Dichloropropene	ug/kg	<14.0	50.0	05/19/17 08:33	
1,2,3-Trichlorobenzene	ug/kg	<17.0	50.0	05/19/17 08:33	
1,2,3-Trichloropropane	ug/kg	<22.3	50.0	05/19/17 08:33	
1,2,4-Trichlorobenzene	ug/kg	<47.6	250	05/19/17 08:33	
1,2,4-Trimethylbenzene	ug/kg	<12.2	50.0	05/19/17 08:33	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	250	05/19/17 08:33	
1,2-Dibromoethane (EDB)	ug/kg	<14.7	50.0	05/19/17 08:33	
1,2-Dichlorobenzene	ug/kg	<16.2	50.0	05/19/17 08:33	
1,2-Dichloroethane	ug/kg	<15.0	50.0	05/19/17 08:33	
1,2-Dichloropropane	ug/kg	<16.8	50.0	05/19/17 08:33	
1,3,5-Trimethylbenzene	ug/kg	<14.5	50.0	05/19/17 08:33	
1,3-Dichlorobenzene	ug/kg	<13.2	50.0	05/19/17 08:33	
1,3-Dichloropropane	ug/kg	<12.0	50.0	05/19/17 08:33	
1,4-Dichlorobenzene	ug/kg	<15.9	50.0	05/19/17 08:33	
2,2-Dichloropropane	ug/kg	<12.6	50.0	05/19/17 08:33	
2-Chlorotoluene	ug/kg	<15.8	50.0	05/19/17 08:33	
4-Chlorotoluene	ug/kg	<13.0	50.0	05/19/17 08:33	
Benzene	ug/kg	<9.2	20.0	05/19/17 08:33	
Bromobenzene	ug/kg	<20.6	50.0	05/19/17 08:33	
Bromochloromethane	ug/kg	<21.4	50.0	05/19/17 08:33	
Bromodichloromethane	ug/kg	<9.8	50.0	05/19/17 08:33	
Bromoform	ug/kg	<19.8	50.0	05/19/17 08:33	
Bromomethane	ug/kg	<69.9	250	05/19/17 08:33	
Carbon tetrachloride	ug/kg	<12.1	50.0	05/19/17 08:33	
Chlorobenzene	ug/kg	<14.8	50.0	05/19/17 08:33	
Chloroethane	ug/kg	<67.0	250	05/19/17 08:33	
Chloroform	ug/kg	<46.4	250	05/19/17 08:33	
Chloromethane	ug/kg	<20.4	50.0	05/19/17 08:33	
cis-1,2-Dichloroethene	ug/kg	<16.6	50.0	05/19/17 08:33	
cis-1,3-Dichloropropene	ug/kg	<16.6	50.0	05/19/17 08:33	
Dibromochloromethane	ug/kg	<17.9	50.0	05/19/17 08:33	
Dibromomethane	ug/kg	<19.3	50.0	05/19/17 08:33	
Dichlorodifluoromethane	ug/kg	<12.3	50.0	05/19/17 08:33	
Diisopropyl ether	ug/kg	<17.7	50.0	05/19/17 08:33	
Ethylbenzene	ug/kg	<12.4	50.0	05/19/17 08:33	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: 2133 SOLVAY COKE
Pace Project No.: 40150126

METHOD BLANK: 1509978 Matrix: Solid
Associated Lab Samples: 40150126001, 40150126002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/kg	28.6J	50.0	05/19/17 08:33	
Isopropylbenzene (Cumene)	ug/kg	<12.6	50.0	05/19/17 08:33	
m&p-Xylene	ug/kg	<34.4	100	05/19/17 08:33	
Methyl-tert-butyl ether	ug/kg	<12.7	50.0	05/19/17 08:33	
Methylene Chloride	ug/kg	<16.2	50.0	05/19/17 08:33	
n-Butylbenzene	ug/kg	<10.5	50.0	05/19/17 08:33	
n-Propylbenzene	ug/kg	<11.6	50.0	05/19/17 08:33	
Naphthalene	ug/kg	<40.0	250	05/19/17 08:33	
o-Xylene	ug/kg	<14.0	50.0	05/19/17 08:33	
p-Isopropyltoluene	ug/kg	<12.0	50.0	05/19/17 08:33	
sec-Butylbenzene	ug/kg	<11.9	50.0	05/19/17 08:33	
Styrene	ug/kg	<9.0	50.0	05/19/17 08:33	
tert-Butylbenzene	ug/kg	<9.5	50.0	05/19/17 08:33	
Tetrachloroethene	ug/kg	<12.9	50.0	05/19/17 08:33	
Toluene	ug/kg	<11.2	50.0	05/19/17 08:33	
trans-1,2-Dichloroethene	ug/kg	<16.5	50.0	05/19/17 08:33	
trans-1,3-Dichloropropene	ug/kg	<14.4	50.0	05/19/17 08:33	
Trichloroethene	ug/kg	<23.6	50.0	05/19/17 08:33	
Trichlorofluoromethane	ug/kg	<24.7	50.0	05/19/17 08:33	
Vinyl chloride	ug/kg	<21.1	50.0	05/19/17 08:33	
4-Bromofluorobenzene (S)	%	86	58-141	05/19/17 08:33	
Dibromofluoromethane (S)	%	102	68-126	05/19/17 08:33	
Toluene-d8 (S)	%	100	68-149	05/19/17 08:33	

LABORATORY CONTROL SAMPLE: 1509979

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2580	103	61-122	
1,1,2,2-Tetrachloroethane	ug/kg	2500	3130	125	77-124	L1
1,1,2-Trichloroethane	ug/kg	2500	2860	115	80-120	
1,1-Dichloroethane	ug/kg	2500	2530	101	63-120	
1,1-Dichloroethene	ug/kg	2500	2490	100	53-117	
1,2,4-Trichlorobenzene	ug/kg	2500	2370	95	78-122	
1,2-Dibromo-3-chloropropane	ug/kg	2500	2800	112	49-140	
1,2-Dibromoethane (EDB)	ug/kg	2500	2790	112	84-124	
1,2-Dichlorobenzene	ug/kg	2500	2640	105	80-120	
1,2-Dichloroethane	ug/kg	2500	2740	110	56-135	
1,2-Dichloropropane	ug/kg	2500	2870	115	77-122	
1,3-Dichlorobenzene	ug/kg	2500	2660	106	80-120	
1,4-Dichlorobenzene	ug/kg	2500	2650	106	80-120	
Benzene	ug/kg	2500	2590	103	66-121	
Bromodichloromethane	ug/kg	2500	2950	118	62-135	
Bromoform	ug/kg	2500	2550	102	68-126	
Bromomethane	ug/kg	2500	2350	94	29-137	

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REPORT OF LABORATORY ANALYSIS

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 2133 SOLVAY COKE
Pace Project No.: 40150126

LABORATORY CONTROL SAMPLE: 1509979

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/kg	2500	2370	95	57-130	
Chlorobenzene	ug/kg	2500	2670	107	80-120	
Chloroethane	ug/kg	2500	2310	93	36-144	
Chloroform	ug/kg	2500	2530	101	69-115	
Chloromethane	ug/kg	2500	2000	80	32-126	
cis-1,2-Dichloroethene	ug/kg	2500	2420	97	65-115	
cis-1,3-Dichloropropene	ug/kg	2500	2820	113	70-119	
Dibromochloromethane	ug/kg	2500	2920	117	70-124	
Dichlorodifluoromethane	ug/kg	2500	1920	77	10-99	
Ethylbenzene	ug/kg	2500	2590	104	80-122	
Isopropylbenzene (Cumene)	ug/kg	2500	2540	102	80-120	
m&p-Xylene	ug/kg	5000	5160	103	80-123	
Methyl-tert-butyl ether	ug/kg	2500	3170	127	63-134	
Methylene Chloride	ug/kg	2500	2420	97	56-123	
o-Xylene	ug/kg	2500	2560	103	77-127	
Styrene	ug/kg	2500	2370	95	81-124	
Tetrachloroethene	ug/kg	2500	2830	113	77-131	
Toluene	ug/kg	2500	2750	110	80-120	
trans-1,2-Dichloroethene	ug/kg	2500	2470	99	66-109	
trans-1,3-Dichloropropene	ug/kg	2500	2600	104	68-118	
Trichloroethene	ug/kg	2500	2670	107	79-120	
Trichlorofluoromethane	ug/kg	2500	2440	97	37-149	
Vinyl chloride	ug/kg	2500	2380	95	43-128	
4-Bromofluorobenzene (S)	%			92	58-141	
Dibromofluoromethane (S)	%			101	68-126	
Toluene-d8 (S)	%			99	68-149	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1509980 1509981

Parameter	Units	40150175005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/kg				1180	1130				4	20	
1,1,2,2-Tetrachloroethane	ug/kg				1450	1520				5	20	
1,1,2-Trichloroethane	ug/kg				1370	1420				4	20	
1,1-Dichloroethane	ug/kg				1220	1190				3	20	
1,1-Dichloroethene	ug/kg				1090	1040				5	23	
1,2,4-Trichlorobenzene	ug/kg				1360	1280				6	20	
1,2-Dibromo-3-chloropropane	ug/kg				1320	1420				7	22	
1,2-Dibromoethane (EDB)	ug/kg				1320	1330				1	20	
1,2-Dichlorobenzene	ug/kg				1320	1300				2	20	
1,2-Dichloroethane	ug/kg				1270	1270				0	20	
1,2-Dichloropropane	ug/kg				1360	1340				1	20	
1,3-Dichlorobenzene	ug/kg				1340	1330				1	20	
1,4-Dichlorobenzene	ug/kg				1280	1310				2	20	

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(920)469-2436

QUALITY CONTROL DATA

Project: 2133 SOLVAY COKE
Pace Project No.: 40150126

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1509980 1509981

Parameter	Units	40150175005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/kg				1220	1200				1	20	
Bromodichloromethane	ug/kg				1420	1330				6	20	
Bromoform	ug/kg				1240	1280				3	20	
Bromomethane	ug/kg				1060	976				8	20	
Carbon tetrachloride	ug/kg				1100	1070				3	20	
Chlorobenzene	ug/kg				1290	1310				2	20	
Chloroethane	ug/kg				1100	1020				7	20	
Chloroform	ug/kg				1200	1220				2	20	
Chloromethane	ug/kg				792	750				5	20	
cis-1,2-Dichloroethene	ug/kg				1170	1150				1	20	
cis-1,3-Dichloropropene	ug/kg				1280	1260				1	20	
Dibromochloromethane	ug/kg				1360	1370				0	20	
Dichlorodifluoromethane	ug/kg				461	413				11	33	
Ethylbenzene	ug/kg				1170	1150				2	20	
Isopropylbenzene (Cumene)	ug/kg				1110	1080				2	20	
m&p-Xylene	ug/kg				2400	2430				1	20	
Methyl-tert-butyl ether	ug/kg				1430	1480				4	20	
Methylene Chloride	ug/kg				1210	1200				1	20	
o-Xylene	ug/kg				1190	1170				2	20	
Styrene	ug/kg				1170	1160				0	20	
Tetrachloroethene	ug/kg				1280	1280				0	20	
Toluene	ug/kg				1310	1260				3	20	
trans-1,2-Dichloroethene	ug/kg				1240	1150				8	20	
trans-1,3-Dichloropropene	ug/kg				1240	1250				1	20	
Trichloroethene	ug/kg				1250	1230				1	20	
Trichlorofluoromethane	ug/kg				946	885				7	24	
Vinyl chloride	ug/kg				938	862				8	20	
4-Bromofluorobenzene (S)	%						77	86	58-141			
Dibromofluoromethane (S)	%						80	87	68-126			
Toluene-d8 (S)	%						80	90	68-149			

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QUALITY CONTROL DATA

Project: 2133 SOLVAY COKE
Pace Project No.: 40150126

QC Batch: 256091
QC Batch Method: WI MOD DRO
Analysis Method: WI MOD DRO
Analysis Description: WIDRO GCS
Associated Lab Samples: 40150126001

METHOD BLANK: 1509484
Matrix: Solid
Associated Lab Samples: 40150126001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics	mg/kg	<1.3	4.4	05/19/17 10:39	

LABORATORY CONTROL SAMPLE & LCSD: 1509485 1509486

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/kg	40	36.1	37.5	90	94	70-120	4	20	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY COKE
Pace Project No.: 40150126

QC Batch: 256114
QC Batch Method: ASTM D2974-87
Associated Lab Samples: 40150126001

Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture

SAMPLE DUPLICATE: 1509661

Parameter	Units	40149931005 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	12.3	12.9	4	10	

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QUALIFIERS

Project: 2133 SOLVAY COKE
Pace Project No.: 40150126

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

DC	Chromatographic pattern inconsistent with typical Diesel Fuel.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results may be biased high.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.
W	Non-detect results are reported on a wet weight basis.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 2133 SOLVAY COKE
Pace Project No.: 40150126

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40150126001	**051617001**	WI MOD DRO	256091	WI MOD DRO	256118
40150126001	**051617001**	EPA 5035/5030B	256190	EPA 8260	256192
40150126002	**051617002**	EPA 5035/5030B	256190	EPA 8260	256192
40150126001	**051617001**	ASTM D2974-87	256114		

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4015012.6

Level II

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

Pace Analytical®
www.pacelabs.com

Courier: Pace/CS Logistics

COC # 2133-0517-001

QC: DLB 5/17/17

CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	Natural Resource Tech
Branch/Location:	Milwaukee, WI
Project Contact:	Andrew Cawrse
Phone:	414-837-3645
Project Number:	2133
Project Name:	Solvay Coke
Project State:	WI
Sampled By (Print):	Andrew Cawrse
Sampled By (Sign):	
PO #:	3400010643
Regulatory Program:	

Quote #:	
Mail To Contact:	gdsdata@obg.com
Mail To Company:	Natural Resource Tech
Mail To Address:	234 W Florida St Milwaukee WI
Invoice To Contact:	Accounts Payable
Invoice To Company:	WEC Business Services
Invoice To Address:	PO Box 19001 Green Bay, WI
Invoice To Phone:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes

A = Air	W = Water
B = Biota	DW = Drinking Water
C = Charcoal	GW = Ground Water
O = Oil	SW = Surface Water
S = Soil	WW = Waste Water
SI = Sludge	WP = Wipe

FILTERED? (YES/NO)
PRESERVATION (CODE)*

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Y/N	Pick Letter	VOC 8260	DRO WI Mod Ext	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
					n	n					
					F	A					
001	051617001	5/16/17	15:30	S	X	X			1-40z 40mlV F 1-403qF	Screen 1-403pA	
002	051617002	—	—	—	X					Trip Blank	

KT 5/18/17

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed: ASAP 5/19/17

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Andrew Cawrse	5/17/17 10:00	Kate Schramm Pace	5/18/17 0920

PACE Project No.: 4015012.6

Receipt Temp = 1.01 °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal Present / Not Present Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

Custody Seal # 2133-01 & 02

ORIGINAL

40150126

From: <notifications@cslog.com>
To: <Alee.Her@pacelabs.com>
Date: 5/18/2017 9:35 AM
Subject: Auto-Notification Shipment #1880.051717

The following shipment sent by Alee Her of PACE
has been delivered and signed for by: A Lee @ 05/18/2017 09:35

OrderTrackingID: 1880.051717
Ref#: Green Bay
Ref#2: Waukesha
Pieces: 1
Weight: 1.00

[Pickup]
CS Logistics MKE
11001 W Mitchell St
Milwaukee WI, 53214-3805

[Delivery]
PACE Labs Green Bay
1241 Bellevue St
Green Bay WI, 54302-2156

If you would like to track this shipment online, please visit:
http://www.cslogisticsinc.com/xcelerator/Online/QuickTrack.aspx?OrderTrackingID=1880.051717&Key=4EEA5

[Shipment delivered by CS Logistics, Inc.]

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Sample Condition Upon Receipt

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical™

Project #:

WO# : 40150126

40150126

Client Name: NRT

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace ☑ Other: CS Logistics

Tracking #: 1880.051717

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☑ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other

Thermometer Used NA **Type of Ice:** (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: /Corr: R01 **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Person examining contents:
Date: 5/18/17
Initials: KB

Temp should be above freezing to 6°C for all sample except Biota.
Frozen Biota Samples should be received ≤ 0°C.

				Comments:
Chain of Custody Present:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes	☐No		Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A	6.
Rush Turn Around Time Requested:	☑Yes	☐No	☐N/A	7.
Sufficient Volume:	☑Yes	☐No	☐N/A	8.
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☑Yes	☐No	☐N/A	
-Pace IR Containers Used:	☐Yes	☐No	☑N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11.
Sample Labels match COC:	☑Yes	☐No	☐N/A	12.
-Includes date/time/ID/Analysis Matrix: S				
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes	☐No	☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes	☐No	☑N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes	☑No		Initial when completed / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	14.
Trip Blank Present:	☑Yes	☐No	☐N/A	15.
Trip Blank Custody Seals Present —	☑Yes	☐No	☐N/A	
Pace Trip Blank Lot # (if purchased):				

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution: 001 will be placed in free product due to odor KB 5/18/17

Project Manager Review: Date: 5-18-17

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

June 06, 2017

Andrew Cawrse
Natural Resource Technology
234 W Florida St
Milwaukee, WI 53204

RE: Project: 2133 SOLVAY
Pace Project No.: 40151038

Dear Andrew Cawrse:
Enclosed are the analytical results for sample(s) received by the laboratory on June 03, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brian Basten
brian.basten@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: NRT Data, Natural Resource Technologies
Brian Hennings, NATURAL RESOURCE TECHNOLOGY

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CERTIFICATIONS

Project: 2133 SOLVAY
Pace Project No.: 40151038

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

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SAMPLE SUMMARY

Project: 2133 SOLVAY
Pace Project No.: 40151038

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40151038001	**060217001**	Solid	06/02/17 08:30	06/03/17 10:30
40151038002	**060217002**	Solid	06/02/17 08:40	06/03/17 10:30

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SAMPLE ANALYTE COUNT

Project: 2133 SOLVAY
Pace Project No.: 40151038

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40151038001	**060217001**	WI MOD DRO	ABF	1
40151038002	**060217002**	WI MOD DRO	ABF	1

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40151038

Sample: 060217001 **Lab ID: 40151038001** Collected: 06/02/17 08:30 Received: 06/03/17 10:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	**3400**	mg/kg	1180	352	10	06/06/17 07:56	06/06/17 13:42		DC
	Analytical Method: ASTM D2974-87								
Percent Moisture	**12.0**	%	0.10	0.10	1		06/06/17 10:42		

Sample: 060217002 **Lab ID: 40151038002** Collected: 06/02/17 08:40 Received: 06/03/17 10:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	**516**	mg/kg	61.3	18.3	15	06/06/17 07:56	06/06/17 13:51		DC
	Analytical Method: ASTM D2974-87								
Percent Moisture	**10.6**	%	0.10	0.10	1		06/06/17 10:42		

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151038

QC Batch: 257699 Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS
Associated Lab Samples: 40151038001, 40151038002

METHOD BLANK: 1518383 Matrix: Solid
Associated Lab Samples: 40151038001, 40151038002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics	mg/kg	<1.3	4.4	06/06/17 12:47	

LABORATORY CONTROL SAMPLE & LCSD: 1518384 1518385

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/kg	40	44.6	41.3	111	103	70-120	8	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151038

QC Batch: 257741
QC Batch Method: ASTM D2974-87
Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40151038001, 40151038002

SAMPLE DUPLICATE: 1518553

Parameter	Units	40151058012 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.8	17.3	3	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: 2133 SOLVAY
Pace Project No.: 40151038

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

DC	Chromatographic pattern inconsistent with typical Diesel Fuel.

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Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 2133 SOLVAY
Pace Project No.: 40151038

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40151038001	**060217001**	WI MOD DRO	257699	WI MOD DRO	257744
40151038002	**060217002**	WI MOD DRO	257699	WI MOD DRO	257744

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UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

Courier: Pace/CS Logistics

Page 1 of 1 — 40151038

COC# 2133-0617-001

QC: DLB 6/21/17

CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	Natural Resource Tech
Branch/Location:	Milwaukee, WI
Project Contact:	Andrew Cawse
Phone:	414-837-3645
Project Number:	2133
Project Name:	Solvay
Project State:	WI
Sampled By (Print):	Andrew Cawse
Sampled By (Sign):	
PO #:	3400010643
Regulatory Program:	

Quote #:	
Mail To Contact:	gdsdata@obg.com
Mail To Company:	Natural Resource Tech
Mail To Address:	234 W Florida St Milwaukee, WI
Invoice To Contact:	Accounts Payable
Invoice To Company:	WEC Business Services
Invoice To Address:	PO Box 19001 Green Bay, WI
Invoice To Phone:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes
A = Air, B = Biota, C = Charcoal, O = Oil, S = Soil, SL = Sludge, W = Water, DW = Drinking Water, GW = Ground Water, SW = Surface Water, WW = Waste Water, WP = Wipe

FILTERED? (YES/NO)
PRESERVATION (CODE)*

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Y/N	Pick Letter	Analyses Requested: DRO WI mod Ext	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	06021701	6/21/17	8:30	S		N		1-4oz cg A		
002	06021702	"	8:40	S		A	X			
							X			

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed: ASAP 6/15/17

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Andrew Cawse	6/21/17 10:30	Zach Schram Pace	6/23/17 0815

PACE Project No.: 40151038

Receipt Temp = 2.0 °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal: Present / Not Present; Intact / Not Intact

Custody Seal # 2133-01 & 02

C019a(27Jun2006)

Version 6.0 06/14/06

Level II

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

Page 1 of

40151038

Courier: Pace/CS Logistics

COC# 2133-0617-001

Page 11 of 19

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QC: DLB 6/15/17

CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	Natural Resource Tech
Branch/Location:	Milwaukee, WI
Project Contact:	Andrew Cawse
Phone:	414-837-3645
Project Number:	2133
Project Name:	Solvay Coke
Project State:	WI
Sampled By (Print):	Andrew Cawse
Sampled By (Sign):	Andrew
PO #:	3400010643
Regulatory Program:	

Quote #:	
Mail To Contact:	gdsdata@obg.com
Mail To Company:	Natural Resource Tech
Mail To Address:	234 W Florida St Milwaukee, WI
Invoice To Contact:	Accounts Payable
Invoice To Company:	WEC Business Services
Invoice To Address:	PO Box 19000 Green Bay, WI
Invoice To Phone:	

Data Package Options (billable)
- ☐ EPA Level III
- ☐ EPA Level IV

MS/MSD
- ☐ On your sample (billable)
- ☐ NOT needed on your sample

Matrix Codes

A = Air	W = Water
B = Biota	DW = Drinking Water
C = Charcoal	GW = Ground Water
O = Oil	SW = Surface Water
S = Soil	WW = Waste Water
SI = Sludge	WP = Wipe

FILTERED? (YES/NO)
PRESERVATION (CODE)*

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Y/N	Pick Letter	Analyses Requested: DRO w/ mod. Acid	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	060217001	6/2/17	8:30	S	N	A	X		1-40zp	
002	060217002	6/2/17	8:40	S	N	A	X			

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed: ASAP

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Andrew Cawse	6/15/17 10:30		
CS Logistics	6/16/17 1010	Pace	6/16/17 1010

PACE Project No.: 40151038

Receipt Temp = R01 °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal: Present / Not Present; Intact / Not Intact

C019a(27Jun2006)

Version 6.0, 06/14/06

Custody Seal # 2133-01+02

ORIGINAL

Y0151038

From: <notifications@cslog.com>
To: <gbsr@pacelabs.com>
Date: 6/3/2017 1:51 AM
Subject: Auto-Notification Shipment #1448.060117

The following shipment sent by Alee Her of PACE
has been delivered and signed for by: CSL warehouse MIKE @ 06/03/2017 01:51

OrderTrackingID: 1448.060117
Ref#: Schaumburg
Pieces: 4
Weight: 1.00

[Pickup]
PACE Labs Schaumburg
870 E Higgins Rd
Suite 143
Schaumburg IL, 60173-4796

[Delivery]
CS Logistics MKE
11001 W Mitchell St
Milwaukee WI, 53214-3805

If you would like to track this shipment online, please visit:
http://www.cslogisticsinc.com/xcelerator/Online/QuickTrack.aspx?OrderTrackingID=1448.060117&Key=9E772

[Shipment delivered by CS Logistics, Inc.]

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Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Project #:

AFFIX WORKORDER LABEL HERE

Client Name: NRT

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: CSLogistics

Tracking #:

Custody Seal on Cooler/Box Present: ☐ yes ☐ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☐ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other

Thermometer Used NA **Type of Ice:** Wet Blue Dry None ☐ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: /Corr: RO1 **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☐ no

Person examining contents:
Date: 6/6/17
Initials:

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

		Comments:
Chain of Custody Present:	☐Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☐Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☐Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☐Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☐Yes ☐No ☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☐No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☐No ☐N/A	7.
Sufficient Volume:	☐Yes ☐No ☐N/A	8.
Correct Containers Used:	☐Yes ☐No ☐N/A	9.
-Pace Containers Used:	☐Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☐N/A	
Containers Intact:	☐Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☐N/A	11.
Sample Labels match COC:	☐Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: S		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes ☐No ☐N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes ☐No	Initial when completed / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☐N/A	14.
Trip Blank Present:	☐Yes ☐No ☐N/A	15.
Trip Blank Custody Seals Present	☐Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution: dry wt for WO 4015103 6/6/17

Project Manager Review: **Date:** 6-6-17

Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Project #: WO#: 40151038

Client Name: NRT

Courier: ☐ Fed Ex ☑ UPS ☐ Client ☐ Pace ☐ Other: CS Logistics

Tracking #: 1448.0160117

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other

Thermometer Used NA **Type of Ice:** (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: /Corr: R01 **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

Person examining contents:
Date: 6/3/17
Initials: KF

Comments:

Chain of Custody Present:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes	☐No		Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A	6.
Rush Turn Around Time Requested:	☑Yes	☐No	☐N/A	7. 6/5 KF 6/3/17
Sufficient Volume:	☐Yes	☑No	☐N/A	8. no dryweight volume KF 6/3/17
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☑Yes	☐No	☐N/A	
-Pace IR Containers Used:	☐Yes	☐No	☑N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11.
Sample Labels match COC:	☑Yes	☐No	☐N/A	12.
-Includes date/time/ID/Analysis Matrix: S				
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes	☐No	☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes	☐No	☑N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes	☑No		Initial when completed / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	14.
Trip Blank Present:	☐Yes	☐No	☑N/A	15.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if purchased):				

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: Date: 6-5-17

Level II SSM

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Courier: Pace/CS Logistics

QC:DLB 6/2/17

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

Page 1 of 4015 1038

COC# 2133-0617-001

CHAIN OF CUSTODY

(Please Print Clearly)	
Company Name:	Natural Resource Tech
Branch/Location:	Milwaukee, WI
Project Contact:	Andrew Cawrse
Phone:	414-837-3645
Project Number:	2133
Project Name:	Solvay
Project State:	WI
Sampled By (Print):	Andrew Cawrse
Sampled By (Sign):	Andrew
PO #:	3400010643
Regulatory Program:	

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

FILTERED? (YES/NO)
PRESERVATION (CODE)*

Quote #:	
Mail To Contact:	gdsdata@obg.com
Mail To Company:	Natural Resource Tech
Mail To Address:	234 W Florida St Milwaukee, WI
Invoice To Contact:	Accounts Payable
Invoice To Company:	WEC Business Services
Invoice To Address:	PO Box 19800 Green Bay, WI
Invoice To Phone:	

Data Package Options (billable)
- ☐ EPA Level III
- ☐ EPA Level IV

MS/MSD
- ☐ On your sample (billable)
- ☐ NOT needed on your sample

Matrix Codes
A = Air, B = Biota, C = Charcoal, O = Oil, S = Soil, SI = Sludge, W = Water, DW = Drinking Water, GW = Ground Water, SW = Surface Water, WW = Waste Water, WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Analyses Requested	DRO WI modified	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	060217001	6/2/17	8:30	S		X	1-4oz cg A		
002	060217002	↑	8:40	S		X	↓		

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed: ASAP 6/5/17

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Andrew Cawrse	6/2/17 10:30	Zak Johnson Pace	6/3/17 0815

PACE Project No. 4015 1038

Receipt Temp = R01 °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal
Present / Not Present
Intact / Not Intact

C019a(27Jun2006)

Custody Seal # 2133-01 + 02

Version 6.0 06/14/06

Page 15 of 19

Level II

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Courier: Pace/CS Logistics QC: DLB 6/15/17

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

Page 1 of

40151038

COC# 2133-0617-001

CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	Natural Resource Tech
Branch/Location:	Milwaukee, WI
Project Contact:	Andrew Caurse
Phone:	414-837-3645
Project Number:	2133
Project Name:	Solvay Coke
Project State:	WI
Sampled By (Print):	Andrew Caurse
Sampled By (Sign):	Andrew
PO #:	3400010643
Regulatory Program:	

Quote #:	
Mail To Contact:	gdsdata@obg.com
Mail To Company:	Natural Resource Tech
Mail To Address:	234 W Florida St Milwaukee, WI
Invoice To Contact:	Accounts Payable
Invoice To Company:	WEC Business Services
Invoice To Address:	PO Box 19000 Green Bay, WI
Invoice To Phone:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes

A = Air	W = Water
B = Biota	DW = Drinking Water
C = Charcoal	GW = Ground Water
O = Oil	SW = Surface Water
S = Soil	WW = Waste Water
SI = Sludge	WP = Wipe

FILTERED? (YES/NO)
PRESERVATION (CODE)*

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Y/N	Pick Letter	Analyses Requested: DRO w/ mod. Acid	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	060217001	6/2/17	8:30	S		N	A		1-40zp	
002	060217002	6/2/17	8:40	S		X	X			

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed: ASAP

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Andrew Caurse	6/15/17 10:30		
CS Logistics	6/16/17 1010	Pace	6/16/17 1010

PACE Project No.: 40151038

Receipt Temp = R01 °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal: Present / Not Present; Intact / Not Intact

Custody Seal # 2133-01+02

C019a(27Jun2006)

Version 6.0, 06/14/06

ORIGINAL

Y0151038

From: <notifications@cslog.com>
To: <gbsr@pacelabs.com>
Date: 6/3/2017 1:51 AM
Subject: Auto-Notification Shipment #1448.060117

The following shipment sent by Alee Her of PACE
has been delivered and signed for by: CSL warehouse MIKE @ 06/03/2017 01:51

OrderTrackingID: 1448.060117
Ref#: Schaumburg
Pieces: 4
Weight: 1.00

[Pickup]
PACE Labs Schaumburg
870 E Higgins Rd
Suite 143
Schaumburg IL, 60173-4796

[Delivery]
CS Logistics MKE
11001 W Mitchell St
Milwaukee WI, 53214-3805

If you would like to track this shipment online, please visit:
http://www.cslogisticsinc.com/xcelerator/Online/QuickTrack.aspx?OrderTrackingID=1448.060117&Key=9E772

[Shipment delivered by CS Logistics, Inc.]

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Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Project #:

AFFIX WORKORDER LABEL HERE

Client Name: NRT

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: CSLogistics

Tracking #:

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used NA **Type of Ice:** (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: /Corr: RO1 **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Person examining contents:
Date: 6/6/17
Initials:

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

				Comments:
Chain of Custody Present:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes	☐No		Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A	7.
Sufficient Volume:	☑Yes	☐No	☐N/A	8.
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☑Yes	☐No	☐N/A	
-Pace IR Containers Used:	☐Yes	☐No	☑N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11.
Sample Labels match COC:	☑Yes	☐No	☐N/A	12.
-Includes date/time/ID/Analysis Matrix: S				
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes	☐No	☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes	☐No	☑N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes	☑No		Initial when completed / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	14.
Trip Blank Present:	☐Yes	☐No	☑N/A	15.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if purchased):				

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution: dry wt for WO 40151038 AB 6/6/17

Project Manager Review: **Date:** 6-6-17

Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Project #: WO#: 40151038

Client Name: NRT

Courier: ☐ Fed Ex ☑ UPS ☐ Client ☐ Pace ☐ Other: CS Logistics

Tracking #: 1448.0160117

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other

Thermometer Used NA **Type of Ice:** (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: /Corr: R01 **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

Person examining contents:
Date: 6/3/17
Initials: KF

Comments:

Chain of Custody Present:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes	☐No		Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A	6.
Rush Turn Around Time Requested:	☑Yes	☐No	☐N/A	7. 6/5 KF 6/3/17
Sufficient Volume:	☐Yes	☑No	☐N/A	8. no dryweight volume KF 6/3/17
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☑Yes	☐No	☐N/A	
-Pace IR Containers Used:	☐Yes	☐No	☑N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11.
Sample Labels match COC:	☑Yes	☐No	☐N/A	12.
-Includes date/time/ID/Analysis Matrix: S				
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes	☐No	☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes	☐No	☑N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes	☑No		Initial when completed / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	14.
Trip Blank Present:	☐Yes	☐No	☑N/A	15.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if purchased):				

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: Date: 6-5-17

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

June 09, 2017

Andrew Cawrse
Natural Resource Technology
234 W Florida St
Milwaukee, WI 53204

RE: Project: 2133 SOLVAY
Pace Project No.: 40151222

Dear Andrew Cawrse:
Enclosed are the analytical results for sample(s) received by the laboratory on June 08, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brian Basten
brian.basten@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: NRT Data, Natural Resource Technologies
Brian Hennings, NATURAL RESOURCE TECHNOLOGY

REPORT OF LABORATORY ANALYSIS

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: 2133 SOLVAY
Pace Project No.: 40151222

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

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(920)469-2436

SAMPLE SUMMARY

Project: 2133 SOLVAY
Pace Project No.: 40151222

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40151222001	**060717001**	Solid	06/07/17 10:00	06/08/17 09:20

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SAMPLE ANALYTE COUNT

Project: 2133 SOLVAY
Pace Project No.: 40151222

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40151222001	**060717001**	WI MOD DRO	ABF	1
		ASTM D2974-87	SKW	1

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40151222

Sample: 060717001 **Lab ID: 40151222001** Collected: 06/07/17 10:00 Received: 06/08/17 09:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	**1170**	mg/kg	167	50.0	30	06/09/17 08:02	06/09/17 13:31		DC
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**41.6**	%	0.10	0.10	1		06/09/17 07:47		

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Green Bay, WI 54302
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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151222

QC Batch: 258103 Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS
Associated Lab Samples: 40151222001

METHOD BLANK: 1520551 Matrix: Solid
Associated Lab Samples: 40151222001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics	mg/kg	<1.3	4.4	06/09/17 12:44	

LABORATORY CONTROL SAMPLE & LCSD: 1520552 1520553

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/kg	40.1	36.7	38.6	92	97	70-120	5	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151222

QC Batch: 258105
QC Batch Method: ASTM D2974-87
Associated Lab Samples: 40151222001

Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture

SAMPLE DUPLICATE: 1520554

Parameter	Units	40151278001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	8.9	8.9	0	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Green Bay, WI 54302
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QUALIFIERS

Project: 2133 SOLVAY
Pace Project No.: 40151222

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

DC	Chromatographic pattern inconsistent with typical Diesel Fuel.

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Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 2133 SOLVAY
Pace Project No.: 40151222

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40151222001	**060717001**	WI MOD DRO	258103	WI MOD DRO	258165
40151222001	**060717001**	ASTM D2974-87	258105		

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Level II

Pace Analytical® Courier: Pace/CS Logistics
www.pacelabs.com

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

Page 1 of 1

4015 1222
COC # 2133-0617-002

CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	Natural Resource Tech
Branch/Location:	Milwaukee, WI
Project Contact:	Andrew Cawrse
Phone:	414-837-3645
Project Number:	2133
Project Name:	Solvay
Project State:	WI
Sampled By (Print):	Andrew Cawrse
Sampled By (Sign):	Andrew
PO #:	3400010643
Regulatory Program:	

Quote #:	
Mail To Contact:	gdsdata@obg.com
Mail To Company:	Natural Resource Tech
Mail To Address:	234 W Florida St Milwaukee WI
Invoice To Contact:	Accounts Payable
Invoice To Company:	WEC Business Services
Invoice To Address:	PO Box 19800 Green Bay, WI
Invoice To Phone:	

FILTERED? (YES/NO) — Y/N: N
PRESERVATION (CODE)* — Pick Letter: A

Data Package Options (billable)
- ☐ EPA Level III
- ☐ EPA Level IV

MS/MSD
- ☐ On your sample (billable)
- ☐ NOT needed on your sample

Matrix Codes
A = Air, B = Biota, C = Charcoal, O = Oil, S = Soil, SI = Sludge, W = Water, DW = Drinking Water, GW = Ground Water, SW = Surface Water, WW = Waste Water, WP = Wipe

Analyses Requested: DRO WI-mod. Acid

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	DRO WI-mod. Acid	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	060717001	6/7/17	10:00	S	X	1-4oz pA	1-4oz cg A	

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed: Rush ASAP 6/8/17

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Andrew	6/7/17 10:45	Kate Schramm Pace	6/8/17 0920
CS Logistics	6/8/17 0920	Kate Schramm Pace	6/8/17 ~~0920~~
		KS	6/8/17

PACE Project No. 4015 1222
Receipt Temp = R01 °C
Sample Receipt pH OK / Adjusted
Cooler Custody Seal Present / Not Present Intact / Not Intact

Custody Seal # 2133-01 & 02

JMK 6/7/17

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

~~40151244~~ 6/8/17

Page 1 of 1

40151222

Page 11 of 13

Level II

Pace Analytical®
www.pacelabs.com

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

Courier: Pace / CS Logistics

QC: GFF 6/8/17

Coc #2133-0617-002

CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	Natural Resource Tech
Branch/Location:	Milwaukee, WI
Project Contact:	Andrew Caurse
Phone:	414-837-3645
Project Number:	2133
Project Name:	Solvay
Project State:	WI
Sampled By (Print):	Andrew Caurse
Sampled By (Sign):	[signature]
PO #:	3400010643
Regulatory Program:	

Quote #:	
Mail To Contact:	gdsdata@obg.com
Mail To Company:	Natural Resource Tech
Mail To Address:	234 W Florida St Milwaukee, WI
Invoice To Contact:	Accounts Payable
Invoice To Company:	WEC Business Services
Invoice To Address:	PO Box 19800 Green Bay, WI
Invoice To Phone:	

FILTERED? (YES/NO)
PRESERVATION (CODE)*

Data Package Options (billable)
- ☐ EPA Level III
- ☐ EPA Level IV

MS/MSD
- ☐ On your sample (billable)
- ☐ NOT needed on your sample

Matrix Codes
A = Air, B = Biota, C = Charcoal, O = Oil, S = Soil, SI = Sludge, W = Water, DW = Drinking Water, GW = Ground Water, SW = Surface Water, WW = Waste Water, WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Analyses Requested	Y/N	Pick Letter								CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
						N	A										
						DRO WI-Modified											
001	060717001	6/7/17	10:00	S		X										1-4oz pA	

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
[signature]	6/8/17 11:30	Rachel Weeks Pace	6/8/17 1130

PACE Project No. ~~40151244~~ AMH 6/8/17

Receipt Temp = R01 °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal
Present / Not Present
Intact / Not Intact

Custody Seal # 2133-01 & 02

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical™

Project #: ~~40151244~~ MMH 6/8/17

AFFIX WORKORDER LABEL HERE
40151222

Client Name: NRT

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☑ Pace Other: _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other _____

Thermometer Used N/A **Type of Ice:** (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 2.0 /Corr: _____ **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Person examining contents:
Date: 6/8/17
Initials: KMW

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

				Comments:
Chain of Custody Present:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes	☐No		Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A	7.
Sufficient Volume:	☑Yes	☐No	☐N/A	8.
Correct Containers Used:	☑Yes	☐No	☐N/A	9. replacement dryweight volume
-Pace Containers Used:	☑Yes	☐No	☐N/A	
-Pace IR Containers Used:	☐Yes	☐No	☑N/A	KF 6/8/17
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☑No	☐N/A	11.
Sample Labels match COC:	☑Yes	☐No	☐N/A	12.
-Includes date/time/ID/Analysis Matrix: S				
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes	☐No	☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes	☐No	☑N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes	☑No		Initial when completed / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	14.
Trip Blank Present:	☐Yes	☐No	☑N/A	15.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if purchased): _____				

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** 6-9-17

Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Project #: **WO# : 40151222**

40151222

Client Name: NRT

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace ☑ Other: CS Logistics

Tracking #: 1501.0607 17, 1502.0607 17

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other

Thermometer Used NA **Type of Ice:** (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: /Corr: R01 **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Person examining contents:
Date: 6/8/17
Initials: KJ

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☑Yes ☐No ☐N/A	7. 6/8 KJ
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9. 40zp possible icemelt contamination
-Pace Containers Used:	☑Yes ☐No ☐N/A	Client will submit more volume
-Pace IR Containers Used:	☐Yes ☐No ☑N/A	6-9-17 per AC 6-8-17 BF KJ 6/8/17
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: S		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes ☐No ☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes ☑No	Initial when completed / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	14.
Trip Blank Present:	☐Yes ☐No ☑N/A	15.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: BF **Date:** 6-8-17

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

June 15, 2017

Andrew Cawrse
Natural Resource Technology
234 W Florida St
Milwaukee, WI 53204

RE: Project: 2133 SOLVAY
Pace Project No.: 40151482

Dear Andrew Cawrse:
Enclosed are the analytical results for sample(s) received by the laboratory on June 13, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Steven Mleczko for
Brian Basten
brian.basten@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: NRT Data, Natural Resource Technologies
Brian Hennings, NATURAL RESOURCE TECHNOLOGY

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CERTIFICATIONS

Project: 2133 SOLVAY
Pace Project No.: 40151482

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 2133 SOLVAY
Pace Project No.: 40151482

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40151482001	**061217001**	Solid	06/12/17 09:30	06/13/17 09:30
40151482002	**061217002**	Solid	06/12/17 09:45	06/13/17 09:30
40151482003	**061217003**	Solid	06/12/17 10:00	06/13/17 09:30
40151482004	**061217004**	Solid	06/12/17 00:00	06/13/17 09:30

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SAMPLE ANALYTE COUNT

Project: 2133 SOLVAY
Pace Project No.: 40151482

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40151482001	**061217001**	EPA 8082	BLM	10
		EPA 6020	DS1	7
		EPA 7471	AJT	1
		EPA 8270 by SIM	ARO	20
		EPA 8260	SMT	64
		ASTM D2974-87	KTS	1
40151482002	**061217002**	EPA 8082	BLM	10
		EPA 6020	DS1	7
		EPA 7471	AJT	1
		EPA 8270 by SIM	ARO	20
		EPA 8260	SMT	64
		ASTM D2974-87	KTS	1
40151482003	**061217003**	EPA 8082	BLM	10
		EPA 6020	DS1	7
		EPA 7471	AJT	1
		EPA 8270 by SIM	ARO	20
		EPA 8260	SMT	64
		ASTM D2974-87	KTS	1
40151482004	**061217004**	EPA 8260	SMT	64

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40151482

Sample: 061217001 **Lab ID: 40151482001** Collected: 06/12/17 09:30 Received: 06/13/17 09:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	**<27.6**	ug/kg	55.2	27.6	1	06/13/17 12:36	06/14/17 09:45	12674-11-2	
PCB-1221 (Aroclor 1221)	**<27.6**	ug/kg	55.2	27.6	1	06/13/17 12:36	06/14/17 09:45	11104-28-2	
PCB-1232 (Aroclor 1232)	**<27.6**	ug/kg	55.2	27.6	1	06/13/17 12:36	06/14/17 09:45	11141-16-5	
PCB-1242 (Aroclor 1242)	**<27.6**	ug/kg	55.2	27.6	1	06/13/17 12:36	06/14/17 09:45	53469-21-9	
PCB-1248 (Aroclor 1248)	**<27.6**	ug/kg	55.2	27.6	1	06/13/17 12:36	06/14/17 09:45	12672-29-6	
PCB-1254 (Aroclor 1254)	**79.3**	ug/kg	55.2	27.6	1	06/13/17 12:36	06/14/17 09:45	11097-69-1	
PCB-1260 (Aroclor 1260)	**<27.6**	ug/kg	55.2	27.6	1	06/13/17 12:36	06/14/17 09:45	11096-82-5	
PCB, Total	**79.3**	ug/kg	55.2	27.6	1	06/13/17 12:36	06/14/17 09:45	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	85	%	50-102		1	06/13/17 12:36	06/14/17 09:45	877-09-8	
Decachlorobiphenyl (S)	83	%	53-105		1	06/13/17 12:36	06/14/17 09:45	2051-24-3	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3050								
Arsenic	**5.9**	mg/kg	2.9	0.87	20	06/14/17 07:46	06/15/17 10:47	7440-38-2	
Barium	**56.2**	mg/kg	0.84	0.25	6.667	06/14/17 07:46	06/15/17 11:15	7440-39-3	
Cadmium	**0.39J**	mg/kg	2.2	0.32	20	06/14/17 07:46	06/15/17 10:47	7440-43-9	D3
Chromium	**16.5**	mg/kg	4.9	1.5	6.667	06/14/17 07:46	06/15/17 11:15	7440-47-3	
Lead	**85.0**	mg/kg	0.73	0.20	6.667	06/14/17 07:46	06/15/17 02:58	7439-92-1	M0
Selenium	**1.3J**	mg/kg	2.2	0.60	20	06/14/17 07:46	06/15/17 10:47	7782-49-2	D3
Silver	**<0.32**	mg/kg	1.1	0.32	20	06/14/17 07:46	06/15/17 10:47	7440-22-4	D3
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.059**	mg/kg	0.040	0.012	1	06/14/17 06:59	06/14/17 12:43	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**1480**	ug/kg	1140	342	80	06/14/17 08:46	06/15/17 10:49	83-32-9	
Acenaphthylene	**381J**	ug/kg	971	291	80	06/14/17 08:46	06/15/17 10:49	208-96-8	
Anthracene	**4440**	ug/kg	1680	504	80	06/14/17 08:46	06/15/17 10:49	120-12-7	
Benzo(a)anthracene	**11100**	ug/kg	935	280	80	06/14/17 08:46	06/15/17 10:49	56-55-3	
Benzo(a)pyrene	**10400**	ug/kg	739	222	80	06/14/17 08:46	06/15/17 10:49	50-32-8	
Benzo(b)fluoranthene	**14800**	ug/kg	830	249	80	06/14/17 08:46	06/15/17 10:49	205-99-2	
Benzo(g,h,i)perylene	**5170**	ug/kg	597	179	80	06/14/17 08:46	06/15/17 10:49	191-24-2	
Benzo(k)fluoranthene	**5980**	ug/kg	738	221	80	06/14/17 08:46	06/15/17 10:49	207-08-9	
Chrysene	**12000**	ug/kg	988	298	80	06/14/17 08:46	06/15/17 10:49	218-01-9	
Dibenz(a,h)anthracene	**1860**	ug/kg	657	197	80	06/14/17 08:46	06/15/17 10:49	53-70-3	
Fluoranthene	**28600**	ug/kg	1540	460	80	06/14/17 08:46	06/15/17 10:49	206-44-0	
Fluorene	**1830**	ug/kg	1220	365	80	06/14/17 08:46	06/15/17 10:49	86-73-7	
Indeno(1,2,3-cd)pyrene	**5150**	ug/kg	647	194	80	06/14/17 08:46	06/15/17 10:49	193-39-5	
1-Methylnaphthalene	**<355**	ug/kg	1180	355	80	06/14/17 08:46	06/15/17 10:49	90-12-0	
2-Methylnaphthalene	**<441**	ug/kg	1470	441	80	06/14/17 08:46	06/15/17 10:49	91-57-6	
Naphthalene	**<743**	ug/kg	2480	743	80	06/14/17 08:46	06/15/17 10:49	91-20-3	
Phenanthrene	**17500**	ug/kg	3420	1030	80	06/14/17 08:46	06/15/17 10:49	85-01-8	
Pyrene	**20200**	ug/kg	1320	398	80	06/14/17 08:46	06/15/17 10:49	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	0	%	19-96		80	06/14/17 08:46	06/15/17 10:49	321-60-8	S4

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40151482

Sample: 061217001 **Lab ID: 40151482001** Collected: 06/12/17 09:30 Received: 06/13/17 09:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Surrogates									
Terphenyl-d14 (S)	0	%	31-98		80	06/14/17 08:46	06/15/17 10:49	1718-51-0	S4
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	630-20-6	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	71-55-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	79-34-5	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	79-00-5	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	75-34-3	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	75-35-4	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	563-58-6	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	87-61-6	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	96-18-4	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	06/14/17 08:30	06/15/17 00:50	120-82-1	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	95-63-6	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	06/14/17 08:30	06/15/17 00:50	96-12-8	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	106-93-4	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	95-50-1	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	107-06-2	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	78-87-5	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	108-67-8	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	541-73-1	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	142-28-9	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	106-46-7	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	594-20-7	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	106-43-4	W
Benzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	06/14/17 08:30	06/15/17 00:50	74-83-9	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	06/14/17 08:30	06/15/17 00:50	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	06/14/17 08:30	06/15/17 00:50	67-66-3	W
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	74-87-3	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	124-48-1	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	74-95-3	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	75-71-8	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	98-82-8	W

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40151482

Sample: 061217001 **Lab ID: 40151482001** Collected: 06/12/17 09:30 Received: 06/13/17 09:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	1634-04-4	W
Methylene Chloride	**39.6J**	ug/kg	66.2	27.6	1	06/14/17 08:30	06/15/17 00:50	75-09-2	
Naphthalene	**46.8J**	ug/kg	276	44.2	1	06/14/17 08:30	06/15/17 00:50	91-20-3	
Styrene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	100-42-5	W
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	108-88-3	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	75-69-4	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	75-01-4	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	156-59-2	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	10061-01-5	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	06/14/17 08:30	06/15/17 00:50	179601-23-1	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	104-51-8	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	103-65-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	95-47-6	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	99-87-6	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	98-06-6	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	156-60-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:50	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	106	%	68-130		1	06/14/17 08:30	06/15/17 00:50	1868-53-7	
Toluene-d8 (S)	105	%	68-149		1	06/14/17 08:30	06/15/17 00:50	2037-26-5	
4-Bromofluorobenzene (S)	99	%	58-141		1	06/14/17 08:30	06/15/17 00:50	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**9.4**	%	0.10	0.10	1		06/13/17 13:13		

Sample: 061217002 **Lab ID: 40151482002** Collected: 06/12/17 09:45 Received: 06/13/17 09:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	**<26.6**	ug/kg	53.2	26.6	1	06/13/17 12:36	06/14/17 10:20	12674-11-2	
PCB-1221 (Aroclor 1221)	**<26.6**	ug/kg	53.2	26.6	1	06/13/17 12:36	06/14/17 10:20	11104-28-2	
PCB-1232 (Aroclor 1232)	**<26.6**	ug/kg	53.2	26.6	1	06/13/17 12:36	06/14/17 10:20	11141-16-5	
PCB-1242 (Aroclor 1242)	**<26.6**	ug/kg	53.2	26.6	1	06/13/17 12:36	06/14/17 10:20	53469-21-9	
PCB-1248 (Aroclor 1248)	**<26.6**	ug/kg	53.2	26.6	1	06/13/17 12:36	06/14/17 10:20	12672-29-6	
PCB-1254 (Aroclor 1254)	**<26.6**	ug/kg	53.2	26.6	1	06/13/17 12:36	06/14/17 10:20	11097-69-1	
PCB-1260 (Aroclor 1260)	**<26.6**	ug/kg	53.2	26.6	1	06/13/17 12:36	06/14/17 10:20	11096-82-5	
PCB, Total	**<26.6**	ug/kg	53.2	26.6	1	06/13/17 12:36	06/14/17 10:20	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	81	%	50-102		1	06/13/17 12:36	06/14/17 10:20	877-09-8	

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40151482

Sample: 061217002 **Lab ID: 40151482002** Collected: 06/12/17 09:45 Received: 06/13/17 09:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
Surrogates									
Decachlorobiphenyl (S)	81	%	53-105		1	06/13/17 12:36	06/14/17 10:20	2051-24-3	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3050								
Arsenic	**4.2**	mg/kg	0.91	0.27	6.667	06/14/17 07:46	06/15/17 11:55	7440-38-2	
Barium	**51.4**	mg/kg	0.79	0.24	6.667	06/14/17 07:46	06/15/17 11:55	7440-39-3	
Cadmium	**0.49J**	mg/kg	0.69	0.10	6.667	06/14/17 07:46	06/15/17 11:55	7440-43-9	D3
Chromium	**10.2**	mg/kg	4.6	1.4	6.667	06/14/17 07:46	06/15/17 11:55	7440-47-3	
Lead	**152**	mg/kg	0.69	0.19	6.667	06/14/17 07:46	06/15/17 03:25	7439-92-1	
Selenium	**1.2**	mg/kg	0.69	0.19	6.667	06/14/17 07:46	06/15/17 11:55	7782-49-2	
Silver	**<0.099**	mg/kg	0.35	0.099	6.667	06/14/17 07:46	06/15/17 11:55	7440-22-4	D3
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.069**	mg/kg	0.038	0.012	1	06/14/17 06:59	06/14/17 12:45	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**9460**	ug/kg	5500	1650	400	06/14/17 08:46	06/15/17 11:07	83-32-9	
Acenaphthylene	**1500J**	ug/kg	4690	1410	400	06/14/17 08:46	06/15/17 11:07	208-96-8	
Anthracene	**34600**	ug/kg	8100	2430	400	06/14/17 08:46	06/15/17 11:07	120-12-7	
Benzo(a)anthracene	**72300**	ug/kg	4520	1350	400	06/14/17 08:46	06/15/17 11:07	56-55-3	
Benzo(a)pyrene	**67100**	ug/kg	3570	1070	400	06/14/17 08:46	06/15/17 11:07	50-32-8	
Benzo(b)fluoranthene	**92100**	ug/kg	4010	1200	400	06/14/17 08:46	06/15/17 11:07	205-99-2	
Benzo(g,h,i)perylene	**30200**	ug/kg	2890	866	400	06/14/17 08:46	06/15/17 11:07	191-24-2	
Benzo(k)fluoranthene	**37000**	ug/kg	3560	1070	400	06/14/17 08:46	06/15/17 11:07	207-08-9	
Chrysene	**82300**	ug/kg	4770	1440	400	06/14/17 08:46	06/15/17 11:07	218-01-9	
Dibenz(a,h)anthracene	**10700**	ug/kg	3180	953	400	06/14/17 08:46	06/15/17 11:07	53-70-3	
Fluoranthene	**186000**	ug/kg	7420	2220	400	06/14/17 08:46	06/15/17 11:07	206-44-0	
Fluorene	**10500**	ug/kg	5880	1760	400	06/14/17 08:46	06/15/17 11:07	86-73-7	
Indeno(1,2,3-cd)pyrene	**29300**	ug/kg	3120	937	400	06/14/17 08:46	06/15/17 11:07	193-39-5	
1-Methylnaphthalene	**<1720**	ug/kg	5710	1720	400	06/14/17 08:46	06/15/17 11:07	90-12-0	
2-Methylnaphthalene	**<2130**	ug/kg	7120	2130	400	06/14/17 08:46	06/15/17 11:07	91-57-6	
Naphthalene	**<3590**	ug/kg	12000	3590	400	06/14/17 08:46	06/15/17 11:07	91-20-3	
Phenanthrene	**96200**	ug/kg	16500	4970	400	06/14/17 08:46	06/15/17 11:07	85-01-8	
Pyrene	**134000**	ug/kg	6390	1920	400	06/14/17 08:46	06/15/17 11:07	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	0	%	19-96		400	06/14/17 08:46	06/15/17 11:07	321-60-8	S4
Terphenyl-d14 (S)	0	%	31-98		400	06/14/17 08:46	06/15/17 11:07	1718-51-0	S4
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	630-20-6	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	71-55-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	79-34-5	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	79-00-5	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	75-34-3	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	75-35-4	W

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(920)469-2436

ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40151482

Sample: 061217002 **Lab ID: 40151482002** Collected: 06/12/17 09:45 Received: 06/13/17 09:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	563-58-6	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	87-61-6	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	96-18-4	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	06/14/17 08:30	06/15/17 01:13	120-82-1	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	95-63-6	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	06/14/17 08:30	06/15/17 01:13	96-12-8	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	106-93-4	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	95-50-1	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	107-06-2	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	78-87-5	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	108-67-8	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	541-73-1	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	142-28-9	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	106-46-7	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	594-20-7	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	106-43-4	W
Benzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	06/14/17 08:30	06/15/17 01:13	74-83-9	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	06/14/17 08:30	06/15/17 01:13	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	06/14/17 08:30	06/15/17 01:13	67-66-3	W
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	74-87-3	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	124-48-1	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	74-95-3	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	75-71-8	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	98-82-8	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	1634-04-4	W
Methylene Chloride	**65.4**	ug/kg	63.8	26.6	1	06/14/17 08:30	06/15/17 01:13	75-09-2	
Naphthalene	**62.5J**	ug/kg	266	42.6	1	06/14/17 08:30	06/15/17 01:13	91-20-3	
Styrene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	100-42-5	W
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	108-88-3	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	75-69-4	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	75-01-4	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	156-59-2	W

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40151482

Sample: 061217002 **Lab ID: 40151482002** Collected: 06/12/17 09:45 Received: 06/13/17 09:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	10061-01-5	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	06/14/17 08:30	06/15/17 01:13	179601-23-1	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	104-51-8	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	103-65-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	95-47-6	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	99-87-6	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	98-06-6	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	156-60-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:13	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	107	%	68-130		1	06/14/17 08:30	06/15/17 01:13	1868-53-7	
Toluene-d8 (S)	105	%	68-149		1	06/14/17 08:30	06/15/17 01:13	2037-26-5	
4-Bromofluorobenzene (S)	95	%	58-141		1	06/14/17 08:30	06/15/17 01:13	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**6.0**	%	0.10	0.10	1		06/13/17 13:13		

Sample: 061217003 **Lab ID: 40151482003** Collected: 06/12/17 10:00 Received: 06/13/17 09:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	**<55.0**	ug/kg	110	55.0	2	06/13/17 12:36	06/14/17 10:55	12674-11-2	
PCB-1221 (Aroclor 1221)	**<55.0**	ug/kg	110	55.0	2	06/13/17 12:36	06/14/17 10:55	11104-28-2	
PCB-1232 (Aroclor 1232)	**<55.0**	ug/kg	110	55.0	2	06/13/17 12:36	06/14/17 10:55	11141-16-5	
PCB-1242 (Aroclor 1242)	**<55.0**	ug/kg	110	55.0	2	06/13/17 12:36	06/14/17 10:55	53469-21-9	
PCB-1248 (Aroclor 1248)	**<55.0**	ug/kg	110	55.0	2	06/13/17 12:36	06/14/17 10:55	12672-29-6	
PCB-1254 (Aroclor 1254)	**1370**	ug/kg	110	55.0	2	06/13/17 12:36	06/14/17 10:55	11097-69-1	
PCB-1260 (Aroclor 1260)	**<55.0**	ug/kg	110	55.0	2	06/13/17 12:36	06/14/17 10:55	11096-82-5	
PCB, Total	**1370**	ug/kg	110	55.0	2	06/13/17 12:36	06/14/17 10:55	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	83	%	50-102		2	06/13/17 12:36	06/14/17 10:55	877-09-8	
Decachlorobiphenyl (S)	80	%	53-105		2	06/13/17 12:36	06/14/17 10:55	2051-24-3	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3050								
Arsenic	**4.6**	mg/kg	0.92	0.28	6.667	06/14/17 07:46	06/15/17 12:09	7440-38-2	
Barium	**52.7**	mg/kg	0.80	0.24	6.667	06/14/17 07:46	06/15/17 12:09	7440-39-3	
Cadmium	**0.32J**	mg/kg	0.70	0.10	6.667	06/14/17 07:46	06/15/17 12:09	7440-43-9	D3
Chromium	**16.4**	mg/kg	4.7	1.4	6.667	06/14/17 07:46	06/15/17 12:09	7440-47-3	
Lead	**76.2**	mg/kg	0.70	0.19	6.667	06/14/17 07:46	06/15/17 03:39	7439-92-1	
Selenium	**1.0**	mg/kg	0.70	0.19	6.667	06/14/17 07:46	06/15/17 12:09	7782-49-2	

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40151482

Sample: 061217003 **Lab ID: 40151482003** Collected: 06/12/17 10:00 Received: 06/13/17 09:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3050								
Silver	**0.25J**	mg/kg	0.35	0.10	6.667	06/14/17 07:46	06/15/17 12:09	7440-22-4	D3
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.069**	mg/kg	0.040	0.012	1	06/14/17 06:59	06/14/17 12:48	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**270J**	ug/kg	567	171	40	06/14/17 08:46	06/14/17 17:12	83-32-9	
Acenaphthylene	**173J**	ug/kg	483	145	40	06/14/17 08:46	06/14/17 17:12	208-96-8	
Anthracene	**1160**	ug/kg	835	251	40	06/14/17 08:46	06/14/17 17:12	120-12-7	
Benzo(a)anthracene	**3000**	ug/kg	466	139	40	06/14/17 08:46	06/14/17 17:12	56-55-3	
Benzo(a)pyrene	**3220**	ug/kg	368	110	40	06/14/17 08:46	06/14/17 17:12	50-32-8	
Benzo(b)fluoranthene	**4170**	ug/kg	414	124	40	06/14/17 08:46	06/14/17 17:12	205-99-2	
Benzo(g,h,i)perylene	**1820**	ug/kg	297	89.3	40	06/14/17 08:46	06/14/17 17:12	191-24-2	
Benzo(k)fluoranthene	**1920**	ug/kg	367	110	40	06/14/17 08:46	06/14/17 17:12	207-08-9	
Chrysene	**3440**	ug/kg	492	148	40	06/14/17 08:46	06/14/17 17:12	218-01-9	
Dibenz(a,h)anthracene	**570**	ug/kg	327	98.3	40	06/14/17 08:46	06/14/17 17:12	53-70-3	
Fluoranthene	**6680**	ug/kg	765	229	40	06/14/17 08:46	06/14/17 17:12	206-44-0	
Fluorene	**297J**	ug/kg	606	182	40	06/14/17 08:46	06/14/17 17:12	86-73-7	
Indeno(1,2,3-cd)pyrene	**1740**	ug/kg	322	96.6	40	06/14/17 08:46	06/14/17 17:12	193-39-5	
1-Methylnaphthalene	**<177**	ug/kg	589	177	40	06/14/17 08:46	06/14/17 17:12	90-12-0	
2-Methylnaphthalene	**<220**	ug/kg	734	220	40	06/14/17 08:46	06/14/17 17:12	91-57-6	
Naphthalene	**<370**	ug/kg	1230	370	40	06/14/17 08:46	06/14/17 17:12	91-20-3	
Phenanthrene	**3340**	ug/kg	1710	512	40	06/14/17 08:46	06/14/17 17:12	85-01-8	
Pyrene	**5060**	ug/kg	659	198	40	06/14/17 08:46	06/14/17 17:12	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	0	%	19-96		40	06/14/17 08:46	06/14/17 17:12	321-60-8	S4
Terphenyl-d14 (S)	0	%	31-98		40	06/14/17 08:46	06/14/17 17:12	1718-51-0	S4
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	630-20-6	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	71-55-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	79-34-5	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	79-00-5	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	75-34-3	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	75-35-4	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	563-58-6	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	87-61-6	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	96-18-4	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	06/14/17 08:30	06/15/17 01:36	120-82-1	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	95-63-6	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	06/14/17 08:30	06/15/17 01:36	96-12-8	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	106-93-4	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	95-50-1	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	107-06-2	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	78-87-5	W

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40151482

Sample: 061217003 **Lab ID: 40151482003** Collected: 06/12/17 10:00 Received: 06/13/17 09:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	108-67-8	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	541-73-1	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	142-28-9	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	106-46-7	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	594-20-7	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	106-43-4	W
Benzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	06/14/17 08:30	06/15/17 01:36	74-83-9	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	06/14/17 08:30	06/15/17 01:36	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	06/14/17 08:30	06/15/17 01:36	67-66-3	W
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	74-87-3	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	124-48-1	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	74-95-3	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	75-71-8	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	98-82-8	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	1634-04-4	W
Methylene Chloride	**61.2J**	ug/kg	66.0	27.5	1	06/14/17 08:30	06/15/17 01:36	75-09-2	
Naphthalene	**57.4J**	ug/kg	275	44.1	1	06/14/17 08:30	06/15/17 01:36	91-20-3	
Styrene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	100-42-5	W
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	108-88-3	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	75-69-4	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	75-01-4	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	156-59-2	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	10061-01-5	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	06/14/17 08:30	06/15/17 01:36	179601-23-1	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	104-51-8	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	103-65-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	95-47-6	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	99-87-6	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	98-06-6	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	156-60-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 01:36	10061-02-6	W

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40151482

Sample: 061217003 **Lab ID: 40151482003** Collected: 06/12/17 10:00 Received: 06/13/17 09:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Surrogates									
Dibromofluoromethane (S)	108	%	68-130		1	06/14/17 08:30	06/15/17 01:36	1868-53-7	
Toluene-d8 (S)	109	%	68-149		1	06/14/17 08:30	06/15/17 01:36	2037-26-5	
4-Bromofluorobenzene (S)	105	%	58-141		1	06/14/17 08:30	06/15/17 01:36	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**9.2**	%	0.10	0.10	1		06/13/17 13:14		

Sample: 061217004 **Lab ID: 40151482004** Collected: 06/12/17 00:00 Received: 06/13/17 09:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	630-20-6	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	71-55-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	79-34-5	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	79-00-5	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	75-34-3	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	75-35-4	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	563-58-6	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	87-61-6	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	96-18-4	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	06/14/17 08:30	06/15/17 00:27	120-82-1	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	95-63-6	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	06/14/17 08:30	06/15/17 00:27	96-12-8	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	106-93-4	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	95-50-1	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	107-06-2	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	78-87-5	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	108-67-8	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	541-73-1	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	142-28-9	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	106-46-7	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	594-20-7	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	106-43-4	W
Benzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	06/14/17 08:30	06/15/17 00:27	74-83-9	W

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40151482

Sample: 061217004 **Lab ID: 40151482004** Collected: 06/12/17 00:00 Received: 06/13/17 09:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	06/14/17 08:30	06/15/17 00:27	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	06/14/17 08:30	06/15/17 00:27	67-66-3	W
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	74-87-3	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	124-48-1	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	74-95-3	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	75-71-8	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	98-82-8	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	1634-04-4	W
Methylene Chloride	**38.0J**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	75-09-2	
Naphthalene	**<40.0**	ug/kg	250	40.0	1	06/14/17 08:30	06/15/17 00:27	91-20-3	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	100-42-5	W
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	108-88-3	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	75-69-4	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	75-01-4	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	156-59-2	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	10061-01-5	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	06/14/17 08:30	06/15/17 00:27	179601-23-1	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	104-51-8	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	103-65-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	95-47-6	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	99-87-6	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	98-06-6	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	156-60-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	06/14/17 08:30	06/15/17 00:27	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	87	%	68-130		1	06/14/17 08:30	06/15/17 00:27	1868-53-7	
Toluene-d8 (S)	92	%	68-149		1	06/14/17 08:30	06/15/17 00:27	2037-26-5	
4-Bromofluorobenzene (S)	88	%	58-141		1	06/14/17 08:30	06/15/17 00:27	460-00-4	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151482

QC Batch: 258493 Analysis Method: EPA 7471
QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
Associated Lab Samples: 40151482001, 40151482002, 40151482003

METHOD BLANK: 1522983 Matrix: Solid
Associated Lab Samples: 40151482001, 40151482002, 40151482003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	<0.011	0.037	06/14/17 12:15	

LABORATORY CONTROL SAMPLE: 1522984

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.83	0.83	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1522985 1522986

Parameter	Units	40151417001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	<0.012	.89	.88	0.88	0.86	98	96	85-115	2	20	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151482

QC Batch: 258500 Analysis Method: EPA 6020
QC Batch Method: EPA 3050 Analysis Description: 6020 MET
Associated Lab Samples: 40151482001, 40151482002, 40151482003

METHOD BLANK: 1523001 Matrix: Solid
Associated Lab Samples: 40151482001, 40151482002, 40151482003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	<0.040	0.13	06/15/17 10:34	
Barium	mg/kg	<0.034	0.11	06/15/17 10:34	
Cadmium	mg/kg	<0.015	0.10	06/15/17 10:34	
Chromium	mg/kg	<0.20	0.67	06/15/17 10:34	
Lead	mg/kg	<0.027	0.10	06/15/17 02:44	
Selenium	mg/kg	<0.027	0.10	06/15/17 10:34	
Silver	mg/kg	<0.014	0.050	06/15/17 10:34	

LABORATORY CONTROL SAMPLE: 1523002

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	53.5	107	80-120	
Barium	mg/kg	50	51.9	104	80-120	
Cadmium	mg/kg	50	54.3	109	80-120	
Chromium	mg/kg	50	50.6	101	80-120	
Lead	mg/kg	50	46.3	93	80-120	
Selenium	mg/kg	50	58.8	118	80-120	
Silver	mg/kg	25	26.0	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1523003 1523004

Parameter	Units	40151482001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	5.9	55.2	55.1	59.2	59.8	96	98	75-125	1	20	
Barium	mg/kg	56.2	55.2	55.1	128	138	129	148	75-125	8	20	M0
Cadmium	mg/kg	0.39J	55.2	55.1	54.0	55.6	97	100	75-125	3	20	
Chromium	mg/kg	16.5	55.2	55.1	72.1	76.9	101	110	75-125	7	20	
Lead	mg/kg	85.0	55.2	55.1	179	150	170	118	75-125	18	20	M0
Selenium	mg/kg	1.3J	55.2	55.1	56.6	58.2	100	103	75-125	3	20	
Silver	mg/kg	<0.32	27.6	27.6	26.5	27.3	96	99	75-125	3	20	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151482

QC Batch: 258557 Analysis Method: EPA 8260
QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List
Associated Lab Samples: 40151482001, 40151482002, 40151482003, 40151482004

METHOD BLANK: 1523360 Matrix: Solid
Associated Lab Samples: 40151482001, 40151482002, 40151482003, 40151482004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<13.7	50.0	06/14/17 19:02	
1,1,1-Trichloroethane	ug/kg	<14.4	50.0	06/14/17 19:02	
1,1,2,2-Tetrachloroethane	ug/kg	<17.5	50.0	06/14/17 19:02	
1,1,2-Trichloroethane	ug/kg	<20.2	50.0	06/14/17 19:02	
1,1-Dichloroethane	ug/kg	<17.6	50.0	06/14/17 19:02	
1,1-Dichloroethene	ug/kg	<17.6	50.0	06/14/17 19:02	
1,1-Dichloropropene	ug/kg	<14.0	50.0	06/14/17 19:02	
1,2,3-Trichlorobenzene	ug/kg	<17.0	50.0	06/14/17 19:02	
1,2,3-Trichloropropane	ug/kg	<22.3	50.0	06/14/17 19:02	
1,2,4-Trichlorobenzene	ug/kg	<47.6	250	06/14/17 19:02	
1,2,4-Trimethylbenzene	ug/kg	<12.2	50.0	06/14/17 19:02	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	250	06/14/17 19:02	
1,2-Dibromoethane (EDB)	ug/kg	<14.7	50.0	06/14/17 19:02	
1,2-Dichlorobenzene	ug/kg	<16.2	50.0	06/14/17 19:02	
1,2-Dichloroethane	ug/kg	<15.0	50.0	06/14/17 19:02	
1,2-Dichloropropane	ug/kg	<16.8	50.0	06/14/17 19:02	
1,3,5-Trimethylbenzene	ug/kg	<14.5	50.0	06/14/17 19:02	
1,3-Dichlorobenzene	ug/kg	<13.2	50.0	06/14/17 19:02	
1,3-Dichloropropane	ug/kg	<12.0	50.0	06/14/17 19:02	
1,4-Dichlorobenzene	ug/kg	<15.9	50.0	06/14/17 19:02	
2,2-Dichloropropane	ug/kg	<12.6	50.0	06/14/17 19:02	
2-Chlorotoluene	ug/kg	<15.8	50.0	06/14/17 19:02	
4-Chlorotoluene	ug/kg	<13.0	50.0	06/14/17 19:02	
Benzene	ug/kg	<9.2	20.0	06/14/17 19:02	
Bromobenzene	ug/kg	<20.6	50.0	06/14/17 19:02	
Bromochloromethane	ug/kg	<21.4	50.0	06/14/17 19:02	
Bromodichloromethane	ug/kg	<9.8	50.0	06/14/17 19:02	
Bromoform	ug/kg	<19.8	50.0	06/14/17 19:02	
Bromomethane	ug/kg	<69.9	250	06/14/17 19:02	
Carbon tetrachloride	ug/kg	<12.1	50.0	06/14/17 19:02	
Chlorobenzene	ug/kg	<14.8	50.0	06/14/17 19:02	
Chloroethane	ug/kg	<67.0	250	06/14/17 19:02	
Chloroform	ug/kg	<46.4	250	06/14/17 19:02	
Chloromethane	ug/kg	<20.4	50.0	06/14/17 19:02	
cis-1,2-Dichloroethene	ug/kg	<16.6	50.0	06/14/17 19:02	
cis-1,3-Dichloropropene	ug/kg	<16.6	50.0	06/14/17 19:02	
Dibromochloromethane	ug/kg	<17.9	50.0	06/14/17 19:02	
Dibromomethane	ug/kg	<19.3	50.0	06/14/17 19:02	
Dichlorodifluoromethane	ug/kg	<12.3	50.0	06/14/17 19:02	
Diisopropyl ether	ug/kg	<17.7	50.0	06/14/17 19:02	
Ethylbenzene	ug/kg	<12.4	50.0	06/14/17 19:02	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151482

METHOD BLANK: 1523360 Matrix: Solid
Associated Lab Samples: 40151482001, 40151482002, 40151482003, 40151482004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/kg	<24.5	50.0	06/14/17 19:02	
Isopropylbenzene (Cumene)	ug/kg	<12.6	50.0	06/14/17 19:02	
m&p-Xylene	ug/kg	<34.4	100	06/14/17 19:02	
Methyl-tert-butyl ether	ug/kg	<12.7	50.0	06/14/17 19:02	
Methylene Chloride	ug/kg	<16.2	50.0	06/14/17 19:02	
n-Butylbenzene	ug/kg	<10.5	50.0	06/14/17 19:02	
n-Propylbenzene	ug/kg	<11.6	50.0	06/14/17 19:02	
Naphthalene	ug/kg	<40.0	250	06/14/17 19:02	
o-Xylene	ug/kg	<14.0	50.0	06/14/17 19:02	
p-Isopropyltoluene	ug/kg	<12.0	50.0	06/14/17 19:02	
sec-Butylbenzene	ug/kg	<11.9	50.0	06/14/17 19:02	
Styrene	ug/kg	<9.0	50.0	06/14/17 19:02	
tert-Butylbenzene	ug/kg	<9.5	50.0	06/14/17 19:02	
Tetrachloroethene	ug/kg	<12.9	50.0	06/14/17 19:02	
Toluene	ug/kg	<11.2	50.0	06/14/17 19:02	
trans-1,2-Dichloroethene	ug/kg	<16.5	50.0	06/14/17 19:02	
trans-1,3-Dichloropropene	ug/kg	<14.4	50.0	06/14/17 19:02	
Trichloroethene	ug/kg	<23.6	50.0	06/14/17 19:02	
Trichlorofluoromethane	ug/kg	<24.7	50.0	06/14/17 19:02	
Vinyl chloride	ug/kg	<21.1	50.0	06/14/17 19:02	
4-Bromofluorobenzene (S)	%	82	58-141	06/14/17 19:02	
Dibromofluoromethane (S)	%	89	68-130	06/14/17 19:02	
Toluene-d8 (S)	%	93	68-149	06/14/17 19:02	

LABORATORY CONTROL SAMPLE: 1523361

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2310	93	61-122	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2250	90	73-130	
1,1,2-Trichloroethane	ug/kg	2500	2570	103	70-130	
1,1-Dichloroethane	ug/kg	2500	2380	95	63-124	
1,1-Dichloroethene	ug/kg	2500	2230	89	53-117	
1,2,4-Trichlorobenzene	ug/kg	2500	2310	93	78-130	
1,2-Dibromo-3-chloropropane	ug/kg	2500	1820	73	49-140	
1,2-Dibromoethane (EDB)	ug/kg	2500	2360	94	70-130	
1,2-Dichlorobenzene	ug/kg	2500	2400	96	70-130	
1,2-Dichloroethane	ug/kg	2500	2330	93	56-135	
1,2-Dichloropropane	ug/kg	2500	2380	95	77-122	
1,3-Dichlorobenzene	ug/kg	2500	2380	95	70-130	
1,4-Dichlorobenzene	ug/kg	2500	2450	98	70-130	
Benzene	ug/kg	2500	2400	96	66-130	
Bromodichloromethane	ug/kg	2500	2160	86	62-135	
Bromoform	ug/kg	2500	1890	76	68-130	
Bromomethane	ug/kg	2500	1900	76	29-137	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151482

LABORATORY CONTROL SAMPLE: 1523361

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/kg	2500	2180	87	57-130	
Chlorobenzene	ug/kg	2500	2650	106	70-130	
Chloroethane	ug/kg	2500	2250	90	36-144	
Chloroform	ug/kg	2500	2410	96	69-115	
Chloromethane	ug/kg	2500	1620	65	32-126	
cis-1,2-Dichloroethene	ug/kg	2500	2440	97	65-130	
cis-1,3-Dichloropropene	ug/kg	2500	2070	83	70-130	
Dibromochloromethane	ug/kg	2500	2250	90	70-130	
Dichlorodifluoromethane	ug/kg	2500	1210	48	10-99	
Ethylbenzene	ug/kg	2500	2440	98	82-122	
Isopropylbenzene (Cumene)	ug/kg	2500	2510	100	70-130	
m&p-Xylene	ug/kg	5000	5100	102	70-130	
Methyl-tert-butyl ether	ug/kg	2500	2450	98	63-134	
Methylene Chloride	ug/kg	2500	2320	93	56-123	
o-Xylene	ug/kg	2500	2550	102	70-130	
Styrene	ug/kg	2500	2650	106	70-130	
Tetrachloroethene	ug/kg	2500	2750	110	70-131	
Toluene	ug/kg	2500	2490	99	80-120	
trans-1,2-Dichloroethene	ug/kg	2500	2560	102	66-130	
trans-1,3-Dichloropropene	ug/kg	2500	2140	85	68-130	
Trichloroethene	ug/kg	2500	2360	94	70-130	
Trichlorofluoromethane	ug/kg	2500	2260	90	37-149	
Vinyl chloride	ug/kg	2500	1750	70	43-128	
4-Bromofluorobenzene (S)	%			98	58-141	
Dibromofluoromethane (S)	%			96	68-130	
Toluene-d8 (S)	%			99	68-149	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1523362 1523363

Parameter	Units	40151482001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/kg	<25.0	1380	1380	1250	1200	91	87	57-123	4	20	
1,1,2,2-Tetrachloroethane	ug/kg	<25.0	1380	1380	1200	1290	87	93	73-135	7	20	
1,1,2-Trichloroethane	ug/kg	<25.0	1380	1380	1570	1500	114	108	70-130	5	20	
1,1-Dichloroethane	ug/kg	<25.0	1380	1380	1340	1300	97	94	63-124	3	20	
1,1-Dichloroethene	ug/kg	<25.0	1380	1380	1290	1320	94	96	48-117	2	23	
1,2,4-Trichlorobenzene	ug/kg	<47.6	1380	1380	1420	1440	103	104	78-145	1	20	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	1380	1380	1010	847	73	61	38-168	17	22	
1,2-Dibromoethane (EDB)	ug/kg	<25.0	1380	1380	1250	1350	91	98	70-130	8	20	
1,2-Dichlorobenzene	ug/kg	<25.0	1380	1380	1430	1350	104	98	70-130	6	20	
1,2-Dichloroethane	ug/kg	<25.0	1380	1380	1340	1370	97	99	56-145	2	20	
1,2-Dichloropropane	ug/kg	<25.0	1380	1380	1380	1220	100	88	77-123	13	20	
1,3-Dichlorobenzene	ug/kg	<25.0	1380	1380	1340	1350	97	98	70-130	0	20	
1,4-Dichlorobenzene	ug/kg	<25.0	1380	1380	1450	1410	105	102	70-130	3	20	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151482

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1523362 1523363

Parameter	Units	40151482001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/kg	<25.0	1380	1380	1340	1340	96	96	65-130	0	20	
Bromodichloromethane	ug/kg	<25.0	1380	1380	1150	1090	83	79	59-141	5	20	
Bromoform	ug/kg	<25.0	1380	1380	1190	1200	86	87	59-141	1	20	
Bromomethane	ug/kg	<69.9	1380	1380	1140	1070	83	77	28-139	7	20	
Carbon tetrachloride	ug/kg	<25.0	1380	1380	1150	1190	83	86	50-130	4	20	
Chlorobenzene	ug/kg	<25.0	1380	1380	1500	1510	109	109	70-130	1	20	
Chloroethane	ug/kg	<67.0	1380	1380	1400	1390	101	101	36-144	0	20	
Chloroform	ug/kg	<46.4	1380	1380	1340	1290	97	93	68-122	4	20	
Chloromethane	ug/kg	<25.0	1380	1380	920	877	67	64	30-126	5	20	
cis-1,2-Dichloroethene	ug/kg	<25.0	1380	1380	1370	1390	99	101	63-130	1	20	
cis-1,3-Dichloropropene	ug/kg	<25.0	1380	1380	1080	1050	78	76	70-130	3	20	
Dibromochloromethane	ug/kg	<25.0	1380	1380	1100	1160	79	84	66-136	6	20	
Dichlorodifluoromethane	ug/kg	<25.0	1380	1380	536	473	39	34	10-99	12	33	
Ethylbenzene	ug/kg	<25.0	1380	1380	1320	1230	95	89	80-122	7	20	
Isopropylbenzene (Cumene)	ug/kg	<25.0	1380	1380	1340	1320	97	95	70-130	2	20	
m&p-Xylene	ug/kg	<50.0	2760	2760	2780	2780	101	101	70-130	0	20	
Methyl-tert-butyl ether	ug/kg	<25.0	1380	1380	1320	1380	96	100	63-134	4	20	
Methylene Chloride	ug/kg	39.6J	1380	1380	1370	1400	96	98	56-127	2	20	
o-Xylene	ug/kg	<25.0	1380	1380	1440	1460	105	106	70-130	1	20	
Styrene	ug/kg	<25.0	1380	1380	1470	1520	106	110	70-130	4	20	
Tetrachloroethene	ug/kg	<25.0	1380	1380	1400	1380	102	100	70-131	1	20	
Toluene	ug/kg	<25.0	1380	1380	1380	1390	99	100	80-120	1	20	
trans-1,2-Dichloroethene	ug/kg	<25.0	1380	1380	1300	1210	95	88	60-130	8	20	
trans-1,3-Dichloropropene	ug/kg	<25.0	1380	1380	1090	1160	79	84	68-130	7	20	
Trichloroethene	ug/kg	<25.0	1380	1380	1380	1140	100	83	70-130	19	20	
Trichlorofluoromethane	ug/kg	<25.0	1380	1380	1090	1260	79	92	37-149	15	24	
Vinyl chloride	ug/kg	<25.0	1380	1380	970	999	70	72	39-128	3	20	
4-Bromofluorobenzene (S)	%						101	105	58-141			
Dibromofluoromethane (S)	%						106	111	68-130			
Toluene-d8 (S)	%						103	113	68-149			

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(920)469-2436

QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151482

QC Batch: 258434 Analysis Method: EPA 8082
QC Batch Method: EPA 3541 Analysis Description: 8082 GCS PCB
Associated Lab Samples: 40151482001, 40151482002, 40151482003

METHOD BLANK: 1522340 Matrix: Solid
Associated Lab Samples: 40151482001, 40151482002, 40151482003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	<25.0	50.0	06/14/17 11:30	
PCB-1221 (Aroclor 1221)	ug/kg	<25.0	50.0	06/14/17 11:30	
PCB-1232 (Aroclor 1232)	ug/kg	<25.0	50.0	06/14/17 11:30	
PCB-1242 (Aroclor 1242)	ug/kg	<25.0	50.0	06/14/17 11:30	
PCB-1248 (Aroclor 1248)	ug/kg	<25.0	50.0	06/14/17 11:30	
PCB-1254 (Aroclor 1254)	ug/kg	<25.0	50.0	06/14/17 11:30	
PCB-1260 (Aroclor 1260)	ug/kg	<25.0	50.0	06/14/17 11:30	
Decachlorobiphenyl (S)	%	78	53-105	06/14/17 11:30	
Tetrachloro-m-xylene (S)	%	82	50-102	06/14/17 11:30	

LABORATORY CONTROL SAMPLE: 1522341

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg		<25.0			
PCB-1221 (Aroclor 1221)	ug/kg		<25.0			
PCB-1232 (Aroclor 1232)	ug/kg		<25.0			
PCB-1242 (Aroclor 1242)	ug/kg		<25.0			
PCB-1248 (Aroclor 1248)	ug/kg		<25.0			
PCB-1254 (Aroclor 1254)	ug/kg		<25.0			
PCB-1260 (Aroclor 1260)	ug/kg	500	396	79	59-106	
Decachlorobiphenyl (S)	%			82	53-105	
Tetrachloro-m-xylene (S)	%			84	50-102	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1522342 1522343

Parameter	Units	40151246004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/kg	<0.029 mg/kg			<28.5	<28.5					20	
PCB-1221 (Aroclor 1221)	ug/kg	<0.029 mg/kg			<28.5	<28.5					20	
PCB-1232 (Aroclor 1232)	ug/kg	<0.029 mg/kg			<28.5	<28.5					20	
PCB-1242 (Aroclor 1242)	ug/kg	<0.029 mg/kg			<28.5	<28.5					20	
PCB-1248 (Aroclor 1248)	ug/kg	<0.029 mg/kg			<28.5	<28.5					20	
PCB-1254 (Aroclor 1254)	ug/kg	<0.029 mg/kg			<28.5	<28.5					20	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151482

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1522342 1522343

Parameter	Units	40151246004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1260 (Aroclor 1260)	ug/kg	<0.029 mg/kg	570	570	471	485	83	85	51-109	3	20	
Decachlorobiphenyl (S)	%						80	84	53-105			
Tetrachloro-m-xylene (S)	%						85	87	50-102			

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151482

QC Batch: 258508 Analysis Method: EPA 8270 by SIM
QC Batch Method: EPA 3546 Analysis Description: 8270/3546 MSSV PAH by SIM
Associated Lab Samples: 40151482001, 40151482002, 40151482003

METHOD BLANK: 1523021 Matrix: Solid
Associated Lab Samples: 40151482001, 40151482002, 40151482003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<4.0	13.4	06/14/17 12:48	
2-Methylnaphthalene	ug/kg	<5.0	16.7	06/14/17 12:48	
Acenaphthene	ug/kg	<3.9	12.9	06/14/17 12:48	
Acenaphthylene	ug/kg	<3.3	11.0	06/14/17 12:48	
Anthracene	ug/kg	<5.7	19.0	06/14/17 12:48	
Benzo(a)anthracene	ug/kg	<3.2	10.6	06/14/17 12:48	
Benzo(a)pyrene	ug/kg	<2.5	8.4	06/14/17 12:48	
Benzo(b)fluoranthene	ug/kg	<2.8	9.4	06/14/17 12:48	
Benzo(g,h,i)perylene	ug/kg	<2.0	6.8	06/14/17 12:48	
Benzo(k)fluoranthene	ug/kg	<2.5	8.4	06/14/17 12:48	
Chrysene	ug/kg	<3.4	11.2	06/14/17 12:48	
Dibenz(a,h)anthracene	ug/kg	<2.2	7.4	06/14/17 12:48	
Fluoranthene	ug/kg	<5.2	17.4	06/14/17 12:48	
Fluorene	ug/kg	<4.1	13.8	06/14/17 12:48	
Indeno(1,2,3-cd)pyrene	ug/kg	<2.2	7.3	06/14/17 12:48	
Naphthalene	ug/kg	<8.4	28.1	06/14/17 12:48	
Phenanthrene	ug/kg	<11.6	38.8	06/14/17 12:48	
Pyrene	ug/kg	<4.5	15.0	06/14/17 12:48	
2-Fluorobiphenyl (S)	%	76	19-96	06/14/17 12:48	
Terphenyl-d14 (S)	%	78	31-98	06/14/17 12:48	

LABORATORY CONTROL SAMPLE: 1523022

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	243	73	49-102	
2-Methylnaphthalene	ug/kg	333	251	75	47-91	
Acenaphthene	ug/kg	333	265	79	52-97	
Acenaphthylene	ug/kg	333	260	78	49-97	
Anthracene	ug/kg	333	302	91	62-101	
Benzo(a)anthracene	ug/kg	333	252	76	53-95	
Benzo(a)pyrene	ug/kg	333	319	96	57-108	
Benzo(b)fluoranthene	ug/kg	333	307	92	53-113	
Benzo(g,h,i)perylene	ug/kg	333	299	90	43-114	
Benzo(k)fluoranthene	ug/kg	333	321	96	66-116	
Chrysene	ug/kg	333	296	89	64-109	
Dibenz(a,h)anthracene	ug/kg	333	315	95	50-105	
Fluoranthene	ug/kg	333	298	89	58-107	
Fluorene	ug/kg	333	272	82	52-99	
Indeno(1,2,3-cd)pyrene	ug/kg	333	304	91	51-113	
Naphthalene	ug/kg	333	214	64	50-91	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151482

LABORATORY CONTROL SAMPLE: 1523022

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phenanthrene	ug/kg	333	270	81	57-101	
Pyrene	ug/kg	333	286	86	50-102	
2-Fluorobiphenyl (S)	%			80	19-96	
Terphenyl-d14 (S)	%			76	31-98	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151482

QC Batch: 258442 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40151482001, 40151482002, 40151482003

SAMPLE DUPLICATE: 1522442

Parameter	Units	40151496001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	7.8	7.8	0	10	

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QUALIFIERS

Project: 2133 SOLVAY
Pace Project No.: 40151482

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.
W	Non-detect results are reported on a wet weight basis.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 2133 SOLVAY
Pace Project No.: 40151482

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40151482001	**061217001**	EPA 3541	258434	EPA 8082	258440
40151482002	**061217002**	EPA 3541	258434	EPA 8082	258440
40151482003	**061217003**	EPA 3541	258434	EPA 8082	258440
40151482001	**061217001**	EPA 3050	258500	EPA 6020	258578
40151482002	**061217002**	EPA 3050	258500	EPA 6020	258578
40151482003	**061217003**	EPA 3050	258500	EPA 6020	258578
40151482001	**061217001**	EPA 7471	258493	EPA 7471	258524
40151482002	**061217002**	EPA 7471	258493	EPA 7471	258524
40151482003	**061217003**	EPA 7471	258493	EPA 7471	258524
40151482001	**061217001**	EPA 3546	258508	EPA 8270 by SIM	258549
40151482002	**061217002**	EPA 3546	258508	EPA 8270 by SIM	258549
40151482003	**061217003**	EPA 3546	258508	EPA 8270 by SIM	258549
40151482001	**061217001**	EPA 5035/5030B	258557	EPA 8260	258568
40151482002	**061217002**	EPA 5035/5030B	258557	EPA 8260	258568
40151482003	**061217003**	EPA 5035/5030B	258557	EPA 8260	258568
40151482004	**061217004**	EPA 5035/5030B	258557	EPA 8260	258568
40151482001	**061217001**	ASTM D2974-87	258442		
40151482002	**061217002**	ASTM D2974-87	258442		
40151482003	**061217003**	ASTM D2974-87	258442		

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Level II

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

4045482

Pace Analytical® www.pacelabs.com Fedex: 7793 7225 1145

COC#2133-0617-003

QC: DLB 6/12/17

CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	Natural Resource Tech
Branch/Location:	Milwaukee, WI
Project Contact:	Andrew Cawrse
Phone:	414-837-3645
Project Number:	2133
Project Name:	Solvay
Project State:	WI
Sampled By (Print):	Andrew Cawrse
Sampled By (Sign):	
PO #:	3400010643
Regulatory Program:	

Quote #:	
Mail To Contact:	gdsdata@obg.com
Mail To Company:	Natural Resource Tech
Mail To Address:	234 W Florida St Milwaukee WI
Invoice To Contact:	Accounts Payable
Invoice To Company:	WEC Business Services
Invoice To Address:	Po Box 19800 Green Bay, WI
Invoice To Phone:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes

A = Air	W = Water
B = Biota	DW = Drinking Water
C = Charcoal	GW = Ground Water
O = Oil	SW = Surface Water
S = Soil	WW = Waste Water
SI = Sludge	WP = Wipe

FILTERED? (YES/NO)
PRESERVATION (CODE)*

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Y/N	Pick Letter	Analyses Requested: VOC 8260	PAH 8270	Metals 6020	PCBs 8082	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	061217001	6/12/17	9:30	S			X	X	X	X	~~LW~~ 3-40z oa A	1-4oz pA	1-40mL vF
002	061217002	↓	9:45	S			X	X	X	X			
003	061217003		10:00	S			X	X	X	X			
004	061217004	↓	-	-			X				Trip Blank	1-40mL vF	

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed: 24Hr TAT/ASAP

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Andrew Cawrse	6/12/17 16:00		
Fed Ex	6/13/17 0930	[illegible]	6/13/17 0930

PACE Project No. 4045482

Receipt Temp = R01 °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal
Present / Not Present
Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

Custody Seal # 2133-01+02

ORIGINAL

Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical™

Project # **WO#: 40151482**

40151482

Client Name: Natural Resources Tech

Courier: ☑ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: _____

Tracking #: 7793 7225 1143

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____

Thermometer Used N/A **Type of Ice:** (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 0.1 /Corr: **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

Person examining contents:
Date: 6/13/17
Initials: RMV

				Comments:
Chain of Custody Present:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes	☐No		Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A	6.
Rush Turn Around Time Requested:	☑Yes	☐No	☐N/A	7. 24 hr TAT / ASAP 6/13/17 RMV
Sufficient Volume:	☐Yes	☐No	☐N/A	8.
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☑Yes	☐No	☐N/A	
-Pace IR Containers Used:	☐Yes	☐No	☑N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☑No	☐N/A	11.
Sample Labels match COC:	☑Yes	☐No	☐N/A	12.
-Includes date/time/ID/Analysis Matrix: S				
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes	☐No	☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes	☐No	☑N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes	☑No		Initial when completed / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes	☑No	☐N/A	14.
Trip Blank Present:	☑Yes	☐No	☐N/A	15.
Trip Blank Custody Seals Present	☑Yes	☐No	☐N/A	
Pace Trip Blank Lot # (if purchased): B623301VB				

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** 6.13.17

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1241 Bellevue Street - Suite 9
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(920)469-2436

June 16, 2017

Andrew Cawrse
Natural Resource Technology
234 W Florida St
Milwaukee, WI 53204

RE: Project: 2133 SOLVAY
Pace Project No.: 40151639

Dear Andrew Cawrse:
Enclosed are the analytical results for sample(s) received by the laboratory on June 15, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Steven Mleczko for
Brian Basten
brian.basten@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: NRT Data, Natural Resource Technologies
Brian Hennings, NATURAL RESOURCE TECHNOLOGY

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CERTIFICATIONS

Project: 2133 SOLVAY
Pace Project No.: 40151639

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

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SAMPLE SUMMARY

Project: 2133 SOLVAY
Pace Project No.: 40151639

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40151639001	**061417001**	Solid	06/14/17 08:30	06/15/17 09:30

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SAMPLE ANALYTE COUNT

Project: 2133 SOLVAY
Pace Project No.: 40151639

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40151639001	**061417001**	WI MOD GRO	ALD	1
		ASTM D2974-87	KTS	1

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40151639

Sample: 061417001 **Lab ID: 40151639001** Collected: 06/14/17 08:30 Received: 06/15/17 09:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	**4.5J**	mg/kg	5.5	2.7	1	06/15/17 11:00	06/15/17 22:06		GO
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**9.1**	%	0.10	0.10	1		06/15/17 17:38		

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151639

QC Batch: 258691 Analysis Method: WI MOD GRO
QC Batch Method: TPH GRO/PVOC WI ext. Analysis Description: WIGRO Solid GCV
Associated Lab Samples: 40151639001

METHOD BLANK: 1524065 Matrix: Solid
Associated Lab Samples: 40151639001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	mg/kg	<1.6	5.0	06/15/17 20:50	
a,a,a-Trifluorotoluene (S)	%	101	80-120	06/15/17 20:50	

LABORATORY CONTROL SAMPLE & LCSD: 1524066 1524067

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Gasoline Range Organics	mg/kg	10	10.4	10.3	104	103	80-120	1	20	
a,a,a-Trifluorotoluene (S)	%				103	102	80-120			

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REPORT OF LABORATORY ANALYSIS

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(920)469-2436

QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151639

QC Batch: 258766
QC Batch Method: ASTM D2974-87
Associated Lab Samples: 40151639001

Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture

SAMPLE DUPLICATE: 1524695

Parameter	Units	40151645001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	9.1	9.0	2	10	

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QUALIFIERS

Project: 2133 SOLVAY
Pace Project No.: 40151639

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

GO Early and late peaks present outside the GRO window.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 2133 SOLVAY
Pace Project No.: 40151639

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40151639001	**061417001**	TPH GRO/PVOC WI ext.	258691	WI MOD GRO	258711
40151639001	**061417001**	ASTM D2974-87	258766		

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Level II 8w

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

Page 1 of

40151639

Page 10 of 11

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www.pacelabs.com

Courier: Pace/CS Logistics

CoC # 2133-0617-004

QC: GFF 6/14/17

CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	Natural Resource Tech
Branch/Location:	Milwaukee WI
Project Contact:	Andrew Caurse
Phone:	414-837-3645
Project Number:	2133
Project Name:	Solway
Project State:	WI
Sampled By (Print):	Andrew Caurse
Sampled By (Sign):	
PO #:	3400010643
Regulatory Program:	

Quote #:	
Mail To Contact:	gds data@obgi.com
Mail To Company:	Natural Resource Tech
Mail To Address:	234 W Florida St Milwaukee WI
Invoice To Contact:	Accounts Payable
Invoice To Company:	WEC Business Services
Invoice To Address:	PO Box 19001 Green Bay, WI
Invoice To Phone:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes

A = Air	W = Water
B = Biota	DW = Drinking Water
C = Charcoal	GW = Ground Water
O = Oil	SW = Surface Water
S = Soil	WW = Waste Water
SI = Sludge	WP = Wipe

FILTERED? (YES/NO)
PRESERVATION (CODE)*

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Analyses Requested: Pick Letter	Y/N	GRO WI-modified	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	06141001	6/14/17	8:30	S	F	N	X		1-40mlVF H-402	
~~002~~	06141002	6/14/17	—	—			X	Blank		
~~006~~ 6/15/17										

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed: 24hr TAT/ASAP

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
	6/14/17 10:30		
CS Logistics	6/15/17 0930	Pace	6/15/17 0930

PACE Project No.
40151639

Receipt Temp = 2.0 °C

Sample Receipt pH
OK / Adjusted

Cooler Custody Seal
Present / Not Present
Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

Custody Seal # 2133-01702

ORIGINAL

Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical™

Project

WO#: 40151639

40151639

Client Name: NRT

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: CS Logistics

Tracking #:

Custody Seal on Cooler/Box Present: ☐ yes ☐ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☐ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other

Thermometer Used NA **Type of Ice:** (Wet) Blue Dry None ☐ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: /Corr: RO **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☐ no

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

Person examining contents:
Date: 6/15/17
Initials:

Comments:

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☑Yes ☐No ☐N/A	7.
Sufficient Volume:	☐Yes ☑No ☐N/A	8. NO TB AP 6/15/17
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☑N/A	
Containers Intact:	☐Yes ☑No ☐N/A	10. TB broke in shipment AP 6/15/17
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: S		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes ☐No ☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes ☑No	Initial when completed / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	14.
Trip Blank Present:	☐Yes ☐No ☑N/A	15.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Andrew Causse Date/Time: 6-15-17

Comments/ Resolution:

Proceed with analysis w/o trip blanks per AC- 6/15/17 AP

Project Manager Review: Date: 6/15/17

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

June 23, 2017

Andrew Cawrse
Natural Resource Technology
234 W Florida St
Milwaukee, WI 53204

RE: Project: 2133 SOLVAY
Pace Project No.: 40151757

Dear Andrew Cawrse:
Enclosed are the analytical results for sample(s) received by the laboratory on June 16, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brian Basten
brian.basten@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: NRT Data, Natural Resource Technologies
Brian Hennings, NATURAL RESOURCE TECHNOLOGY

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CERTIFICATIONS

Project: 2133 SOLVAY
Pace Project No.: 40151757

Minnesota Certification IDs

1700 Elm Street SE, Suite 200, Minneapolis, MN 55414
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: UST-078
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas Certification #: 88-0680
California Certification #: MN00064
CNMI Saipan Certification #:MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8 Certification #: 8TMS-L
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: MN00064
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon NwTPH Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DW Certification #: 9952 C
West Virginia WW Certification #: 382
Wisconsin Certification #: 999407970
Wyoming via EPA Region 8 Certification #: 8TMS-L

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

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SAMPLE SUMMARY

Project: 2133 SOLVAY
Pace Project No.: 40151757

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40151757001	**061517001**	Solid	06/15/17 10:15	06/16/17 09:10
40151757002	**061517002**	Solid	06/15/17 10:30	06/16/17 09:10

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SAMPLE ANALYTE COUNT

Project: 2133 SOLVAY
Pace Project No.: 40151757

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40151757001	**061517001**	EPA 6010	DLB	7	PASI-G
		EPA 6010C	DM	1	PASI-M
		EPA 7470	AJT	1	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 300.0	HMB	1	PASI-G
40151757002	**061517002**	EPA 6010	DLB	7	PASI-G
		EPA 6010C	DM	1	PASI-M
		EPA 7470	AJT	1	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 300.0	HMB	1	PASI-G

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40151757

Sample: 061517001 **Lab ID: 40151757001** Collected: 06/15/17 10:15 Received: 06/16/17 09:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, TCLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1311; 06/19/17 12:00								
Arsenic	**<0.042**	mg/L	0.12	0.042	1	06/20/17 10:40	06/21/17 11:38	7440-38-2	
Barium	**0.12**	mg/L	0.075	0.025	1	06/20/17 10:40	06/21/17 11:38	7440-39-3	
Cadmium	**<0.0066**	mg/L	0.025	0.0066	1	06/20/17 10:40	06/21/17 11:38	7440-43-9	
Chromium	**<0.013**	mg/L	0.050	0.013	1	06/20/17 10:40	06/21/17 11:38	7440-47-3	
Lead	**<0.022**	mg/L	0.065	0.022	1	06/20/17 10:40	06/21/17 11:38	7439-92-1	
Selenium	**<0.083**	mg/L	0.25	0.083	1	06/20/17 10:40	06/21/17 11:38	7782-49-2	
Silver	**<0.017**	mg/L	0.050	0.017	1	06/20/17 10:40	06/21/17 11:38	7440-22-4	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3050								
Sulfur	**1290**	mg/kg	2.8	0.83	1	06/20/17 05:22	06/21/17 04:55		
7470 Mercury, TCLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1311; 06/19/17 12:00								
Mercury	**<0.00013**	mg/L	0.00042	0.00013	1	06/22/17 10:35	06/22/17 14:31	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**5.8**	%	0.10	0.10	1		06/20/17 11:39		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Preparation Method: EPA 300.0								
Sulfate	**<105**	mg/kg	210	105	1	06/20/17 19:39	06/23/17 11:34	14808-79-8	

Sample: 061517002 **Lab ID: 40151757002** Collected: 06/15/17 10:30 Received: 06/16/17 09:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, TCLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1311; 06/19/17 12:00								
Arsenic	**<0.042**	mg/L	0.12	0.042	1	06/20/17 10:40	06/21/17 11:41	7440-38-2	
Barium	**0.047J**	mg/L	0.075	0.025	1	06/20/17 10:40	06/21/17 11:41	7440-39-3	
Cadmium	**<0.0066**	mg/L	0.025	0.0066	1	06/20/17 10:40	06/21/17 11:41	7440-43-9	
Chromium	**<0.013**	mg/L	0.050	0.013	1	06/20/17 10:40	06/21/17 11:41	7440-47-3	
Lead	**<0.022**	mg/L	0.065	0.022	1	06/20/17 10:40	06/21/17 11:41	7439-92-1	
Selenium	**<0.083**	mg/L	0.25	0.083	1	06/20/17 10:40	06/21/17 11:41	7782-49-2	
Silver	**<0.017**	mg/L	0.050	0.017	1	06/20/17 10:40	06/21/17 11:41	7440-22-4	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3050								
Sulfur	**847**	mg/kg	2.9	0.87	1	06/20/17 05:22	06/21/17 05:09		
7470 Mercury, TCLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1311; 06/19/17 12:00								
Mercury	**<0.00013**	mg/L	0.00042	0.00013	1	06/22/17 10:35	06/22/17 14:34	7439-97-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40151757

Sample: 061517002 **Lab ID: 40151757002** Collected: 06/15/17 10:30 Received: 06/16/17 09:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**10.6**	%	0.10	0.10	1		06/20/17 11:39		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Preparation Method: EPA 300.0								
Sulfate	**<112**	mg/kg	224	112	1	06/20/17 19:39	06/23/17 12:06	14808-79-8	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151757

QC Batch: 259457 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury TCLP
Associated Lab Samples: 40151757001, 40151757002

METHOD BLANK: 1528178 Matrix: Water
Associated Lab Samples: 40151757001, 40151757002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/L	<0.00013	0.00042	06/22/17 14:15	

METHOD BLANK: 1525788 Matrix: Water
Associated Lab Samples: 40151757001, 40151757002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/L	<0.00013	0.00042	06/22/17 14:36	

METHOD BLANK: 1526457 Matrix: Water
Associated Lab Samples: 40151757001, 40151757002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/L	<0.00013	0.00042	06/22/17 14:48	

METHOD BLANK: 1527388 Matrix: Water
Associated Lab Samples: 40151757001, 40151757002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/L	<0.00013	0.00042	06/22/17 14:57	

LABORATORY CONTROL SAMPLE: 1528179

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.005	0.0049	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1528180 1528181

Parameter	Units	40151700001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	0.16J ug/L	.005	.005	0.0048	0.0049	93	94	85-115	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151757

MATRIX SPIKE SAMPLE: 1528182

Parameter	Units	40151870001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	<0.13 ug/L	.005	0.0049	96	85-115	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151757

QC Batch: 259141 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET TCLP
Associated Lab Samples: 40151757001, 40151757002

METHOD BLANK: 1526537 Matrix: Water
Associated Lab Samples: 40151757001, 40151757002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	<0.0083	0.025	06/21/17 11:26	
Barium	mg/L	<0.0050	0.015	06/21/17 11:26	
Cadmium	mg/L	<0.0013	0.0050	06/21/17 11:26	
Chromium	mg/L	<0.0025	0.010	06/21/17 11:26	
Lead	mg/L	<0.0043	0.013	06/21/17 11:26	
Selenium	mg/L	<0.017	0.050	06/21/17 11:26	
Silver	mg/L	<0.0033	0.010	06/21/17 11:26	

METHOD BLANK: 1525784 Matrix: Solid
Associated Lab Samples: 40151757001, 40151757002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	<0.042	0.12	06/21/17 11:46	
Barium	mg/L	<0.025	0.075	06/21/17 11:46	
Cadmium	mg/L	<0.0066	0.025	06/21/17 11:46	
Chromium	mg/L	<0.013	0.050	06/21/17 11:46	
Lead	mg/L	<0.022	0.065	06/21/17 11:46	
Selenium	mg/L	<0.083	0.25	06/21/17 11:46	
Silver	mg/L	<0.017	0.050	06/21/17 11:46	

LABORATORY CONTROL SAMPLE: 1526538

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	.5	0.47	95	80-120	
Barium	mg/L	.5	0.50	100	80-120	
Cadmium	mg/L	.5	0.49	99	80-120	
Chromium	mg/L	.5	0.52	104	80-120	
Lead	mg/L	.5	0.50	100	80-120	
Selenium	mg/L	.5	0.49	98	80-120	
Silver	mg/L	.25	0.25	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1526539 1526540

Parameter	Units	40151684001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	<0.042	2.5	2.5	2.5	2.5	98	98	75-125	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151757

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1526539 1526540

Parameter	Units	40151684001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.58	2.5	2.5	3.1	3.2	101	103	75-125	2	20	
Cadmium	mg/L	<0.0066	2.5	2.5	2.5	2.6	102	103	75-125	1	20	
Chromium	mg/L	<0.013	2.5	2.5	2.5	2.5	99	100	75-125	1	20	
Lead	mg/L	<0.022	2.5	2.5	2.5	2.5	99	101	75-125	2	20	
Selenium	mg/L	<0.083	2.5	2.5	2.6	2.7	104	106	75-125	2	20	
Silver	mg/L	<0.017	1.2	1.2	1.3	1.4	105	108	75-125	2	20	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151757

QC Batch: 480321 Analysis Method: EPA 6010C
QC Batch Method: EPA 3050 Analysis Description: 6010C Solids
Associated Lab Samples: 40151757001, 40151757002

METHOD BLANK: 2616410 Matrix: Solid
Associated Lab Samples: 40151757001, 40151757002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfur	mg/kg	1.7J	2.7	06/21/17 04:49	

LABORATORY CONTROL SAMPLE: 2616411

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfur	mg/kg	971	869	89	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2616412 2616413

Parameter	Units	40151757001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfur	mg/kg	1290	1060	1000	2240	2390	90	110	75-125	6	20	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151757

QC Batch: 259149
QC Batch Method: ASTM D2974-87
Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40151757001, 40151757002

SAMPLE DUPLICATE: 1526583

Parameter	Units	40151909002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	12.4	12.1	2	10	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151757

QC Batch: 259198 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 40151757001, 40151757002

METHOD BLANK: 1526728 Matrix: Solid
Associated Lab Samples: 40151757001, 40151757002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/kg	<20.0	40.0	06/23/17 11:12	

LABORATORY CONTROL SAMPLE: 1526729

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/kg	200	203	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1526730 1526731

Parameter	Units	40151757001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/kg	<105	1050	1040	1070	1040	100	98	80-120	3	15	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: 2133 SOLVAY
Pace Project No.: 40151757

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay
PASI-M	Pace Analytical Services - Minneapolis

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Green Bay, WI 54302
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 2133 SOLVAY
Pace Project No.: 40151757

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40151757001	**061517001**	EPA 3010	259141	EPA 6010	259313
40151757002	**061517002**	EPA 3010	259141	EPA 6010	259313
40151757001	**061517001**	EPA 3050	480321	EPA 6010C	480687
40151757002	**061517002**	EPA 3050	480321	EPA 6010C	480687
40151757001	**061517001**	EPA 7470	259457	EPA 7470	259479
40151757002	**061517002**	EPA 7470	259457	EPA 7470	259479
40151757001	**061517001**	ASTM D2974-87	259149		
40151757002	**061517002**	ASTM D2974-87	259149		
40151757001	**061517001**	EPA 300.0	259198	EPA 300.0	259468
40151757002	**061517002**	EPA 300.0	259198	EPA 300.0	259468

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QC: EDP 6/15/17

Level II

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

Page 1 of 1

40151757

Pace Analytical®
www.pacelabs.com

courier: Pace/CS Logistics

COC # 2133-0617-005

CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	Natural Resource Tech
Branch/Location:	Milwaukee, WI
Project Contact:	Andrew Cawrse
Phone:	414-837-3645
Project Number:	2133
Project Name:	Solvay
Project State:	WI
Sampled By (Print):	Andrew Cawrse
Sampled By (Sign):	Andrew C
PO #:	3400010643
Regulatory Program:	

Quote #:	
Mail To Contact:	gdsdata@obg.com
Mail To Company:	Natural Resource Tech
Mail To Address:	234 W Florida St Milwaukee, WI
Invoice To Contact:	Accounts Payable
Invoice To Company:	WEC Business Services
Invoice To Address:	PO Box 19800 Green Bay, WI
Invoice To Phone:	

Data Package Options (billable)
- ☐ EPA Level III
- ☐ EPA Level IV

MS/MSD
- ☐ On your sample (billable)
- ☐ NOT needed on your sample

Matrix Codes

A = Air	W = Water
B = Biota	DW = Drinking Water
C = Charcoal	GW = Ground Water
O = Oil	SW = Surface Water
S = Soil	WW = Waste Water
SI = Sludge	WP = Wipe

FILTERED? (YES/NO)
PRESERVATION (CODE)*

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Y/N	Pick Letter	Analyses Requested: Sulfur 6010	Sulfide 9030/9034	Sulfate 300.0	TCLP metals 6010	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	061517001	6/15/17	10:15	S	N	A	X	X	X	X	*TCLP RCRA 11 metals	4-4oz ag A	
002	061517002	6/15/17	10:30	S	N	A	X	X	X	X			

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed: 5 day TAT

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Andrew C	6/15/17 12:00	Katie Schramm Pace	6/15/17 0910

PACE Project No.: 40151757

Receipt Temp = R01 °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal: Present / Not Present; Intact / Not Intact

C019a(27Jun2006)

Custody Seal # 2133-01 & 02

Version 6.0, 06/14/06

ORIGINAL

Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Project #: WO# : 40151757

Client Name: NRT

Courier: ☑ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: _____

Tracking #: 779415472956

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____

Thermometer Used NA **Type of Ice:** (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: _____ /Corr: R01 **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

Person examining contents:
Date: 6/16/17
Initials: KJ

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7. 5 day TAT KJ 6/16/17
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☑N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: S		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes ☐No ☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes ☑No	Initial when completed / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	14.
Trip Blank Present:	☐Yes ☐No ☑N/A	15.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** 6/16/17

Environmental Monitoring and Technologies, Inc.

8100 N. Austin Avenue Morton Grove, IL 60053-3203 **P** 847.967.6666 800.246.0663 **F** 847.967.6735 www.emt.com

Analytical Report

Brian Basten
Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

June 23, 2017

Work Order: 17F0633

RE: Green Bay
2133 Solvay / 40151757

Dear Brian Basten:

Enclosed are the analytical reports for the EMT Work Order listed. Also included with this analytical report is a copy of the chain of custody associated with these samples. If you have any questions, please contact me.

Sincerely,

Tim Witrzek For Arminta Priddy
Project Manager
847.967.6666
apriddy@emt.com
Approved for release: 6/23/2017 3:17:25PM

Approved by,

Matthew Gregory
Technical Manager

The contents of this report apply to the sample(s) analyzed. No duplication is allowed except in its entirety. Detection and Reporting limits are adjusted for sample size used, dilutions and moisture content, if applicable.

State of Wisconsin Dept of Natural Resources, Cert No. 999888890

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Sample Summary

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
061517001	17F0633-01	Solid	06/15/17 10:15	06/20/17 10:52
061517002	17F0633-02	Solid	06/15/17 10:30	06/20/17 10:52

Environmental Monitoring and Technologies, Inc.

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Case Narrative

Client: Pace Analytical Services, Inc. **Date:** 06/23/2017
Project: Green Bay
2133 Solvay / 40151757
Work Order: 17F0633

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

Sample results only relate to the sample(s) received at the laboratory and analytes of interest tested.

Work Order: 17F0633
The samples were received on 06/20/17 10:52. The samples arrived in good condition and properly preserved. The temperature of the cooler at receipt was

Cooler	Temp C°
Default Cooler	1.6

Refer to Qualifiers and Definitions for quality and analytical clarifications or deviations.

Environmental Monitoring and Technologies, Inc.

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Client Sample Results

Client: Pace Analytical Services, Inc.
Project: Green Bay
2133 Solvay / 40151757
Work Order: 17F0633

Client Sample ID: 061517001
Report Date: 06/23/2017
Collection Date: 06/15/2017 10:15
Matrix: Solid
Lab ID: 17F0633-01

Analyses	Result	EMT Reporting Limit	Qual	Units	MDL	Date/Time Analyzed	Batch	Analyst	DF
Wet Chemistry									
Method: SM2540G									
Total Solids	**94.2**	0.100		% (Percent)	0.00700	06/21/17 12:01	B7F0757	MLB	1
Method: SW9030B/SW9034/SM4500-S2 F									
Sulfide, total	**14.7**	21.2	J	mg/Kg dry	3.61	06/22/17 15:00	B7F0865	DP1	1

Environmental Monitoring and Technologies, Inc.

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Client Sample Results

(Continued)

Client: Pace Analytical Services, Inc.
Project: Green Bay
2133 Solvay / 40151757
Work Order: 17F0633

Client Sample ID: 061517002
Report Date: 06/23/2017
Collection Date: 06/15/2017 10:30
Matrix: Solid
Lab ID: 17F0633-02

Analyses	Result	EMT Reporting Limit	Qual	Units	MDL	Date/Time Analyzed	Batch	Analyst	DF
Wet Chemistry									
Method: SM2540G									
Total Solids	**89.4**	0.100		% (Percent)	0.00700	06/21/17 12:01	B7F0757	MLB	1
Method: SW9030B/SW9034/SM4500-S2 F									
Sulfide, total	**27.3**	22.4		mg/Kg dry	3.80	06/22/17 15:00	B7F0865	DP1	1

Environmental Monitoring and Technologies, Inc.

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Dates Report

Client: Pace Analytical Services, Inc.
Project: Green Bay
2133 Solvay / 40151757
Work Order: 17F0633

Report Date: 06/23/2017

Sample ID	Client Sample ID	Collection	Matrix	Test Name	Leached Prep Date	Prep Date	Analysis Date	Batch ID	Sequence
17F0633-01	061517001	06/15/17	Solid	Total Solids / Percent Moisture		06/21/17 12:00	06/21/17 12:01	B7F0757	
				Sulfide (S2), Total		06/22/17 15:00	06/22/17 15:00	B7F0865	
17F0633-02	061517002	06/15/17		Total Solids / Percent Moisture		06/21/17 12:00	06/21/17 12:01	B7F0757	
				Sulfide (S2), Total		06/22/17 15:00	06/22/17 15:00	B7F0865	

Environmental Monitoring and Technologies, Inc.

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Quality Control

Client: Pace Analytical Services, Inc.
Project: Green Bay
2133 Solvay / 40151757
Work Order: 17F0633

Report Date: 06/23/2017
Matrix: Solid

Wet Chemistry

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual	DF
Batch: B7F0865											
Blank (B7F0865-BLK1)				*Prepared: 06/22/2017 15:00*			*Analyzed: 06/22/2017 15:00*				
Sulfide, total	< 3.40	20.0	mg/Kg wet								1
LCS (B7F0865-BS1)				*Prepared: 06/22/2017 15:00*			*Analyzed: 06/22/2017 15:00*				
Sulfide, total	116	20.0	mg/Kg wet	154.2		75.5	80-120			S	1
Duplicate (B7F0865-DUP1)		**Source: 17F0633-02**		*Prepared: 06/22/2017 15:00*			*Analyzed: 06/22/2017 15:00*				
Sulfide, total	25.5	22.4	mg/Kg dry		27.3			6.78	14.1		1

Environmental Monitoring and Technologies, Inc.

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Certified Analyses included in this Report

Analyte	CAS #	Certifications
SM2540G in Solid		
Total Solids	Moist	WDNR
SW9030B/SW9034/SM4500-S2 F in Solid		
Sulfide, total	18496-25-8	DoD,ILEPA,WDNR

List of Certifications

Code	Description	Number	Expires
AKDEC	State of Alaska, Dept. Environmental Conservation	UST-105	07/16/2017
CPSC	US Consumer Product Safety Commission, Accredited by PJLA Lab No. 1050	L14-56	04/30/2018
DoD	Department of Defense, Accredited by PJLA	L14-55	04/30/2018
ILEPA	State of Illinois, NELAP Accredited Lab No. 100256	003674	07/27/2017
ISO	ISO/IEC 17025, Accredited by PJLA	L14-56	04/30/2018
LELAP	State of Louisiana, NELAP Accredited Lab No. 171344	05015	06/30/2017
NJDEP	State of New Jersey, NELAP Accredited Lab No. IL010	NLC160001	06/30/2017
WDNR	State of Wisconsin Dept of Natural Resources	999888890	08/31/2017

Environmental Monitoring and Technologies, Inc.

8100 N. Austin Avenue Morton Grove, IL 60053-3203 **P** 847.967.6666 800.246.0663 **F** 847.967.6735 www.emt.com

Qualifiers and Definitions

Item	Description
J	Estimated Value
S	The recovery is outside of the laboratory control limits.
%Rec	Percent Recovery
MDL	In the state of Wisconsin MDL is equivalent to LOD; in all other applications MDL is equivalent to MDL. In the state of Wisconsin LOQ is equivalent to Reporting Limit.

Chain of Cus

17F0633
PM: Arminta Priddy
Pace Analytical Services, Inc.
Green Bay

Pace Analytical®
www.pacelabs.com

Workorder: 40151757 **Workorder Name:** 2133 SOLVAY **Results Requested By:** 6/23/2017

Report / Invoice To	Subcontract To
Brian Basten Pace Analytical Green Bay 1241 Bellevue Street Suite 9 Green Bay, WI 54302 Phone (920)469-2436 Email: brian.basten@pacelabs.com	EMT 8100 Austin Ave Morton Grove, IL 60053

State of Sample Origin: WI LOD/LOQ

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved	Requested Analysis: Sulfide	Total Solids	LAB USE ONLY
1	061517001	6/15/2017 10:15	40151757001	Solid		X	X	01
2	061517002	6/15/2017 10:30	40151757002	Solid		X	X	02
3								
4								
5								

Transfers	Released By	Date/Time	Received By	Date/Time
1	[illegible]	6/19/17 1707		
2				
3			[illegible] 10:45	6/20/17

Comments:

Cooler Temperature on Receipt 1.6 °C | Custody Seal (Y) or N | Received on Ice (Y) or N | Samples Intact (Y) or N

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

June 26, 2017

Andrew Cawrse
Natural Resource Technology
234 W Florida St
Milwaukee, WI 53204

RE: Project: 2133 SOLVAY
Pace Project No.: 40151862

Dear Andrew Cawrse:
Enclosed are the analytical results for sample(s) received by the laboratory on June 17, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brian Basten
brian.basten@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: NRT Data, Natural Resource Technologies
Brian Hennings, NATURAL RESOURCE TECHNOLOGY

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: 2133 SOLVAY
Pace Project No.: 40151862

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

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SAMPLE SUMMARY

Project: 2133 SOLVAY
Pace Project No.: 40151862

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40151862001	**061617004**	Solid	06/16/17 11:00	06/17/17 07:50
40151862002	**061617005**	Solid	06/16/17 00:00	06/17/17 07:50

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SAMPLE ANALYTE COUNT

Project: 2133 SOLVAY
Pace Project No.: 40151862

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40151862001	**061617004**	WI MOD DRO	ABF	1
		EPA 8260	SMT	64
		ASTM D2974-87	KTS	1
40151862002	**061617005**	EPA 8260	SMT	64

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40151862

Sample: 061617004 **Lab ID: 40151862001** Collected: 06/16/17 11:00 Received: 06/17/17 07:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	**163000**	mg/kg	35100	10500	200	06/20/17 09:40	06/21/17 15:44		DC
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	630-20-6	W
1,1,1-Trichloroethane	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	71-55-6	W
1,1,2,2-Tetrachloroethane	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	79-34-5	W
1,1,2-Trichloroethane	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	79-00-5	W
1,1-Dichloroethane	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	75-34-3	W
1,1-Dichloroethene	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	75-35-4	W
1,1-Dichloropropene	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	563-58-6	W
1,2,3-Trichlorobenzene	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	87-61-6	W
1,2,3-Trichloropropane	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	96-18-4	W
1,2,4-Trichlorobenzene	**<38000**	ug/kg	200000	38000	800	06/20/17 08:00	06/20/17 20:50	120-82-1	W
1,2,4-Trimethylbenzene	**28500J**	ug/kg	52500	21900	800	06/20/17 08:00	06/20/17 20:50	95-63-6	
1,2-Dibromo-3-chloropropane	**<73000**	ug/kg	200000	73000	800	06/20/17 08:00	06/20/17 20:50	96-12-8	W
1,2-Dibromoethane (EDB)	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	106-93-4	W
1,2-Dichlorobenzene	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	95-50-1	W
1,2-Dichloroethane	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	107-06-2	W
1,2-Dichloropropane	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	78-87-5	W
1,3,5-Trimethylbenzene	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	108-67-8	W
1,3-Dichlorobenzene	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	541-73-1	W
1,3-Dichloropropane	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	142-28-9	W
1,4-Dichlorobenzene	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	106-46-7	W
2,2-Dichloropropane	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	594-20-7	W
2-Chlorotoluene	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	95-49-8	W
4-Chlorotoluene	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	106-43-4	W
Benzene	**28900J**	ug/kg	52500	21900	800	06/20/17 08:00	06/20/17 20:50	71-43-2	
Bromobenzene	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	108-86-1	W
Bromochloromethane	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	74-97-5	W
Bromodichloromethane	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	75-27-4	W
Bromoform	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	75-25-2	W
Bromomethane	**<55900**	ug/kg	200000	55900	800	06/20/17 08:00	06/20/17 20:50	74-83-9	W
Carbon tetrachloride	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	56-23-5	W
Chlorobenzene	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	108-90-7	W
Chloroethane	**<53600**	ug/kg	200000	53600	800	06/20/17 08:00	06/20/17 20:50	75-00-3	W
Chloroform	**<37200**	ug/kg	200000	37200	800	06/20/17 08:00	06/20/17 20:50	67-66-3	W
Chloromethane	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	74-87-3	W
Dibromochloromethane	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	124-48-1	W
Dibromomethane	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	74-95-3	W
Dichlorodifluoromethane	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	75-71-8	W
Diisopropyl ether	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	108-20-3	W
Ethylbenzene	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	100-41-4	W
Hexachloro-1,3-butadiene	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	87-68-3	W
Isopropylbenzene (Cumene)	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	98-82-8	W
Methyl-tert-butyl ether	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	1634-04-4	W

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40151862

Sample: 061617004 **Lab ID: 40151862001** Collected: 06/16/17 11:00 Received: 06/17/17 07:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Methylene Chloride	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	75-09-2	W
Naphthalene	**2600000**	ug/kg	219000	35000	800	06/20/17 08:00	06/20/17 20:50	91-20-3	
Styrene	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	100-42-5	W
Tetrachloroethene	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	127-18-4	W
Toluene	**30400J**	ug/kg	52500	21900	800	06/20/17 08:00	06/20/17 20:50	108-88-3	
Trichloroethene	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	79-01-6	W
Trichlorofluoromethane	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	75-69-4	W
Vinyl chloride	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	75-01-4	W
cis-1,2-Dichloroethene	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	156-59-2	W
cis-1,3-Dichloropropene	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	10061-01-5	W
m&p-Xylene	**<40000**	ug/kg	96000	40000	800	06/20/17 08:00	06/20/17 20:50	179601-23-1	W
n-Butylbenzene	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	104-51-8	W
n-Propylbenzene	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	103-65-1	W
o-Xylene	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	95-47-6	W
p-Isopropyltoluene	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	99-87-6	W
sec-Butylbenzene	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	135-98-8	W
tert-Butylbenzene	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	98-06-6	W
trans-1,2-Dichloroethene	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	156-60-5	W
trans-1,3-Dichloropropene	**<20000**	ug/kg	48000	20000	800	06/20/17 08:00	06/20/17 20:50	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	0	%	68-130		800	06/20/17 08:00	06/20/17 20:50	1868-53-7	S4
Toluene-d8 (S)	0	%	68-149		800	06/20/17 08:00	06/20/17 20:50	2037-26-5	S4
4-Bromofluorobenzene (S)	0	%	58-141		800	06/20/17 08:00	06/20/17 20:50	460-00-4	S4
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**8.5**	%	0.10	0.10	1		06/21/17 16:06		

Sample: 061617005 **Lab ID: 40151862002** Collected: 06/16/17 00:00 Received: 06/17/17 07:50 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	630-20-6	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	71-55-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	79-34-5	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	79-00-5	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	75-34-3	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	75-35-4	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	563-58-6	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	87-61-6	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	96-18-4	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	06/20/17 08:00	06/20/17 13:02	120-82-1	W

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40151862

Sample: 061617005 **Lab ID: 40151862002** Collected: 06/16/17 00:00 Received: 06/17/17 07:50 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	95-63-6	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	06/20/17 08:00	06/20/17 13:02	96-12-8	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	106-93-4	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	95-50-1	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	107-06-2	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	78-87-5	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	108-67-8	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	541-73-1	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	142-28-9	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	106-46-7	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	594-20-7	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	106-43-4	W
Benzene	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	06/20/17 08:00	06/20/17 13:02	74-83-9	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	06/20/17 08:00	06/20/17 13:02	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	06/20/17 08:00	06/20/17 13:02	67-66-3	W
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	74-87-3	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	124-48-1	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	74-95-3	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	75-71-8	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	98-82-8	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	1634-04-4	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	75-09-2	W
Naphthalene	**<40.0**	ug/kg	250	40.0	1	06/20/17 08:00	06/20/17 13:02	91-20-3	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	100-42-5	W
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	108-88-3	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	75-69-4	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	75-01-4	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	156-59-2	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	10061-01-5	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	06/20/17 08:00	06/20/17 13:02	179601-23-1	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	104-51-8	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	103-65-1	W

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40151862

Sample: 061617005 **Lab ID: 40151862002** Collected: 06/16/17 00:00 Received: 06/17/17 07:50 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	95-47-6	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	99-87-6	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	98-06-6	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	156-60-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	06/20/17 08:00	06/20/17 13:02	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	90	%	68-130		1	06/20/17 08:00	06/20/17 13:02	1868-53-7	
Toluene-d8 (S)	96	%	68-149		1	06/20/17 08:00	06/20/17 13:02	2037-26-5	
4-Bromofluorobenzene (S)	94	%	58-141		1	06/20/17 08:00	06/20/17 13:02	460-00-4	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151862

QC Batch: 259185 Analysis Method: EPA 8260
QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List
Associated Lab Samples: 40151862001, 40151862002

METHOD BLANK: 1526699 Matrix: Solid
Associated Lab Samples: 40151862001, 40151862002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<13.7	50.0	06/20/17 07:54	
1,1,1-Trichloroethane	ug/kg	<14.4	50.0	06/20/17 07:54	
1,1,2,2-Tetrachloroethane	ug/kg	<17.5	50.0	06/20/17 07:54	
1,1,2-Trichloroethane	ug/kg	<20.2	50.0	06/20/17 07:54	
1,1-Dichloroethane	ug/kg	<17.6	50.0	06/20/17 07:54	
1,1-Dichloroethene	ug/kg	<17.6	50.0	06/20/17 07:54	
1,1-Dichloropropene	ug/kg	<14.0	50.0	06/20/17 07:54	
1,2,3-Trichlorobenzene	ug/kg	<17.0	50.0	06/20/17 07:54	
1,2,3-Trichloropropane	ug/kg	<22.3	50.0	06/20/17 07:54	
1,2,4-Trichlorobenzene	ug/kg	<47.6	250	06/20/17 07:54	
1,2,4-Trimethylbenzene	ug/kg	<12.2	50.0	06/20/17 07:54	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	250	06/20/17 07:54	
1,2-Dibromoethane (EDB)	ug/kg	<14.7	50.0	06/20/17 07:54	
1,2-Dichlorobenzene	ug/kg	<16.2	50.0	06/20/17 07:54	
1,2-Dichloroethane	ug/kg	<15.0	50.0	06/20/17 07:54	
1,2-Dichloropropane	ug/kg	<16.8	50.0	06/20/17 07:54	
1,3,5-Trimethylbenzene	ug/kg	<14.5	50.0	06/20/17 07:54	
1,3-Dichlorobenzene	ug/kg	<13.2	50.0	06/20/17 07:54	
1,3-Dichloropropane	ug/kg	<12.0	50.0	06/20/17 07:54	
1,4-Dichlorobenzene	ug/kg	<15.9	50.0	06/20/17 07:54	
2,2-Dichloropropane	ug/kg	<12.6	50.0	06/20/17 07:54	
2-Chlorotoluene	ug/kg	<15.8	50.0	06/20/17 07:54	
4-Chlorotoluene	ug/kg	<13.0	50.0	06/20/17 07:54	
Benzene	ug/kg	<9.2	20.0	06/20/17 07:54	
Bromobenzene	ug/kg	<20.6	50.0	06/20/17 07:54	
Bromochloromethane	ug/kg	<21.4	50.0	06/20/17 07:54	
Bromodichloromethane	ug/kg	<9.8	50.0	06/20/17 07:54	
Bromoform	ug/kg	<19.8	50.0	06/20/17 07:54	
Bromomethane	ug/kg	<69.9	250	06/20/17 07:54	
Carbon tetrachloride	ug/kg	<12.1	50.0	06/20/17 07:54	
Chlorobenzene	ug/kg	<14.8	50.0	06/20/17 07:54	
Chloroethane	ug/kg	<67.0	250	06/20/17 07:54	
Chloroform	ug/kg	<46.4	250	06/20/17 07:54	
Chloromethane	ug/kg	<20.4	50.0	06/20/17 07:54	
cis-1,2-Dichloroethene	ug/kg	<16.6	50.0	06/20/17 07:54	
cis-1,3-Dichloropropene	ug/kg	<16.6	50.0	06/20/17 07:54	
Dibromochloromethane	ug/kg	<17.9	50.0	06/20/17 07:54	
Dibromomethane	ug/kg	<19.3	50.0	06/20/17 07:54	
Dichlorodifluoromethane	ug/kg	<12.3	50.0	06/20/17 07:54	
Diisopropyl ether	ug/kg	<17.7	50.0	06/20/17 07:54	
Ethylbenzene	ug/kg	<12.4	50.0	06/20/17 07:54	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151862

METHOD BLANK: 1526699 Matrix: Solid
Associated Lab Samples: 40151862001, 40151862002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/kg	<24.5	50.0	06/20/17 07:54	
Isopropylbenzene (Cumene)	ug/kg	<12.6	50.0	06/20/17 07:54	
m&p-Xylene	ug/kg	<34.4	100	06/20/17 07:54	
Methyl-tert-butyl ether	ug/kg	<12.7	50.0	06/20/17 07:54	
Methylene Chloride	ug/kg	<16.2	50.0	06/20/17 07:54	
n-Butylbenzene	ug/kg	<10.5	50.0	06/20/17 07:54	
n-Propylbenzene	ug/kg	<11.6	50.0	06/20/17 07:54	
Naphthalene	ug/kg	<40.0	250	06/20/17 07:54	
o-Xylene	ug/kg	<14.0	50.0	06/20/17 07:54	
p-Isopropyltoluene	ug/kg	<12.0	50.0	06/20/17 07:54	
sec-Butylbenzene	ug/kg	<11.9	50.0	06/20/17 07:54	
Styrene	ug/kg	<9.0	50.0	06/20/17 07:54	
tert-Butylbenzene	ug/kg	<9.5	50.0	06/20/17 07:54	
Tetrachloroethene	ug/kg	<12.9	50.0	06/20/17 07:54	
Toluene	ug/kg	<11.2	50.0	06/20/17 07:54	
trans-1,2-Dichloroethene	ug/kg	<16.5	50.0	06/20/17 07:54	
trans-1,3-Dichloropropene	ug/kg	<14.4	50.0	06/20/17 07:54	
Trichloroethene	ug/kg	<23.6	50.0	06/20/17 07:54	
Trichlorofluoromethane	ug/kg	<24.7	50.0	06/20/17 07:54	
Vinyl chloride	ug/kg	<21.1	50.0	06/20/17 07:54	
4-Bromofluorobenzene (S)	%	94	58-141	06/20/17 07:54	
Dibromofluoromethane (S)	%	89	68-130	06/20/17 07:54	
Toluene-d8 (S)	%	100	68-149	06/20/17 07:54	

LABORATORY CONTROL SAMPLE: 1526700

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2170	87	61-122	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2470	99	73-130	
1,1,2-Trichloroethane	ug/kg	2500	2370	95	70-130	
1,1-Dichloroethane	ug/kg	2500	2060	82	63-124	
1,1-Dichloroethene	ug/kg	2500	2140	85	53-117	
1,2,4-Trichlorobenzene	ug/kg	2500	2280	91	78-130	
1,2-Dibromo-3-chloropropane	ug/kg	2500	2200	88	49-140	
1,2-Dibromoethane (EDB)	ug/kg	2500	2300	92	70-130	
1,2-Dichlorobenzene	ug/kg	2500	2500	100	70-130	
1,2-Dichloroethane	ug/kg	2500	2500	100	56-135	
1,2-Dichloropropane	ug/kg	2500	2270	91	77-122	
1,3-Dichlorobenzene	ug/kg	2500	2500	100	70-130	
1,4-Dichlorobenzene	ug/kg	2500	2420	97	70-130	
Benzene	ug/kg	2500	2170	87	66-130	
Bromodichloromethane	ug/kg	2500	2230	89	62-135	
Bromoform	ug/kg	2500	2160	86	68-130	
Bromomethane	ug/kg	2500	2020	81	29-137	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151862

LABORATORY CONTROL SAMPLE: 1526700

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/kg	2500	2170	87	57-130	
Chlorobenzene	ug/kg	2500	2420	97	70-130	
Chloroethane	ug/kg	2500	2120	85	36-144	
Chloroform	ug/kg	2500	2200	88	69-115	
Chloromethane	ug/kg	2500	1600	64	32-126	
cis-1,2-Dichloroethene	ug/kg	2500	2020	81	65-130	
cis-1,3-Dichloropropene	ug/kg	2500	2230	89	70-130	
Dibromochloromethane	ug/kg	2500	2100	84	70-130	
Dichlorodifluoromethane	ug/kg	2500	1470	59	10-99	
Ethylbenzene	ug/kg	2500	2380	95	82-122	
Isopropylbenzene (Cumene)	ug/kg	2500	2340	94	70-130	
m&p-Xylene	ug/kg	5000	4570	91	70-130	
Methyl-tert-butyl ether	ug/kg	2500	2250	90	63-134	
Methylene Chloride	ug/kg	2500	2260	91	56-123	
o-Xylene	ug/kg	2500	2350	94	70-130	
Styrene	ug/kg	2500	2350	94	70-130	
Tetrachloroethene	ug/kg	2500	2360	95	70-131	
Toluene	ug/kg	2500	2420	97	80-120	
trans-1,2-Dichloroethene	ug/kg	2500	2090	84	66-130	
trans-1,3-Dichloropropene	ug/kg	2500	2310	92	68-130	
Trichloroethene	ug/kg	2500	2340	93	70-130	
Trichlorofluoromethane	ug/kg	2500	2290	92	37-149	
Vinyl chloride	ug/kg	2500	1870	75	43-128	
4-Bromofluorobenzene (S)	%			92	58-141	
Dibromofluoromethane (S)	%			90	68-130	
Toluene-d8 (S)	%			97	68-149	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1526701 1526702

Parameter	Units	40151859002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/kg	<25.0	1550	1530	1160	1220	75	79	57-123	5	20	
1,1,2,2-Tetrachloroethane	ug/kg	<25.0	1550	1530	1400	1370	91	89	73-135	2	20	
1,1,2-Trichloroethane	ug/kg	<25.0	1550	1530	1320	1320	85	86	70-130	0	20	
1,1-Dichloroethane	ug/kg	<25.0	1550	1530	1130	1150	73	75	63-124	2	20	
1,1-Dichloroethene	ug/kg	<25.0	1550	1530	1090	1200	70	78	48-117	10	23	
1,2,4-Trichlorobenzene	ug/kg	<47.6	1550	1530	1440	1390	93	91	78-145	3	20	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	1550	1530	1230	1210	80	79	38-168	1	22	
1,2-Dibromoethane (EDB)	ug/kg	<25.0	1550	1530	1330	1310	86	85	70-130	2	20	
1,2-Dichlorobenzene	ug/kg	<25.0	1550	1530	1500	1440	97	94	70-130	4	20	
1,2-Dichloroethane	ug/kg	<25.0	1550	1530	1380	1400	89	91	56-145	1	20	
1,2-Dichloropropane	ug/kg	<25.0	1550	1530	1200	1270	78	83	77-123	5	20	
1,3-Dichlorobenzene	ug/kg	<25.0	1550	1530	1490	1410	96	92	70-130	5	20	
1,4-Dichlorobenzene	ug/kg	<25.0	1550	1530	1400	1370	91	89	70-130	2	20	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151862

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1526701 1526702

Parameter	Units	40151859002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/kg	<25.0	1550	1530	1180	1230	76	80	65-130	4	20	
Bromodichloromethane	ug/kg	<25.0	1550	1530	1210	1240	79	81	59-141	3	20	
Bromoform	ug/kg	<25.0	1550	1530	1180	1150	77	75	59-141	3	20	
Bromomethane	ug/kg	<69.9	1550	1530	930	1070	60	70	28-139	14	20	
Carbon tetrachloride	ug/kg	<25.0	1550	1530	1140	1200	74	78	50-130	5	20	
Chlorobenzene	ug/kg	<25.0	1550	1530	1360	1350	88	88	70-130	1	20	
Chloroethane	ug/kg	<67.0	1550	1530	1230	1290	80	84	36-144	5	20	
Chloroform	ug/kg	<46.4	1550	1530	1200	1240	77	81	68-122	4	20	
Chloromethane	ug/kg	<25.0	1550	1530	807	914	52	60	30-126	12	20	
cis-1,2-Dichloroethene	ug/kg	<25.0	1550	1530	1100	1140	71	75	63-130	4	20	
cis-1,3-Dichloropropene	ug/kg	<25.0	1550	1530	1220	1220	79	79	70-130	1	20	
Dibromochloromethane	ug/kg	<25.0	1550	1530	1170	1170	76	76	66-136	0	20	
Dichlorodifluoromethane	ug/kg	<25.0	1550	1530	689	790	45	52	10-99	14	33	
Ethylbenzene	ug/kg	<25.0	1550	1530	1350	1340	87	88	80-122	0	20	
Isopropylbenzene (Cumene)	ug/kg	<25.0	1550	1530	1310	1300	85	85	70-130	1	20	
m&p-Xylene	ug/kg	<50.0	3080	3070	2630	2580	85	84	70-130	2	20	
Methyl-tert-butyl ether	ug/kg	<25.0	1550	1530	1320	1320	86	86	63-134	0	20	
Methylene Chloride	ug/kg	<25.0	1550	1530	1180	1260	76	82	56-127	7	20	
o-Xylene	ug/kg	<25.0	1550	1530	1330	1310	86	85	70-130	1	20	
Styrene	ug/kg	<25.0	1550	1530	1350	1350	87	88	70-130	0	20	
Tetrachloroethene	ug/kg	<25.0	1550	1530	1380	1370	89	90	70-131	1	20	
Toluene	ug/kg	<25.0	1550	1530	1340	1350	87	88	80-120	0	20	
trans-1,2-Dichloroethene	ug/kg	<25.0	1550	1530	1140	1170	74	76	60-130	2	20	
trans-1,3-Dichloropropene	ug/kg	<25.0	1550	1530	1250	1270	81	83	68-130	1	20	
Trichloroethene	ug/kg	<25.0	1550	1530	1280	1320	83	86	70-130	3	20	
Trichlorofluoromethane	ug/kg	<25.0	1550	1530	1080	1270	70	83	37-149	16	24	
Vinyl chloride	ug/kg	<25.0	1550	1530	959	1060	62	69	39-128	10	20	
4-Bromofluorobenzene (S)	%						83	83	58-141			
Dibromofluoromethane (S)	%						75	78	68-130			
Toluene-d8 (S)	%						87	86	68-149			

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151862

QC Batch: 259120
QC Batch Method: WI MOD DRO
Analysis Method: WI MOD DRO
Analysis Description: WIDRO GCS
Associated Lab Samples: 40151862001

METHOD BLANK: 1526479
Matrix: Solid
Associated Lab Samples: 40151862001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics	mg/kg	<1.3	4.3	06/21/17 11:21	

LABORATORY CONTROL SAMPLE & LCSD: 1526480 1526481

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/kg	40	32.3	37.5	81	94	70-120	15	20	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151862

QC Batch: 259391
QC Batch Method: ASTM D2974-87
Associated Lab Samples: 40151862001

Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture

SAMPLE DUPLICATE: 1527886

Parameter	Units	40151966003 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.0	16.3	2	10	

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QUALIFIERS

Project: 2133 SOLVAY
Pace Project No.: 40151862

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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TNI - The NELAC Institute.

ANALYTE QUALIFIERS

DC	Chromatographic pattern inconsistent with typical Diesel Fuel.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.
W	Non-detect results are reported on a wet weight basis.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 2133 SOLVAY
Pace Project No.: 40151862

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40151862001	**061617004**	WI MOD DRO	259120	WI MOD DRO	259207
40151862001	**061617004**	EPA 5035/5030B	259185	EPA 8260	259192
40151862002	**061617005**	EPA 5035/5030B	259185	EPA 8260	259192
40151862001	**061617004**	ASTM D2974-87	259391		

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Level II SSM

Pace Analytical® www.pacelabs.com

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

Page 1 of 1

4015862

Courier: Pace/CS Logistics

COC# 2133-0617-006

QC: 6/16/17

CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	Natural Resource Tech
Branch/Location:	Milwaukee, WI
Project Contact:	Andrew Caviris
Phone:	414-837-3645
Project Number:	2133
Project Name:	Solvay
Project State:	WI
Sampled By (Print):	Andrew Caviris
Sampled By (Sign):	AndrewC
PO #:	3400010643
Regulatory Program:	

Quote #:	
Mail To Contact:	gdsdata@dsgi.com
Mail To Company:	Natural Resource Tech
Mail To Address:	234 W Florida St Milwaukee, WI
Invoice To Contact:	Accounts Payable
Invoice To Company:	WEC Business Services
Invoice To Address:	PO Box 19800 Green Bay, WI
Invoice To Phone:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes

A = Air	W = Water
B = Biota	DW = Drinking Water
C = Charcoal	GW = Ground Water
O = Oil	SW = Surface Water
S = Soil	WW = Waste Water
Sl = Sludge	WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO)	PRESERVATION (CODE)*	Analyses Requested: VOC 8260	Analyses Requested: DRO WI-Modified		CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
					Y/N	Pick Letter						
001	061617004	6/16/17	1100	S	N	F	X	X	1-40ml LVF	Screen	1-403pA 1-403agA	
002	061617005	6/16/17	—	—	N	A	X		↓	Trip Blank		

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
AndrewC	6/16/17 1300	Katie Johnson Pace	6/17/17 0750

PACE Project No.: 4015862

Receipt Temp = R01 °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal Present / Not Present
Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

Custody Seal # 2133-01502

ORIGINAL

Page 17 of 19

40151862

From: <notifications@cslog.com>
To: <gbsr@pacelabs.com>
Date: 6/17/2017 1:00 AM
Subject: Auto-Notification Shipment #1137.061517

The following shipment sent by Alee Her of PACE
has been delivered and signed for by: CSL warehouse MIKE @ 06/17/2017 01:00

OrderTrackingID: 1137.061517
Ref#: Schaumburg
Pieces: 2
Weight: 1.00

[Pickup]
PACE Labs Schaumburg
870 E Higgins Rd
Suite 143
Schaumburg IL, 60173-4796

[Delivery]
CS Logistics MKE
11001 W Mitchell St
Milwaukee WI, 53214-3805

If you would like to track this shipment online, please visit:
http://www.cslogisticsinc.com/xcelerator/Online/QuickTrack.aspx?OrderTrackingID=1137.061517&Key=06D53

[Shipment delivered by CS Logistics, Inc.]

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Pace Analytical™

Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Project #: **WO# : 40151862**

40151862

Client Name: NRT

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace ☑ Other: CS Logistics

Tracking #: 1137.061517

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other

Thermometer Used NA **Type of Ice:** (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: /Corr: R01 **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

Person examining contents:
Date: 6/17/17
Initials: KF

			Comments:
Chain of Custody Present:	☑Yes	☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No ☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes	☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes	☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☑No ☐N/A	7.
Sufficient Volume:	☑Yes	☐No ☐N/A	8.
Correct Containers Used:	☑Yes	☐No ☐N/A	9.
-Pace Containers Used:	☑Yes	☐No ☐N/A	
-Pace IR Containers Used:	☐Yes	☐No ☐N/A	
Containers Intact:	☑Yes	☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☐No ☐N/A	11.
Sample Labels match COC:	☑Yes	☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: S			
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes	☐No ☐N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes	☐No ☐N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes	☑No	Initial when completed / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes	☐No ☐N/A	14.
Trip Blank Present:	☑Yes	☐No ☐N/A	15.
Trip Blank Custody Seals Present	☐Yes	☐No ☐N/A	
Pace Trip Blank Lot # (if purchased): 67-560-1			

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: Date: 6-9-17

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

June 23, 2017

Andrew Cawrse
Natural Resource Technology
234 W Florida St
Milwaukee, WI 53204

RE: Project: 2133 SOLVAY
Pace Project No.: 40151863

Dear Andrew Cawrse:
Enclosed are the analytical results for sample(s) received by the laboratory on June 17, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brian Basten
brian.basten@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: NRT Data, Natural Resource Technologies
Brian Hennings, NATURAL RESOURCE TECHNOLOGY

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Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: 2133 SOLVAY
Pace Project No.: 40151863

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

REPORT OF LABORATORY ANALYSIS

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: 2133 SOLVAY
Pace Project No.: 40151863

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40151863001	**061617006**	Solid	06/16/17 11:30	06/17/17 07:50

REPORT OF LABORATORY ANALYSIS

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Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: 2133 SOLVAY
Pace Project No.: 40151863

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40151863001	**061617006**	EPA 8260	LAP	4

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Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40151863

Sample: 061617006 **Lab ID: 40151863001** Collected: 06/16/17 11:30 Received: 06/17/17 07:50 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV TCLP	Analytical Method: EPA 8260 Leachate Method/Date: EPA 1311; 06/21/17 00:00								
Benzene	**<125**	ug/L	250	125	250		06/23/17 10:14	71-43-2	
Surrogates									
Toluene-d8 (S)	96	%	70-130		250		06/23/17 10:14	2037-26-5	D3
4-Bromofluorobenzene (S)	90	%	61-130		250		06/23/17 10:14	460-00-4	
Dibromofluoromethane (S)	100	%	67-130		250		06/23/17 10:14	1868-53-7	

REPORT OF LABORATORY ANALYSIS

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Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151863

QC Batch: 259259 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV TCLP
Associated Lab Samples: 40151863001

METHOD BLANK: 1527140 Matrix: Water
Associated Lab Samples: 40151863001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	<0.50	1.0	06/22/17 07:15	
4-Bromofluorobenzene (S)	%	94	61-130	06/22/17 07:15	
Dibromofluoromethane (S)	%	99	67-130	06/22/17 07:15	
Toluene-d8 (S)	%	99	70-130	06/22/17 07:15	

METHOD BLANK: 1526458 Matrix: Solid
Associated Lab Samples: 40151863001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	<5.0	10.0	06/22/17 11:03	
4-Bromofluorobenzene (S)	%	92	61-130	06/22/17 11:03	
Dibromofluoromethane (S)	%	103	67-130	06/22/17 11:03	
Toluene-d8 (S)	%	99	70-130	06/22/17 11:03	

LABORATORY CONTROL SAMPLE: 1527141

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	51.3	103	73-145	
4-Bromofluorobenzene (S)	%			101	61-130	
Dibromofluoromethane (S)	%			100	67-130	
Toluene-d8 (S)	%			96	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1527939 1527940

Parameter	Units	40151759004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	<5.0	500	500	497	475	99	95	73-145	5	20	
4-Bromofluorobenzene (S)	%						100	103	61-130			
Dibromofluoromethane (S)	%						98	98	67-130			
Toluene-d8 (S)	%						100	101	70-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: 2133 SOLVAY
Pace Project No.: 40151863

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 2133 SOLVAY
Pace Project No.: 40151863

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40151863001	**061617006**	EPA 8260	259259		

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Level II

SSM

Page 1 of 1

4015863

Page 9 of 10

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

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courier: Pace/CS Logistics

COC # 2133-0617-007

QC: GFF 6/16/17

CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	Natural Resource Tech
Branch/Location:	Milwaukee, WI
Project Contact:	Andrew Course
Phone:	414-837-3645
Project Number:	2133
Project Name:	Solvay
Project State:	WI
Sampled By (Print):	Andrew Course
Sampled By (Sign):	Andrew C
PO #:	3400010643
Regulatory Program:	

Quote #:	
Mail To Contact:	gdsdata@dbg.com
Mail To Company:	Natural Resource Tech
Mail To Address:	234 W Florida St Milwaukee, WI
Invoice To Contact:	Accounts Payable
Invoice To Company:	WEC Business Services
Invoice To Address:	PO Box 19000 Green Bay, WI
Invoice To Phone:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes

A = Air	W = Water
B = Biota	DW = Drinking Water
C = Charcoal	GW = Ground Water
O = Oil	SW = Surface Water
S = Soil	WW = Waste Water
Sl = Sludge	WP = Wipe

FILTERED? (YES/NO) — Y/N: N
PRESERVATION (CODE)* — Pick Letter: A

Analyses Requested: 8260 TCLP Benzene: X

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	061617006	6/16/17	1130	S	screen	1-4oz ag A	

Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge) Date Needed:	
Transmit Prelim Rush Results by (complete what you want):	
Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Andrew C	6/16/17 1300	Kate Schramm Pace	6/16/17 0750
		KA	6/17/17

PACE Project No.: 4015863

Receipt Temp = R01 °C

Sample Receipt pH: OK / Adjusted

Cooler Custody Seal: Present / Not Present; Intact / Not Intact

Custody Seal # 2133-01402

C019a(27Jun2006)

Version 6.0 06/14/06

ORIGINAL

Pace Analytical™

Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Project #: **WO# : 40151863**

40151863

Client Name: NRT

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace ☑ Other: CS Logistics

Tracking #: 1137.061517

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other

Thermometer Used NA **Type of Ice:** (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: /Corr: R01 **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

Person examining contents:
Date: 6/17/17
Initials: ZJ

Comments:

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☑N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: S		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes ☐No ☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes ☑No	Initial when completed / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	14.
Trip Blank Present:	☐Yes ☑No ☐N/A	15.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:** 6-19-17

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

June 22, 2017

Andrew Cawrse
Natural Resource Technology
234 W Florida St
Milwaukee, WI 53204

RE: Project: 2133 SOLVAY
Pace Project No.: 40151864

Dear Andrew Cawrse:
Enclosed are the analytical results for sample(s) received by the laboratory on June 17, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brian Basten
brian.basten@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: NRT Data, Natural Resource Technologies
Brian Hennings, NATURAL RESOURCE TECHNOLOGY

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: 2133 SOLVAY
Pace Project No.: 40151864

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: 2133 SOLVAY
Pace Project No.: 40151864

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40151864001	**061617001**	Solid	06/16/17 10:15	06/17/17 07:50
40151864002	**061617002**	Solid	06/16/17 10:30	06/17/17 07:50
40151864003	**061617003**	Solid	06/16/17 10:45	06/17/17 07:50

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Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: 2133 SOLVAY
Pace Project No.: 40151864

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40151864001	**061617001**	EPA 8082	BDS	10
		ASTM D2974-87	SKW	1
40151864002	**061617002**	EPA 8082	BDS	10
		ASTM D2974-87	SKW	1
40151864003	**061617003**	EPA 8082	BDS	10
		ASTM D2974-87	SKW	1

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40151864

Sample: 061617001 **Lab ID: 40151864001** Collected: 06/16/17 10:15 Received: 06/17/17 07:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	**<26.2**	ug/kg	52.3	26.2	1	06/19/17 13:42	06/21/17 03:24	12674-11-2	
PCB-1221 (Aroclor 1221)	**<26.2**	ug/kg	52.3	26.2	1	06/19/17 13:42	06/21/17 03:24	11104-28-2	
PCB-1232 (Aroclor 1232)	**<26.2**	ug/kg	52.3	26.2	1	06/19/17 13:42	06/21/17 03:24	11141-16-5	
PCB-1242 (Aroclor 1242)	**<26.2**	ug/kg	52.3	26.2	1	06/19/17 13:42	06/21/17 03:24	53469-21-9	
PCB-1248 (Aroclor 1248)	**<26.2**	ug/kg	52.3	26.2	1	06/19/17 13:42	06/21/17 03:24	12672-29-6	
PCB-1254 (Aroclor 1254)	**<26.2**	ug/kg	52.3	26.2	1	06/19/17 13:42	06/21/17 03:24	11097-69-1	
PCB-1260 (Aroclor 1260)	**<26.2**	ug/kg	52.3	26.2	1	06/19/17 13:42	06/21/17 03:24	11096-82-5	
PCB, Total	**<26.2**	ug/kg	52.3	26.2	1	06/19/17 13:42	06/21/17 03:24	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	74	%	50-102		1	06/19/17 13:42	06/21/17 03:24	877-09-8	
Decachlorobiphenyl (S)	77	%	53-105		1	06/19/17 13:42	06/21/17 03:24	2051-24-3	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**4.4**	%	0.10	0.10	1		06/21/17 10:42		

Sample: 061617002 **Lab ID: 40151864002** Collected: 06/16/17 10:30 Received: 06/17/17 07:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	**<25.5**	ug/kg	51.1	25.5	1	06/19/17 13:42	06/21/17 03:45	12674-11-2	
PCB-1221 (Aroclor 1221)	**<25.5**	ug/kg	51.1	25.5	1	06/19/17 13:42	06/21/17 03:45	11104-28-2	
PCB-1232 (Aroclor 1232)	**<25.5**	ug/kg	51.1	25.5	1	06/19/17 13:42	06/21/17 03:45	11141-16-5	
PCB-1242 (Aroclor 1242)	**<25.5**	ug/kg	51.1	25.5	1	06/19/17 13:42	06/21/17 03:45	53469-21-9	
PCB-1248 (Aroclor 1248)	**<25.5**	ug/kg	51.1	25.5	1	06/19/17 13:42	06/21/17 03:45	12672-29-6	
PCB-1254 (Aroclor 1254)	**<25.5**	ug/kg	51.1	25.5	1	06/19/17 13:42	06/21/17 03:45	11097-69-1	
PCB-1260 (Aroclor 1260)	**<25.5**	ug/kg	51.1	25.5	1	06/19/17 13:42	06/21/17 03:45	11096-82-5	
PCB, Total	**<25.5**	ug/kg	51.1	25.5	1	06/19/17 13:42	06/21/17 03:45	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	78	%	50-102		1	06/19/17 13:42	06/21/17 03:45	877-09-8	
Decachlorobiphenyl (S)	79	%	53-105		1	06/19/17 13:42	06/21/17 03:45	2051-24-3	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**2.1**	%	0.10	0.10	1		06/21/17 10:42		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40151864

Sample: 061617003 **Lab ID: 40151864003** Collected: 06/16/17 10:45 Received: 06/17/17 07:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	**<25.8**	ug/kg	51.6	25.8	1	06/19/17 13:42	06/21/17 04:06	12674-11-2	
PCB-1221 (Aroclor 1221)	**<25.8**	ug/kg	51.6	25.8	1	06/19/17 13:42	06/21/17 04:06	11104-28-2	
PCB-1232 (Aroclor 1232)	**<25.8**	ug/kg	51.6	25.8	1	06/19/17 13:42	06/21/17 04:06	11141-16-5	
PCB-1242 (Aroclor 1242)	**<25.8**	ug/kg	51.6	25.8	1	06/19/17 13:42	06/21/17 04:06	53469-21-9	
PCB-1248 (Aroclor 1248)	**<25.8**	ug/kg	51.6	25.8	1	06/19/17 13:42	06/21/17 04:06	12672-29-6	
PCB-1254 (Aroclor 1254)	**<25.8**	ug/kg	51.6	25.8	1	06/19/17 13:42	06/21/17 04:06	11097-69-1	
PCB-1260 (Aroclor 1260)	**<25.8**	ug/kg	51.6	25.8	1	06/19/17 13:42	06/21/17 04:06	11096-82-5	
PCB, Total	**<25.8**	ug/kg	51.6	25.8	1	06/19/17 13:42	06/21/17 04:06	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	78	%	50-102		1	06/19/17 13:42	06/21/17 04:06	877-09-8	
Decachlorobiphenyl (S)	82	%	53-105		1	06/19/17 13:42	06/21/17 04:06	2051-24-3	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**3.1**	%	0.10	0.10	1		06/21/17 10:42		

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151864

QC Batch: 258999 Analysis Method: EPA 8082
QC Batch Method: EPA 3541 Analysis Description: 8082 GCS PCB
Associated Lab Samples: 40151864001, 40151864002, 40151864003

METHOD BLANK: 1526050 Matrix: Solid
Associated Lab Samples: 40151864001, 40151864002, 40151864003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	<25.0	50.0	06/20/17 20:53	
PCB-1221 (Aroclor 1221)	ug/kg	<25.0	50.0	06/20/17 20:53	
PCB-1232 (Aroclor 1232)	ug/kg	<25.0	50.0	06/20/17 20:53	
PCB-1242 (Aroclor 1242)	ug/kg	<25.0	50.0	06/20/17 20:53	
PCB-1248 (Aroclor 1248)	ug/kg	<25.0	50.0	06/20/17 20:53	
PCB-1254 (Aroclor 1254)	ug/kg	<25.0	50.0	06/20/17 20:53	
PCB-1260 (Aroclor 1260)	ug/kg	<25.0	50.0	06/20/17 20:53	
Decachlorobiphenyl (S)	%	82	53-105	06/20/17 20:53	
Tetrachloro-m-xylene (S)	%	75	50-102	06/20/17 20:53	

LABORATORY CONTROL SAMPLE: 1526051

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg		<25.0			
PCB-1221 (Aroclor 1221)	ug/kg		<25.0			
PCB-1232 (Aroclor 1232)	ug/kg		<25.0			
PCB-1242 (Aroclor 1242)	ug/kg		<25.0			
PCB-1248 (Aroclor 1248)	ug/kg		<25.0			
PCB-1254 (Aroclor 1254)	ug/kg		<25.0			
PCB-1260 (Aroclor 1260)	ug/kg	500	419	84	59-106	
Decachlorobiphenyl (S)	%			81	53-105	
Tetrachloro-m-xylene (S)	%			75	50-102	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1526052 1526053

Parameter	Units	40151693001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/kg	<25.0			<25.0	<25.0					20	
PCB-1221 (Aroclor 1221)	ug/kg	<25.0			<25.0	<25.0					20	
PCB-1232 (Aroclor 1232)	ug/kg	<25.0			<25.0	<25.0					20	
PCB-1242 (Aroclor 1242)	ug/kg	<25.0			<25.0	<25.0					20	
PCB-1248 (Aroclor 1248)	ug/kg	<25.0			<25.0	<25.0					20	
PCB-1254 (Aroclor 1254)	ug/kg	<25.0			<25.0	<25.0					20	
PCB-1260 (Aroclor 1260)	ug/kg	<25.0	500	500	385	389	77	78	51-109	1	20	
Decachlorobiphenyl (S)	%						75	75	53-105			
Tetrachloro-m-xylene (S)	%						70	72	50-102			

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40151864

QC Batch: 259312 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40151864001, 40151864002, 40151864003

SAMPLE DUPLICATE: 1527335

Parameter	Units	40151872004 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	5.8	6.3	9	10	

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QUALIFIERS

Project: 2133 SOLVAY
Pace Project No.: 40151864

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 2133 SOLVAY
Pace Project No.: 40151864

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40151864001	**061617001**	EPA 3541	258999	EPA 8082	259007
40151864002	**061617002**	EPA 3541	258999	EPA 8082	259007
40151864003	**061617003**	EPA 3541	258999	EPA 8082	259007
40151864001	**061617001**	ASTM D2974-87	259312		
40151864002	**061617002**	ASTM D2974-87	259312		
40151864003	**061617003**	ASTM D2974-87	259312		

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Level II

SSM

Page 1 of 1

40151864

Page 11 of 12

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UPPER MIDWEST REGION

MN: 612-607-1700 WI: 920-469-2436

courier: Pace/CS Logistics

COC # 2133-0617-005

QC: GFF 6/16/17

CHAIN OF CUSTODY

*Preservation Codes

A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	Natural Resource Tech
Branch/Location:	Milwaukee, WI
Project Contact:	Andrew Cowrie
Phone:	414-837-3645
Project Number:	2133
Project Name:	Solvay
Project State:	WI
Sampled By (Print):	Andrew Cowrie
Sampled By (Sign):	Andrew C
PO #:	3400010643
Regulatory Program:	

Quote #:	
Mail To Contact:	gdsdata@obg.com
Mail To Company:	Natural Resource Tech
Mail To Address:	234 W Florida St Milwaukee WI
Invoice To Contact:	Accounts Payable
Invoice To Company:	WEC Business Services
Invoice To Address:	PO Box 19800 Green Bay, WI
Invoice To Phone:	

FILTERED? (YES/NO) Y/N: N

PRESERVATION (CODE)* Pick Letter: A

Analyses Requested: PCBs 8082

Data Package Options (billable)
- ☐ EPA Level III
- ☐ EPA Level IV

MS/MSD
- ☐ On your sample (billable)
- ☐ NOT needed on your sample

Matrix Codes
A = Air, B = Biota, C = Charcoal, O = Oil, S = Soil, SI = Sludge, W = Water, DW = Drinking Water, GW = Ground Water, SW = Surface Water, WW = Waste Water, WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	PCBs 8082	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	061617001	6/16/17	1015	Concrete	X	1-40zag A		
002	061617002	↓	1030	↓	X	↓		
003	061617003	↓	1045	↓	X	↓		

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Andrew C	6/16/17 13:00	Zatie Schramm Pace	6/17/17 0750

PACE Project No. 40151864

Receipt Temp = R01 °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal Present / Not Present Intact / Not Intact

Custody Seal # 2133-01 & 02

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

Pace Analytical™

Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Project #: WO# : 40151864

40151864

Client Name: NRT

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace ☑ Other: CS Logistics

Tracking #: 1137.061517

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other

Thermometer Used NA **Type of Ice:** (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: /Corr: R01 **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

Person examining contents:
Date: 6/17/17
Initials: KJ

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☑N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: S		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes ☐No ☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes ☑No	Initial when completed / Lab Std #ID of preservative / Date/Time:
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	14.
Trip Blank Present:	☐Yes ☐No ☑N/A	15.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: [signature] **Date:** 6-19-17

F-GB-C-031-Rev.04 (12Dec2016) SCUR.xls
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1241 Bellevue Street - Suite 9
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June 27, 2017

Andrew Cawrse
Natural Resource Technology
234 W Florida St
Milwaukee, WI 53204

RE: Project: 2133 SOLVAY
Pace Project No.: 40152170

Dear Andrew Cawrse:
Enclosed are the analytical results for sample(s) received by the laboratory on June 23, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brian Basten
brian.basten@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: NRT Data, Natural Resource Technologies
Brian Hennings, NATURAL RESOURCE TECHNOLOGY

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CERTIFICATIONS

Project: 2133 SOLVAY
Pace Project No.: 40152170

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

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SAMPLE SUMMARY

Project: 2133 SOLVAY
Pace Project No.: 40152170

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40152170001	**062217001**	Solid	06/22/17 13:45	06/23/17 09:00

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SAMPLE ANALYTE COUNT

Project: 2133 SOLVAY
Pace Project No.: 40152170

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40152170001	**062217001**	ASTM D2974-87	KTS	1
		EPA 9012	BAF	1

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40152170

Sample: 062217001 **Lab ID: 40152170001** Collected: 06/22/17 13:45 Received: 06/23/17 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**7.6**	%	0.10	0.10	1		06/23/17 21:25		
9012 Cyanide, Total	Analytical Method: EPA 9012 Preparation Method: EPA 9012A								
Cyanide	**1260**	mg/kg	88.4	26.4	200	06/27/17 08:27	06/27/17 13:45	57-12-5	P6

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152170

QC Batch: 259639
QC Batch Method: ASTM D2974-87
Associated Lab Samples: 40152170001

Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture

SAMPLE DUPLICATE: 1529789

Parameter	Units	40152170001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	7.6	7.6	1	10	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152170

QC Batch: 259807
QC Batch Method: EPA 9012A
Analysis Method: EPA 9012
Analysis Description: 9012 Cyanide
Associated Lab Samples: 40152170001

METHOD BLANK: 1530409
Matrix: Solid
Associated Lab Samples: 40152170001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	mg/kg	<0.12	0.40	06/27/17 11:23	

LABORATORY CONTROL SAMPLE: 1530410

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/kg	3	3.2	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1530411 1530412

Parameter	Units	40152170001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cyanide	mg/kg	1260	3.2	3.4	<25.9	1210	-39000	-1660	80-120		20	P6

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 2133 SOLVAY
Pace Project No.: 40152170

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 2133 SOLVAY
Pace Project No.: 40152170

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40152170001	**062217001**	ASTM D2974-87	259639		
40152170001	**062217001**	EPA 9012A	259807	EPA 9012	259856

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Level II

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

4015 2170 Page 1 of 1

Pace Analytical® www.pacelabs.com

Courier: FedEx 779472786534

COC# 2133-0617-009

QC: EDF 6/22/17

CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	Natural Resource Tech
Branch/Location:	Milwaukee, WI
Project Contact:	Andrew Course
Phone:	414-837-3645
Project Number:	2133
Project Name:	Solvay
Project State:	WI
Sampled By (Print):	Andrew Course
Sampled By (Sign):	Andrew Course
PO #:	3400010643
Regulatory Program:	

Quote #:	
Mail To Contact:	gdsdata@obg.com
Mail To Company:	Natural Resource Tech
Mail To Address:	234 W Florida St Milwaukee, WI
Invoice To Contact:	Accounts Payable
Invoice To Company:	WEC Business Services
Invoice To Address:	PO Box 19800 Green Bay, WI
Invoice To Phone:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes

A = Air	W = Water
B = Biota	DW = Drinking Water
C = Charcoal	GW = Ground Water
O = Oil	SW = Surface Water
S = Soil	WW = Waste Water
SI = Sludge	WP = Wipe

FILTERED? (YES/NO) — Y/N: N
PRESERVATION (CODE)* — Pick Letter: A

Analyses Requested: SW846 Cyanide 9012

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Analyses Requested	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)
001	06221701	6/22/17	13:45	S	X		1-40zag[a]

Profile #:

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed: 24 Hr ASAP

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Andrew Course	6/22/17 16:30		
Fed Ex	6/23/17 0900	Kimberly Ratzlaff Pace	6/23/17 0900

PACE Project No.: 4015 2170

Receipt Temp = R01 °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal: Present / Not Present; Intact / Not Intact

Custody Seal # 2133-01802

C019a(27Jun2006)

Version 6.0 06/14/06

ORIGINAL

Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical™

Project #: WO#: 40152170

40152170

Client Name: Natural Resource Tech

Courier: ☑ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: _____

Tracking #: 7794 7278 6534

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☐ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other _____

Thermometer Used NA **Type of Ice:** (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: R01 /Corr: **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☐ no

Person examining contents:
Date: 6-23-17
Initials: KR

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

				Comments:
Chain of Custody Present:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes	☐No		Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A	6.
Rush Turn Around Time Requested:	☑Yes	☐No	☐N/A	7. 24 hour 6-23-17 KR
Sufficient Volume:	☑Yes	☐No	☐N/A	8.
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☑Yes	☐No	☐N/A	
-Pace IR Containers Used:	☐Yes	☐No	☑N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11.
Sample Labels match COC:	☑Yes	☐No	☐N/A	12.
-Includes date/time/ID/Analysis Matrix: S				
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes	☐No	☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes	☐No	☑N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes	☑No		Initial when completed / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	14.
Trip Blank Present:	☐Yes	☐No	☑N/A	15.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if purchased):				

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** 6-23-14

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

June 29, 2017

Andrew Cawrse
Natural Resource Technology
234 W Florida St
Milwaukee, WI 53204

RE: Project: 2133 SOLVAY
Pace Project No.: 40152181

Dear Andrew Cawrse:
Enclosed are the analytical results for sample(s) received by the laboratory on June 23, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brian Basten
brian.basten@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: NRT Data, Natural Resource Technologies
Brian Hennings, NATURAL RESOURCE TECHNOLOGY
Robert Paulson, We Energies

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 2133 SOLVAY
Pace Project No.: 40152181

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

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SAMPLE SUMMARY

Project: 2133 SOLVAY
Pace Project No.: 40152181

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40152181001	**062117001**	Solid	06/21/17 12:45	06/23/17 09:20
40152181002	**062117002**	Solid	06/21/17 13:15	06/23/17 09:20
40152181003	**062117003**	Solid	06/21/17 13:30	06/23/17 09:20
40152181004	**062117004**	Solid	06/21/17 00:00	06/23/17 09:20

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SAMPLE ANALYTE COUNT

Project: 2133 SOLVAY
Pace Project No.: 40152181

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40152181001	**062117001**	ASTM D2974-87	KTS	1
		EPA 9012	BAF	1
40152181002	**062117002**	EPA 8082	BLM	10
		EPA 6020	DS1	7
		EPA 7471	AJT	1
		EPA 8270 by SIM	ARO	20
		EPA 8260	SMT	64
		ASTM D2974-87	KTS	1
40152181003	**062117003**	EPA 8082	BDS	10
		EPA 6020	DS1	7
		EPA 7471	AJT	1
		EPA 8270 by SIM	ARO	20
		EPA 8260	SMT	64
		ASTM D2974-87	KTS	1
40152181004	**062117004**	EPA 8260	SMT	64

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40152181

Sample: 062117001 **Lab ID: 40152181001** Collected: 06/21/17 12:45 Received: 06/23/17 09:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**15.7**	%	0.10	0.10	1		06/23/17 21:26		
9012 Cyanide, Total	Analytical Method: EPA 9012 Preparation Method: EPA 9012A								
Cyanide	**144**	mg/kg	11.0	3.3	25	06/27/17 08:27	06/27/17 12:49	57-12-5	

Sample: 062117002 **Lab ID: 40152181002** Collected: 06/21/17 13:15 Received: 06/23/17 09:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	**<28.0**	ug/kg	56.1	28.0	1	06/28/17 11:52	06/29/17 00:27	12674-11-2	
PCB-1221 (Aroclor 1221)	**<28.0**	ug/kg	56.1	28.0	1	06/28/17 11:52	06/29/17 00:27	11104-28-2	
PCB-1232 (Aroclor 1232)	**<28.0**	ug/kg	56.1	28.0	1	06/28/17 11:52	06/29/17 00:27	11141-16-5	
PCB-1242 (Aroclor 1242)	**69.3**	ug/kg	56.1	28.0	1	06/28/17 11:52	06/29/17 00:27	53469-21-9	
PCB-1248 (Aroclor 1248)	**<28.0**	ug/kg	56.1	28.0	1	06/28/17 11:52	06/29/17 00:27	12672-29-6	
PCB-1254 (Aroclor 1254)	**67.7**	ug/kg	56.1	28.0	1	06/28/17 11:52	06/29/17 00:27	11097-69-1	
PCB-1260 (Aroclor 1260)	**104**	ug/kg	56.1	28.0	1	06/28/17 11:52	06/29/17 00:27	11096-82-5	
PCB, Total	**241**	ug/kg	56.1	28.0	1	06/28/17 11:52	06/29/17 00:27	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	84	%	50-102		1	06/28/17 11:52	06/29/17 00:27	877-09-8	
Decachlorobiphenyl (S)	76	%	53-105		1	06/28/17 11:52	06/29/17 00:27	2051-24-3	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3050								
Arsenic	**4.8**	mg/kg	0.98	0.29	6.667	06/26/17 09:18	06/27/17 10:46	7440-38-2	
Barium	**51.0**	mg/kg	0.85	0.25	6.667	06/26/17 09:18	06/27/17 10:46	7440-39-3	
Cadmium	**0.35J**	mg/kg	0.74	0.11	6.667	06/26/17 09:18	06/27/17 10:46	7440-43-9	D3
Chromium	**19.3**	mg/kg	5.0	1.5	6.667	06/26/17 09:18	06/27/17 10:46	7440-47-3	
Lead	**26.0**	mg/kg	0.74	0.20	6.667	06/26/17 09:18	06/27/17 10:46	7439-92-1	
Selenium	**0.95**	mg/kg	0.74	0.20	6.667	06/26/17 09:18	06/27/17 10:46	7782-49-2	
Silver	**0.23J**	mg/kg	0.37	0.11	6.667	06/26/17 09:18	06/27/17 10:46	7440-22-4	D3
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.10**	mg/kg	0.041	0.012	1	06/27/17 06:47	06/27/17 11:15	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**25.0J**	ug/kg	57.9	17.4	4	06/26/17 08:06	06/28/17 15:09	83-32-9	
Acenaphthylene	**72.4**	ug/kg	49.4	14.8	4	06/26/17 08:06	06/28/17 15:09	208-96-8	
Anthracene	**144**	ug/kg	85.3	25.6	4	06/26/17 08:06	06/28/17 15:09	120-12-7	
Benzo(a)anthracene	**414**	ug/kg	47.6	14.2	4	06/26/17 08:06	06/28/17 15:09	56-55-3	
Benzo(a)pyrene	**335**	ug/kg	37.6	11.3	4	06/26/17 08:06	06/28/17 15:09	50-32-8	
Benzo(b)fluoranthene	**579**	ug/kg	42.2	12.7	4	06/26/17 08:06	06/28/17 15:09	205-99-2	
Benzo(g,h,i)perylene	**249**	ug/kg	30.4	9.1	4	06/26/17 08:06	06/28/17 15:09	191-24-2	

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40152181

Sample: 062117002 **Lab ID: 40152181002** Collected: 06/21/17 13:15 Received: 06/23/17 09:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Benzo(k)fluoranthene	**220**	ug/kg	37.5	11.3	4	06/26/17 08:06	06/28/17 15:09	207-08-9	
Chrysene	**500**	ug/kg	50.3	15.1	4	06/26/17 08:06	06/28/17 15:09	218-01-9	
Dibenz(a,h)anthracene	**81.3**	ug/kg	33.4	10.0	4	06/26/17 08:06	06/28/17 15:09	53-70-3	
Fluoranthene	**783**	ug/kg	78.1	23.4	4	06/26/17 08:06	06/28/17 15:09	206-44-0	
Fluorene	**35.3J**	ug/kg	61.9	18.6	4	06/26/17 08:06	06/28/17 15:09	86-73-7	
Indeno(1,2,3-cd)pyrene	**212**	ug/kg	32.9	9.9	4	06/26/17 08:06	06/28/17 15:09	193-39-5	
1-Methylnaphthalene	**262**	ug/kg	60.1	18.1	4	06/26/17 08:06	06/28/17 15:09	90-12-0	
2-Methylnaphthalene	**354**	ug/kg	74.9	22.4	4	06/26/17 08:06	06/28/17 15:09	91-57-6	
Naphthalene	**382**	ug/kg	126	37.8	4	06/26/17 08:06	06/28/17 15:09	91-20-3	
Phenanthrene	**636**	ug/kg	174	52.3	4	06/26/17 08:06	06/28/17 15:09	85-01-8	
Pyrene	**618**	ug/kg	67.3	20.2	4	06/26/17 08:06	06/28/17 15:09	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	48	%	19-96		4	06/26/17 08:06	06/28/17 15:09	321-60-8	
Terphenyl-d14 (S)	43	%	31-98		4	06/26/17 08:06	06/28/17 15:09	1718-51-0	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	630-20-6	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	71-55-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	79-34-5	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	79-00-5	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	75-34-3	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	75-35-4	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	563-58-6	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	87-61-6	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	96-18-4	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	06/26/17 08:45	06/26/17 14:00	120-82-1	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	95-63-6	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	06/26/17 08:45	06/26/17 14:00	96-12-8	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	106-93-4	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	95-50-1	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	107-06-2	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	78-87-5	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	108-67-8	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	541-73-1	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	142-28-9	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	106-46-7	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	594-20-7	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	106-43-4	W
Benzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	06/26/17 08:45	06/26/17 14:00	74-83-9	W

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40152181

Sample: 062117002 **Lab ID: 40152181002** Collected: 06/21/17 13:15 Received: 06/23/17 09:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	06/26/17 08:45	06/26/17 14:00	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	06/26/17 08:45	06/26/17 14:00	67-66-3	W
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	74-87-3	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	124-48-1	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	74-95-3	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	75-71-8	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	98-82-8	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	1634-04-4	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	75-09-2	W
Naphthalene	**<40.0**	ug/kg	250	40.0	1	06/26/17 08:45	06/26/17 14:00	91-20-3	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	100-42-5	W
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	127-18-4	W
Toluene	**38.6J**	ug/kg	67.3	28.0	1	06/26/17 08:45	06/26/17 14:00	108-88-3	
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	75-69-4	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	75-01-4	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	156-59-2	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	10061-01-5	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	06/26/17 08:45	06/26/17 14:00	179601-23-1	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	104-51-8	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	103-65-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	95-47-6	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	99-87-6	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	98-06-6	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	156-60-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 14:00	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	109	%	68-130		1	06/26/17 08:45	06/26/17 14:00	1868-53-7	
Toluene-d8 (S)	111	%	68-149		1	06/26/17 08:45	06/26/17 14:00	2037-26-5	
4-Bromofluorobenzene (S)	103	%	58-141		1	06/26/17 08:45	06/26/17 14:00	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**10.9**	%	0.10	0.10	1		06/23/17 21:26		

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Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40152181

Sample: 062117003 **Lab ID: 40152181003** Collected: 06/21/17 13:30 Received: 06/23/17 09:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	**<27.4**	ug/kg	54.8	27.4	1	06/27/17 10:19	06/27/17 16:05	12674-11-2	
PCB-1221 (Aroclor 1221)	**<27.4**	ug/kg	54.8	27.4	1	06/27/17 10:19	06/27/17 16:05	11104-28-2	
PCB-1232 (Aroclor 1232)	**<27.4**	ug/kg	54.8	27.4	1	06/27/17 10:19	06/27/17 16:05	11141-16-5	
PCB-1242 (Aroclor 1242)	**<27.4**	ug/kg	54.8	27.4	1	06/27/17 10:19	06/27/17 16:05	53469-21-9	
PCB-1248 (Aroclor 1248)	**<27.4**	ug/kg	54.8	27.4	1	06/27/17 10:19	06/27/17 16:05	12672-29-6	
PCB-1254 (Aroclor 1254)	**<27.4**	ug/kg	54.8	27.4	1	06/27/17 10:19	06/27/17 16:05	11097-69-1	
PCB-1260 (Aroclor 1260)	**<27.4**	ug/kg	54.8	27.4	1	06/27/17 10:19	06/27/17 16:05	11096-82-5	
PCB, Total	**<27.4**	ug/kg	54.8	27.4	1	06/27/17 10:19	06/27/17 16:05	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	79	%	50-102		1	06/27/17 10:19	06/27/17 16:05	877-09-8	
Decachlorobiphenyl (S)	75	%	53-105		1	06/27/17 10:19	06/27/17 16:05	2051-24-3	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3050								
Arsenic	**4.4**	mg/kg	0.96	0.29	6.667	06/26/17 09:18	06/27/17 10:06	7440-38-2	
Barium	**55.6**	mg/kg	0.83	0.25	6.667	06/26/17 09:18	06/27/17 10:06	7440-39-3	
Cadmium	**1.2**	mg/kg	0.73	0.11	6.667	06/26/17 09:18	06/27/17 10:06	7440-43-9	
Chromium	**14.7**	mg/kg	4.9	1.5	6.667	06/26/17 09:18	06/27/17 10:06	7440-47-3	
Lead	**58.8**	mg/kg	0.73	0.20	6.667	06/26/17 09:18	06/27/17 10:06	7439-92-1	
Selenium	**0.72J**	mg/kg	0.73	0.20	6.667	06/26/17 09:18	06/27/17 10:06	7782-49-2	D3
Silver	**<0.10**	mg/kg	0.36	0.10	6.667	06/26/17 09:18	06/27/17 10:06	7440-22-4	D3
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.051**	mg/kg	0.039	0.012	1	06/27/17 06:47	06/27/17 11:18	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**1080J**	ug/kg	2820	850	200	06/26/17 08:06	06/27/17 10:49	83-32-9	
Acenaphthylene	**<721**	ug/kg	2410	721	200	06/26/17 08:06	06/27/17 10:49	208-96-8	
Anthracene	**10300**	ug/kg	4160	1250	200	06/26/17 08:06	06/27/17 10:49	120-12-7	
Benzo(a)anthracene	**13100**	ug/kg	2320	694	200	06/26/17 08:06	06/27/17 10:49	56-55-3	
Benzo(a)pyrene	**9610**	ug/kg	1830	550	200	06/26/17 08:06	06/27/17 10:49	50-32-8	
Benzo(b)fluoranthene	**12900**	ug/kg	2060	618	200	06/26/17 08:06	06/27/17 10:49	205-99-2	
Benzo(g,h,i)perylene	**6390**	ug/kg	1480	445	200	06/26/17 08:06	06/27/17 10:49	191-24-2	
Benzo(k)fluoranthene	**5600**	ug/kg	1830	549	200	06/26/17 08:06	06/27/17 10:49	207-08-9	
Chrysene	**13700**	ug/kg	2450	738	200	06/26/17 08:06	06/27/17 10:49	218-01-9	
Dibenz(a,h)anthracene	**1880**	ug/kg	1630	489	200	06/26/17 08:06	06/27/17 10:49	53-70-3	
Fluoranthene	**25400**	ug/kg	3810	1140	200	06/26/17 08:06	06/27/17 10:49	206-44-0	
Fluorene	**1730J**	ug/kg	3020	906	200	06/26/17 08:06	06/27/17 10:49	86-73-7	
Indeno(1,2,3-cd)pyrene	**5410**	ug/kg	1600	481	200	06/26/17 08:06	06/27/17 10:49	193-39-5	
1-Methylnaphthalene	**<881**	ug/kg	2930	881	200	06/26/17 08:06	06/27/17 10:49	90-12-0	
2-Methylnaphthalene	**<1090**	ug/kg	3660	1090	200	06/26/17 08:06	06/27/17 10:49	91-57-6	
Naphthalene	**<1840**	ug/kg	6150	1840	200	06/26/17 08:06	06/27/17 10:49	91-20-3	
Phenanthrene	**16500**	ug/kg	8490	2550	200	06/26/17 08:06	06/27/17 10:49	85-01-8	
Pyrene	**18100**	ug/kg	3280	988	200	06/26/17 08:06	06/27/17 10:49	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	0	%	19-96		200	06/26/17 08:06	06/27/17 10:49	321-60-8	S4

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(920)469-2436

ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40152181

Sample: 062117003 **Lab ID: 40152181003** Collected: 06/21/17 13:30 Received: 06/23/17 09:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Surrogates									
Terphenyl-d14 (S)	0	%	31-98		200	06/26/17 08:06	06/27/17 10:49	1718-51-0	S4
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	630-20-6	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	71-55-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	79-34-5	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	79-00-5	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	75-34-3	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	75-35-4	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	563-58-6	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	87-61-6	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	96-18-4	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	06/26/17 08:45	06/26/17 13:37	120-82-1	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	95-63-6	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	06/26/17 08:45	06/26/17 13:37	96-12-8	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	106-93-4	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	95-50-1	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	107-06-2	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	78-87-5	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	108-67-8	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	541-73-1	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	142-28-9	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	106-46-7	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	594-20-7	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	106-43-4	W
Benzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	06/26/17 08:45	06/26/17 13:37	74-83-9	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	06/26/17 08:45	06/26/17 13:37	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	06/26/17 08:45	06/26/17 13:37	67-66-3	W
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	74-87-3	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	124-48-1	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	74-95-3	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	75-71-8	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	98-82-8	W

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40152181

Sample: 062117003 **Lab ID: 40152181003** Collected: 06/21/17 13:30 Received: 06/23/17 09:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	1634-04-4	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	75-09-2	W
Naphthalene	**46.2J**	ug/kg	274	43.9	1	06/26/17 08:45	06/26/17 13:37	91-20-3	
Styrene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	100-42-5	W
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	108-88-3	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	75-69-4	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	75-01-4	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	156-59-2	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	10061-01-5	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	06/26/17 08:45	06/26/17 13:37	179601-23-1	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	104-51-8	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	103-65-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	95-47-6	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	99-87-6	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	98-06-6	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	156-60-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:37	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	113	%	68-130		1	06/26/17 08:45	06/26/17 13:37	1868-53-7	
Toluene-d8 (S)	107	%	68-149		1	06/26/17 08:45	06/26/17 13:37	2037-26-5	
4-Bromofluorobenzene (S)	103	%	58-141		1	06/26/17 08:45	06/26/17 13:37	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**8.7**	%	0.10	0.10	1		06/23/17 21:26		

Sample: 062117004 **Lab ID: 40152181004** Collected: 06/21/17 00:00 Received: 06/23/17 09:20 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	630-20-6	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	71-55-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	79-34-5	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	79-00-5	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	75-34-3	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	75-35-4	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	563-58-6	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	87-61-6	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	96-18-4	W

REPORT OF LABORATORY ANALYSIS

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40152181

Sample: 062117004 **Lab ID: 40152181004** Collected: 06/21/17 00:00 Received: 06/23/17 09:20 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	06/26/17 08:45	06/26/17 13:13	120-82-1	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	95-63-6	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	06/26/17 08:45	06/26/17 13:13	96-12-8	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	106-93-4	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	95-50-1	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	107-06-2	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	78-87-5	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	108-67-8	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	541-73-1	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	142-28-9	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	106-46-7	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	594-20-7	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	106-43-4	W
Benzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	06/26/17 08:45	06/26/17 13:13	74-83-9	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	06/26/17 08:45	06/26/17 13:13	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	06/26/17 08:45	06/26/17 13:13	67-66-3	W
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	74-87-3	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	124-48-1	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	74-95-3	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	75-71-8	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	98-82-8	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	1634-04-4	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	75-09-2	W
Naphthalene	**<40.0**	ug/kg	250	40.0	1	06/26/17 08:45	06/26/17 13:13	91-20-3	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	100-42-5	W
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	108-88-3	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	75-69-4	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	75-01-4	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	156-59-2	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	10061-01-5	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	06/26/17 08:45	06/26/17 13:13	179601-23-1	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	104-51-8	W

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40152181

Sample: 062117004 **Lab ID: 40152181004** Collected: 06/21/17 00:00 Received: 06/23/17 09:20 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	103-65-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	95-47-6	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	99-87-6	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	98-06-6	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	156-60-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	06/26/17 08:45	06/26/17 13:13	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	95	%	68-130		1	06/26/17 08:45	06/26/17 13:13	1868-53-7	
Toluene-d8 (S)	88	%	68-149		1	06/26/17 08:45	06/26/17 13:13	2037-26-5	
4-Bromofluorobenzene (S)	87	%	58-141		1	06/26/17 08:45	06/26/17 13:13	460-00-4	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152181

QC Batch: 259687 Analysis Method: EPA 7471
QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
Associated Lab Samples: 40152181002, 40152181003

METHOD BLANK: 1530062 Matrix: Solid
Associated Lab Samples: 40152181002, 40152181003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	<0.011	0.037	06/27/17 10:57	

LABORATORY CONTROL SAMPLE: 1530063

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.83	0.80	95	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1530064 1530065

Parameter	Units	40152098001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	<0.042	.96	.96	0.94	0.95	96	96	85-115	1	20	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152181

QC Batch: 259713 Analysis Method: EPA 6020
QC Batch Method: EPA 3050 Analysis Description: 6020 MET
Associated Lab Samples: 40152181002, 40152181003

METHOD BLANK: 1530138 Matrix: Solid
Associated Lab Samples: 40152181002, 40152181003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	<0.040	0.13	06/27/17 09:52	
Barium	mg/kg	<0.034	0.11	06/27/17 09:52	
Cadmium	mg/kg	<0.015	0.10	06/27/17 09:52	
Chromium	mg/kg	<0.20	0.67	06/27/17 09:52	
Lead	mg/kg	<0.027	0.10	06/27/17 09:52	
Selenium	mg/kg	<0.027	0.10	06/27/17 09:52	
Silver	mg/kg	<0.014	0.050	06/27/17 09:52	

LABORATORY CONTROL SAMPLE: 1530139

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	49.7	99	80-120	
Barium	mg/kg	50	49.2	98	80-120	
Cadmium	mg/kg	50	49.5	99	80-120	
Chromium	mg/kg	50	48.2	96	80-120	
Lead	mg/kg	50	47.6	95	80-120	
Selenium	mg/kg	50	53.0	106	80-120	
Silver	mg/kg	25	25.2	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1530140 1530141

Parameter	Units	40152181003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	4.4	54.3	54.7	57.4	56.4	98	95	75-125	2	20	
Barium	mg/kg	55.6	54.3	54.7	114	106	108	93	75-125	7	20	
Cadmium	mg/kg	1.2	54.3	54.7	51.6	52.5	93	94	75-125	2	20	
Chromium	mg/kg	14.7	54.3	54.7	64.5	64.7	92	91	75-125	0	20	
Lead	mg/kg	58.8	54.3	54.7	109	103	92	81	75-125	6	20	
Selenium	mg/kg	0.72J	54.3	54.7	54.4	54.9	99	99	75-125	1	20	
Silver	mg/kg	<0.10	27.2	27.4	25.2	25.3	92	92	75-125	0	20	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152181

QC Batch: 259761 Analysis Method: EPA 8260
QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List
Associated Lab Samples: 40152181002, 40152181003, 40152181004

METHOD BLANK: 1530264 Matrix: Solid
Associated Lab Samples: 40152181002, 40152181003, 40152181004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<13.7	50.0	06/26/17 09:45	
1,1,1-Trichloroethane	ug/kg	<14.4	50.0	06/26/17 09:45	
1,1,2,2-Tetrachloroethane	ug/kg	<17.5	50.0	06/26/17 09:45	
1,1,2-Trichloroethane	ug/kg	<20.2	50.0	06/26/17 09:45	
1,1-Dichloroethane	ug/kg	<17.6	50.0	06/26/17 09:45	
1,1-Dichloroethene	ug/kg	<17.6	50.0	06/26/17 09:45	
1,1-Dichloropropene	ug/kg	<14.0	50.0	06/26/17 09:45	
1,2,3-Trichlorobenzene	ug/kg	<17.0	50.0	06/26/17 09:45	
1,2,3-Trichloropropane	ug/kg	<22.3	50.0	06/26/17 09:45	
1,2,4-Trichlorobenzene	ug/kg	<47.6	250	06/26/17 09:45	
1,2,4-Trimethylbenzene	ug/kg	<12.2	50.0	06/26/17 09:45	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	250	06/26/17 09:45	
1,2-Dibromoethane (EDB)	ug/kg	<14.7	50.0	06/26/17 09:45	
1,2-Dichlorobenzene	ug/kg	<16.2	50.0	06/26/17 09:45	
1,2-Dichloroethane	ug/kg	<15.0	50.0	06/26/17 09:45	
1,2-Dichloropropane	ug/kg	<16.8	50.0	06/26/17 09:45	
1,3,5-Trimethylbenzene	ug/kg	<14.5	50.0	06/26/17 09:45	
1,3-Dichlorobenzene	ug/kg	<13.2	50.0	06/26/17 09:45	
1,3-Dichloropropane	ug/kg	<12.0	50.0	06/26/17 09:45	
1,4-Dichlorobenzene	ug/kg	<15.9	50.0	06/26/17 09:45	
2,2-Dichloropropane	ug/kg	<12.6	50.0	06/26/17 09:45	
2-Chlorotoluene	ug/kg	<15.8	50.0	06/26/17 09:45	
4-Chlorotoluene	ug/kg	<13.0	50.0	06/26/17 09:45	
Benzene	ug/kg	<9.2	20.0	06/26/17 09:45	
Bromobenzene	ug/kg	<20.6	50.0	06/26/17 09:45	
Bromochloromethane	ug/kg	<21.4	50.0	06/26/17 09:45	
Bromodichloromethane	ug/kg	<9.8	50.0	06/26/17 09:45	
Bromoform	ug/kg	<19.8	50.0	06/26/17 09:45	
Bromomethane	ug/kg	<69.9	250	06/26/17 09:45	
Carbon tetrachloride	ug/kg	<12.1	50.0	06/26/17 09:45	
Chlorobenzene	ug/kg	<14.8	50.0	06/26/17 09:45	
Chloroethane	ug/kg	<67.0	250	06/26/17 09:45	
Chloroform	ug/kg	<46.4	250	06/26/17 09:45	
Chloromethane	ug/kg	<20.4	50.0	06/26/17 09:45	
cis-1,2-Dichloroethene	ug/kg	<16.6	50.0	06/26/17 09:45	
cis-1,3-Dichloropropene	ug/kg	<16.6	50.0	06/26/17 09:45	
Dibromochloromethane	ug/kg	<17.9	50.0	06/26/17 09:45	
Dibromomethane	ug/kg	<19.3	50.0	06/26/17 09:45	
Dichlorodifluoromethane	ug/kg	<12.3	50.0	06/26/17 09:45	
Diisopropyl ether	ug/kg	<17.7	50.0	06/26/17 09:45	
Ethylbenzene	ug/kg	<12.4	50.0	06/26/17 09:45	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152181

METHOD BLANK: 1530264 Matrix: Solid
Associated Lab Samples: 40152181002, 40152181003, 40152181004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/kg	<24.5	50.0	06/26/17 09:45	
Isopropylbenzene (Cumene)	ug/kg	<12.6	50.0	06/26/17 09:45	
m&p-Xylene	ug/kg	<34.4	100	06/26/17 09:45	
Methyl-tert-butyl ether	ug/kg	<12.7	50.0	06/26/17 09:45	
Methylene Chloride	ug/kg	<16.2	50.0	06/26/17 09:45	
n-Butylbenzene	ug/kg	<10.5	50.0	06/26/17 09:45	
n-Propylbenzene	ug/kg	<11.6	50.0	06/26/17 09:45	
Naphthalene	ug/kg	<40.0	250	06/26/17 09:45	
o-Xylene	ug/kg	<14.0	50.0	06/26/17 09:45	
p-Isopropyltoluene	ug/kg	<12.0	50.0	06/26/17 09:45	
sec-Butylbenzene	ug/kg	<11.9	50.0	06/26/17 09:45	
Styrene	ug/kg	<9.0	50.0	06/26/17 09:45	
tert-Butylbenzene	ug/kg	<9.5	50.0	06/26/17 09:45	
Tetrachloroethene	ug/kg	<12.9	50.0	06/26/17 09:45	
Toluene	ug/kg	<11.2	50.0	06/26/17 09:45	
trans-1,2-Dichloroethene	ug/kg	<16.5	50.0	06/26/17 09:45	
trans-1,3-Dichloropropene	ug/kg	<14.4	50.0	06/26/17 09:45	
Trichloroethene	ug/kg	<23.6	50.0	06/26/17 09:45	
Trichlorofluoromethane	ug/kg	<24.7	50.0	06/26/17 09:45	
Vinyl chloride	ug/kg	<21.1	50.0	06/26/17 09:45	
4-Bromofluorobenzene (S)	%	87	58-141	06/26/17 09:45	
Dibromofluoromethane (S)	%	97	68-130	06/26/17 09:45	
Toluene-d8 (S)	%	99	68-149	06/26/17 09:45	

LABORATORY CONTROL SAMPLE: 1530265

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2430	97	61-122	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2190	88	73-130	
1,1,2-Trichloroethane	ug/kg	2500	2350	94	70-130	
1,1-Dichloroethane	ug/kg	2500	2400	96	63-124	
1,1-Dichloroethene	ug/kg	2500	2180	87	53-117	
1,2,4-Trichlorobenzene	ug/kg	2500	2030	81	78-130	
1,2-Dibromo-3-chloropropane	ug/kg	2500	1980	79	49-140	
1,2-Dibromoethane (EDB)	ug/kg	2500	2130	85	70-130	
1,2-Dichlorobenzene	ug/kg	2500	2290	91	70-130	
1,2-Dichloroethane	ug/kg	2500	2520	101	56-135	
1,2-Dichloropropane	ug/kg	2500	2340	94	77-122	
1,3-Dichlorobenzene	ug/kg	2500	2210	88	70-130	
1,4-Dichlorobenzene	ug/kg	2500	2190	87	70-130	
Benzene	ug/kg	2500	2380	95	66-130	
Bromodichloromethane	ug/kg	2500	2190	88	62-135	
Bromoform	ug/kg	2500	1770	71	68-130	
Bromomethane	ug/kg	2500	2030	81	29-137	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152181

LABORATORY CONTROL SAMPLE: 1530265

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/kg	2500	2210	88	57-130	
Chlorobenzene	ug/kg	2500	2460	98	70-130	
Chloroethane	ug/kg	2500	2260	91	36-144	
Chloroform	ug/kg	2500	2430	97	69-115	
Chloromethane	ug/kg	2500	1940	78	32-126	
cis-1,2-Dichloroethene	ug/kg	2500	2420	97	65-130	
cis-1,3-Dichloropropene	ug/kg	2500	2130	85	70-130	
Dibromochloromethane	ug/kg	2500	2060	82	70-130	
Dichlorodifluoromethane	ug/kg	2500	1470	59	10-99	
Ethylbenzene	ug/kg	2500	2300	92	82-122	
Isopropylbenzene (Cumene)	ug/kg	2500	2350	94	70-130	
m&p-Xylene	ug/kg	5000	4590	92	70-130	
Methyl-tert-butyl ether	ug/kg	2500	2500	100	63-134	
Methylene Chloride	ug/kg	2500	2170	87	56-123	
o-Xylene	ug/kg	2500	2300	92	70-130	
Styrene	ug/kg	2500	2430	97	70-130	
Tetrachloroethene	ug/kg	2500	2330	93	70-131	
Toluene	ug/kg	2500	2330	93	80-120	
trans-1,2-Dichloroethene	ug/kg	2500	2470	99	66-130	
trans-1,3-Dichloropropene	ug/kg	2500	2190	88	68-130	
Trichloroethene	ug/kg	2500	2410	96	70-130	
Trichlorofluoromethane	ug/kg	2500	2440	98	37-149	
Vinyl chloride	ug/kg	2500	2050	82	43-128	
4-Bromofluorobenzene (S)	%			84	58-141	
Dibromofluoromethane (S)	%			91	68-130	
Toluene-d8 (S)	%			87	68-149	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1530266 1530267

Parameter	Units	40152181003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/kg	<25.0	1370	1370	1350	1330	98	97	57-123	1	20	
1,1,2,2-Tetrachloroethane	ug/kg	<25.0	1370	1370	1250	1340	91	98	73-135	7	20	
1,1,2-Trichloroethane	ug/kg	<25.0	1370	1370	1300	1390	95	101	70-130	6	20	
1,1-Dichloroethane	ug/kg	<25.0	1370	1370	1320	1370	97	100	63-124	4	20	
1,1-Dichloroethene	ug/kg	<25.0	1370	1370	1130	1100	82	80	48-117	3	23	
1,2,4-Trichlorobenzene	ug/kg	<47.6	1370	1370	1270	1250	93	92	78-145	1	20	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	1370	1370	1150	1150	84	84	38-168	1	22	
1,2-Dibromoethane (EDB)	ug/kg	<25.0	1370	1370	1180	1330	86	97	70-130	11	20	
1,2-Dichlorobenzene	ug/kg	<25.0	1370	1370	1280	1320	94	96	70-130	3	20	
1,2-Dichloroethane	ug/kg	<25.0	1370	1370	1480	1500	108	109	56-145	1	20	
1,2-Dichloropropane	ug/kg	<25.0	1370	1370	1310	1240	96	90	77-123	6	20	
1,3-Dichlorobenzene	ug/kg	<25.0	1370	1370	1270	1330	93	97	70-130	4	20	
1,4-Dichlorobenzene	ug/kg	<25.0	1370	1370	1330	1320	97	96	70-130	1	20	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152181

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1530266 1530267

Parameter	Units	40152181003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/kg	<25.0	1370	1370	1340	1320	98	97	65-130	1	20	
Bromodichloromethane	ug/kg	<25.0	1370	1370	1210	1210	88	88	59-141	0	20	
Bromoform	ug/kg	<25.0	1370	1370	1060	1110	78	81	59-141	4	20	
Bromomethane	ug/kg	<69.9	1370	1370	908	1040	66	76	28-139	13	20	
Carbon tetrachloride	ug/kg	<25.0	1370	1370	1250	1190	91	87	50-130	5	20	
Chlorobenzene	ug/kg	<25.0	1370	1370	1390	1360	102	99	70-130	2	20	
Chloroethane	ug/kg	<67.0	1370	1370	1460	1290	107	94	36-144	13	20	
Chloroform	ug/kg	<46.4	1370	1370	1420	1380	104	101	68-122	3	20	
Chloromethane	ug/kg	<25.0	1370	1370	884	874	65	64	30-126	1	20	
cis-1,2-Dichloroethene	ug/kg	<25.0	1370	1370	1330	1340	97	98	63-130	1	20	
cis-1,3-Dichloropropene	ug/kg	<25.0	1370	1370	1150	1150	84	84	70-130	0	20	
Dibromochloromethane	ug/kg	<25.0	1370	1370	1020	1230	74	90	66-136	19	20	
Dichlorodifluoromethane	ug/kg	<25.0	1370	1370	325	433	24	32	10-99	29	33	
Ethylbenzene	ug/kg	<25.0	1370	1370	1260	1340	92	98	80-122	6	20	
Isopropylbenzene (Cumene)	ug/kg	<25.0	1370	1370	1260	1350	92	98	70-130	6	20	
m&p-Xylene	ug/kg	<50.0	2740	2740	2530	2600	92	95	70-130	3	20	
Methyl-tert-butyl ether	ug/kg	<25.0	1370	1370	1390	1430	102	105	63-134	3	20	
Methylene Chloride	ug/kg	<25.0	1370	1370	1240	1340	91	98	56-127	8	20	
o-Xylene	ug/kg	<25.0	1370	1370	1300	1320	95	97	70-130	2	20	
Styrene	ug/kg	<25.0	1370	1370	1300	1350	95	98	70-130	3	20	
Tetrachloroethene	ug/kg	<25.0	1370	1370	1230	1280	90	94	70-131	4	20	
Toluene	ug/kg	<25.0	1370	1370	1290	1280	94	93	80-120	1	20	
trans-1,2-Dichloroethene	ug/kg	<25.0	1370	1370	1330	1240	97	90	60-130	7	20	
trans-1,3-Dichloropropene	ug/kg	<25.0	1370	1370	1210	1220	88	89	68-130	1	20	
Trichloroethene	ug/kg	<25.0	1370	1370	1340	1310	98	96	70-130	2	20	
Trichlorofluoromethane	ug/kg	<25.0	1370	1370	1200	1220	88	89	37-149	2	24	
Vinyl chloride	ug/kg	<25.0	1370	1370	937	901	68	66	39-128	4	20	
4-Bromofluorobenzene (S)	%						103	83	58-141			
Dibromofluoromethane (S)	%						110	89	68-130			
Toluene-d8 (S)	%						106	88	68-149			

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152181

QC Batch: 259872
QC Batch Method: EPA 3541
Analysis Method: EPA 8082
Analysis Description: 8082 GCS PCB
Associated Lab Samples: 40152181003

METHOD BLANK: 1530633
Matrix: Solid
Associated Lab Samples: 40152181003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	<25.0	50.0	06/27/17 14:54	
PCB-1221 (Aroclor 1221)	ug/kg	<25.0	50.0	06/27/17 14:54	
PCB-1232 (Aroclor 1232)	ug/kg	<25.0	50.0	06/27/17 14:54	
PCB-1242 (Aroclor 1242)	ug/kg	<25.0	50.0	06/27/17 14:54	
PCB-1248 (Aroclor 1248)	ug/kg	<25.0	50.0	06/27/17 14:54	
PCB-1254 (Aroclor 1254)	ug/kg	<25.0	50.0	06/27/17 14:54	
PCB-1260 (Aroclor 1260)	ug/kg	<25.0	50.0	06/27/17 14:54	
Decachlorobiphenyl (S)	%	88	53-105	06/27/17 14:54	
Tetrachloro-m-xylene (S)	%	85	50-102	06/27/17 14:54	

LABORATORY CONTROL SAMPLE: 1530634

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg		<25.0			
PCB-1221 (Aroclor 1221)	ug/kg		<25.0			
PCB-1232 (Aroclor 1232)	ug/kg		<25.0			
PCB-1242 (Aroclor 1242)	ug/kg		<25.0			
PCB-1248 (Aroclor 1248)	ug/kg		<25.0			
PCB-1254 (Aroclor 1254)	ug/kg		<25.0			
PCB-1260 (Aroclor 1260)	ug/kg	500	437	87	59-106	
Decachlorobiphenyl (S)	%			87	53-105	
Tetrachloro-m-xylene (S)	%			85	50-102	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1530635 1530636

Parameter	Units	40152265004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/kg	<28.7			<28.7	<28.7					20	
PCB-1221 (Aroclor 1221)	ug/kg	<28.7			<28.7	<28.7					20	
PCB-1232 (Aroclor 1232)	ug/kg	<28.7			<28.7	<28.7					20	
PCB-1242 (Aroclor 1242)	ug/kg	<28.7			<28.7	<28.7					20	
PCB-1248 (Aroclor 1248)	ug/kg	<28.7			<28.7	<28.7					20	
PCB-1254 (Aroclor 1254)	ug/kg	<28.7			<28.7	<28.7					20	
PCB-1260 (Aroclor 1260)	ug/kg	<28.7	574	574	499	487	87	85	51-109	2	20	
Decachlorobiphenyl (S)	%						83	82	53-105			
Tetrachloro-m-xylene (S)	%						81	79	50-102			

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152181

QC Batch: 260016
QC Batch Method: EPA 3541
Analysis Method: EPA 8082
Analysis Description: 8082 GCS PCB
Associated Lab Samples: 40152181002

METHOD BLANK: 1531379 Matrix: Solid
Associated Lab Samples: 40152181002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	<25.0	50.0	06/29/17 02:11	
PCB-1221 (Aroclor 1221)	ug/kg	<25.0	50.0	06/29/17 02:11	
PCB-1232 (Aroclor 1232)	ug/kg	<25.0	50.0	06/29/17 02:11	
PCB-1242 (Aroclor 1242)	ug/kg	<25.0	50.0	06/29/17 02:11	
PCB-1248 (Aroclor 1248)	ug/kg	<25.0	50.0	06/29/17 02:11	
PCB-1254 (Aroclor 1254)	ug/kg	<25.0	50.0	06/29/17 02:11	
PCB-1260 (Aroclor 1260)	ug/kg	<25.0	50.0	06/29/17 02:11	
Decachlorobiphenyl (S)	%	75	53-105	06/29/17 02:11	
Tetrachloro-m-xylene (S)	%	79	50-102	06/29/17 02:11	

LABORATORY CONTROL SAMPLE: 1531380

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg		<25.0			
PCB-1221 (Aroclor 1221)	ug/kg		<25.0			
PCB-1232 (Aroclor 1232)	ug/kg		<25.0			
PCB-1242 (Aroclor 1242)	ug/kg		<25.0			
PCB-1248 (Aroclor 1248)	ug/kg		<25.0			
PCB-1254 (Aroclor 1254)	ug/kg		<25.0			
PCB-1260 (Aroclor 1260)	ug/kg	500	412	82	59-106	
Decachlorobiphenyl (S)	%			78	53-105	
Tetrachloro-m-xylene (S)	%			90	50-102	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1531381 1531382

Parameter	Units	40152328012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/kg	<26.7			<26.7	<26.7					20	
PCB-1221 (Aroclor 1221)	ug/kg	<26.7			<26.7	<26.7					20	
PCB-1232 (Aroclor 1232)	ug/kg	<26.7			<26.7	<26.7					20	
PCB-1242 (Aroclor 1242)	ug/kg	<26.7			<26.7	<26.7					20	
PCB-1248 (Aroclor 1248)	ug/kg	<26.7			<26.7	<26.7					20	
PCB-1254 (Aroclor 1254)	ug/kg	<26.7			<26.7	<26.7					20	
PCB-1260 (Aroclor 1260)	ug/kg	<26.7	534	534	433	428	81	80	51-109	1	20	
Decachlorobiphenyl (S)	%						77	76	53-105			
Tetrachloro-m-xylene (S)	%						88	91	50-102			

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152181

QC Batch: 259666
QC Batch Method: EPA 3546
Analysis Method: EPA 8270 by SIM
Analysis Description: 8270/3546 MSSV PAH by SIM
Associated Lab Samples: 40152181002, 40152181003

METHOD BLANK: 1530015
Matrix: Solid
Associated Lab Samples: 40152181002, 40152181003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<4.0	13.4	06/26/17 15:37	
2-Methylnaphthalene	ug/kg	<5.0	16.7	06/26/17 15:37	
Acenaphthene	ug/kg	<3.9	12.9	06/26/17 15:37	
Acenaphthylene	ug/kg	<3.3	11.0	06/26/17 15:37	
Anthracene	ug/kg	<5.7	19.0	06/26/17 15:37	
Benzo(a)anthracene	ug/kg	<3.2	10.6	06/26/17 15:37	
Benzo(a)pyrene	ug/kg	<2.5	8.4	06/26/17 15:37	
Benzo(b)fluoranthene	ug/kg	<2.8	9.4	06/26/17 15:37	
Benzo(g,h,i)perylene	ug/kg	<2.0	6.8	06/26/17 15:37	
Benzo(k)fluoranthene	ug/kg	<2.5	8.4	06/26/17 15:37	
Chrysene	ug/kg	<3.4	11.2	06/26/17 15:37	
Dibenz(a,h)anthracene	ug/kg	<2.2	7.4	06/26/17 15:37	
Fluoranthene	ug/kg	<5.2	17.4	06/26/17 15:37	
Fluorene	ug/kg	<4.1	13.8	06/26/17 15:37	
Indeno(1,2,3-cd)pyrene	ug/kg	<2.2	7.3	06/26/17 15:37	
Naphthalene	ug/kg	<8.4	28.1	06/26/17 15:37	
Phenanthrene	ug/kg	<11.6	38.8	06/26/17 15:37	
Pyrene	ug/kg	<4.5	15.0	06/26/17 15:37	
2-Fluorobiphenyl (S)	%	65	19-96	06/26/17 15:37	
Terphenyl-d14 (S)	%	76	31-98	06/26/17 15:37	

LABORATORY CONTROL SAMPLE: 1530016

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	286	86	49-102	
2-Methylnaphthalene	ug/kg	333	283	85	47-91	
Acenaphthene	ug/kg	333	312	94	52-97	
Acenaphthylene	ug/kg	333	304	91	49-97	
Anthracene	ug/kg	333	317	95	62-101	
Benzo(a)anthracene	ug/kg	333	272	82	53-95	
Benzo(a)pyrene	ug/kg	333	313	94	57-108	
Benzo(b)fluoranthene	ug/kg	333	311	93	53-113	
Benzo(g,h,i)perylene	ug/kg	333	169	51	43-114	
Benzo(k)fluoranthene	ug/kg	333	322	97	66-116	
Chrysene	ug/kg	333	301	90	64-109	
Dibenz(a,h)anthracene	ug/kg	333	238	71	50-105	
Fluoranthene	ug/kg	333	310	93	58-107	
Fluorene	ug/kg	333	304	91	52-99	
Indeno(1,2,3-cd)pyrene	ug/kg	333	209	63	51-113	
Naphthalene	ug/kg	333	287	86	50-91	

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REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
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Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152181

LABORATORY CONTROL SAMPLE: 1530016

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phenanthrene	ug/kg	333	308	92	57-101	
Pyrene	ug/kg	333	278	83	50-102	
2-Fluorobiphenyl (S)	%			80	19-96	
Terphenyl-d14 (S)	%			80	31-98	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1530017 1530018

Parameter	Units	40151973014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1-Methylnaphthalene	ug/kg	<4.5	376	375	259	263	69	70	37-102	1	29	
2-Methylnaphthalene	ug/kg	<5.6	376	375	258	262	68	69	44-91	2	36	
Acenaphthene	ug/kg	<4.4	376	375	300	303	80	81	46-97	1	26	
Acenaphthylene	ug/kg	<3.7	376	375	294	298	78	80	47-97	2	29	
Anthracene	ug/kg	<6.4	376	375	289	290	77	77	50-101	0	28	
Benzo(a)anthracene	ug/kg	<3.6	376	375	254	255	67	68	48-95	0	28	
Benzo(a)pyrene	ug/kg	<2.8	376	375	283	286	75	76	47-108	1	36	
Benzo(b)fluoranthene	ug/kg	<3.2	376	375	275	275	73	73	42-113	0	34	
Benzo(g,h,i)perylene	ug/kg	<2.3	376	375	322	323	86	86	18-114	0	30	
Benzo(k)fluoranthene	ug/kg	<2.8	376	375	291	299	78	80	50-116	3	27	
Chrysene	ug/kg	<3.8	376	375	274	276	73	74	55-109	1	28	
Dibenz(a,h)anthracene	ug/kg	<2.5	376	375	298	301	79	80	39-105	1	29	
Fluoranthene	ug/kg	<5.8	376	375	281	283	75	75	41-107	1	28	
Fluorene	ug/kg	<4.6	376	375	287	290	77	77	48-99	1	28	
Indeno(1,2,3-cd)pyrene	ug/kg	<2.5	376	375	294	297	78	79	27-113	1	30	
Naphthalene	ug/kg	<9.5	376	375	283	287	75	76	40-91	1	37	
Phenanthrene	ug/kg	<13.1	376	375	281	283	74	75	46-101	1	40	
Pyrene	ug/kg	<5.1	376	375	247	249	66	66	50-102	1	31	
2-Fluorobiphenyl (S)	%						69	66	19-96			
Terphenyl-d14 (S)	%						64	62	31-98			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152181

QC Batch: 259639 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40152181001, 40152181002, 40152181003

SAMPLE DUPLICATE: 1529789

Parameter	Units	40152170001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	7.6	7.6	1	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152181

QC Batch: 259807 Analysis Method: EPA 9012
QC Batch Method: EPA 9012A Analysis Description: 9012 Cyanide
Associated Lab Samples: 40152181001

METHOD BLANK: 1530409 Matrix: Solid
Associated Lab Samples: 40152181001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	mg/kg	<0.12	0.40	06/27/17 11:23	

LABORATORY CONTROL SAMPLE: 1530410

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/kg	3	3.2	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1530411 1530412

Parameter	Units	40152170001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cyanide	mg/kg	1260	3.2	3.4	<25.9	1210	-39000	-1660	80-120		20	P6

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: 2133 SOLVAY
Pace Project No.: 40152181

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.
W	Non-detect results are reported on a wet weight basis.

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 2133 SOLVAY
Pace Project No.: 40152181

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40152181002	**062117002**	EPA 3541	260016	EPA 8082	260017
40152181003	**062117003**	EPA 3541	259872	EPA 8082	259873
40152181002	**062117002**	EPA 3050	259713	EPA 6020	259793
40152181003	**062117003**	EPA 3050	259713	EPA 6020	259793
40152181002	**062117002**	EPA 7471	259687	EPA 7471	259847
40152181003	**062117003**	EPA 7471	259687	EPA 7471	259847
40152181002	**062117002**	EPA 3546	259666	EPA 8270 by SIM	259769
40152181003	**062117003**	EPA 3546	259666	EPA 8270 by SIM	259769
40152181002	**062117002**	EPA 5035/5030B	259761	EPA 8260	259762
40152181003	**062117003**	EPA 5035/5030B	259761	EPA 8260	259762
40152181004	**062117004**	EPA 5035/5030B	259761	EPA 8260	259762
40152181001	**062117001**	ASTM D2974-87	259639		
40152181002	**062117002**	ASTM D2974-87	259639		
40152181003	**062117003**	ASTM D2974-87	259639		
40152181001	**062117001**	EPA 9012A	259807	EPA 9012	259856

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40152181

Level II

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UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

Courier: Pace/CS Logistics
QC: DLB 6/22/17

COC # 2133-0617-003

CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	Natural Resource Tech
Branch/Location:	Milwaukee, WI
Project Contact:	Andrew Cawrse
Phone:	414-837-3645
Project Number:	2133
Project Name:	Solvay
Project State:	WI
Sampled By (Print):	Andrew Cawrse
Sampled By (Sign):	Andrew Cawrse
PO #:	3400010643
Regulatory Program:	

Quote #:	
Mail To Contact:	gdsdata@obg.com
Mail To Company:	Natural Resource Tech
Mail To Address:	234 W Florida St Milwaukee, WI
Invoice To Contact:	Accounts Payable
Invoice To Company:	WEC Business Services
Invoice To Address:	PO Box 19800 Green Bay, WI
Invoice To Phone:	

Data Package Options (billable)
- ☐ EPA Level III
- ☐ EPA Level IV

MS/MSD
- ☐ On your sample (billable)
- ☐ NOT needed on your sample

Matrix Codes
A = Air, B = Biota, C = Charcoal, O = Oil, S = Soil, SI = Sludge, W = Water, DW = Drinking Water, GW = Ground Water, SW = Surface Water, WW = Waste Water, WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Analyses Requested: Cyanide SW846 9012	VOC 8260	PAH 8270	RCRA Metals 6020	PCB 8082	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
					Y/N: N	N	N	N	N			
					Pick Letter: A	F	A	A	A			
001	062117001	6/21/17	12:45	S	X						1-4ozag A	
002	062117002	↓	13:15	↓		X	X	X	X		3-4ozag A, 1-4ozp A, 1-40mLv F	
003	062117003	↓	13:30	↓		X	X	X	X		↓ ↓ ↓	
004	062117004	↓	–	–		X				Trip Blank	↓	

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed: 3 day TAT

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Andrew C	6/22/17 8:30	[signature] Pace	6/23/17 0920

PACE Project No. 40152181

Receipt Temp = ROI °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal Present / Not Present Intact / Not Intact

Custody Seal # 2133-01 & 02

C019a(27Jun2006)

Version 6.0 06/14/06

ORIGINAL

40152181

From: <notifications@cslog.com>
To: <gbsr@pacelabs.com>
Date: 6/23/2017 9:18 AM
Subject: Auto-Notification Shipment #1177.062217

The following shipment sent by Alee Her of PACE
has been delivered and signed for by: Katie @ 06/23/2017 09:18

- OrderTrackingID: 1177.062217
  Ref#: Green Bay
  Ref#2: Waukesha
  Pieces: 1
  Weight: 1.00

[Pickup]
CS Logistics MKE
11001 W Mitchell St
Milwaukee WI, 53214-3805

[Delivery]
PACE Labs Green Bay
1241 Bellevue St
Green Bay WI, 54302-2156

If you would like to track this shipment online, please visit:
http://www.cslogisticsinc.com/xcelerator/Online/QuickTrack.aspx?OrderTrackingID=1177.062217&Key=AE89D

[Shipment delivered by CS Logistics, Inc.]

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Pace Analytical

Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Project #: **WO# : 40152181**

40152181

Client Name: NRT

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: CSLogistics

Tracking #: 1177,062217

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other

Thermometer Used N/A **Type of Ice:** Wet Blue Dry None ☒ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 10.4 /Corr: **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☒ yes ☐ no

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

Person examining contents:
Date: 6/23/17
Initials: SJM

		Comments:
Chain of Custody Present:	☒Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☒Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes ☐No ☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☒No ☐N/A	6.
Rush Turn Around Time Requested:	☒Yes ☐No ☐N/A	7.
Sufficient Volume:	☒Yes ☐No ☐N/A	8.
Correct Containers Used:	☒Yes ☐No ☐N/A	9.
-Pace Containers Used:	☒Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☒N/A	
Containers Intact:	☒Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☒N/A	11.
Sample Labels match COC:	☒Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: S		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes ☐No ☒N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes ☐No ☒N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes ☒No	Initial when completed / Lab Std #ID of preservative / Date/Time:
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☒N/A	14.
Trip Blank Present:	☒Yes ☐No ☒N/A	15.
Trip Blank Custody Seals Present	☒Yes ☐No ☒N/A	
Pace Trip Blank Lot # (if purchased): —		

KJ 6/23/17

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: [signature] **Date:** 6-23-17

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

July 17, 2017

Andrew Cawrse
Natural Resource Technology
234 W Florida St
Milwaukee, WI 53204

RE: Project: 2133 SOLVAY
Pace Project No.: 40152678

Dear Andrew Cawrse:
Enclosed are the analytical results for sample(s) received by the laboratory on July 01, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brian Basten
brian.basten@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: NRT Data, Natural Resource Technologies
Brian Hennings, NATURAL RESOURCE TECHNOLOGY
Robert Paulson, We Energies

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: 2133 SOLVAY
Pace Project No.: 40152678

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40152678001	**063017001**	Solid	06/30/17 09:45	07/01/17 08:00

REPORT OF LABORATORY ANALYSIS

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40152678

COC# 2133-0617-012

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www.pacelabs.com

Courier: Pace/CS Logistics

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)

Company Name:	Natural Resource Technology
Branch/Location:	Milwaukee, WI
Project Contact:	Andrew Caurse
Phone:	414-837-3645
Project Number:	2133
Project Name:	Solvay
Project State:	WI
Sampled By (Print):	Andrew Caurse
Sampled By (Sign):	Andrew C
PO #:	3400010643
Regulatory Program:	

FILTERED? (YES/NO)
PRESERVATION (CODE)*

Quote #:	
Mail To Contact:	gdsdata@obg.com
Mail To Company:	Natural Resource Tech
Mail To Address:	234 W. Florida St. Milwaukee, WI
Invoice To Contact:	Bob Paulson
Invoice To Company:	We Energies
Invoice To Address:	231 W Michigan St Milwaukee, WI
Invoice To Phone:	

Data Package Options (billable)
- ☐ EPA Level III
- ☐ EPA Level IV

MS/MSD
- ☐ On your sample (billable)
- ☐ NOT needed on your sample

Matrix Codes
A = Air, B = Biota, C = Charcoal, O = Oil, S = Soil, SI = Sludge, W = Water, DW = Drinking Water, GW = Ground Water, SW = Surface Water, WW = Waste Water, WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Analyses Requested	Metals Composition								CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
					Y/N	N										
					Pick Letter	A										
001	063017001	6/30/17	0945	S		X									1-2;ploc A	

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Melissa Mora	6/30/17 1005	[signature] Pace	7/1/17 0800

PACE Project No. 40152678

Receipt Temp = 10°F °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal
Present / Not Present
Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

Custody Seal # 2133-01+02

ORIGINAL

Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical™

Client Name: NRT

Project # **WO# : 40152678**

40152678

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: CS Logistics

Tracking #: 1586-0629 17

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other

Thermometer Used N/A **Type of Ice:** (Wet) Blue Dry None ☒ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: R6 I /Corr: **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☒ no

Person examining contents:
Date: 7/1/17
Initials: SSm

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

			Comments:
Chain of Custody Present:	☒Yes	☐No ☐N/A	1.
Chain of Custody Filled Out:	☒Yes	☐No ☐N/A	2.
Chain of Custody Relinquished:	☒Yes	☐No ☐N/A	3.
Sampler Name & Signature on COC:	☒Yes	☐No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes	☐No ☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes	☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes	☒No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☒No ☐N/A	7.
Sufficient Volume:	☒Yes	☐No ☐N/A	8.
Correct Containers Used:	☒Yes	☐No ☐N/A	9.
-Pace Containers Used:	☐Yes	☒No ☐N/A	
-Pace IR Containers Used:	☐Yes	☐No ☒N/A	
Containers Intact:	☒Yes	☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☐No ☒N/A	11.
Sample Labels match COC:	☐Yes	☒No ☐N/A	12. No date/time on sample SSm 7/1/17
-Includes date/time/ID/Analysis Matrix: S (Rocks)			
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes	☐No ☒N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes	☐No ☒N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes	☒No	Initial when completed / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes	☐No ☒N/A	14.
Trip Blank Present:	☐Yes	☐No ☒N/A	15.
Trip Blank Custody Seals Present	☐Yes	☐No ☒N/A	
Pace Trip Blank Lot # (if purchased):			

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:** 7-3-17

RTI Laboratories
33080 Industrial Rd.
Livonia, MI 48150
TEL: (734) 422-8000
Website: www.rtilab.com

Monday, July 17, 2017

Brian Basten
Pace Analytical - Green Bay
1241 Bellevue Street, Suite 9
Green Bay, WI 54302
TEL: (920) 321-9411
FAX:

RE: Chemistry on Material

Work Order #: 1707196

Dear Brian Basten:

Lloyd Kaufman

Director of Materials Sciences

RTI Laboratories, Inc. - Analytical Report

WO#: 1707196

Date Reported: 7/17/2017
Original

Client:	Pace Analytical - Green Bay	**Collection Date:**	
Project:	Chemistry on Material		
Lab ID:	1707196-001	**Matrix:**	
Client Sample ID:	063017001		

Analysis	Result	PQL	Qual	Units	DF	Date Analyzed
Metals - Materials Science Group by ICP-OES		**Method: SW6010C**		**SW3050B**		**Analyst: LK**
Aluminum	17,900	250		mg/Kg	100	7/17/2017 2:58 PM
Antimony	< 2.50	2.50		mg/Kg	1	7/17/2017 2:58 PM
Arsenic	< 2.50	2.50		mg/Kg	1	7/17/2017 2:58 PM
Barium	12.8	2.50		mg/Kg	1	7/17/2017 2:58 PM
Beryllium	< 2.50	2.50		mg/Kg	1	7/17/2017 2:58 PM
Bismuth	< 2.50	2.50		mg/Kg	1	7/17/2017 2:58 PM
Boron	< 2.50	2.50		mg/Kg	1	7/17/2017 2:58 PM
Cadmium	< 2.50	2.50		mg/Kg	1	7/17/2017 2:58 PM
Calcium	21,900	250		mg/Kg	100	7/17/2017 2:58 PM
Chromium	353	2.50		mg/Kg	1	7/17/2017 2:58 PM
Cobalt	2.60	2.50		mg/Kg	1	7/17/2017 2:58 PM
Copper	27.1	2.50		mg/Kg	1	7/17/2017 2:58 PM
Iron	7,250	250		mg/Kg	100	7/17/2017 2:58 PM
Lead	57.7	2.50		mg/Kg	1	7/17/2017 2:58 PM
Magnesium	606	2.50		mg/Kg	1	7/17/2017 2:58 PM
Manganese	84.0	2.50		mg/Kg	1	7/17/2017 2:58 PM
Molybdenum	< 2.50	2.50		mg/Kg	1	7/17/2017 2:58 PM
Nickel	36.9	2.50		mg/Kg	1	7/17/2017 2:58 PM
Phosphorus	57.8	2.50		mg/Kg	1	7/17/2017 2:58 PM
Potassium	58.6	2.50		mg/Kg	1	7/17/2017 2:58 PM
Selenium	< 2.50	2.50		mg/Kg	1	7/17/2017 2:58 PM
Silicon	73.1	2.50		mg/Kg	1	7/17/2017 2:58 PM
Silver	2.97	2.50		mg/Kg	1	7/17/2017 2:58 PM
Sodium	37.1	2.50		mg/Kg	1	7/17/2017 2:58 PM
Strontium	47.5	2.50		mg/Kg	1	7/17/2017 2:58 PM
Tin	< 2.50	2.50		mg/Kg	1	7/17/2017 2:58 PM
Titanium	894	2.50		mg/Kg	1	7/17/2017 2:58 PM
Vanadium	< 2.50	2.50		mg/Kg	1	7/17/2017 2:58 PM
Zinc	< 2.50	2.50		mg/Kg	1	7/17/2017 2:58 PM

RTI Laboratories, Inc. - Definitions and Acronyms

WO#: 1707196

Date Reported: 7/17/2017
Original

DEFINITIONS:

DF: Dilution factor; the dilution factor applied to the prepared sample.

DUP: Duplicate; aliquots of a sample taken from the same container under laboratory conditions and processed and analyzed independently, used to calculate Precision (%RPD).

LCS: Laboratory Control Sample; prepared by adding a known amount of target analytes to a specified amount of clean matrix and prepared with the batch of samples, used to calculate Accuracy (%REC).

LCSD: A duplicate LCS sample, used to calculate both Accuracy (%REC) and Precision (%RPD)

MBLK: Method Blank; a sample of similar matrix that does not contain target analytes or interference that may impact the analytical results and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedure, used to assess and verify that the analytical process is free of contamination.

MDL: Method Detection Limit; The lowest concentration of analyte that can be detected by the method in the applicable matrix.

Mg/Kg or mg/L: Units of part per million (PPM) – milligram per Kilogram (W/W) or milligram per Liter (W/V).

MS: Matrix Spike; prepared by adding a known amount of target analytes to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available, used to calculate Accuracy (%REC)

MSD: A duplicate MS sample, used to calculate both Accuracy (%REC) and Precision (%RPD)

% REC: Percent Recovery of a known spike (SPK); a measure of accuracy expressed as a percentage of a measured (recovered) concentration compared to the known concentration (SPK) added to the sample. This is compared to the Low Limit and High Limit.

% RPD: Relative Percent Difference; a measure of precision expressed as a percentage of the difference between two duplicates relative to the average concentration. This is compared to the RPD Limit.

PL: Permit limit:; Not included on all reports. Used primarily for wastewater discharge permits.

PQL: Practical Quantitation Limit; The lowest verified limit to which data is quantified without qualifications. Analyte concentrations below PQL are reported either as ND or as a number with a “J” qualifier.

Qual: Qualifier that applies to the analyte reported

RL: Reporting Limit: See PQL

SPK: Spike; used in the QC section for both SPK Value and SPK Ref Val

Ug/Kg or ug/L: Units of part per billion (PPB) – microgram per Kilogram (W/W) or microgram per Liter (W/V).

QUALIFIERS:

*/X: Reported value exceeds the maximum allowed concentration by regulation or permit

B: Analyte detected in the associated Method Blank at a concentration > RL.

E: Analyte concentration reported that exceeds the upper calibration standard. Greater uncertainty is associated with this result and data should be considered estimated.

H: Holding time for preparation or analysis has been exceeded

J: Analyte concentration is reported, and is less than the PQL and greater than or equal to the established MDL. Greater uncertainty is associated with this result and data reported is estimated. These analytes are not routinely reviewed nor narrated as to their potential for being laboratory artifacts.

M: Manual Integration used to determine area response

ND: Analyte concentration is less than the Reporting Limit.

P: Second column RPD exceeds 40%

R: % RPD exceeds control limits

S: % REC exceeds control limits

T: MBLK result is greater than 1/2 of the LOQ

U: The analyte concentration is less than the DL.

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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July 21, 2017

Andrew Cawrse
Natural Resource Technology
234 W Florida St
Milwaukee, WI 53204

RE: Project: 2133 SOLVAY
Pace Project No.: 40152687

Dear Andrew Cawrse:
Enclosed are the analytical results for sample(s) received by the laboratory on July 01, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brian Basten
brian.basten@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: NRT Data, Natural Resource Technologies
Brian Hennings, NATURAL RESOURCE TECHNOLOGY
Robert Paulson, We Energies

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 2133 SOLVAY
Pace Project No.: 40152687

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

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SAMPLE SUMMARY

Project: 2133 SOLVAY
Pace Project No.: 40152687

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40152687001	**062917001**	Water	06/29/17 11:00	07/01/17 08:00
40152687002	**062917002**	Water	06/29/17 00:00	07/01/17 08:00
40152687003	**062917003**	Solid	06/29/17 11:30	07/01/17 08:00
40152687004	**062917004**	Solid	06/29/17 00:00	07/01/17 08:00

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SAMPLE ANALYTE COUNT

Project: 2133 SOLVAY
Pace Project No.: 40152687

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40152687001	**062917001**	EPA 6010	DLB	7
		EPA 7470	AJT	1
		EPA 8260	HNW	64
40152687002	**062917002**	EPA 8260	HNW	64
40152687003	**062917003**	EPA 8082	BDS	10
		EPA 6020	DS1	7
		EPA 7471	AJT	1
		EPA 8270 by SIM	ARO	20
		EPA 8260	SMT	64
		ASTM D2974-87	RMV	1
40152687004	**062917004**	EPA 8260	SMT	64

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40152687

Sample: 062917001 **Lab ID: 40152687001** Collected: 06/29/17 11:00 Received: 07/01/17 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	07/11/17 14:48	07/12/17 17:01	7440-38-2	
Barium	**163**	ug/L	5.0	1.5	1	07/11/17 14:48	07/12/17 17:01	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	07/11/17 14:48	07/12/17 17:01	7440-43-9	
Chromium	**9.5J**	ug/L	10.0	2.5	1	07/11/17 14:48	07/12/17 17:01	7440-47-3	
Lead	**204**	ug/L	13.0	4.3	1	07/11/17 14:48	07/12/17 17:01	7439-92-1	
Selenium	**<16.6**	ug/L	50.0	16.6	1	07/11/17 14:48	07/12/17 17:01	7782-49-2	
Silver	**<3.3**	ug/L	10.0	3.3	1	07/11/17 14:48	07/12/17 17:01	7440-22-4	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**0.71**	ug/L	0.42	0.13	1	07/05/17 13:05	07/06/17 09:20	7439-97-6	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.18**	ug/L	1.0	0.18	1		07/06/17 15:46	630-20-6	
1,1,1-Trichloroethane	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.25**	ug/L	1.0	0.25	1		07/06/17 15:46	79-34-5	
1,1,2-Trichloroethane	**<0.20**	ug/L	1.0	0.20	1		07/06/17 15:46	79-00-5	
1,1-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		07/06/17 15:46	75-34-3	
1,1-Dichloroethene	**<0.41**	ug/L	1.0	0.41	1		07/06/17 15:46	75-35-4	
1,1-Dichloropropene	**<0.44**	ug/L	1.0	0.44	1		07/06/17 15:46	563-58-6	
1,2,3-Trichlorobenzene	**<2.1**	ug/L	5.0	2.1	1		07/06/17 15:46	87-61-6	
1,2,3-Trichloropropane	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	96-18-4	
1,2,4-Trichlorobenzene	**<2.2**	ug/L	5.0	2.2	1		07/06/17 15:46	120-82-1	
1,2,4-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	95-63-6	
1,2-Dibromo-3-chloropropane	**<2.2**	ug/L	5.0	2.2	1		07/06/17 15:46	96-12-8	
1,2-Dibromoethane (EDB)	**<0.18**	ug/L	1.0	0.18	1		07/06/17 15:46	106-93-4	
1,2-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	95-50-1	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		07/06/17 15:46	107-06-2	
1,2-Dichloropropane	**<0.23**	ug/L	1.0	0.23	1		07/06/17 15:46	78-87-5	
1,3,5-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	108-67-8	
1,3-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	541-73-1	
1,3-Dichloropropane	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	142-28-9	
1,4-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	106-46-7	
2,2-Dichloropropane	**<0.48**	ug/L	1.0	0.48	1		07/06/17 15:46	594-20-7	
2-Chlorotoluene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	95-49-8	
4-Chlorotoluene	**<0.21**	ug/L	1.0	0.21	1		07/06/17 15:46	106-43-4	
Benzene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	71-43-2	
Bromobenzene	**<0.23**	ug/L	1.0	0.23	1		07/06/17 15:46	108-86-1	
Bromochloromethane	**<0.34**	ug/L	1.0	0.34	1		07/06/17 15:46	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	75-27-4	
Bromoform	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	75-25-2	
Bromomethane	**<2.4**	ug/L	5.0	2.4	1		07/06/17 15:46	74-83-9	
Carbon tetrachloride	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	56-23-5	
Chlorobenzene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	108-90-7	
Chloroethane	**<0.37**	ug/L	1.0	0.37	1		07/06/17 15:46	75-00-3	
Chloroform	**<2.5**	ug/L	5.0	2.5	1		07/06/17 15:46	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	74-87-3	

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40152687

Sample: 062917001 **Lab ID: 40152687001** Collected: 06/29/17 11:00 Received: 07/01/17 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Dibromochloromethane	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	124-48-1	
Dibromomethane	**<0.43**	ug/L	1.0	0.43	1		07/06/17 15:46	74-95-3	
Dichlorodifluoromethane	**<0.22**	ug/L	1.0	0.22	1		07/06/17 15:46	75-71-8	
Diisopropyl ether	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	108-20-3	
Ethylbenzene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	100-41-4	
Hexachloro-1,3-butadiene	**<2.1**	ug/L	5.0	2.1	1		07/06/17 15:46	87-68-3	
Isopropylbenzene (Cumene)	**<0.14**	ug/L	1.0	0.14	1		07/06/17 15:46	98-82-8	
Methyl-tert-butyl ether	**<0.17**	ug/L	1.0	0.17	1		07/06/17 15:46	1634-04-4	
Methylene Chloride	**<0.23**	ug/L	1.0	0.23	1		07/06/17 15:46	75-09-2	
Naphthalene	**<2.5**	ug/L	5.0	2.5	1		07/06/17 15:46	91-20-3	
Styrene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	100-42-5	
Tetrachloroethene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	127-18-4	
Toluene	**2.0**	ug/L	1.0	0.50	1		07/06/17 15:46	108-88-3	
Trichloroethene	**<0.33**	ug/L	1.0	0.33	1		07/06/17 15:46	79-01-6	
Trichlorofluoromethane	**<0.18**	ug/L	1.0	0.18	1		07/06/17 15:46	75-69-4	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		07/06/17 15:46	75-01-4	
cis-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		07/06/17 15:46	156-59-2	
cis-1,3-Dichloropropene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	10061-01-5	
m&p-Xylene	**<1.0**	ug/L	2.0	1.0	1		07/06/17 15:46	179601-23-1	
n-Butylbenzene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	104-51-8	
n-Propylbenzene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	103-65-1	
o-Xylene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	95-47-6	
p-Isopropyltoluene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	99-87-6	
sec-Butylbenzene	**<2.2**	ug/L	5.0	2.2	1		07/06/17 15:46	135-98-8	
tert-Butylbenzene	**<0.18**	ug/L	1.0	0.18	1		07/06/17 15:46	98-06-6	
trans-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		07/06/17 15:46	156-60-5	
trans-1,3-Dichloropropene	**<0.23**	ug/L	1.0	0.23	1		07/06/17 15:46	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	92	%	61-130		1		07/06/17 15:46	460-00-4	
Dibromofluoromethane (S)	109	%	67-130		1		07/06/17 15:46	1868-53-7	
Toluene-d8 (S)	109	%	70-130		1		07/06/17 15:46	2037-26-5	

Sample: 062917002 **Lab ID: 40152687002** Collected: 06/29/17 00:00 Received: 07/01/17 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.18**	ug/L	1.0	0.18	1		07/07/17 07:57	630-20-6	
1,1,1-Trichloroethane	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.25**	ug/L	1.0	0.25	1		07/07/17 07:57	79-34-5	
1,1,2-Trichloroethane	**<0.20**	ug/L	1.0	0.20	1		07/07/17 07:57	79-00-5	
1,1-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		07/07/17 07:57	75-34-3	
1,1-Dichloroethene	**<0.41**	ug/L	1.0	0.41	1		07/07/17 07:57	75-35-4	
1,1-Dichloropropene	**<0.44**	ug/L	1.0	0.44	1		07/07/17 07:57	563-58-6	

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40152687

Sample: 062917002 **Lab ID: 40152687002** Collected: 06/29/17 00:00 Received: 07/01/17 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,2,3-Trichlorobenzene	**<2.1**	ug/L	5.0	2.1	1		07/07/17 07:57	87-61-6	
1,2,3-Trichloropropane	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	96-18-4	
1,2,4-Trichlorobenzene	**<2.2**	ug/L	5.0	2.2	1		07/07/17 07:57	120-82-1	
1,2,4-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	95-63-6	
1,2-Dibromo-3-chloropropane	**<2.2**	ug/L	5.0	2.2	1		07/07/17 07:57	96-12-8	
1,2-Dibromoethane (EDB)	**<0.18**	ug/L	1.0	0.18	1		07/07/17 07:57	106-93-4	
1,2-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	95-50-1	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		07/07/17 07:57	107-06-2	
1,2-Dichloropropane	**<0.23**	ug/L	1.0	0.23	1		07/07/17 07:57	78-87-5	
1,3,5-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	108-67-8	
1,3-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	541-73-1	
1,3-Dichloropropane	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	142-28-9	
1,4-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	106-46-7	
2,2-Dichloropropane	**<0.48**	ug/L	1.0	0.48	1		07/07/17 07:57	594-20-7	
2-Chlorotoluene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	95-49-8	
4-Chlorotoluene	**<0.21**	ug/L	1.0	0.21	1		07/07/17 07:57	106-43-4	
Benzene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	71-43-2	
Bromobenzene	**<0.23**	ug/L	1.0	0.23	1		07/07/17 07:57	108-86-1	
Bromochloromethane	**<0.34**	ug/L	1.0	0.34	1		07/07/17 07:57	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	75-27-4	
Bromoform	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	75-25-2	
Bromomethane	**<2.4**	ug/L	5.0	2.4	1		07/07/17 07:57	74-83-9	
Carbon tetrachloride	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	56-23-5	
Chlorobenzene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	108-90-7	
Chloroethane	**<0.37**	ug/L	1.0	0.37	1		07/07/17 07:57	75-00-3	
Chloroform	**<2.5**	ug/L	5.0	2.5	1		07/07/17 07:57	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	74-87-3	
Dibromochloromethane	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	124-48-1	
Dibromomethane	**<0.43**	ug/L	1.0	0.43	1		07/07/17 07:57	74-95-3	
Dichlorodifluoromethane	**<0.22**	ug/L	1.0	0.22	1		07/07/17 07:57	75-71-8	
Diisopropyl ether	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	108-20-3	
Ethylbenzene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	100-41-4	
Hexachloro-1,3-butadiene	**<2.1**	ug/L	5.0	2.1	1		07/07/17 07:57	87-68-3	
Isopropylbenzene (Cumene)	**<0.14**	ug/L	1.0	0.14	1		07/07/17 07:57	98-82-8	
Methyl-tert-butyl ether	**<0.17**	ug/L	1.0	0.17	1		07/07/17 07:57	1634-04-4	
Methylene Chloride	**<0.23**	ug/L	1.0	0.23	1		07/07/17 07:57	75-09-2	
Naphthalene	**<2.5**	ug/L	5.0	2.5	1		07/07/17 07:57	91-20-3	
Styrene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	100-42-5	
Tetrachloroethene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	127-18-4	
Toluene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	108-88-3	
Trichloroethene	**<0.33**	ug/L	1.0	0.33	1		07/07/17 07:57	79-01-6	
Trichlorofluoromethane	**<0.18**	ug/L	1.0	0.18	1		07/07/17 07:57	75-69-4	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		07/07/17 07:57	75-01-4	
cis-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		07/07/17 07:57	156-59-2	
cis-1,3-Dichloropropene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	10061-01-5	
m&p-Xylene	**<1.0**	ug/L	2.0	1.0	1		07/07/17 07:57	179601-23-1	

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40152687

Sample: 062917002 **Lab ID: 40152687002** Collected: 06/29/17 00:00 Received: 07/01/17 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
n-Butylbenzene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	104-51-8	
n-Propylbenzene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	103-65-1	
o-Xylene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	95-47-6	
p-Isopropyltoluene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	99-87-6	
sec-Butylbenzene	**<2.2**	ug/L	5.0	2.2	1		07/07/17 07:57	135-98-8	
tert-Butylbenzene	**<0.18**	ug/L	1.0	0.18	1		07/07/17 07:57	98-06-6	
trans-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		07/07/17 07:57	156-60-5	
trans-1,3-Dichloropropene	**<0.23**	ug/L	1.0	0.23	1		07/07/17 07:57	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	94	%	61-130		1		07/07/17 07:57	460-00-4	
Dibromofluoromethane (S)	108	%	67-130		1		07/07/17 07:57	1868-53-7	
Toluene-d8 (S)	107	%	70-130		1		07/07/17 07:57	2037-26-5	

Sample: 062917003 **Lab ID: 40152687003** Collected: 06/29/17 11:30 Received: 07/01/17 08:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	**<34.4**	ug/kg	68.9	34.4	1	07/05/17 13:13	07/06/17 01:11	12674-11-2	
PCB-1221 (Aroclor 1221)	**<34.4**	ug/kg	68.9	34.4	1	07/05/17 13:13	07/06/17 01:11	11104-28-2	
PCB-1232 (Aroclor 1232)	**<34.4**	ug/kg	68.9	34.4	1	07/05/17 13:13	07/06/17 01:11	11141-16-5	
PCB-1242 (Aroclor 1242)	**<34.4**	ug/kg	68.9	34.4	1	07/05/17 13:13	07/06/17 01:11	53469-21-9	
PCB-1248 (Aroclor 1248)	**<34.4**	ug/kg	68.9	34.4	1	07/05/17 13:13	07/06/17 01:11	12672-29-6	
PCB-1254 (Aroclor 1254)	**<34.4**	ug/kg	68.9	34.4	1	07/05/17 13:13	07/06/17 01:11	11097-69-1	
PCB-1260 (Aroclor 1260)	**<34.4**	ug/kg	68.9	34.4	1	07/05/17 13:13	07/06/17 01:11	11096-82-5	
PCB, Total	**<34.4**	ug/kg	68.9	34.4	1	07/05/17 13:13	07/06/17 01:11	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	59	%	50-102		1	07/05/17 13:13	07/06/17 01:11	877-09-8	
Decachlorobiphenyl (S)	59	%	53-105		1	07/05/17 13:13	07/06/17 01:11	2051-24-3	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3050								
Arsenic	**185**	mg/kg	1.2	0.36	6.667	07/13/17 08:31	07/14/17 21:14	7440-38-2	
Barium	**408**	mg/kg	1.0	0.31	6.667	07/13/17 08:31	07/14/17 21:14	7440-39-3	
Cadmium	**0.92**	mg/kg	0.91	0.13	6.667	07/13/17 08:31	07/14/17 21:14	7440-43-9	
Chromium	**17.5**	mg/kg	6.1	1.8	6.667	07/13/17 08:31	07/14/17 21:14	7440-47-3	
Lead	**586**	mg/kg	0.91	0.25	6.667	07/13/17 08:31	07/14/17 21:14	7439-92-1	
Selenium	**2.8**	mg/kg	0.91	0.25	6.667	07/13/17 08:31	07/14/17 21:14	7782-49-2	
Silver	**<0.13**	mg/kg	0.45	0.13	6.667	07/13/17 08:31	07/14/17 21:14	7440-22-4	D3
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.020J**	mg/kg	0.051	0.015	1	07/10/17 06:36	07/10/17 12:56	7439-97-6	

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(920)469-2436

ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40152687

Sample: 062917003 **Lab ID: 40152687003** Collected: 06/29/17 11:30 Received: 07/01/17 08:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**<26.8**	ug/kg	88.9	26.8	5	07/13/17 08:53	07/20/17 14:54	83-32-9	
Acenaphthylene	**<22.7**	ug/kg	75.8	22.7	5	07/13/17 08:53	07/20/17 14:54	208-96-8	
Anthracene	**<39.4**	ug/kg	131	39.4	5	07/13/17 08:53	07/20/17 14:54	120-12-7	
Benzo(a)anthracene	**264**	ug/kg	73.1	21.9	5	07/13/17 08:53	07/20/17 14:54	56-55-3	
Benzo(a)pyrene	**1290**	ug/kg	57.7	17.3	5	07/13/17 08:53	07/20/17 14:54	50-32-8	
Benzo(b)fluoranthene	**1710**	ug/kg	64.9	19.5	5	07/13/17 08:53	07/20/17 14:54	205-99-2	
Benzo(g,h,i)perylene	**1540**	ug/kg	46.7	14.0	5	07/13/17 08:53	07/20/17 14:54	191-24-2	
Benzo(k)fluoranthene	**1440**	ug/kg	57.6	17.3	5	07/13/17 08:53	07/20/17 14:54	207-08-9	
Chrysene	**563**	ug/kg	77.2	23.2	5	07/13/17 08:53	07/20/17 14:54	218-01-9	
Dibenz(a,h)anthracene	**782**	ug/kg	51.3	15.4	5	07/13/17 08:53	07/20/17 14:54	53-70-3	
Fluoranthene	**124**	ug/kg	120	35.9	5	07/13/17 08:53	07/20/17 14:54	206-44-0	
Fluorene	**<28.5**	ug/kg	95.1	28.5	5	07/13/17 08:53	07/20/17 14:54	86-73-7	
Indeno(1,2,3-cd)pyrene	**1180**	ug/kg	50.5	15.2	5	07/13/17 08:53	07/20/17 14:54	193-39-5	
1-Methylnaphthalene	**<27.7**	ug/kg	92.4	27.7	5	07/13/17 08:53	07/20/17 14:54	90-12-0	
2-Methylnaphthalene	**<34.5**	ug/kg	115	34.5	5	07/13/17 08:53	07/20/17 14:54	91-57-6	
Naphthalene	**<58.0**	ug/kg	194	58.0	5	07/13/17 08:53	07/20/17 14:54	91-20-3	
Phenanthrene	**<80.3**	ug/kg	267	80.3	5	07/13/17 08:53	07/20/17 14:54	85-01-8	
Pyrene	**88.2J**	ug/kg	103	31.1	5	07/13/17 08:53	07/20/17 14:54	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	57	%	19-96		5	07/13/17 08:53	07/20/17 14:54	321-60-8	
Terphenyl-d14 (S)	54	%	31-98		5	07/13/17 08:53	07/20/17 14:54	1718-51-0	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	630-20-6	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	71-55-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	79-34-5	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	79-00-5	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	75-34-3	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	75-35-4	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	563-58-6	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	87-61-6	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	96-18-4	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	07/03/17 10:00	07/04/17 02:52	120-82-1	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	95-63-6	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	07/03/17 10:00	07/04/17 02:52	96-12-8	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	106-93-4	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	95-50-1	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	107-06-2	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	78-87-5	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	108-67-8	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	541-73-1	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	142-28-9	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	106-46-7	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	594-20-7	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	95-49-8	W

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40152687

Sample: 062917003 **Lab ID: 40152687003** Collected: 06/29/17 11:30 Received: 07/01/17 08:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	106-43-4	W
Benzene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	07/03/17 10:00	07/04/17 02:52	74-83-9	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	07/03/17 10:00	07/04/17 02:52	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	07/03/17 10:00	07/04/17 02:52	67-66-3	W
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	74-87-3	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	124-48-1	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	74-95-3	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	75-71-8	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	98-82-8	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	1634-04-4	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	75-09-2	W
Naphthalene	**<40.0**	ug/kg	250	40.0	1	07/03/17 10:00	07/04/17 02:52	91-20-3	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	100-42-5	W
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	108-88-3	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	75-69-4	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	75-01-4	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	156-59-2	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	10061-01-5	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	07/03/17 10:00	07/04/17 02:52	179601-23-1	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	104-51-8	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	103-65-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	95-47-6	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	99-87-6	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	98-06-6	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	156-60-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	108	%	68-130		1	07/03/17 10:00	07/04/17 02:52	1868-53-7	
Toluene-d8 (S)	109	%	68-149		1	07/03/17 10:00	07/04/17 02:52	2037-26-5	
4-Bromofluorobenzene (S)	96	%	58-141		1	07/03/17 10:00	07/04/17 02:52	460-00-4	

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40152687

Sample: 062917003 **Lab ID: 40152687003** Collected: 06/29/17 11:30 Received: 07/01/17 08:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**27.4**	%	0.10	0.10	1		07/10/17 08:59		

Sample: 062917004 **Lab ID: 40152687004** Collected: 06/29/17 00:00 Received: 07/01/17 08:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	630-20-6	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	71-55-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	79-34-5	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	79-00-5	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	75-34-3	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	75-35-4	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	563-58-6	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	87-61-6	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	96-18-4	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	07/06/17 07:30	07/06/17 23:34	120-82-1	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	95-63-6	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	07/06/17 07:30	07/06/17 23:34	96-12-8	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	106-93-4	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	95-50-1	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	107-06-2	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	78-87-5	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	108-67-8	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	541-73-1	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	142-28-9	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	106-46-7	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	594-20-7	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	106-43-4	W
Benzene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	07/06/17 07:30	07/06/17 23:34	74-83-9	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	07/06/17 07:30	07/06/17 23:34	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	07/06/17 07:30	07/06/17 23:34	67-66-3	W
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	74-87-3	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	124-48-1	W

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40152687

Sample: 062917004 **Lab ID: 40152687004** Collected: 06/29/17 00:00 Received: 07/01/17 08:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	74-95-3	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	75-71-8	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	98-82-8	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	1634-04-4	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	75-09-2	W
Naphthalene	**<40.0**	ug/kg	250	40.0	1	07/06/17 07:30	07/06/17 23:34	91-20-3	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	100-42-5	W
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	108-88-3	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	75-69-4	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	75-01-4	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	156-59-2	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	10061-01-5	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	07/06/17 07:30	07/06/17 23:34	179601-23-1	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	104-51-8	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	103-65-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	95-47-6	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	99-87-6	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	98-06-6	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	156-60-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	116	%	68-130		1	07/06/17 07:30	07/06/17 23:34	1868-53-7	
Toluene-d8 (S)	104	%	68-149		1	07/06/17 07:30	07/06/17 23:34	2037-26-5	
4-Bromofluorobenzene (S)	96	%	58-141		1	07/06/17 07:30	07/06/17 23:34	460-00-4	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

QC Batch: 260584
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Associated Lab Samples: 40152687001

METHOD BLANK: 1535149 Matrix: Water
Associated Lab Samples: 40152687001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.13	0.42	07/06/17 08:36	

LABORATORY CONTROL SAMPLE: 1535150

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.8	97	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1535151 1535152

Parameter	Units	40152676003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L				4.7	4.8				3	20	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

QC Batch: 260854
QC Batch Method: EPA 7471
Analysis Method: EPA 7471
Analysis Description: 7471 Mercury
Associated Lab Samples: 40152687003

METHOD BLANK: 1536256 Matrix: Solid
Associated Lab Samples: 40152687003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	<0.011	0.037	07/10/17 12:09	

LABORATORY CONTROL SAMPLE: 1536257

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.83	0.85	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1536258 1536259

Parameter	Units	40152348002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	0.11	.94	.95	0.99	1.1	93	100	85-115	7	20	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

QC Batch: 261201
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Associated Lab Samples: 40152687001

METHOD BLANK: 1537940 Matrix: Water
Associated Lab Samples: 40152687001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<8.3	25.0	07/12/17 16:33	
Barium	ug/L	<1.5	5.0	07/12/17 16:33	
Cadmium	ug/L	<1.3	5.0	07/12/17 16:33	
Chromium	ug/L	<2.5	10.0	07/12/17 16:33	
Lead	ug/L	<4.3	13.0	07/12/17 16:33	
Selenium	ug/L	<16.6	50.0	07/12/17 16:33	
Silver	ug/L	<3.3	10.0	07/12/17 16:33	

LABORATORY CONTROL SAMPLE: 1537941

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	500	481	96	80-120	
Barium	ug/L	500	503	101	80-120	
Cadmium	ug/L	500	502	100	80-120	
Chromium	ug/L	500	512	102	80-120	
Lead	ug/L	500	507	101	80-120	
Selenium	ug/L	500	506	101	80-120	
Silver	ug/L	250	252	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1537942 1537943

Parameter	Units	40152545015 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	<8.3	500	500	497	485	99	97	75-125	2	20	
Barium	ug/L	62.0	500	500	574	561	102	100	75-125	2	20	
Cadmium	ug/L	<1.3	500	500	515	501	103	100	75-125	3	20	
Chromium	ug/L	<2.5	500	500	520	512	104	102	75-125	2	20	
Lead	ug/L	<4.3	500	500	514	505	103	101	75-125	2	20	
Selenium	ug/L	<16.6	500	500	515	509	103	102	75-125	1	20	
Silver	ug/L	<3.3	250	250	261	256	104	102	75-125	2	20	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

QC Batch: 261258
QC Batch Method: EPA 3050
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Associated Lab Samples: 40152687003

METHOD BLANK: 1538272
Matrix: Solid
Associated Lab Samples: 40152687003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	<0.040	0.13	07/14/17 20:19	
Barium	mg/kg	<0.034	0.11	07/14/17 20:19	
Cadmium	mg/kg	<0.015	0.10	07/14/17 20:19	
Chromium	mg/kg	<0.20	0.67	07/14/17 20:19	
Lead	mg/kg	<0.027	0.10	07/14/17 20:19	
Selenium	mg/kg	<0.027	0.10	07/14/17 20:19	
Silver	mg/kg	<0.014	0.050	07/14/17 20:19	

LABORATORY CONTROL SAMPLE: 1538273

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	50.9	102	80-120	
Barium	mg/kg	50	51.6	103	80-120	
Cadmium	mg/kg	50	50.9	102	80-120	
Chromium	mg/kg	50	51.3	103	80-120	
Lead	mg/kg	50	47.3	95	80-120	
Selenium	mg/kg	50	53.0	106	80-120	
Silver	mg/kg	25	26.1	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1538274 1538275

Parameter	Units	40152670031 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	3.1	56.2	56.5	62.2	59.4	105	100	75-125	5	20	
Barium	mg/kg	28.2	56.2	56.5	80.7	79.3	93	90	75-125	2	20	
Cadmium	mg/kg	0.20J	56.2	56.5	55.7	56.4	99	99	75-125	1	20	
Chromium	mg/kg	14.2	56.2	56.5	68.1	64.7	96	89	75-125	5	20	
Lead	mg/kg	11.3	56.2	56.5	65.8	64.6	97	94	75-125	2	20	
Selenium	mg/kg	1.2	56.2	56.5	61.8	60.9	108	106	75-125	1	20	
Silver	mg/kg	<0.11	28.2	28.3	27.5	28.4	97	100	75-125	3	20	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

QC Batch: 260465
QC Batch Method: EPA 5035/5030B
Analysis Method: EPA 8260
Analysis Description: 8260 MSV Med Level Normal List
Associated Lab Samples: 40152687003

METHOD BLANK: 1534887
Matrix: Solid
Associated Lab Samples: 40152687003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<13.7	50.0	07/03/17 18:23	
1,1,1-Trichloroethane	ug/kg	<14.4	50.0	07/03/17 18:23	
1,1,2,2-Tetrachloroethane	ug/kg	<17.5	50.0	07/03/17 18:23	
1,1,2-Trichloroethane	ug/kg	<20.2	50.0	07/03/17 18:23	
1,1-Dichloroethane	ug/kg	<17.6	50.0	07/03/17 18:23	
1,1-Dichloroethene	ug/kg	<17.6	50.0	07/03/17 18:23	
1,1-Dichloropropene	ug/kg	<14.0	50.0	07/03/17 18:23	
1,2,3-Trichlorobenzene	ug/kg	<17.0	50.0	07/03/17 18:23	
1,2,3-Trichloropropane	ug/kg	<22.3	50.0	07/03/17 18:23	
1,2,4-Trichlorobenzene	ug/kg	<47.6	250	07/03/17 18:23	
1,2,4-Trimethylbenzene	ug/kg	<12.2	50.0	07/03/17 18:23	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	250	07/03/17 18:23	
1,2-Dibromoethane (EDB)	ug/kg	<14.7	50.0	07/03/17 18:23	
1,2-Dichlorobenzene	ug/kg	<16.2	50.0	07/03/17 18:23	
1,2-Dichloroethane	ug/kg	<15.0	50.0	07/03/17 18:23	
1,2-Dichloropropane	ug/kg	<16.8	50.0	07/03/17 18:23	
1,3,5-Trimethylbenzene	ug/kg	<14.5	50.0	07/03/17 18:23	
1,3-Dichlorobenzene	ug/kg	<13.2	50.0	07/03/17 18:23	
1,3-Dichloropropane	ug/kg	<12.0	50.0	07/03/17 18:23	
1,4-Dichlorobenzene	ug/kg	<15.9	50.0	07/03/17 18:23	
2,2-Dichloropropane	ug/kg	<12.6	50.0	07/03/17 18:23	
2-Chlorotoluene	ug/kg	<15.8	50.0	07/03/17 18:23	
4-Chlorotoluene	ug/kg	<13.0	50.0	07/03/17 18:23	
Benzene	ug/kg	<9.2	20.0	07/03/17 18:23	
Bromobenzene	ug/kg	<20.6	50.0	07/03/17 18:23	
Bromochloromethane	ug/kg	<21.4	50.0	07/03/17 18:23	
Bromodichloromethane	ug/kg	<9.8	50.0	07/03/17 18:23	
Bromoform	ug/kg	<19.8	50.0	07/03/17 18:23	
Bromomethane	ug/kg	<69.9	250	07/03/17 18:23	
Carbon tetrachloride	ug/kg	<12.1	50.0	07/03/17 18:23	
Chlorobenzene	ug/kg	<14.8	50.0	07/03/17 18:23	
Chloroethane	ug/kg	<67.0	250	07/03/17 18:23	
Chloroform	ug/kg	<46.4	250	07/03/17 18:23	
Chloromethane	ug/kg	<20.4	50.0	07/03/17 18:23	
cis-1,2-Dichloroethene	ug/kg	<16.6	50.0	07/03/17 18:23	
cis-1,3-Dichloropropene	ug/kg	<16.6	50.0	07/03/17 18:23	
Dibromochloromethane	ug/kg	<17.9	50.0	07/03/17 18:23	
Dibromomethane	ug/kg	<19.3	50.0	07/03/17 18:23	
Dichlorodifluoromethane	ug/kg	<12.3	50.0	07/03/17 18:23	
Diisopropyl ether	ug/kg	<17.7	50.0	07/03/17 18:23	
Ethylbenzene	ug/kg	<12.4	50.0	07/03/17 18:23	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

METHOD BLANK: 1534887 Matrix: Solid
Associated Lab Samples: 40152687003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/kg	<24.5	50.0	07/03/17 18:23	
Isopropylbenzene (Cumene)	ug/kg	<12.6	50.0	07/03/17 18:23	
m&p-Xylene	ug/kg	<34.4	100	07/03/17 18:23	
Methyl-tert-butyl ether	ug/kg	<12.7	50.0	07/03/17 18:23	
Methylene Chloride	ug/kg	<16.2	50.0	07/03/17 18:23	
n-Butylbenzene	ug/kg	<10.5	50.0	07/03/17 18:23	
n-Propylbenzene	ug/kg	<11.6	50.0	07/03/17 18:23	
Naphthalene	ug/kg	<40.0	250	07/03/17 18:23	
o-Xylene	ug/kg	<14.0	50.0	07/03/17 18:23	
p-Isopropyltoluene	ug/kg	<12.0	50.0	07/03/17 18:23	
sec-Butylbenzene	ug/kg	<11.9	50.0	07/03/17 18:23	
Styrene	ug/kg	<9.0	50.0	07/03/17 18:23	
tert-Butylbenzene	ug/kg	<9.5	50.0	07/03/17 18:23	
Tetrachloroethene	ug/kg	<12.9	50.0	07/03/17 18:23	
Toluene	ug/kg	<11.2	50.0	07/03/17 18:23	
trans-1,2-Dichloroethene	ug/kg	<16.5	50.0	07/03/17 18:23	
trans-1,3-Dichloropropene	ug/kg	<14.4	50.0	07/03/17 18:23	
Trichloroethene	ug/kg	<23.6	50.0	07/03/17 18:23	
Trichlorofluoromethane	ug/kg	<24.7	50.0	07/03/17 18:23	
Vinyl chloride	ug/kg	<21.1	50.0	07/03/17 18:23	
4-Bromofluorobenzene (S)	%	85	58-141	07/03/17 18:23	
Dibromofluoromethane (S)	%	101	68-130	07/03/17 18:23	
Toluene-d8 (S)	%	102	68-149	07/03/17 18:23	

LABORATORY CONTROL SAMPLE: 1534888

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2580	103	61-122	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2370	95	73-130	
1,1,2-Trichloroethane	ug/kg	2500	2690	108	70-130	
1,1-Dichloroethane	ug/kg	2500	2600	104	63-124	
1,1-Dichloroethene	ug/kg	2500	2470	99	53-117	
1,2,4-Trichlorobenzene	ug/kg	2500	2100	84	78-130	
1,2-Dibromo-3-chloropropane	ug/kg	2500	1690	68	49-140	
1,2-Dibromoethane (EDB)	ug/kg	2500	2320	93	70-130	
1,2-Dichlorobenzene	ug/kg	2500	2350	94	70-130	
1,2-Dichloroethane	ug/kg	2500	2650	106	56-135	
1,2-Dichloropropane	ug/kg	2500	2480	99	77-122	
1,3-Dichlorobenzene	ug/kg	2500	2380	95	70-130	
1,4-Dichlorobenzene	ug/kg	2500	2660	106	70-130	
Benzene	ug/kg	2500	2640	106	66-130	
Bromodichloromethane	ug/kg	2500	2270	91	62-135	
Bromoform	ug/kg	2500	2020	81	68-130	
Bromomethane	ug/kg	2500	2040	82	29-137	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

LABORATORY CONTROL SAMPLE: 1534888

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/kg	2500	2510	100	57-130	
Chlorobenzene	ug/kg	2500	2700	108	70-130	
Chloroethane	ug/kg	2500	2660	106	36-144	
Chloroform	ug/kg	2500	2570	103	69-115	
Chloromethane	ug/kg	2500	1820	73	32-126	
cis-1,2-Dichloroethene	ug/kg	2500	2710	108	65-130	
cis-1,3-Dichloropropene	ug/kg	2500	2130	85	70-130	
Dibromochloromethane	ug/kg	2500	2330	93	70-130	
Dichlorodifluoromethane	ug/kg	2500	1580	63	10-99	
Ethylbenzene	ug/kg	2500	2450	98	82-122	
Isopropylbenzene (Cumene)	ug/kg	2500	2570	103	70-130	
m&p-Xylene	ug/kg	5000	5200	104	70-130	
Methyl-tert-butyl ether	ug/kg	2500	2510	101	63-134	
Methylene Chloride	ug/kg	2500	2560	103	56-123	
o-Xylene	ug/kg	2500	2590	104	70-130	
Styrene	ug/kg	2500	2650	106	70-130	
Tetrachloroethene	ug/kg	2500	2620	105	70-131	
Toluene	ug/kg	2500	2580	103	80-120	
trans-1,2-Dichloroethene	ug/kg	2500	2740	110	66-130	
trans-1,3-Dichloropropene	ug/kg	2500	2130	85	68-130	
Trichloroethene	ug/kg	2500	2520	101	70-130	
Trichlorofluoromethane	ug/kg	2500	2920	117	37-149	
Vinyl chloride	ug/kg	2500	2060	82	43-128	
4-Bromofluorobenzene (S)	%			94	58-141	
Dibromofluoromethane (S)	%			108	68-130	
Toluene-d8 (S)	%			102	68-149	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1534889 1534890

Parameter	Units	40152432002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/kg	<25.0	1340	1340	1400	1230	105	92	57-123	13	20	
1,1,2,2-Tetrachloroethane	ug/kg	<25.0	1340	1340	1380	1370	103	103	73-135	0	20	
1,1,2-Trichloroethane	ug/kg	<25.0	1340	1340	1540	1550	115	115	70-130	0	20	
1,1-Dichloroethane	ug/kg	<25.0	1340	1340	1390	1370	104	102	63-124	2	20	
1,1-Dichloroethene	ug/kg	<25.0	1340	1340	1340	1160	100	87	48-117	14	23	
1,2,4-Trichlorobenzene	ug/kg	<47.6	1340	1340	1270	1260	95	94	78-145	2	20	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	1340	1340	1040	976	78	73	38-168	6	22	
1,2-Dibromoethane (EDB)	ug/kg	<25.0	1340	1340	1300	1360	97	101	70-130	4	20	
1,2-Dichlorobenzene	ug/kg	<25.0	1340	1340	1380	1380	103	103	70-130	1	20	
1,2-Dichloroethane	ug/kg	<25.0	1340	1340	1430	1370	106	102	56-145	4	20	
1,2-Dichloropropane	ug/kg	<25.0	1340	1340	1270	1370	95	103	77-123	7	20	
1,3-Dichlorobenzene	ug/kg	<25.0	1340	1340	1390	1370	104	103	70-130	1	20	
1,4-Dichlorobenzene	ug/kg	<25.0	1340	1340	1460	1560	109	117	70-130	7	20	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1534889 1534890

Parameter	Units	40152432002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/kg	<25.0	1340	1340	1420	1300	106	97	65-130	9	20	
Bromodichloromethane	ug/kg	<25.0	1340	1340	1170	1130	87	85	59-141	3	20	
Bromoform	ug/kg	<25.0	1340	1340	1110	1260	83	94	59-141	13	20	
Bromomethane	ug/kg	<69.9	1340	1340	1210	1230	90	92	28-139	2	20	
Carbon tetrachloride	ug/kg	<25.0	1340	1340	1290	1100	96	82	50-130	16	20	
Chlorobenzene	ug/kg	<25.0	1340	1340	1510	1580	113	118	70-130	5	20	
Chloroethane	ug/kg	<67.0	1340	1340	1500	1390	112	104	36-144	8	20	
Chloroform	ug/kg	<46.4	1340	1340	1440	1370	108	102	68-122	5	20	
Chloromethane	ug/kg	<25.0	1340	1340	1050	946	78	71	30-126	10	20	
cis-1,2-Dichloroethene	ug/kg	<25.0	1340	1340	1480	1430	110	107	63-130	3	20	
cis-1,3-Dichloropropene	ug/kg	<25.0	1340	1340	1090	1060	81	79	70-130	2	20	
Dibromochloromethane	ug/kg	<25.0	1340	1340	1310	1330	98	99	66-136	1	20	
Dichlorodifluoromethane	ug/kg	<25.0	1340	1340	866	696	65	52	10-99	22	33	
Ethylbenzene	ug/kg	<25.0	1340	1340	1350	1310	100	98	80-122	3	20	
Isopropylbenzene (Cumene)	ug/kg	<25.0	1340	1340	1290	1290	96	96	70-130	0	20	
m&p-Xylene	ug/kg	<50.0	2680	2680	2820	2760	105	103	70-130	2	20	
Methyl-tert-butyl ether	ug/kg	<25.0	1340	1340	1410	1310	106	98	63-134	8	20	
Methylene Chloride	ug/kg	<25.0	1340	1340	1430	1250	107	93	56-127	14	20	
o-Xylene	ug/kg	<25.0	1340	1340	1420	1430	106	106	70-130	1	20	
Styrene	ug/kg	<25.0	1340	1340	1510	1430	113	107	70-130	5	20	
Tetrachloroethene	ug/kg	<25.0	1340	1340	1380	1380	103	103	70-131	0	20	
Toluene	ug/kg	<25.0	1340	1340	1360	1420	102	106	80-120	4	20	
trans-1,2-Dichloroethene	ug/kg	<25.0	1340	1340	1540	1310	115	98	60-130	17	20	
trans-1,3-Dichloropropene	ug/kg	<25.0	1340	1340	1060	1210	79	90	68-130	13	20	
Trichloroethene	ug/kg	<25.0	1340	1340	1320	1350	98	101	70-130	3	20	
Trichlorofluoromethane	ug/kg	<25.0	1340	1340	1310	1200	98	89	37-149	9	24	
Vinyl chloride	ug/kg	<25.0	1340	1340	1090	1010	81	75	39-128	7	20	
4-Bromofluorobenzene (S)	%						96	92	58-141			
Dibromofluoromethane (S)	%						103	96	68-130			
Toluene-d8 (S)	%						98	92	68-149			

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

QC Batch: 260757
QC Batch Method: EPA 5035/5030B
Analysis Method: EPA 8260
Analysis Description: 8260 MSV Med Level Normal List
Associated Lab Samples: 40152687004

METHOD BLANK: 1535892
Matrix: Solid
Associated Lab Samples: 40152687004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<13.7	50.0	07/06/17 18:56	
1,1,1-Trichloroethane	ug/kg	<14.4	50.0	07/06/17 18:56	
1,1,2,2-Tetrachloroethane	ug/kg	<17.5	50.0	07/06/17 18:56	
1,1,2-Trichloroethane	ug/kg	<20.2	50.0	07/06/17 18:56	
1,1-Dichloroethane	ug/kg	<17.6	50.0	07/06/17 18:56	
1,1-Dichloroethene	ug/kg	<17.6	50.0	07/06/17 18:56	
1,1-Dichloropropene	ug/kg	<14.0	50.0	07/06/17 18:56	
1,2,3-Trichlorobenzene	ug/kg	<17.0	50.0	07/06/17 18:56	
1,2,3-Trichloropropane	ug/kg	<22.3	50.0	07/06/17 18:56	
1,2,4-Trichlorobenzene	ug/kg	<47.6	250	07/06/17 18:56	
1,2,4-Trimethylbenzene	ug/kg	<12.2	50.0	07/06/17 18:56	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	250	07/06/17 18:56	
1,2-Dibromoethane (EDB)	ug/kg	<14.7	50.0	07/06/17 18:56	
1,2-Dichlorobenzene	ug/kg	<16.2	50.0	07/06/17 18:56	
1,2-Dichloroethane	ug/kg	<15.0	50.0	07/06/17 18:56	
1,2-Dichloropropane	ug/kg	<16.8	50.0	07/06/17 18:56	
1,3,5-Trimethylbenzene	ug/kg	<14.5	50.0	07/06/17 18:56	
1,3-Dichlorobenzene	ug/kg	<13.2	50.0	07/06/17 18:56	
1,3-Dichloropropane	ug/kg	<12.0	50.0	07/06/17 18:56	
1,4-Dichlorobenzene	ug/kg	<15.9	50.0	07/06/17 18:56	
2,2-Dichloropropane	ug/kg	<12.6	50.0	07/06/17 18:56	
2-Chlorotoluene	ug/kg	<15.8	50.0	07/06/17 18:56	
4-Chlorotoluene	ug/kg	<13.0	50.0	07/06/17 18:56	
Benzene	ug/kg	<9.2	20.0	07/06/17 18:56	
Bromobenzene	ug/kg	<20.6	50.0	07/06/17 18:56	
Bromochloromethane	ug/kg	<21.4	50.0	07/06/17 18:56	
Bromodichloromethane	ug/kg	<9.8	50.0	07/06/17 18:56	
Bromoform	ug/kg	<19.8	50.0	07/06/17 18:56	
Bromomethane	ug/kg	<69.9	250	07/06/17 18:56	
Carbon tetrachloride	ug/kg	<12.1	50.0	07/06/17 18:56	
Chlorobenzene	ug/kg	<14.8	50.0	07/06/17 18:56	
Chloroethane	ug/kg	<67.0	250	07/06/17 18:56	
Chloroform	ug/kg	<46.4	250	07/06/17 18:56	
Chloromethane	ug/kg	<20.4	50.0	07/06/17 18:56	
cis-1,2-Dichloroethene	ug/kg	<16.6	50.0	07/06/17 18:56	
cis-1,3-Dichloropropene	ug/kg	<16.6	50.0	07/06/17 18:56	
Dibromochloromethane	ug/kg	<17.9	50.0	07/06/17 18:56	
Dibromomethane	ug/kg	<19.3	50.0	07/06/17 18:56	
Dichlorodifluoromethane	ug/kg	<12.3	50.0	07/06/17 18:56	
Diisopropyl ether	ug/kg	<17.7	50.0	07/06/17 18:56	
Ethylbenzene	ug/kg	<12.4	50.0	07/06/17 18:56	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

METHOD BLANK: 1535892 Matrix: Solid
Associated Lab Samples: 40152687004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/kg	<24.5	50.0	07/06/17 18:56	
Isopropylbenzene (Cumene)	ug/kg	<12.6	50.0	07/06/17 18:56	
m&p-Xylene	ug/kg	<34.4	100	07/06/17 18:56	
Methyl-tert-butyl ether	ug/kg	<12.7	50.0	07/06/17 18:56	
Methylene Chloride	ug/kg	<16.2	50.0	07/06/17 18:56	
n-Butylbenzene	ug/kg	<10.5	50.0	07/06/17 18:56	
n-Propylbenzene	ug/kg	<11.6	50.0	07/06/17 18:56	
Naphthalene	ug/kg	<40.0	250	07/06/17 18:56	
o-Xylene	ug/kg	<14.0	50.0	07/06/17 18:56	
p-Isopropyltoluene	ug/kg	<12.0	50.0	07/06/17 18:56	
sec-Butylbenzene	ug/kg	<11.9	50.0	07/06/17 18:56	
Styrene	ug/kg	<9.0	50.0	07/06/17 18:56	
tert-Butylbenzene	ug/kg	<9.5	50.0	07/06/17 18:56	
Tetrachloroethene	ug/kg	<12.9	50.0	07/06/17 18:56	
Toluene	ug/kg	<11.2	50.0	07/06/17 18:56	
trans-1,2-Dichloroethene	ug/kg	<16.5	50.0	07/06/17 18:56	
trans-1,3-Dichloropropene	ug/kg	<14.4	50.0	07/06/17 18:56	
Trichloroethene	ug/kg	<23.6	50.0	07/06/17 18:56	
Trichlorofluoromethane	ug/kg	<24.7	50.0	07/06/17 18:56	
Vinyl chloride	ug/kg	<21.1	50.0	07/06/17 18:56	
4-Bromofluorobenzene (S)	%	92	58-141	07/06/17 18:56	
Dibromofluoromethane (S)	%	112	68-130	07/06/17 18:56	
Toluene-d8 (S)	%	103	68-149	07/06/17 18:56	

LABORATORY CONTROL SAMPLE: 1535893

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2830	113	61-122	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2350	94	73-130	
1,1,2-Trichloroethane	ug/kg	2500	2560	103	70-130	
1,1-Dichloroethane	ug/kg	2500	2850	114	63-124	
1,1-Dichloroethene	ug/kg	2500	2440	98	53-117	
1,2,4-Trichlorobenzene	ug/kg	2500	2030	81	78-130	
1,2-Dibromo-3-chloropropane	ug/kg	2500	1740	70	49-140	
1,2-Dibromoethane (EDB)	ug/kg	2500	2490	100	70-130	
1,2-Dichlorobenzene	ug/kg	2500	2390	96	70-130	
1,2-Dichloroethane	ug/kg	2500	2960	119	56-135	
1,2-Dichloropropane	ug/kg	2500	2620	105	77-122	
1,3-Dichlorobenzene	ug/kg	2500	2430	97	70-130	
1,4-Dichlorobenzene	ug/kg	2500	2500	100	70-130	
Benzene	ug/kg	2500	2670	107	66-130	
Bromodichloromethane	ug/kg	2500	2400	96	62-135	
Bromoform	ug/kg	2500	2070	83	68-130	
Bromomethane	ug/kg	2500	2110	85	29-137	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

LABORATORY CONTROL SAMPLE: 1535893

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/kg	2500	2740	109	57-130	
Chlorobenzene	ug/kg	2500	2770	111	70-130	
Chloroethane	ug/kg	2500	2920	117	36-144	
Chloroform	ug/kg	2500	2750	110	69-115	
Chloromethane	ug/kg	2500	2060	82	32-126	
cis-1,2-Dichloroethene	ug/kg	2500	2810	112	65-130	
cis-1,3-Dichloropropene	ug/kg	2500	2310	92	70-130	
Dibromochloromethane	ug/kg	2500	2440	98	70-130	
Dichlorodifluoromethane	ug/kg	2500	1330	53	10-99	
Ethylbenzene	ug/kg	2500	2530	101	82-122	
Isopropylbenzene (Cumene)	ug/kg	2500	2620	105	70-130	
m&p-Xylene	ug/kg	5000	5250	105	70-130	
Methyl-tert-butyl ether	ug/kg	2500	2840	114	63-134	
Methylene Chloride	ug/kg	2500	2530	101	56-123	
o-Xylene	ug/kg	2500	2500	100	70-130	
Styrene	ug/kg	2500	2660	106	70-130	
Tetrachloroethene	ug/kg	2500	2660	106	70-131	
Toluene	ug/kg	2500	2580	103	80-120	
trans-1,2-Dichloroethene	ug/kg	2500	2880	115	66-130	
trans-1,3-Dichloropropene	ug/kg	2500	2350	94	68-130	
Trichloroethene	ug/kg	2500	2730	109	70-130	
Trichlorofluoromethane	ug/kg	2500	2640	105	37-149	
Vinyl chloride	ug/kg	2500	2180	87	43-128	
4-Bromofluorobenzene (S)	%			100	58-141	
Dibromofluoromethane (S)	%			116	68-130	
Toluene-d8 (S)	%			107	68-149	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1535894 1535895

Parameter	Units	40152684003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/kg	<25.0	1460	1460	1520	1410	104	97	57-123	7	20	
1,1,2,2-Tetrachloroethane	ug/kg	<25.0	1460	1460	1390	1450	95	99	73-135	4	20	
1,1,2-Trichloroethane	ug/kg	<25.0	1460	1460	1590	1490	109	102	70-130	6	20	
1,1-Dichloroethane	ug/kg	<25.0	1460	1460	1590	1460	108	100	63-124	8	20	
1,1-Dichloroethene	ug/kg	<25.0	1460	1460	1400	1250	96	86	48-117	11	23	
1,2,4-Trichlorobenzene	ug/kg	<47.6	1460	1460	1370	1370	93	94	78-145	0	20	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	1460	1460	1190	1060	82	73	38-168	12	22	
1,2-Dibromoethane (EDB)	ug/kg	<25.0	1460	1460	1520	1390	104	95	70-130	9	20	
1,2-Dichlorobenzene	ug/kg	<25.0	1460	1460	1570	1520	108	104	70-130	3	20	
1,2-Dichloroethane	ug/kg	<25.0	1460	1460	1750	1690	120	116	56-145	3	20	
1,2-Dichloropropane	ug/kg	<25.0	1460	1460	1590	1500	108	103	77-123	6	20	
1,3-Dichlorobenzene	ug/kg	<25.0	1460	1460	1450	1490	99	102	70-130	2	20	
1,4-Dichlorobenzene	ug/kg	<25.0	1460	1460	1490	1650	102	113	70-130	10	20	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1535894 1535895

Parameter	Units	40152684003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/kg	<25.0	1460	1460	1600	1460	109	100	65-130	9	20	
Bromodichloromethane	ug/kg	<25.0	1460	1460	1330	1310	91	89	59-141	2	20	
Bromoform	ug/kg	<25.0	1460	1460	1310	1380	90	94	59-141	5	20	
Bromomethane	ug/kg	<69.9	1460	1460	1450	1380	99	94	28-139	5	20	
Carbon tetrachloride	ug/kg	<25.0	1460	1460	1440	1310	98	89	50-130	9	20	
Chlorobenzene	ug/kg	<25.0	1460	1460	1730	1470	118	100	70-130	16	20	
Chloroethane	ug/kg	<67.0	1460	1460	1320	1390	90	95	36-144	6	20	
Chloroform	ug/kg	<46.4	1460	1460	1650	1570	113	107	68-122	5	20	
Chloromethane	ug/kg	<25.0	1460	1460	1280	1200	88	82	30-126	6	20	
cis-1,2-Dichloroethene	ug/kg	<25.0	1460	1460	1570	1660	107	113	63-130	5	20	
cis-1,3-Dichloropropene	ug/kg	<25.0	1460	1460	1260	1220	86	84	70-130	3	20	
Dibromochloromethane	ug/kg	<25.0	1460	1460	1360	1280	93	87	66-136	6	20	
Dichlorodifluoromethane	ug/kg	<25.0	1460	1460	1010	804	69	55	10-99	23	33	
Ethylbenzene	ug/kg	<25.0	1460	1460	1400	1320	96	91	80-122	6	20	
Isopropylbenzene (Cumene)	ug/kg	<25.0	1460	1460	1470	1320	101	90	70-130	11	20	
m&p-Xylene	ug/kg	<50.0	2920	2920	2970	2800	102	96	70-130	6	20	
Methyl-tert-butyl ether	ug/kg	<25.0	1460	1460	1730	1600	118	109	63-134	8	20	
Methylene Chloride	ug/kg	<25.0	1460	1460	1680	1490	115	102	56-127	12	20	
o-Xylene	ug/kg	<25.0	1460	1460	1430	1430	98	98	70-130	0	20	
Styrene	ug/kg	<25.0	1460	1460	1530	1440	104	99	70-130	6	20	
Tetrachloroethene	ug/kg	<25.0	1460	1460	1670	1320	115	90	70-131	24	20	R1
Toluene	ug/kg	<25.0	1460	1460	1530	1410	105	96	80-120	8	20	
trans-1,2-Dichloroethene	ug/kg	<25.0	1460	1460	1680	1430	115	98	60-130	16	20	
trans-1,3-Dichloropropene	ug/kg	<25.0	1460	1460	1350	1310	92	90	68-130	3	20	
Trichloroethene	ug/kg	<25.0	1460	1460	1520	1350	104	93	70-130	12	20	
Trichlorofluoromethane	ug/kg	<25.0	1460	1460	1450	1250	99	85	37-149	15	24	
Vinyl chloride	ug/kg	<25.0	1460	1460	1280	1110	88	76	39-128	15	20	
4-Bromofluorobenzene (S)	%						106	90	58-141			
Dibromofluoromethane (S)	%						127	117	68-130			
Toluene-d8 (S)	%						119	106	68-149			

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

QC Batch: 260510 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 40152687001, 40152687002

METHOD BLANK: 1534961 Matrix: Water
Associated Lab Samples: 40152687001, 40152687002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.18	1.0	07/06/17 06:56	
1,1,1-Trichloroethane	ug/L	<0.50	1.0	07/06/17 06:56	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	1.0	07/06/17 06:56	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	07/06/17 06:56	
1,1-Dichloroethane	ug/L	<0.24	1.0	07/06/17 06:56	
1,1-Dichloroethene	ug/L	<0.41	1.0	07/06/17 06:56	
1,1-Dichloropropene	ug/L	<0.44	1.0	07/06/17 06:56	
1,2,3-Trichlorobenzene	ug/L	<2.1	5.0	07/06/17 06:56	
1,2,3-Trichloropropane	ug/L	<0.50	1.0	07/06/17 06:56	
1,2,4-Trichlorobenzene	ug/L	<2.2	5.0	07/06/17 06:56	
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	07/06/17 06:56	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	5.0	07/06/17 06:56	
1,2-Dibromoethane (EDB)	ug/L	<0.18	1.0	07/06/17 06:56	
1,2-Dichlorobenzene	ug/L	<0.50	1.0	07/06/17 06:56	
1,2-Dichloroethane	ug/L	<0.17	1.0	07/06/17 06:56	
1,2-Dichloropropane	ug/L	<0.23	1.0	07/06/17 06:56	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	07/06/17 06:56	
1,3-Dichlorobenzene	ug/L	<0.50	1.0	07/06/17 06:56	
1,3-Dichloropropane	ug/L	<0.50	1.0	07/06/17 06:56	
1,4-Dichlorobenzene	ug/L	<0.50	1.0	07/06/17 06:56	
2,2-Dichloropropane	ug/L	<0.48	1.0	07/06/17 06:56	
2-Chlorotoluene	ug/L	<0.50	1.0	07/06/17 06:56	
4-Chlorotoluene	ug/L	<0.21	1.0	07/06/17 06:56	
Benzene	ug/L	<0.50	1.0	07/06/17 06:56	
Bromobenzene	ug/L	<0.23	1.0	07/06/17 06:56	
Bromochloromethane	ug/L	<0.34	1.0	07/06/17 06:56	
Bromodichloromethane	ug/L	<0.50	1.0	07/06/17 06:56	
Bromoform	ug/L	<0.50	1.0	07/06/17 06:56	
Bromomethane	ug/L	<2.4	5.0	07/06/17 06:56	
Carbon tetrachloride	ug/L	<0.50	1.0	07/06/17 06:56	
Chlorobenzene	ug/L	<0.50	1.0	07/06/17 06:56	
Chloroethane	ug/L	<0.37	1.0	07/06/17 06:56	
Chloroform	ug/L	<2.5	5.0	07/06/17 06:56	
Chloromethane	ug/L	<0.50	1.0	07/06/17 06:56	
cis-1,2-Dichloroethene	ug/L	<0.26	1.0	07/06/17 06:56	
cis-1,3-Dichloropropene	ug/L	<0.50	1.0	07/06/17 06:56	
Dibromochloromethane	ug/L	<0.50	1.0	07/06/17 06:56	
Dibromomethane	ug/L	<0.43	1.0	07/06/17 06:56	
Dichlorodifluoromethane	ug/L	<0.22	1.0	07/06/17 06:56	
Diisopropyl ether	ug/L	<0.50	1.0	07/06/17 06:56	
Ethylbenzene	ug/L	<0.50	1.0	07/06/17 06:56	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

METHOD BLANK: 1534961 Matrix: Water
Associated Lab Samples: 40152687001, 40152687002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	<2.1	5.0	07/06/17 06:56	
Isopropylbenzene (Cumene)	ug/L	<0.14	1.0	07/06/17 06:56	
m&p-Xylene	ug/L	<1.0	2.0	07/06/17 06:56	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	07/06/17 06:56	
Methylene Chloride	ug/L	<0.23	1.0	07/06/17 06:56	
n-Butylbenzene	ug/L	<0.50	1.0	07/06/17 06:56	
n-Propylbenzene	ug/L	<0.50	1.0	07/06/17 06:56	
Naphthalene	ug/L	<2.5	5.0	07/06/17 06:56	
o-Xylene	ug/L	<0.50	1.0	07/06/17 06:56	
p-Isopropyltoluene	ug/L	<0.50	1.0	07/06/17 06:56	
sec-Butylbenzene	ug/L	<2.2	5.0	07/06/17 06:56	
Styrene	ug/L	<0.50	1.0	07/06/17 06:56	
tert-Butylbenzene	ug/L	<0.18	1.0	07/06/17 06:56	
Tetrachloroethene	ug/L	<0.50	1.0	07/06/17 06:56	
Toluene	ug/L	<0.50	1.0	07/06/17 06:56	
trans-1,2-Dichloroethene	ug/L	<0.26	1.0	07/06/17 06:56	
trans-1,3-Dichloropropene	ug/L	<0.23	1.0	07/06/17 06:56	
Trichloroethene	ug/L	<0.33	1.0	07/06/17 06:56	
Trichlorofluoromethane	ug/L	<0.18	1.0	07/06/17 06:56	
Vinyl chloride	ug/L	<0.18	1.0	07/06/17 06:56	
4-Bromofluorobenzene (S)	%	98	61-130	07/06/17 06:56	
Dibromofluoromethane (S)	%	88	67-130	07/06/17 06:56	
Toluene-d8 (S)	%	107	70-130	07/06/17 06:56	

LABORATORY CONTROL SAMPLE: 1534962

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.8	104	70-130	
1,1,2,2-Tetrachloroethane	ug/L	20	23.3	116	70-130	
1,1,2-Trichloroethane	ug/L	20	22.8	114	70-130	
1,1-Dichloroethane	ug/L	20	22.1	110	71-132	
1,1-Dichloroethene	ug/L	20	17.9	90	75-130	
1,2,4-Trichlorobenzene	ug/L	20	20.6	103	70-130	
1,2-Dibromo-3-chloropropane	ug/L	20	20.3	102	63-123	
1,2-Dibromoethane (EDB)	ug/L	20	20.7	103	70-130	
1,2-Dichlorobenzene	ug/L	20	19.9	100	70-130	
1,2-Dichloroethane	ug/L	20	21.9	109	70-131	
1,2-Dichloropropane	ug/L	20	21.7	108	80-120	
1,3-Dichlorobenzene	ug/L	20	19.6	98	70-130	
1,4-Dichlorobenzene	ug/L	20	20.0	100	70-130	
Benzene	ug/L	20	23.2	116	73-145	
Bromodichloromethane	ug/L	20	21.1	105	70-130	
Bromoform	ug/L	20	20.4	102	67-130	
Bromomethane	ug/L	20	12.8	64	26-128	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

LABORATORY CONTROL SAMPLE: 1534962

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	20	21.1	106	70-133	
Chlorobenzene	ug/L	20	21.2	106	70-130	
Chloroethane	ug/L	20	18.5	92	58-120	
Chloroform	ug/L	20	23.3	116	80-121	
Chloromethane	ug/L	20	20.1	101	40-127	
cis-1,2-Dichloroethene	ug/L	20	21.6	108	70-130	
cis-1,3-Dichloropropene	ug/L	20	19.8	99	70-130	
Dibromochloromethane	ug/L	20	20.2	101	70-130	
Dichlorodifluoromethane	ug/L	20	18.6	93	20-135	
Ethylbenzene	ug/L	20	21.6	108	87-129	
Isopropylbenzene (Cumene)	ug/L	20	20.3	102	70-130	
m&p-Xylene	ug/L	40	40.0	100	70-130	
Methyl-tert-butyl ether	ug/L	20	22.7	114	66-143	
Methylene Chloride	ug/L	20	21.4	107	70-130	
o-Xylene	ug/L	20	19.1	95	70-130	
Styrene	ug/L	20	20.9	104	70-130	
Tetrachloroethene	ug/L	20	17.9	89	70-130	
Toluene	ug/L	20	21.2	106	82-130	
trans-1,2-Dichloroethene	ug/L	20	20.7	104	75-132	
trans-1,3-Dichloropropene	ug/L	20	21.6	108	70-130	
Trichloroethene	ug/L	20	21.6	108	70-130	
Trichlorofluoromethane	ug/L	20	16.8	84	76-133	
Vinyl chloride	ug/L	20	23.4	117	57-136	
4-Bromofluorobenzene (S)	%			104	61-130	
Dibromofluoromethane (S)	%			108	67-130	
Toluene-d8 (S)	%			107	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1535029 1535030

Parameter	Units	40152685024 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<0.50	50	50	58.1	48.3	116	97	70-134	18	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	50	50	63.9	54.1	128	108	70-130	17	20	
1,1,2-Trichloroethane	ug/L	<0.20	50	50	63.1	50.9	126	102	70-130	21	20	R1
1,1-Dichloroethane	ug/L	<0.24	50	50	59.0	49.6	118	99	71-133	17	20	
1,1-Dichloroethene	ug/L	<0.41	50	50	47.0	37.1	94	74	75-136	23	20	M1,R1
1,2,4-Trichlorobenzene	ug/L	<2.2	50	50	59.4	39.5	119	79	70-130	40	20	R1
1,2-Dibromo-3-chloropropane	ug/L	<2.2	50	50	53.8	49.4	108	99	63-123	9	20	
1,2-Dibromoethane (EDB)	ug/L	<0.18	50	50	57.6	46.4	115	93	70-130	22	20	R1
1,2-Dichlorobenzene	ug/L	<0.50	50	50	57.1	42.8	114	86	70-130	29	20	R1
1,2-Dichloroethane	ug/L	<0.17	50	50	59.3	49.5	119	99	70-131	18	20	
1,2-Dichloropropane	ug/L	<0.23	50	50	56.3	48.5	113	97	80-120	15	20	
1,3-Dichlorobenzene	ug/L	<0.50	50	50	56.5	40.3	113	81	70-130	33	20	R1
1,4-Dichlorobenzene	ug/L	<0.50	50	50	56.0	40.3	112	81	70-130	33	20	R1

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1535029 1535030

Parameter	Units	40152685024 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	<0.50	50	50	62.1	51.5	124	103	73-145	19	20	
Bromodichloromethane	ug/L	<0.50	50	50	59.1	49.0	118	98	70-130	19	20	
Bromoform	ug/L	<0.50	50	50	52.0	42.0	104	84	67-130	21	20	R1
Bromomethane	ug/L	<2.4	50	50	36.4	31.7	73	63	26-129	14	20	
Carbon tetrachloride	ug/L	<0.50	50	50	54.3	43.9	109	88	70-134	21	20	R1
Chlorobenzene	ug/L	<0.50	50	50	58.4	44.4	117	89	70-130	27	20	R1
Chloroethane	ug/L	<0.37	50	50	53.8	44.9	108	90	58-120	18	20	
Chloroform	ug/L	<2.5	50	50	61.0	51.3	122	103	80-121	17	20	M1
Chloromethane	ug/L	<0.50	50	50	49.1	40.7	98	81	40-128	19	20	
cis-1,2-Dichloroethene	ug/L	<0.26	50	50	59.8	48.6	120	97	70-130	21	20	R1
cis-1,3-Dichloropropene	ug/L	<0.50	50	50	59.3	49.3	119	99	70-130	18	20	
Dibromochloromethane	ug/L	<0.50	50	50	52.3	42.1	105	84	70-130	21	20	R1
Dichlorodifluoromethane	ug/L	<0.22	50	50	39.4	29.7	79	59	20-146	28	20	R1
Ethylbenzene	ug/L	<0.50	50	50	62.3	46.4	125	93	87-129	29	20	R1
Isopropylbenzene (Cumene)	ug/L	<0.14	50	50	60.4	42.9	121	86	70-130	34	20	R1
m&p-Xylene	ug/L	<1.0	100	100	117	86.5	117	87	70-130	30	20	R1
Methyl-tert-butyl ether	ug/L	<0.17	50	50	58.3	49.1	117	98	66-143	17	20	
Methylene Chloride	ug/L	<0.23	50	50	50.9	42.8	102	86	70-130	17	20	
o-Xylene	ug/L	<0.50	50	50	58.0	44.4	116	89	70-130	27	20	R1
Styrene	ug/L	<0.50	50	50	62.2	47.0	124	94	70-130	28	20	R1
Tetrachloroethene	ug/L	<0.50	50	50	51.9	36.6	104	73	70-130	35	20	R1
Toluene	ug/L	<0.50	50	50	60.7	46.9	121	94	82-131	26	20	R1
trans-1,2-Dichloroethene	ug/L	<0.26	50	50	54.4	43.9	109	88	75-135	21	20	R1
trans-1,3-Dichloropropene	ug/L	<0.23	50	50	55.1	45.1	110	90	70-130	20	20	
Trichloroethene	ug/L	<0.33	50	50	58.1	46.8	116	94	70-130	22	20	R1
Trichlorofluoromethane	ug/L	<0.18	50	50	50.4	35.1	101	70	76-150	36	20	M1,R1
Vinyl chloride	ug/L	<0.18	50	50	59.5	48.0	119	96	56-143	21	20	R1
4-Bromofluorobenzene (S)	%						108	105	61-130			
Dibromofluoromethane (S)	%						105	110	67-130			
Toluene-d8 (S)	%						106	103	70-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

QC Batch: 260611
QC Batch Method: EPA 3541
Analysis Method: EPA 8082
Analysis Description: 8082 GCS PCB
Associated Lab Samples: 40152687003

METHOD BLANK: 1535257
Matrix: Solid
Associated Lab Samples: 40152687003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	<25.0	50.0	07/05/17 17:45	
PCB-1221 (Aroclor 1221)	ug/kg	<25.0	50.0	07/05/17 17:45	
PCB-1232 (Aroclor 1232)	ug/kg	<25.0	50.0	07/05/17 17:45	
PCB-1242 (Aroclor 1242)	ug/kg	<25.0	50.0	07/05/17 17:45	
PCB-1248 (Aroclor 1248)	ug/kg	<25.0	50.0	07/05/17 17:45	
PCB-1254 (Aroclor 1254)	ug/kg	<25.0	50.0	07/05/17 17:45	
PCB-1260 (Aroclor 1260)	ug/kg	<25.0	50.0	07/05/17 17:45	
Decachlorobiphenyl (S)	%	80	53-105	07/05/17 17:45	
Tetrachloro-m-xylene (S)	%	79	50-102	07/05/17 17:45	

LABORATORY CONTROL SAMPLE: 1535258

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg		<25.0			
PCB-1221 (Aroclor 1221)	ug/kg		<25.0			
PCB-1232 (Aroclor 1232)	ug/kg		<25.0			
PCB-1242 (Aroclor 1242)	ug/kg		<25.0			
PCB-1248 (Aroclor 1248)	ug/kg		<25.0			
PCB-1254 (Aroclor 1254)	ug/kg		<25.0			
PCB-1260 (Aroclor 1260)	ug/kg	500	450	90	59-106	
Decachlorobiphenyl (S)	%			81	53-105	
Tetrachloro-m-xylene (S)	%			83	50-102	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1535259 1535260

Parameter	Units	40152537002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/kg	<0.029 mg/kg			<28.9	<28.9					20	
PCB-1221 (Aroclor 1221)	ug/kg	<0.029 mg/kg			<28.9	<28.9					20	
PCB-1232 (Aroclor 1232)	ug/kg	<0.029 mg/kg			<28.9	<28.9					20	
PCB-1242 (Aroclor 1242)	ug/kg	<0.029 mg/kg			<28.9	<28.9					20	
PCB-1248 (Aroclor 1248)	ug/kg	<0.029 mg/kg			<28.9	<28.9					20	
PCB-1254 (Aroclor 1254)	ug/kg	<0.029 mg/kg			<28.9	<28.9					20	

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(920)469-2436

QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1535259 1535260

Parameter	Units	40152537002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1260 (Aroclor 1260)	ug/kg	<0.029 mg/kg	579	579	488	463	84	80	51-109	5	20	
Decachlorobiphenyl (S)	%						79	73	53-105			
Tetrachloro-m-xylene (S)	%						76	71	50-102			

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

QC Batch: 261367
QC Batch Method: EPA 3546
Analysis Method: EPA 8270 by SIM
Analysis Description: 8270/3546 MSSV PAH by SIM
Associated Lab Samples: 40152687003

METHOD BLANK: 1538951
Matrix: Solid
Associated Lab Samples: 40152687003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<4.0	13.4	07/13/17 20:17	
2-Methylnaphthalene	ug/kg	<5.0	16.7	07/13/17 20:17	
Acenaphthene	ug/kg	<3.9	12.9	07/13/17 20:17	
Acenaphthylene	ug/kg	<3.3	11.0	07/13/17 20:17	
Anthracene	ug/kg	<5.7	19.0	07/13/17 20:17	
Benzo(a)anthracene	ug/kg	<3.2	10.6	07/13/17 20:17	
Benzo(a)pyrene	ug/kg	<2.5	8.4	07/13/17 20:17	
Benzo(b)fluoranthene	ug/kg	<2.8	9.4	07/13/17 20:17	
Benzo(g,h,i)perylene	ug/kg	<2.0	6.8	07/13/17 20:17	
Benzo(k)fluoranthene	ug/kg	<2.5	8.4	07/13/17 20:17	
Chrysene	ug/kg	<3.4	11.2	07/13/17 20:17	
Dibenz(a,h)anthracene	ug/kg	<2.2	7.5	07/13/17 20:17	
Fluoranthene	ug/kg	<5.2	17.4	07/13/17 20:17	
Fluorene	ug/kg	<4.1	13.8	07/13/17 20:17	
Indeno(1,2,3-cd)pyrene	ug/kg	<2.2	7.3	07/13/17 20:17	
Naphthalene	ug/kg	<8.4	28.1	07/13/17 20:17	
Phenanthrene	ug/kg	<11.7	38.9	07/13/17 20:17	
Pyrene	ug/kg	<4.5	15.0	07/13/17 20:17	
2-Fluorobiphenyl (S)	%	62	19-96	07/13/17 20:17	
Terphenyl-d14 (S)	%	73	31-98	07/13/17 20:17	

LABORATORY CONTROL SAMPLE: 1538952

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	334	204	61	49-102	
2-Methylnaphthalene	ug/kg	334	215	64	47-91	
Acenaphthene	ug/kg	334	222	66	52-97	
Acenaphthylene	ug/kg	334	222	67	49-97	
Anthracene	ug/kg	334	223	67	62-101	
Benzo(a)anthracene	ug/kg	334	215	64	53-95	
Benzo(a)pyrene	ug/kg	334	230	69	57-108	
Benzo(b)fluoranthene	ug/kg	334	224	67	53-113	
Benzo(g,h,i)perylene	ug/kg	334	203	61	43-114	
Benzo(k)fluoranthene	ug/kg	334	228	68	66-116	
Chrysene	ug/kg	334	224	67	64-109	
Dibenz(a,h)anthracene	ug/kg	334	216	65	50-105	
Fluoranthene	ug/kg	334	233	70	58-107	
Fluorene	ug/kg	334	224	67	52-99	
Indeno(1,2,3-cd)pyrene	ug/kg	334	208	62	51-113	
Naphthalene	ug/kg	334	201	60	50-91	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

LABORATORY CONTROL SAMPLE: 1538952

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phenanthrene	ug/kg	334	224	67	57-101	
Pyrene	ug/kg	334	222	66	50-102	
2-Fluorobiphenyl (S)	%			62	19-96	
Terphenyl-d14 (S)	%			65	31-98	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1538953 1538954

Parameter	Units	40152670031 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1-Methylnaphthalene	ug/kg	376	377	377	536	488	43	30	37-102	9	29	M1
2-Methylnaphthalene	ug/kg	92.4J	377	377	286	285	51	51	44-91	0	36	
Acenaphthene	ug/kg	384	377	377	633	555	66	45	46-97	13	26	M1
Acenaphthylene	ug/kg	<29.8	377	377	242	254	58	61	47-97	5	29	
Anthracene	ug/kg	277	377	377	298	322	6	12	50-101	8	28	M1
Benzo(a)anthracene	ug/kg	714	377	377	330	371	-102	-91	48-95	12	28	M1
Benzo(a)pyrene	ug/kg	864	377	377	296	345	-151	-137	47-108	16	36	M1
Benzo(b)fluoranthene	ug/kg	731	377	377	273	323	-122	-108	42-113	17	34	M1
Benzo(g,h,i)perylene	ug/kg	720	377	377	296	339	-113	-101	18-114	14	30	M1
Benzo(k)fluoranthene	ug/kg	824	377	377	294	339	-141	-129	50-116	14	27	M1
Chrysene	ug/kg	815	377	377	354	401	-122	-110	55-109	12	28	M1
Dibenz(a,h)anthracene	ug/kg	220	377	377	251	280	8	16	39-105	11	29	M1
Fluoranthene	ug/kg	1700	377	377	439	513	-334	-314	41-107	16	28	M1
Fluorene	ug/kg	184	377	377	357	359	46	46	48-99	0	28	M1
Indeno(1,2,3-cd)pyrene	ug/kg	591	377	377	267	304	-86	-76	27-113	13	30	M1
Naphthalene	ug/kg	428	377	377	404	353	-6	-20	40-91	13	37	M1
Phenanthrene	ug/kg	1070	377	377	563	600	-134	-124	46-101	6	40	M1
Pyrene	ug/kg	1500	377	377	568	637	-248	-229	50-102	11	31	M1
2-Fluorobiphenyl (S)	%						54	51	19-96			
Terphenyl-d14 (S)	%						51	50	31-98			

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

QC Batch: 260980
QC Batch Method: ASTM D2974-87
Associated Lab Samples: 40152687003

Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture

SAMPLE DUPLICATE: 1537264

Parameter	Units	40152686004 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.6	17.6	6	10	

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QUALIFIERS

Project: 2133 SOLVAY
Pace Project No.: 40152687

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: 261436

[IP]	Benzo(b)fluoranthene and benzo(k)fluoranthene were in the check standard but did not meet the resolution criteria in SW846 Method 8270C. Whereas sample results included are reported as individual isomers, the lab and the customer must recognize them as an isomeric pair.

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1	RPD value was outside control limits.
W	Non-detect results are reported on a wet weight basis.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 2133 SOLVAY
Pace Project No.: 40152687

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40152687003	**062917003**	EPA 3541	260611	EPA 8082	260612
40152687001	**062917001**	EPA 3010	261201	EPA 6010	261277
40152687003	**062917003**	EPA 3050	261258	EPA 6020	261464
40152687001	**062917001**	EPA 7470	260584	EPA 7470	260624
40152687003	**062917003**	EPA 7471	260854	EPA 7471	260977
40152687003	**062917003**	EPA 3546	261367	EPA 8270 by SIM	261436
40152687003	**062917003**	EPA 5035/5030B	260465	EPA 8260	260470
40152687004	**062917004**	EPA 5035/5030B	260757	EPA 8260	260760
40152687001	**062917001**	EPA 8260	260510		
40152687002	**062917002**	EPA 8260	260510		
40152687003	**062917003**	ASTM D2974-87	260980		

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EMM Level II

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UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

Page 1 of 40152687

Courier: Pace/CS Logistics COC# 2133-0617-010

QC: MJM 6/30/17

CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	Natural Resource Tech
Branch/Location:	Milwaukee, WI
Project Contact:	Andrew Cawrse
Phone:	414-837-3645
Project Number:	2133
Project Name:	Solvay
Project State:	WI
Sampled By (Print):	Andrew Cawrse
Sampled By (Sign):	Andrew C
PO #:	3400010643
Regulatory Program:	

Quote #:	
Mail To Contact:	gdsdata@obg.com
Mail To Company:	Natural Resource Tech
Mail To Address:	234 W Florida St Milwaukee, WI
Invoice To Contact:	Bob Paulson
Invoice To Company:	We Energies
Invoice To Address:	231 W Michigan St Milwaukee, WI
Invoice To Phone:	

Data Package Options (billable)
- ☐ EPA Level III
- ☐ EPA Level IV

MS/MSD
- ☐ On your sample (billable)
- ☐ NOT needed on your sample

Matrix Codes
A = Air, B = Biota, C = Charcoal, O = Oil, S = Soil, SI = Sludge, W = Water, DW = Drinking Water, GW = Ground Water, SW = Surface Water, WW = Waste Water, WP = Wipe

FILTERED? (YES/NO)					Y/N	N	N								
PRESERVATION (CODE)*					Pick Letter	D	B								
					Analyses Requested	RCRA Metals 6020	VOC 8260								
PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX										CLIENT COMMENTS	LAB COMMENTS (Lab Use Only) / Profile #
001	062917001	6/29/17	11:00	W		X	X								1-250mLp D, 3-40mLv B
002	062917002	+	–	–			X							Trip Blank	2-40mLv B

OGC

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Andrew C	6/30/17 10:30	[signature] Pace	7/1/17 0800

PACE Project No. 40152687

Receipt Temp = ROI °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal
Present / Not Present
Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

Custody Seal # 2133-01+02

ORIGINAL

Level II

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UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

Courier: Pace/CS Logistics

QC: MJM 6/30/17

Page 1 of 1

4015268 7

COC # 2133-0617-011

Page 37 of 39

CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	Natural Resource Tech
Branch/Location:	Milwaukee, WI
Project Contact:	Andrew Cawse
Phone:	414-837-3645
Project Number:	2133
Project Name:	Solvay
Project State:	WI
Sampled By (Print):	Andrew Cawse
Sampled By (Sign):	
PO #:	3400010643
Regulatory Program:	

Quote #:	
Mail To Contact:	gdsdata@obg.com
Mail To Company:	Natural Resource Tech
Mail To Address:	234 W Florida St Milwaukee, WI
Invoice To Contact:	Bob Paulson
Invoice To Company:	We Energies
Invoice To Address:	231 W Michigan St Milwaukee, WI
Invoice To Phone:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes

A = Air	W = Water
B = Biota	DW = Drinking Water
C = Charcoal	GW = Ground Water
O = Oil	SW = Surface Water
S = Soil	WW = Waste Water
Sl = Sludge	WP = Wipe

FILTERED? (YES/NO)
PRESERVATION (CODE)*

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Y/N	Pick Letter	Analyses Requested: VOC 8260	PAH 8270	RCRA Metals 6020	PCB 8082	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
003	062917003	6/29/17	1130	S	N	F	X	X	X	X		3-4ozAG^A, 1-4ozP^A, 1-40mLV^F	
004	062917004	"	-	-	N	F	X				Trip Blank	↓	

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Andrew Cawse	6/30/17 10:30	[signature]	7/1/17 0800

PACE Project No.: 4015268 7

Receipt Temp = 0.1 °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal Present / Not Present Intact / Not Intact

Custody Seal # 2133-01+02

C019a(27Jun2006)

Version 6.0 06/14/06

ORIGINAL

40152687

From: <notifications@cslog.com>
To: <gbsr@pacelabs.com>
Date: 7/1/2017 12:15 AM
Subject: Auto-Notification Shipment #1586.062917

The following shipment sent by Alee Her of PACE
has been delivered and signed for by: CSL warehouse MIKE @ 07/01/2017 00:15

OrderTrackingID: 1586.062917
Ref#: Schaumburg
Pieces: 7
Weight: 1.00

[Pickup]
PACE Labs Schaumburg
870 E Higgins Rd
Suite 143
Schaumburg IL, 60173-4796

[Delivery]
CS Logistics MKE
11001 W Mitchell St
Milwaukee WI, 53214-3805

If you would like to track this shipment online, please visit:
http://www.cslogisticsinc.com/xcelerator/Online/QuickTrack.aspx?OrderTrackingID=1586.062917&Key=C3E15

[Shipment delivered by CS Logistics, Inc.]

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Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical™

Project # WO# : 40152687

40152687

Client Name: NRT

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: CS Logistics

Tracking #: 1586.062917

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other

Thermometer Used N/A **Type of Ice:** (Wet) Blue Dry None ☒ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: Rot /Corr: **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☒ no

Person examining contents:
Date: 7/1/17
Initials: SSM

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

				Comments:
Chain of Custody Present:	☒Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☒Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☒Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☒Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☒Yes	☐No	☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes	☐No		Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes	☒No	☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☒No	☐N/A	7.
Sufficient Volume:	☒Yes	☐No	☐N/A	8.
Correct Containers Used:	☒Yes	☐No	☐N/A	9.
-Pace Containers Used:	☒Yes	☐No	☐N/A	
-Pace IR Containers Used:	☐Yes	☐No	☒N/A	
Containers Intact:	☒Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☒Yes	☒No SSM 7/1/17	☐N/A	11.
Sample Labels match COC:	☒Yes	☐No	☐N/A	12.
-Includes date/time/ID/Analysis Matrix: S/W				
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☒Yes	☐No	☐N/A	13. ☒ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☒Yes	☐No	☐N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☒Yes	☐No		Initial when completed SSM / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes	☒No	☐N/A	14.
Trip Blank Present:	☒Yes	☐No	☐N/A	15.
Trip Blank Custody Seals Present	☒Yes	☐No	☐N/A	
Pace Trip Blank Lot # (if purchased): 381/1623301UB				

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:** 7-3-17

F-GB-C-031-Rev.04 (12Dec2016) SCUR.xls
Pace Analytical Services LLC. - Green Bay WI

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

July 20, 2017

Andrew Cawrse
Natural Resource Technology
234 W Florida St
Milwaukee, WI 53204

RE: Project: 2133 SOLVAY
Pace Project No.: 40153449

Dear Andrew Cawrse:
Enclosed are the analytical results for sample(s) received by the laboratory on July 19, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brian Basten
brian.basten@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: NRT Data, Natural Resource Technologies
Brian Hennings, NATURAL RESOURCE TECHNOLOGY
Robert Paulson, We Energies

REPORT OF LABORATORY ANALYSIS

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: 2133 SOLVAY
Pace Project No.: 40153449

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

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(920)469-2436

SAMPLE SUMMARY

Project: 2133 SOLVAY
Pace Project No.: 40153449

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40153449001	**071817001**	Solid	07/18/17 11:00	07/19/17 09:50
40153449002	**071817002**	Solid	07/18/17 11:20	07/19/17 09:50

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SAMPLE ANALYTE COUNT

Project: 2133 SOLVAY
Pace Project No.: 40153449

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40153449001	**071817001**	ASTM D2974-87	SSM	1
		EPA 9012	DAW	1
40153449002	**071817002**	ASTM D2974-87	SSM	1
		EPA 9012	DAW	1

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40153449

Sample: 071817001 **Lab ID: 40153449001** Collected: 07/18/17 11:00 Received: 07/19/17 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**6.1**	%	0.10	0.10	1		07/19/17 18:34		
9012 Cyanide, Total	Analytical Method: EPA 9012 Preparation Method: EPA 9012A								
Cyanide	**1.2**	mg/kg	0.23	0.068	1	07/19/17 11:00	07/19/17 13:38	57-12-5	

Sample: 071817002 **Lab ID: 40153449002** Collected: 07/18/17 11:20 Received: 07/19/17 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**5.1**	%	0.10	0.10	1		07/19/17 18:34		
9012 Cyanide, Total	Analytical Method: EPA 9012 Preparation Method: EPA 9012A								
Cyanide	**0.34**	mg/kg	0.23	0.069	1	07/19/17 11:00	07/19/17 13:38	57-12-5	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40153449

QC Batch: 262007
QC Batch Method: ASTM D2974-87
Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40153449001, 40153449002

SAMPLE DUPLICATE: 1542507

Parameter	Units	40153469006 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.9	17.0	1	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40153449

QC Batch: 261810 Analysis Method: EPA 9012
QC Batch Method: EPA 9012A Analysis Description: 9012 Cyanide
Associated Lab Samples: 40153449001, 40153449002

METHOD BLANK: 1541489 Matrix: Solid
Associated Lab Samples: 40153449001, 40153449002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	mg/kg	<0.12	0.40	07/19/17 13:25	

LABORATORY CONTROL SAMPLE: 1541490

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/kg	3	3.0	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1541491 1541492

Parameter	Units	40153350018 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cyanide	mg/kg	<0.12	2.8	2.8	2.8	3.0	100	105	80-120	6	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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(920)469-2436

QUALIFIERS

Project: 2133 SOLVAY
Pace Project No.: 40153449

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

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Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 2133 SOLVAY
Pace Project No.: 40153449

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40153449001	**071817001**	ASTM D2974-87	262007		
40153449002	**071817002**	ASTM D2974-87	262007		
40153449001	**071817001**	EPA 9012A	261810	EPA 9012	261916
40153449002	**071817002**	EPA 9012A	261810	EPA 9012	261916

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4015344 9

Level II

Pace Analytical® www.pacelabs.com

courier: Pace/CS Logistics

QC: EMS 7/18/17

KR

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

COC# 2133-0717-001

CHAIN OF CUSTODY

(Please Print Clearly)	
Company Name:	Natural Resource Tech
Branch/Location:	Milwaukee, WI
Project Contact:	Andrew Cawrse
Phone:	414-837-3645
Project Number:	2133
Project Name:	Solvay
Project State:	WI
Sampled By (Print):	Andrew Cawrse
Sampled By (Sign):	Andrew C
PO #:	3400010643
Regulatory Program:	

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

Quote #:	
Mail To Contact:	gdsdata@obg.com
Mail To Company:	Natural Resource Tech
Mail To Address:	234 W Florida St Milwaukee, WI
Invoice To Contact:	Bob Paulson
Invoice To Company:	We Energies
Invoice To Address:	231 W Michigan St Milwaukee, WI
Invoice To Phone:	

FILTERED? (YES/NO) Y/N: N
PRESERVATION (CODE)* Pick Letter: A

Data Package Options (billable)
- ☐ EPA Level III
- ☐ EPA Level IV

MS/MSD
- ☐ On your sample (billable)
- ☐ NOT needed on your sample

Matrix Codes
A = Air, B = Biota, C = Charcoal, O = Oil, S = Soil, SI = Sludge, W = Water, DW = Drinking Water, GW = Ground Water, SW = Surface Water, WW = Waste Water, WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Analyses Requested: Cyanide SW846 9012	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	071817001	7/18/17	11:00	concrete	X		1-4oz ag A	
002	071817002	↓	11:20	↓	X		↓	

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Andrew C	7/18/17 12:30		
CS Logistics	7/19/17 0950	Pace	7/19/17 0950

PACE Project No. 40153449

Receipt Temp = R01 °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal
Present / Not Present
Intact / Not Intact

Custody Seal # 2133-01+02

C019a(27Jun2006)

Version 6.0 06/14/06

ORIGINAL

Pace Analytical™

Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Project # **WO# : 40153449**

40153449

Client Name: NRT

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: CS Logistics

Tracking #: 1229.071817

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other

Thermometer Used NA **Type of Ice:** Wet Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: /Corr: 20

Biological Tissue is Frozen: ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

Person examining contents:
Date: 7/19/17
Initials: [illegible]

				Comments:
Chain of Custody Present:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes	☐No		Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A	7.
Sufficient Volume:	☑Yes	☐No	☐N/A	8.
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☑Yes	☐No	☐N/A	
-Pace IR Containers Used:	☐Yes	☐No	☑N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11.
Sample Labels match COC:	☑Yes	☐No	☐N/A	12.
-Includes date/time/ID/Analysis Matrix: S				
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes	☐No	☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes	☐No	☑N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes	☑No		Initial when completed / Lab Std #ID of preservative / Date/Time:
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	14.
Trip Blank Present:	☐Yes	☐No	☑N/A	15.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if purchased):				

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: [signature] **Date:** 7-19-17

Appendix G3

Analytical Data Reports - Water

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

July 21, 2017

Andrew Cawrse
Natural Resource Technology
234 W Florida St
Milwaukee, WI 53204

RE: Project: 2133 SOLVAY
Pace Project No.: 40152687

Dear Andrew Cawrse:
Enclosed are the analytical results for sample(s) received by the laboratory on July 01, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brian Basten
brian.basten@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: NRT Data, Natural Resource Technologies
Brian Hennings, NATURAL RESOURCE TECHNOLOGY
Robert Paulson, We Energies

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 2133 SOLVAY
Pace Project No.: 40152687

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

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Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: 2133 SOLVAY
Pace Project No.: 40152687

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40152687001	**062917001**	Water	06/29/17 11:00	07/01/17 08:00
40152687002	**062917002**	Water	06/29/17 00:00	07/01/17 08:00
40152687003	**062917003**	Solid	06/29/17 11:30	07/01/17 08:00
40152687004	**062917004**	Solid	06/29/17 00:00	07/01/17 08:00

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SAMPLE ANALYTE COUNT

Project: 2133 SOLVAY
Pace Project No.: 40152687

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40152687001	**062917001**	EPA 6010	DLB	7
		EPA 7470	AJT	1
		EPA 8260	HNW	64
40152687002	**062917002**	EPA 8260	HNW	64
40152687003	**062917003**	EPA 8082	BDS	10
		EPA 6020	DS1	7
		EPA 7471	AJT	1
		EPA 8270 by SIM	ARO	20
		EPA 8260	SMT	64
		ASTM D2974-87	RMV	1
40152687004	**062917004**	EPA 8260	SMT	64

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40152687

Sample: 062917001 **Lab ID: 40152687001** Collected: 06/29/17 11:00 Received: 07/01/17 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	07/11/17 14:48	07/12/17 17:01	7440-38-2	
Barium	**163**	ug/L	5.0	1.5	1	07/11/17 14:48	07/12/17 17:01	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	07/11/17 14:48	07/12/17 17:01	7440-43-9	
Chromium	**9.5J**	ug/L	10.0	2.5	1	07/11/17 14:48	07/12/17 17:01	7440-47-3	
Lead	**204**	ug/L	13.0	4.3	1	07/11/17 14:48	07/12/17 17:01	7439-92-1	
Selenium	**<16.6**	ug/L	50.0	16.6	1	07/11/17 14:48	07/12/17 17:01	7782-49-2	
Silver	**<3.3**	ug/L	10.0	3.3	1	07/11/17 14:48	07/12/17 17:01	7440-22-4	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**0.71**	ug/L	0.42	0.13	1	07/05/17 13:05	07/06/17 09:20	7439-97-6	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.18**	ug/L	1.0	0.18	1		07/06/17 15:46	630-20-6	
1,1,1-Trichloroethane	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.25**	ug/L	1.0	0.25	1		07/06/17 15:46	79-34-5	
1,1,2-Trichloroethane	**<0.20**	ug/L	1.0	0.20	1		07/06/17 15:46	79-00-5	
1,1-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		07/06/17 15:46	75-34-3	
1,1-Dichloroethene	**<0.41**	ug/L	1.0	0.41	1		07/06/17 15:46	75-35-4	
1,1-Dichloropropene	**<0.44**	ug/L	1.0	0.44	1		07/06/17 15:46	563-58-6	
1,2,3-Trichlorobenzene	**<2.1**	ug/L	5.0	2.1	1		07/06/17 15:46	87-61-6	
1,2,3-Trichloropropane	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	96-18-4	
1,2,4-Trichlorobenzene	**<2.2**	ug/L	5.0	2.2	1		07/06/17 15:46	120-82-1	
1,2,4-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	95-63-6	
1,2-Dibromo-3-chloropropane	**<2.2**	ug/L	5.0	2.2	1		07/06/17 15:46	96-12-8	
1,2-Dibromoethane (EDB)	**<0.18**	ug/L	1.0	0.18	1		07/06/17 15:46	106-93-4	
1,2-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	95-50-1	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		07/06/17 15:46	107-06-2	
1,2-Dichloropropane	**<0.23**	ug/L	1.0	0.23	1		07/06/17 15:46	78-87-5	
1,3,5-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	108-67-8	
1,3-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	541-73-1	
1,3-Dichloropropane	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	142-28-9	
1,4-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	106-46-7	
2,2-Dichloropropane	**<0.48**	ug/L	1.0	0.48	1		07/06/17 15:46	594-20-7	
2-Chlorotoluene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	95-49-8	
4-Chlorotoluene	**<0.21**	ug/L	1.0	0.21	1		07/06/17 15:46	106-43-4	
Benzene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	71-43-2	
Bromobenzene	**<0.23**	ug/L	1.0	0.23	1		07/06/17 15:46	108-86-1	
Bromochloromethane	**<0.34**	ug/L	1.0	0.34	1		07/06/17 15:46	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	75-27-4	
Bromoform	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	75-25-2	
Bromomethane	**<2.4**	ug/L	5.0	2.4	1		07/06/17 15:46	74-83-9	
Carbon tetrachloride	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	56-23-5	
Chlorobenzene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	108-90-7	
Chloroethane	**<0.37**	ug/L	1.0	0.37	1		07/06/17 15:46	75-00-3	
Chloroform	**<2.5**	ug/L	5.0	2.5	1		07/06/17 15:46	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	74-87-3	

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40152687

Sample: 062917001 **Lab ID: 40152687001** Collected: 06/29/17 11:00 Received: 07/01/17 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Dibromochloromethane	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	124-48-1	
Dibromomethane	**<0.43**	ug/L	1.0	0.43	1		07/06/17 15:46	74-95-3	
Dichlorodifluoromethane	**<0.22**	ug/L	1.0	0.22	1		07/06/17 15:46	75-71-8	
Diisopropyl ether	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	108-20-3	
Ethylbenzene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	100-41-4	
Hexachloro-1,3-butadiene	**<2.1**	ug/L	5.0	2.1	1		07/06/17 15:46	87-68-3	
Isopropylbenzene (Cumene)	**<0.14**	ug/L	1.0	0.14	1		07/06/17 15:46	98-82-8	
Methyl-tert-butyl ether	**<0.17**	ug/L	1.0	0.17	1		07/06/17 15:46	1634-04-4	
Methylene Chloride	**<0.23**	ug/L	1.0	0.23	1		07/06/17 15:46	75-09-2	
Naphthalene	**<2.5**	ug/L	5.0	2.5	1		07/06/17 15:46	91-20-3	
Styrene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	100-42-5	
Tetrachloroethene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	127-18-4	
Toluene	**2.0**	ug/L	1.0	0.50	1		07/06/17 15:46	108-88-3	
Trichloroethene	**<0.33**	ug/L	1.0	0.33	1		07/06/17 15:46	79-01-6	
Trichlorofluoromethane	**<0.18**	ug/L	1.0	0.18	1		07/06/17 15:46	75-69-4	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		07/06/17 15:46	75-01-4	
cis-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		07/06/17 15:46	156-59-2	
cis-1,3-Dichloropropene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	10061-01-5	
m&p-Xylene	**<1.0**	ug/L	2.0	1.0	1		07/06/17 15:46	179601-23-1	
n-Butylbenzene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	104-51-8	
n-Propylbenzene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	103-65-1	
o-Xylene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	95-47-6	
p-Isopropyltoluene	**<0.50**	ug/L	1.0	0.50	1		07/06/17 15:46	99-87-6	
sec-Butylbenzene	**<2.2**	ug/L	5.0	2.2	1		07/06/17 15:46	135-98-8	
tert-Butylbenzene	**<0.18**	ug/L	1.0	0.18	1		07/06/17 15:46	98-06-6	
trans-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		07/06/17 15:46	156-60-5	
trans-1,3-Dichloropropene	**<0.23**	ug/L	1.0	0.23	1		07/06/17 15:46	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	92	%	61-130		1		07/06/17 15:46	460-00-4	
Dibromofluoromethane (S)	109	%	67-130		1		07/06/17 15:46	1868-53-7	
Toluene-d8 (S)	109	%	70-130		1		07/06/17 15:46	2037-26-5	

Sample: 062917002 **Lab ID: 40152687002** Collected: 06/29/17 00:00 Received: 07/01/17 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.18**	ug/L	1.0	0.18	1		07/07/17 07:57	630-20-6	
1,1,1-Trichloroethane	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.25**	ug/L	1.0	0.25	1		07/07/17 07:57	79-34-5	
1,1,2-Trichloroethane	**<0.20**	ug/L	1.0	0.20	1		07/07/17 07:57	79-00-5	
1,1-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		07/07/17 07:57	75-34-3	
1,1-Dichloroethene	**<0.41**	ug/L	1.0	0.41	1		07/07/17 07:57	75-35-4	
1,1-Dichloropropene	**<0.44**	ug/L	1.0	0.44	1		07/07/17 07:57	563-58-6	

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40152687

Sample: 062917002 **Lab ID: 40152687002** Collected: 06/29/17 00:00 Received: 07/01/17 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,2,3-Trichlorobenzene	**<2.1**	ug/L	5.0	2.1	1		07/07/17 07:57	87-61-6	
1,2,3-Trichloropropane	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	96-18-4	
1,2,4-Trichlorobenzene	**<2.2**	ug/L	5.0	2.2	1		07/07/17 07:57	120-82-1	
1,2,4-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	95-63-6	
1,2-Dibromo-3-chloropropane	**<2.2**	ug/L	5.0	2.2	1		07/07/17 07:57	96-12-8	
1,2-Dibromoethane (EDB)	**<0.18**	ug/L	1.0	0.18	1		07/07/17 07:57	106-93-4	
1,2-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	95-50-1	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		07/07/17 07:57	107-06-2	
1,2-Dichloropropane	**<0.23**	ug/L	1.0	0.23	1		07/07/17 07:57	78-87-5	
1,3,5-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	108-67-8	
1,3-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	541-73-1	
1,3-Dichloropropane	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	142-28-9	
1,4-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	106-46-7	
2,2-Dichloropropane	**<0.48**	ug/L	1.0	0.48	1		07/07/17 07:57	594-20-7	
2-Chlorotoluene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	95-49-8	
4-Chlorotoluene	**<0.21**	ug/L	1.0	0.21	1		07/07/17 07:57	106-43-4	
Benzene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	71-43-2	
Bromobenzene	**<0.23**	ug/L	1.0	0.23	1		07/07/17 07:57	108-86-1	
Bromochloromethane	**<0.34**	ug/L	1.0	0.34	1		07/07/17 07:57	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	75-27-4	
Bromoform	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	75-25-2	
Bromomethane	**<2.4**	ug/L	5.0	2.4	1		07/07/17 07:57	74-83-9	
Carbon tetrachloride	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	56-23-5	
Chlorobenzene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	108-90-7	
Chloroethane	**<0.37**	ug/L	1.0	0.37	1		07/07/17 07:57	75-00-3	
Chloroform	**<2.5**	ug/L	5.0	2.5	1		07/07/17 07:57	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	74-87-3	
Dibromochloromethane	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	124-48-1	
Dibromomethane	**<0.43**	ug/L	1.0	0.43	1		07/07/17 07:57	74-95-3	
Dichlorodifluoromethane	**<0.22**	ug/L	1.0	0.22	1		07/07/17 07:57	75-71-8	
Diisopropyl ether	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	108-20-3	
Ethylbenzene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	100-41-4	
Hexachloro-1,3-butadiene	**<2.1**	ug/L	5.0	2.1	1		07/07/17 07:57	87-68-3	
Isopropylbenzene (Cumene)	**<0.14**	ug/L	1.0	0.14	1		07/07/17 07:57	98-82-8	
Methyl-tert-butyl ether	**<0.17**	ug/L	1.0	0.17	1		07/07/17 07:57	1634-04-4	
Methylene Chloride	**<0.23**	ug/L	1.0	0.23	1		07/07/17 07:57	75-09-2	
Naphthalene	**<2.5**	ug/L	5.0	2.5	1		07/07/17 07:57	91-20-3	
Styrene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	100-42-5	
Tetrachloroethene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	127-18-4	
Toluene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	108-88-3	
Trichloroethene	**<0.33**	ug/L	1.0	0.33	1		07/07/17 07:57	79-01-6	
Trichlorofluoromethane	**<0.18**	ug/L	1.0	0.18	1		07/07/17 07:57	75-69-4	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		07/07/17 07:57	75-01-4	
cis-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		07/07/17 07:57	156-59-2	
cis-1,3-Dichloropropene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	10061-01-5	
m&p-Xylene	**<1.0**	ug/L	2.0	1.0	1		07/07/17 07:57	179601-23-1	

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40152687

Sample: 062917002 **Lab ID: 40152687002** Collected: 06/29/17 00:00 Received: 07/01/17 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
n-Butylbenzene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	104-51-8	
n-Propylbenzene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	103-65-1	
o-Xylene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	95-47-6	
p-Isopropyltoluene	**<0.50**	ug/L	1.0	0.50	1		07/07/17 07:57	99-87-6	
sec-Butylbenzene	**<2.2**	ug/L	5.0	2.2	1		07/07/17 07:57	135-98-8	
tert-Butylbenzene	**<0.18**	ug/L	1.0	0.18	1		07/07/17 07:57	98-06-6	
trans-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		07/07/17 07:57	156-60-5	
trans-1,3-Dichloropropene	**<0.23**	ug/L	1.0	0.23	1		07/07/17 07:57	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	94	%	61-130		1		07/07/17 07:57	460-00-4	
Dibromofluoromethane (S)	108	%	67-130		1		07/07/17 07:57	1868-53-7	
Toluene-d8 (S)	107	%	70-130		1		07/07/17 07:57	2037-26-5	

Sample: 062917003 **Lab ID: 40152687003** Collected: 06/29/17 11:30 Received: 07/01/17 08:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	**<34.4**	ug/kg	68.9	34.4	1	07/05/17 13:13	07/06/17 01:11	12674-11-2	
PCB-1221 (Aroclor 1221)	**<34.4**	ug/kg	68.9	34.4	1	07/05/17 13:13	07/06/17 01:11	11104-28-2	
PCB-1232 (Aroclor 1232)	**<34.4**	ug/kg	68.9	34.4	1	07/05/17 13:13	07/06/17 01:11	11141-16-5	
PCB-1242 (Aroclor 1242)	**<34.4**	ug/kg	68.9	34.4	1	07/05/17 13:13	07/06/17 01:11	53469-21-9	
PCB-1248 (Aroclor 1248)	**<34.4**	ug/kg	68.9	34.4	1	07/05/17 13:13	07/06/17 01:11	12672-29-6	
PCB-1254 (Aroclor 1254)	**<34.4**	ug/kg	68.9	34.4	1	07/05/17 13:13	07/06/17 01:11	11097-69-1	
PCB-1260 (Aroclor 1260)	**<34.4**	ug/kg	68.9	34.4	1	07/05/17 13:13	07/06/17 01:11	11096-82-5	
PCB, Total	**<34.4**	ug/kg	68.9	34.4	1	07/05/17 13:13	07/06/17 01:11	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	59	%	50-102		1	07/05/17 13:13	07/06/17 01:11	877-09-8	
Decachlorobiphenyl (S)	59	%	53-105		1	07/05/17 13:13	07/06/17 01:11	2051-24-3	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3050								
Arsenic	**185**	mg/kg	1.2	0.36	6.667	07/13/17 08:31	07/14/17 21:14	7440-38-2	
Barium	**408**	mg/kg	1.0	0.31	6.667	07/13/17 08:31	07/14/17 21:14	7440-39-3	
Cadmium	**0.92**	mg/kg	0.91	0.13	6.667	07/13/17 08:31	07/14/17 21:14	7440-43-9	
Chromium	**17.5**	mg/kg	6.1	1.8	6.667	07/13/17 08:31	07/14/17 21:14	7440-47-3	
Lead	**586**	mg/kg	0.91	0.25	6.667	07/13/17 08:31	07/14/17 21:14	7439-92-1	
Selenium	**2.8**	mg/kg	0.91	0.25	6.667	07/13/17 08:31	07/14/17 21:14	7782-49-2	
Silver	**<0.13**	mg/kg	0.45	0.13	6.667	07/13/17 08:31	07/14/17 21:14	7440-22-4	D3
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.020J**	mg/kg	0.051	0.015	1	07/10/17 06:36	07/10/17 12:56	7439-97-6	

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40152687

Sample: 062917003 **Lab ID: 40152687003** Collected: 06/29/17 11:30 Received: 07/01/17 08:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**<26.8**	ug/kg	88.9	26.8	5	07/13/17 08:53	07/20/17 14:54	83-32-9	
Acenaphthylene	**<22.7**	ug/kg	75.8	22.7	5	07/13/17 08:53	07/20/17 14:54	208-96-8	
Anthracene	**<39.4**	ug/kg	131	39.4	5	07/13/17 08:53	07/20/17 14:54	120-12-7	
Benzo(a)anthracene	**264**	ug/kg	73.1	21.9	5	07/13/17 08:53	07/20/17 14:54	56-55-3	
Benzo(a)pyrene	**1290**	ug/kg	57.7	17.3	5	07/13/17 08:53	07/20/17 14:54	50-32-8	
Benzo(b)fluoranthene	**1710**	ug/kg	64.9	19.5	5	07/13/17 08:53	07/20/17 14:54	205-99-2	
Benzo(g,h,i)perylene	**1540**	ug/kg	46.7	14.0	5	07/13/17 08:53	07/20/17 14:54	191-24-2	
Benzo(k)fluoranthene	**1440**	ug/kg	57.6	17.3	5	07/13/17 08:53	07/20/17 14:54	207-08-9	
Chrysene	**563**	ug/kg	77.2	23.2	5	07/13/17 08:53	07/20/17 14:54	218-01-9	
Dibenz(a,h)anthracene	**782**	ug/kg	51.3	15.4	5	07/13/17 08:53	07/20/17 14:54	53-70-3	
Fluoranthene	**124**	ug/kg	120	35.9	5	07/13/17 08:53	07/20/17 14:54	206-44-0	
Fluorene	**<28.5**	ug/kg	95.1	28.5	5	07/13/17 08:53	07/20/17 14:54	86-73-7	
Indeno(1,2,3-cd)pyrene	**1180**	ug/kg	50.5	15.2	5	07/13/17 08:53	07/20/17 14:54	193-39-5	
1-Methylnaphthalene	**<27.7**	ug/kg	92.4	27.7	5	07/13/17 08:53	07/20/17 14:54	90-12-0	
2-Methylnaphthalene	**<34.5**	ug/kg	115	34.5	5	07/13/17 08:53	07/20/17 14:54	91-57-6	
Naphthalene	**<58.0**	ug/kg	194	58.0	5	07/13/17 08:53	07/20/17 14:54	91-20-3	
Phenanthrene	**<80.3**	ug/kg	267	80.3	5	07/13/17 08:53	07/20/17 14:54	85-01-8	
Pyrene	**88.2J**	ug/kg	103	31.1	5	07/13/17 08:53	07/20/17 14:54	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	57	%	19-96		5	07/13/17 08:53	07/20/17 14:54	321-60-8	
Terphenyl-d14 (S)	54	%	31-98		5	07/13/17 08:53	07/20/17 14:54	1718-51-0	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	630-20-6	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	71-55-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	79-34-5	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	79-00-5	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	75-34-3	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	75-35-4	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	563-58-6	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	87-61-6	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	96-18-4	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	07/03/17 10:00	07/04/17 02:52	120-82-1	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	95-63-6	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	07/03/17 10:00	07/04/17 02:52	96-12-8	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	106-93-4	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	95-50-1	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	107-06-2	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	78-87-5	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	108-67-8	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	541-73-1	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	142-28-9	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	106-46-7	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	594-20-7	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	95-49-8	W

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40152687

Sample: 062917003 **Lab ID: 40152687003** Collected: 06/29/17 11:30 Received: 07/01/17 08:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	106-43-4	W
Benzene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	07/03/17 10:00	07/04/17 02:52	74-83-9	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	07/03/17 10:00	07/04/17 02:52	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	07/03/17 10:00	07/04/17 02:52	67-66-3	W
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	74-87-3	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	124-48-1	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	74-95-3	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	75-71-8	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	98-82-8	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	1634-04-4	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	75-09-2	W
Naphthalene	**<40.0**	ug/kg	250	40.0	1	07/03/17 10:00	07/04/17 02:52	91-20-3	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	100-42-5	W
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	108-88-3	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	75-69-4	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	75-01-4	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	156-59-2	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	10061-01-5	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	07/03/17 10:00	07/04/17 02:52	179601-23-1	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	104-51-8	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	103-65-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	95-47-6	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	99-87-6	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	98-06-6	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	156-60-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	07/03/17 10:00	07/04/17 02:52	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	108	%	68-130		1	07/03/17 10:00	07/04/17 02:52	1868-53-7	
Toluene-d8 (S)	109	%	68-149		1	07/03/17 10:00	07/04/17 02:52	2037-26-5	
4-Bromofluorobenzene (S)	96	%	58-141		1	07/03/17 10:00	07/04/17 02:52	460-00-4	

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(920)469-2436

ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40152687

Sample: 062917003 **Lab ID: 40152687003** Collected: 06/29/17 11:30 Received: 07/01/17 08:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**27.4**	%	0.10	0.10	1		07/10/17 08:59		

Sample: 062917004 **Lab ID: 40152687004** Collected: 06/29/17 00:00 Received: 07/01/17 08:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	630-20-6	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	71-55-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	79-34-5	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	79-00-5	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	75-34-3	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	75-35-4	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	563-58-6	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	87-61-6	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	96-18-4	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	07/06/17 07:30	07/06/17 23:34	120-82-1	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	95-63-6	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	07/06/17 07:30	07/06/17 23:34	96-12-8	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	106-93-4	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	95-50-1	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	107-06-2	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	78-87-5	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	108-67-8	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	541-73-1	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	142-28-9	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	106-46-7	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	594-20-7	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	106-43-4	W
Benzene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	07/06/17 07:30	07/06/17 23:34	74-83-9	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	07/06/17 07:30	07/06/17 23:34	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	07/06/17 07:30	07/06/17 23:34	67-66-3	W
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	74-87-3	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	124-48-1	W

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ANALYTICAL RESULTS

Project: 2133 SOLVAY
Pace Project No.: 40152687

Sample: 062917004 **Lab ID: 40152687004** Collected: 06/29/17 00:00 Received: 07/01/17 08:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	74-95-3	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	75-71-8	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	98-82-8	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	1634-04-4	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	75-09-2	W
Naphthalene	**<40.0**	ug/kg	250	40.0	1	07/06/17 07:30	07/06/17 23:34	91-20-3	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	100-42-5	W
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	108-88-3	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	75-69-4	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	75-01-4	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	156-59-2	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	10061-01-5	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	07/06/17 07:30	07/06/17 23:34	179601-23-1	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	104-51-8	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	103-65-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	95-47-6	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	99-87-6	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	98-06-6	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	156-60-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	07/06/17 07:30	07/06/17 23:34	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	116	%	68-130		1	07/06/17 07:30	07/06/17 23:34	1868-53-7	
Toluene-d8 (S)	104	%	68-149		1	07/06/17 07:30	07/06/17 23:34	2037-26-5	
4-Bromofluorobenzene (S)	96	%	58-141		1	07/06/17 07:30	07/06/17 23:34	460-00-4	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

QC Batch: 260584
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Associated Lab Samples: 40152687001

METHOD BLANK: 1535149 Matrix: Water
Associated Lab Samples: 40152687001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.13	0.42	07/06/17 08:36	

LABORATORY CONTROL SAMPLE: 1535150

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.8	97	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1535151 1535152

Parameter	Units	40152676003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L				4.7	4.8				3	20	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

QC Batch: 260854
QC Batch Method: EPA 7471
Analysis Method: EPA 7471
Analysis Description: 7471 Mercury
Associated Lab Samples: 40152687003

METHOD BLANK: 1536256 Matrix: Solid
Associated Lab Samples: 40152687003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	<0.011	0.037	07/10/17 12:09	

LABORATORY CONTROL SAMPLE: 1536257

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.83	0.85	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1536258 1536259

Parameter	Units	40152348002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	0.11	.94	.95	0.99	1.1	93	100	85-115	7	20	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

QC Batch: 261201
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Associated Lab Samples: 40152687001

METHOD BLANK: 1537940 Matrix: Water
Associated Lab Samples: 40152687001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<8.3	25.0	07/12/17 16:33	
Barium	ug/L	<1.5	5.0	07/12/17 16:33	
Cadmium	ug/L	<1.3	5.0	07/12/17 16:33	
Chromium	ug/L	<2.5	10.0	07/12/17 16:33	
Lead	ug/L	<4.3	13.0	07/12/17 16:33	
Selenium	ug/L	<16.6	50.0	07/12/17 16:33	
Silver	ug/L	<3.3	10.0	07/12/17 16:33	

LABORATORY CONTROL SAMPLE: 1537941

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	500	481	96	80-120	
Barium	ug/L	500	503	101	80-120	
Cadmium	ug/L	500	502	100	80-120	
Chromium	ug/L	500	512	102	80-120	
Lead	ug/L	500	507	101	80-120	
Selenium	ug/L	500	506	101	80-120	
Silver	ug/L	250	252	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1537942 1537943

Parameter	Units	40152545015 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	<8.3	500	500	497	485	99	97	75-125	2	20	
Barium	ug/L	62.0	500	500	574	561	102	100	75-125	2	20	
Cadmium	ug/L	<1.3	500	500	515	501	103	100	75-125	3	20	
Chromium	ug/L	<2.5	500	500	520	512	104	102	75-125	2	20	
Lead	ug/L	<4.3	500	500	514	505	103	101	75-125	2	20	
Selenium	ug/L	<16.6	500	500	515	509	103	102	75-125	1	20	
Silver	ug/L	<3.3	250	250	261	256	104	102	75-125	2	20	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

QC Batch: 261258
QC Batch Method: EPA 3050
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Associated Lab Samples: 40152687003

METHOD BLANK: 1538272
Matrix: Solid
Associated Lab Samples: 40152687003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	<0.040	0.13	07/14/17 20:19	
Barium	mg/kg	<0.034	0.11	07/14/17 20:19	
Cadmium	mg/kg	<0.015	0.10	07/14/17 20:19	
Chromium	mg/kg	<0.20	0.67	07/14/17 20:19	
Lead	mg/kg	<0.027	0.10	07/14/17 20:19	
Selenium	mg/kg	<0.027	0.10	07/14/17 20:19	
Silver	mg/kg	<0.014	0.050	07/14/17 20:19	

LABORATORY CONTROL SAMPLE: 1538273

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	50.9	102	80-120	
Barium	mg/kg	50	51.6	103	80-120	
Cadmium	mg/kg	50	50.9	102	80-120	
Chromium	mg/kg	50	51.3	103	80-120	
Lead	mg/kg	50	47.3	95	80-120	
Selenium	mg/kg	50	53.0	106	80-120	
Silver	mg/kg	25	26.1	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1538274 1538275

Parameter	Units	40152670031 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	3.1	56.2	56.5	62.2	59.4	105	100	75-125	5	20	
Barium	mg/kg	28.2	56.2	56.5	80.7	79.3	93	90	75-125	2	20	
Cadmium	mg/kg	0.20J	56.2	56.5	55.7	56.4	99	99	75-125	1	20	
Chromium	mg/kg	14.2	56.2	56.5	68.1	64.7	96	89	75-125	5	20	
Lead	mg/kg	11.3	56.2	56.5	65.8	64.6	97	94	75-125	2	20	
Selenium	mg/kg	1.2	56.2	56.5	61.8	60.9	108	106	75-125	1	20	
Silver	mg/kg	<0.11	28.2	28.3	27.5	28.4	97	100	75-125	3	20	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

QC Batch: 260465
QC Batch Method: EPA 5035/5030B
Analysis Method: EPA 8260
Analysis Description: 8260 MSV Med Level Normal List
Associated Lab Samples: 40152687003

METHOD BLANK: 1534887
Matrix: Solid
Associated Lab Samples: 40152687003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<13.7	50.0	07/03/17 18:23	
1,1,1-Trichloroethane	ug/kg	<14.4	50.0	07/03/17 18:23	
1,1,2,2-Tetrachloroethane	ug/kg	<17.5	50.0	07/03/17 18:23	
1,1,2-Trichloroethane	ug/kg	<20.2	50.0	07/03/17 18:23	
1,1-Dichloroethane	ug/kg	<17.6	50.0	07/03/17 18:23	
1,1-Dichloroethene	ug/kg	<17.6	50.0	07/03/17 18:23	
1,1-Dichloropropene	ug/kg	<14.0	50.0	07/03/17 18:23	
1,2,3-Trichlorobenzene	ug/kg	<17.0	50.0	07/03/17 18:23	
1,2,3-Trichloropropane	ug/kg	<22.3	50.0	07/03/17 18:23	
1,2,4-Trichlorobenzene	ug/kg	<47.6	250	07/03/17 18:23	
1,2,4-Trimethylbenzene	ug/kg	<12.2	50.0	07/03/17 18:23	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	250	07/03/17 18:23	
1,2-Dibromoethane (EDB)	ug/kg	<14.7	50.0	07/03/17 18:23	
1,2-Dichlorobenzene	ug/kg	<16.2	50.0	07/03/17 18:23	
1,2-Dichloroethane	ug/kg	<15.0	50.0	07/03/17 18:23	
1,2-Dichloropropane	ug/kg	<16.8	50.0	07/03/17 18:23	
1,3,5-Trimethylbenzene	ug/kg	<14.5	50.0	07/03/17 18:23	
1,3-Dichlorobenzene	ug/kg	<13.2	50.0	07/03/17 18:23	
1,3-Dichloropropane	ug/kg	<12.0	50.0	07/03/17 18:23	
1,4-Dichlorobenzene	ug/kg	<15.9	50.0	07/03/17 18:23	
2,2-Dichloropropane	ug/kg	<12.6	50.0	07/03/17 18:23	
2-Chlorotoluene	ug/kg	<15.8	50.0	07/03/17 18:23	
4-Chlorotoluene	ug/kg	<13.0	50.0	07/03/17 18:23	
Benzene	ug/kg	<9.2	20.0	07/03/17 18:23	
Bromobenzene	ug/kg	<20.6	50.0	07/03/17 18:23	
Bromochloromethane	ug/kg	<21.4	50.0	07/03/17 18:23	
Bromodichloromethane	ug/kg	<9.8	50.0	07/03/17 18:23	
Bromoform	ug/kg	<19.8	50.0	07/03/17 18:23	
Bromomethane	ug/kg	<69.9	250	07/03/17 18:23	
Carbon tetrachloride	ug/kg	<12.1	50.0	07/03/17 18:23	
Chlorobenzene	ug/kg	<14.8	50.0	07/03/17 18:23	
Chloroethane	ug/kg	<67.0	250	07/03/17 18:23	
Chloroform	ug/kg	<46.4	250	07/03/17 18:23	
Chloromethane	ug/kg	<20.4	50.0	07/03/17 18:23	
cis-1,2-Dichloroethene	ug/kg	<16.6	50.0	07/03/17 18:23	
cis-1,3-Dichloropropene	ug/kg	<16.6	50.0	07/03/17 18:23	
Dibromochloromethane	ug/kg	<17.9	50.0	07/03/17 18:23	
Dibromomethane	ug/kg	<19.3	50.0	07/03/17 18:23	
Dichlorodifluoromethane	ug/kg	<12.3	50.0	07/03/17 18:23	
Diisopropyl ether	ug/kg	<17.7	50.0	07/03/17 18:23	
Ethylbenzene	ug/kg	<12.4	50.0	07/03/17 18:23	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

METHOD BLANK: 1534887 Matrix: Solid
Associated Lab Samples: 40152687003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/kg	<24.5	50.0	07/03/17 18:23	
Isopropylbenzene (Cumene)	ug/kg	<12.6	50.0	07/03/17 18:23	
m&p-Xylene	ug/kg	<34.4	100	07/03/17 18:23	
Methyl-tert-butyl ether	ug/kg	<12.7	50.0	07/03/17 18:23	
Methylene Chloride	ug/kg	<16.2	50.0	07/03/17 18:23	
n-Butylbenzene	ug/kg	<10.5	50.0	07/03/17 18:23	
n-Propylbenzene	ug/kg	<11.6	50.0	07/03/17 18:23	
Naphthalene	ug/kg	<40.0	250	07/03/17 18:23	
o-Xylene	ug/kg	<14.0	50.0	07/03/17 18:23	
p-Isopropyltoluene	ug/kg	<12.0	50.0	07/03/17 18:23	
sec-Butylbenzene	ug/kg	<11.9	50.0	07/03/17 18:23	
Styrene	ug/kg	<9.0	50.0	07/03/17 18:23	
tert-Butylbenzene	ug/kg	<9.5	50.0	07/03/17 18:23	
Tetrachloroethene	ug/kg	<12.9	50.0	07/03/17 18:23	
Toluene	ug/kg	<11.2	50.0	07/03/17 18:23	
trans-1,2-Dichloroethene	ug/kg	<16.5	50.0	07/03/17 18:23	
trans-1,3-Dichloropropene	ug/kg	<14.4	50.0	07/03/17 18:23	
Trichloroethene	ug/kg	<23.6	50.0	07/03/17 18:23	
Trichlorofluoromethane	ug/kg	<24.7	50.0	07/03/17 18:23	
Vinyl chloride	ug/kg	<21.1	50.0	07/03/17 18:23	
4-Bromofluorobenzene (S)	%	85	58-141	07/03/17 18:23	
Dibromofluoromethane (S)	%	101	68-130	07/03/17 18:23	
Toluene-d8 (S)	%	102	68-149	07/03/17 18:23	

LABORATORY CONTROL SAMPLE: 1534888

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2580	103	61-122	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2370	95	73-130	
1,1,2-Trichloroethane	ug/kg	2500	2690	108	70-130	
1,1-Dichloroethane	ug/kg	2500	2600	104	63-124	
1,1-Dichloroethene	ug/kg	2500	2470	99	53-117	
1,2,4-Trichlorobenzene	ug/kg	2500	2100	84	78-130	
1,2-Dibromo-3-chloropropane	ug/kg	2500	1690	68	49-140	
1,2-Dibromoethane (EDB)	ug/kg	2500	2320	93	70-130	
1,2-Dichlorobenzene	ug/kg	2500	2350	94	70-130	
1,2-Dichloroethane	ug/kg	2500	2650	106	56-135	
1,2-Dichloropropane	ug/kg	2500	2480	99	77-122	
1,3-Dichlorobenzene	ug/kg	2500	2380	95	70-130	
1,4-Dichlorobenzene	ug/kg	2500	2660	106	70-130	
Benzene	ug/kg	2500	2640	106	66-130	
Bromodichloromethane	ug/kg	2500	2270	91	62-135	
Bromoform	ug/kg	2500	2020	81	68-130	
Bromomethane	ug/kg	2500	2040	82	29-137	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

LABORATORY CONTROL SAMPLE: 1534888

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/kg	2500	2510	100	57-130	
Chlorobenzene	ug/kg	2500	2700	108	70-130	
Chloroethane	ug/kg	2500	2660	106	36-144	
Chloroform	ug/kg	2500	2570	103	69-115	
Chloromethane	ug/kg	2500	1820	73	32-126	
cis-1,2-Dichloroethene	ug/kg	2500	2710	108	65-130	
cis-1,3-Dichloropropene	ug/kg	2500	2130	85	70-130	
Dibromochloromethane	ug/kg	2500	2330	93	70-130	
Dichlorodifluoromethane	ug/kg	2500	1580	63	10-99	
Ethylbenzene	ug/kg	2500	2450	98	82-122	
Isopropylbenzene (Cumene)	ug/kg	2500	2570	103	70-130	
m&p-Xylene	ug/kg	5000	5200	104	70-130	
Methyl-tert-butyl ether	ug/kg	2500	2510	101	63-134	
Methylene Chloride	ug/kg	2500	2560	103	56-123	
o-Xylene	ug/kg	2500	2590	104	70-130	
Styrene	ug/kg	2500	2650	106	70-130	
Tetrachloroethene	ug/kg	2500	2620	105	70-131	
Toluene	ug/kg	2500	2580	103	80-120	
trans-1,2-Dichloroethene	ug/kg	2500	2740	110	66-130	
trans-1,3-Dichloropropene	ug/kg	2500	2130	85	68-130	
Trichloroethene	ug/kg	2500	2520	101	70-130	
Trichlorofluoromethane	ug/kg	2500	2920	117	37-149	
Vinyl chloride	ug/kg	2500	2060	82	43-128	
4-Bromofluorobenzene (S)	%			94	58-141	
Dibromofluoromethane (S)	%			108	68-130	
Toluene-d8 (S)	%			102	68-149	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1534889 1534890

Parameter	Units	40152432002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/kg	<25.0	1340	1340	1400	1230	105	92	57-123	13	20	
1,1,2,2-Tetrachloroethane	ug/kg	<25.0	1340	1340	1380	1370	103	103	73-135	0	20	
1,1,2-Trichloroethane	ug/kg	<25.0	1340	1340	1540	1550	115	115	70-130	0	20	
1,1-Dichloroethane	ug/kg	<25.0	1340	1340	1390	1370	104	102	63-124	2	20	
1,1-Dichloroethene	ug/kg	<25.0	1340	1340	1340	1160	100	87	48-117	14	23	
1,2,4-Trichlorobenzene	ug/kg	<47.6	1340	1340	1270	1260	95	94	78-145	2	20	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	1340	1340	1040	976	78	73	38-168	6	22	
1,2-Dibromoethane (EDB)	ug/kg	<25.0	1340	1340	1300	1360	97	101	70-130	4	20	
1,2-Dichlorobenzene	ug/kg	<25.0	1340	1340	1380	1380	103	103	70-130	1	20	
1,2-Dichloroethane	ug/kg	<25.0	1340	1340	1430	1370	106	102	56-145	4	20	
1,2-Dichloropropane	ug/kg	<25.0	1340	1340	1270	1370	95	103	77-123	7	20	
1,3-Dichlorobenzene	ug/kg	<25.0	1340	1340	1390	1370	104	103	70-130	1	20	
1,4-Dichlorobenzene	ug/kg	<25.0	1340	1340	1460	1560	109	117	70-130	7	20	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1534889 1534890

Parameter	Units	40152432002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/kg	<25.0	1340	1340	1420	1300	106	97	65-130	9	20	
Bromodichloromethane	ug/kg	<25.0	1340	1340	1170	1130	87	85	59-141	3	20	
Bromoform	ug/kg	<25.0	1340	1340	1110	1260	83	94	59-141	13	20	
Bromomethane	ug/kg	<69.9	1340	1340	1210	1230	90	92	28-139	2	20	
Carbon tetrachloride	ug/kg	<25.0	1340	1340	1290	1100	96	82	50-130	16	20	
Chlorobenzene	ug/kg	<25.0	1340	1340	1510	1580	113	118	70-130	5	20	
Chloroethane	ug/kg	<67.0	1340	1340	1500	1390	112	104	36-144	8	20	
Chloroform	ug/kg	<46.4	1340	1340	1440	1370	108	102	68-122	5	20	
Chloromethane	ug/kg	<25.0	1340	1340	1050	946	78	71	30-126	10	20	
cis-1,2-Dichloroethene	ug/kg	<25.0	1340	1340	1480	1430	110	107	63-130	3	20	
cis-1,3-Dichloropropene	ug/kg	<25.0	1340	1340	1090	1060	81	79	70-130	2	20	
Dibromochloromethane	ug/kg	<25.0	1340	1340	1310	1330	98	99	66-136	1	20	
Dichlorodifluoromethane	ug/kg	<25.0	1340	1340	866	696	65	52	10-99	22	33	
Ethylbenzene	ug/kg	<25.0	1340	1340	1350	1310	100	98	80-122	3	20	
Isopropylbenzene (Cumene)	ug/kg	<25.0	1340	1340	1290	1290	96	96	70-130	0	20	
m&p-Xylene	ug/kg	<50.0	2680	2680	2820	2760	105	103	70-130	2	20	
Methyl-tert-butyl ether	ug/kg	<25.0	1340	1340	1410	1310	106	98	63-134	8	20	
Methylene Chloride	ug/kg	<25.0	1340	1340	1430	1250	107	93	56-127	14	20	
o-Xylene	ug/kg	<25.0	1340	1340	1420	1430	106	106	70-130	1	20	
Styrene	ug/kg	<25.0	1340	1340	1510	1430	113	107	70-130	5	20	
Tetrachloroethene	ug/kg	<25.0	1340	1340	1380	1380	103	103	70-131	0	20	
Toluene	ug/kg	<25.0	1340	1340	1360	1420	102	106	80-120	4	20	
trans-1,2-Dichloroethene	ug/kg	<25.0	1340	1340	1540	1310	115	98	60-130	17	20	
trans-1,3-Dichloropropene	ug/kg	<25.0	1340	1340	1060	1210	79	90	68-130	13	20	
Trichloroethene	ug/kg	<25.0	1340	1340	1320	1350	98	101	70-130	3	20	
Trichlorofluoromethane	ug/kg	<25.0	1340	1340	1310	1200	98	89	37-149	9	24	
Vinyl chloride	ug/kg	<25.0	1340	1340	1090	1010	81	75	39-128	7	20	
4-Bromofluorobenzene (S)	%						96	92	58-141			
Dibromofluoromethane (S)	%						103	96	68-130			
Toluene-d8 (S)	%						98	92	68-149			

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

QC Batch: 260757
QC Batch Method: EPA 5035/5030B
Analysis Method: EPA 8260
Analysis Description: 8260 MSV Med Level Normal List
Associated Lab Samples: 40152687004

METHOD BLANK: 1535892
Matrix: Solid
Associated Lab Samples: 40152687004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<13.7	50.0	07/06/17 18:56	
1,1,1-Trichloroethane	ug/kg	<14.4	50.0	07/06/17 18:56	
1,1,2,2-Tetrachloroethane	ug/kg	<17.5	50.0	07/06/17 18:56	
1,1,2-Trichloroethane	ug/kg	<20.2	50.0	07/06/17 18:56	
1,1-Dichloroethane	ug/kg	<17.6	50.0	07/06/17 18:56	
1,1-Dichloroethene	ug/kg	<17.6	50.0	07/06/17 18:56	
1,1-Dichloropropene	ug/kg	<14.0	50.0	07/06/17 18:56	
1,2,3-Trichlorobenzene	ug/kg	<17.0	50.0	07/06/17 18:56	
1,2,3-Trichloropropane	ug/kg	<22.3	50.0	07/06/17 18:56	
1,2,4-Trichlorobenzene	ug/kg	<47.6	250	07/06/17 18:56	
1,2,4-Trimethylbenzene	ug/kg	<12.2	50.0	07/06/17 18:56	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	250	07/06/17 18:56	
1,2-Dibromoethane (EDB)	ug/kg	<14.7	50.0	07/06/17 18:56	
1,2-Dichlorobenzene	ug/kg	<16.2	50.0	07/06/17 18:56	
1,2-Dichloroethane	ug/kg	<15.0	50.0	07/06/17 18:56	
1,2-Dichloropropane	ug/kg	<16.8	50.0	07/06/17 18:56	
1,3,5-Trimethylbenzene	ug/kg	<14.5	50.0	07/06/17 18:56	
1,3-Dichlorobenzene	ug/kg	<13.2	50.0	07/06/17 18:56	
1,3-Dichloropropane	ug/kg	<12.0	50.0	07/06/17 18:56	
1,4-Dichlorobenzene	ug/kg	<15.9	50.0	07/06/17 18:56	
2,2-Dichloropropane	ug/kg	<12.6	50.0	07/06/17 18:56	
2-Chlorotoluene	ug/kg	<15.8	50.0	07/06/17 18:56	
4-Chlorotoluene	ug/kg	<13.0	50.0	07/06/17 18:56	
Benzene	ug/kg	<9.2	20.0	07/06/17 18:56	
Bromobenzene	ug/kg	<20.6	50.0	07/06/17 18:56	
Bromochloromethane	ug/kg	<21.4	50.0	07/06/17 18:56	
Bromodichloromethane	ug/kg	<9.8	50.0	07/06/17 18:56	
Bromoform	ug/kg	<19.8	50.0	07/06/17 18:56	
Bromomethane	ug/kg	<69.9	250	07/06/17 18:56	
Carbon tetrachloride	ug/kg	<12.1	50.0	07/06/17 18:56	
Chlorobenzene	ug/kg	<14.8	50.0	07/06/17 18:56	
Chloroethane	ug/kg	<67.0	250	07/06/17 18:56	
Chloroform	ug/kg	<46.4	250	07/06/17 18:56	
Chloromethane	ug/kg	<20.4	50.0	07/06/17 18:56	
cis-1,2-Dichloroethene	ug/kg	<16.6	50.0	07/06/17 18:56	
cis-1,3-Dichloropropene	ug/kg	<16.6	50.0	07/06/17 18:56	
Dibromochloromethane	ug/kg	<17.9	50.0	07/06/17 18:56	
Dibromomethane	ug/kg	<19.3	50.0	07/06/17 18:56	
Dichlorodifluoromethane	ug/kg	<12.3	50.0	07/06/17 18:56	
Diisopropyl ether	ug/kg	<17.7	50.0	07/06/17 18:56	
Ethylbenzene	ug/kg	<12.4	50.0	07/06/17 18:56	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

METHOD BLANK: 1535892 Matrix: Solid
Associated Lab Samples: 40152687004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/kg	<24.5	50.0	07/06/17 18:56	
Isopropylbenzene (Cumene)	ug/kg	<12.6	50.0	07/06/17 18:56	
m&p-Xylene	ug/kg	<34.4	100	07/06/17 18:56	
Methyl-tert-butyl ether	ug/kg	<12.7	50.0	07/06/17 18:56	
Methylene Chloride	ug/kg	<16.2	50.0	07/06/17 18:56	
n-Butylbenzene	ug/kg	<10.5	50.0	07/06/17 18:56	
n-Propylbenzene	ug/kg	<11.6	50.0	07/06/17 18:56	
Naphthalene	ug/kg	<40.0	250	07/06/17 18:56	
o-Xylene	ug/kg	<14.0	50.0	07/06/17 18:56	
p-Isopropyltoluene	ug/kg	<12.0	50.0	07/06/17 18:56	
sec-Butylbenzene	ug/kg	<11.9	50.0	07/06/17 18:56	
Styrene	ug/kg	<9.0	50.0	07/06/17 18:56	
tert-Butylbenzene	ug/kg	<9.5	50.0	07/06/17 18:56	
Tetrachloroethene	ug/kg	<12.9	50.0	07/06/17 18:56	
Toluene	ug/kg	<11.2	50.0	07/06/17 18:56	
trans-1,2-Dichloroethene	ug/kg	<16.5	50.0	07/06/17 18:56	
trans-1,3-Dichloropropene	ug/kg	<14.4	50.0	07/06/17 18:56	
Trichloroethene	ug/kg	<23.6	50.0	07/06/17 18:56	
Trichlorofluoromethane	ug/kg	<24.7	50.0	07/06/17 18:56	
Vinyl chloride	ug/kg	<21.1	50.0	07/06/17 18:56	
4-Bromofluorobenzene (S)	%	92	58-141	07/06/17 18:56	
Dibromofluoromethane (S)	%	112	68-130	07/06/17 18:56	
Toluene-d8 (S)	%	103	68-149	07/06/17 18:56	

LABORATORY CONTROL SAMPLE: 1535893

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2830	113	61-122	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2350	94	73-130	
1,1,2-Trichloroethane	ug/kg	2500	2560	103	70-130	
1,1-Dichloroethane	ug/kg	2500	2850	114	63-124	
1,1-Dichloroethene	ug/kg	2500	2440	98	53-117	
1,2,4-Trichlorobenzene	ug/kg	2500	2030	81	78-130	
1,2-Dibromo-3-chloropropane	ug/kg	2500	1740	70	49-140	
1,2-Dibromoethane (EDB)	ug/kg	2500	2490	100	70-130	
1,2-Dichlorobenzene	ug/kg	2500	2390	96	70-130	
1,2-Dichloroethane	ug/kg	2500	2960	119	56-135	
1,2-Dichloropropane	ug/kg	2500	2620	105	77-122	
1,3-Dichlorobenzene	ug/kg	2500	2430	97	70-130	
1,4-Dichlorobenzene	ug/kg	2500	2500	100	70-130	
Benzene	ug/kg	2500	2670	107	66-130	
Bromodichloromethane	ug/kg	2500	2400	96	62-135	
Bromoform	ug/kg	2500	2070	83	68-130	
Bromomethane	ug/kg	2500	2110	85	29-137	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

LABORATORY CONTROL SAMPLE: 1535893

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/kg	2500	2740	109	57-130	
Chlorobenzene	ug/kg	2500	2770	111	70-130	
Chloroethane	ug/kg	2500	2920	117	36-144	
Chloroform	ug/kg	2500	2750	110	69-115	
Chloromethane	ug/kg	2500	2060	82	32-126	
cis-1,2-Dichloroethene	ug/kg	2500	2810	112	65-130	
cis-1,3-Dichloropropene	ug/kg	2500	2310	92	70-130	
Dibromochloromethane	ug/kg	2500	2440	98	70-130	
Dichlorodifluoromethane	ug/kg	2500	1330	53	10-99	
Ethylbenzene	ug/kg	2500	2530	101	82-122	
Isopropylbenzene (Cumene)	ug/kg	2500	2620	105	70-130	
m&p-Xylene	ug/kg	5000	5250	105	70-130	
Methyl-tert-butyl ether	ug/kg	2500	2840	114	63-134	
Methylene Chloride	ug/kg	2500	2530	101	56-123	
o-Xylene	ug/kg	2500	2500	100	70-130	
Styrene	ug/kg	2500	2660	106	70-130	
Tetrachloroethene	ug/kg	2500	2660	106	70-131	
Toluene	ug/kg	2500	2580	103	80-120	
trans-1,2-Dichloroethene	ug/kg	2500	2880	115	66-130	
trans-1,3-Dichloropropene	ug/kg	2500	2350	94	68-130	
Trichloroethene	ug/kg	2500	2730	109	70-130	
Trichlorofluoromethane	ug/kg	2500	2640	105	37-149	
Vinyl chloride	ug/kg	2500	2180	87	43-128	
4-Bromofluorobenzene (S)	%			100	58-141	
Dibromofluoromethane (S)	%			116	68-130	
Toluene-d8 (S)	%			107	68-149	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1535894 1535895

Parameter	Units	40152684003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/kg	<25.0	1460	1460	1520	1410	104	97	57-123	7	20	
1,1,2,2-Tetrachloroethane	ug/kg	<25.0	1460	1460	1390	1450	95	99	73-135	4	20	
1,1,2-Trichloroethane	ug/kg	<25.0	1460	1460	1590	1490	109	102	70-130	6	20	
1,1-Dichloroethane	ug/kg	<25.0	1460	1460	1590	1460	108	100	63-124	8	20	
1,1-Dichloroethene	ug/kg	<25.0	1460	1460	1400	1250	96	86	48-117	11	23	
1,2,4-Trichlorobenzene	ug/kg	<47.6	1460	1460	1370	1370	93	94	78-145	0	20	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	1460	1460	1190	1060	82	73	38-168	12	22	
1,2-Dibromoethane (EDB)	ug/kg	<25.0	1460	1460	1520	1390	104	95	70-130	9	20	
1,2-Dichlorobenzene	ug/kg	<25.0	1460	1460	1570	1520	108	104	70-130	3	20	
1,2-Dichloroethane	ug/kg	<25.0	1460	1460	1750	1690	120	116	56-145	3	20	
1,2-Dichloropropane	ug/kg	<25.0	1460	1460	1590	1500	108	103	77-123	6	20	
1,3-Dichlorobenzene	ug/kg	<25.0	1460	1460	1450	1490	99	102	70-130	2	20	
1,4-Dichlorobenzene	ug/kg	<25.0	1460	1460	1490	1650	102	113	70-130	10	20	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1535894 1535895

Parameter	Units	40152684003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/kg	<25.0	1460	1460	1600	1460	109	100	65-130	9	20	
Bromodichloromethane	ug/kg	<25.0	1460	1460	1330	1310	91	89	59-141	2	20	
Bromoform	ug/kg	<25.0	1460	1460	1310	1380	90	94	59-141	5	20	
Bromomethane	ug/kg	<69.9	1460	1460	1450	1380	99	94	28-139	5	20	
Carbon tetrachloride	ug/kg	<25.0	1460	1460	1440	1310	98	89	50-130	9	20	
Chlorobenzene	ug/kg	<25.0	1460	1460	1730	1470	118	100	70-130	16	20	
Chloroethane	ug/kg	<67.0	1460	1460	1320	1390	90	95	36-144	6	20	
Chloroform	ug/kg	<46.4	1460	1460	1650	1570	113	107	68-122	5	20	
Chloromethane	ug/kg	<25.0	1460	1460	1280	1200	88	82	30-126	6	20	
cis-1,2-Dichloroethene	ug/kg	<25.0	1460	1460	1570	1660	107	113	63-130	5	20	
cis-1,3-Dichloropropene	ug/kg	<25.0	1460	1460	1260	1220	86	84	70-130	3	20	
Dibromochloromethane	ug/kg	<25.0	1460	1460	1360	1280	93	87	66-136	6	20	
Dichlorodifluoromethane	ug/kg	<25.0	1460	1460	1010	804	69	55	10-99	23	33	
Ethylbenzene	ug/kg	<25.0	1460	1460	1400	1320	96	91	80-122	6	20	
Isopropylbenzene (Cumene)	ug/kg	<25.0	1460	1460	1470	1320	101	90	70-130	11	20	
m&p-Xylene	ug/kg	<50.0	2920	2920	2970	2800	102	96	70-130	6	20	
Methyl-tert-butyl ether	ug/kg	<25.0	1460	1460	1730	1600	118	109	63-134	8	20	
Methylene Chloride	ug/kg	<25.0	1460	1460	1680	1490	115	102	56-127	12	20	
o-Xylene	ug/kg	<25.0	1460	1460	1430	1430	98	98	70-130	0	20	
Styrene	ug/kg	<25.0	1460	1460	1530	1440	104	99	70-130	6	20	
Tetrachloroethene	ug/kg	<25.0	1460	1460	1670	1320	115	90	70-131	24	20	R1
Toluene	ug/kg	<25.0	1460	1460	1530	1410	105	96	80-120	8	20	
trans-1,2-Dichloroethene	ug/kg	<25.0	1460	1460	1680	1430	115	98	60-130	16	20	
trans-1,3-Dichloropropene	ug/kg	<25.0	1460	1460	1350	1310	92	90	68-130	3	20	
Trichloroethene	ug/kg	<25.0	1460	1460	1520	1350	104	93	70-130	12	20	
Trichlorofluoromethane	ug/kg	<25.0	1460	1460	1450	1250	99	85	37-149	15	24	
Vinyl chloride	ug/kg	<25.0	1460	1460	1280	1110	88	76	39-128	15	20	
4-Bromofluorobenzene (S)	%						106	90	58-141			
Dibromofluoromethane (S)	%						127	117	68-130			
Toluene-d8 (S)	%						119	106	68-149			

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

QC Batch: 260510 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 40152687001, 40152687002

METHOD BLANK: 1534961 Matrix: Water
Associated Lab Samples: 40152687001, 40152687002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.18	1.0	07/06/17 06:56	
1,1,1-Trichloroethane	ug/L	<0.50	1.0	07/06/17 06:56	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	1.0	07/06/17 06:56	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	07/06/17 06:56	
1,1-Dichloroethane	ug/L	<0.24	1.0	07/06/17 06:56	
1,1-Dichloroethene	ug/L	<0.41	1.0	07/06/17 06:56	
1,1-Dichloropropene	ug/L	<0.44	1.0	07/06/17 06:56	
1,2,3-Trichlorobenzene	ug/L	<2.1	5.0	07/06/17 06:56	
1,2,3-Trichloropropane	ug/L	<0.50	1.0	07/06/17 06:56	
1,2,4-Trichlorobenzene	ug/L	<2.2	5.0	07/06/17 06:56	
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	07/06/17 06:56	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	5.0	07/06/17 06:56	
1,2-Dibromoethane (EDB)	ug/L	<0.18	1.0	07/06/17 06:56	
1,2-Dichlorobenzene	ug/L	<0.50	1.0	07/06/17 06:56	
1,2-Dichloroethane	ug/L	<0.17	1.0	07/06/17 06:56	
1,2-Dichloropropane	ug/L	<0.23	1.0	07/06/17 06:56	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	07/06/17 06:56	
1,3-Dichlorobenzene	ug/L	<0.50	1.0	07/06/17 06:56	
1,3-Dichloropropane	ug/L	<0.50	1.0	07/06/17 06:56	
1,4-Dichlorobenzene	ug/L	<0.50	1.0	07/06/17 06:56	
2,2-Dichloropropane	ug/L	<0.48	1.0	07/06/17 06:56	
2-Chlorotoluene	ug/L	<0.50	1.0	07/06/17 06:56	
4-Chlorotoluene	ug/L	<0.21	1.0	07/06/17 06:56	
Benzene	ug/L	<0.50	1.0	07/06/17 06:56	
Bromobenzene	ug/L	<0.23	1.0	07/06/17 06:56	
Bromochloromethane	ug/L	<0.34	1.0	07/06/17 06:56	
Bromodichloromethane	ug/L	<0.50	1.0	07/06/17 06:56	
Bromoform	ug/L	<0.50	1.0	07/06/17 06:56	
Bromomethane	ug/L	<2.4	5.0	07/06/17 06:56	
Carbon tetrachloride	ug/L	<0.50	1.0	07/06/17 06:56	
Chlorobenzene	ug/L	<0.50	1.0	07/06/17 06:56	
Chloroethane	ug/L	<0.37	1.0	07/06/17 06:56	
Chloroform	ug/L	<2.5	5.0	07/06/17 06:56	
Chloromethane	ug/L	<0.50	1.0	07/06/17 06:56	
cis-1,2-Dichloroethene	ug/L	<0.26	1.0	07/06/17 06:56	
cis-1,3-Dichloropropene	ug/L	<0.50	1.0	07/06/17 06:56	
Dibromochloromethane	ug/L	<0.50	1.0	07/06/17 06:56	
Dibromomethane	ug/L	<0.43	1.0	07/06/17 06:56	
Dichlorodifluoromethane	ug/L	<0.22	1.0	07/06/17 06:56	
Diisopropyl ether	ug/L	<0.50	1.0	07/06/17 06:56	
Ethylbenzene	ug/L	<0.50	1.0	07/06/17 06:56	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

METHOD BLANK: 1534961 Matrix: Water
Associated Lab Samples: 40152687001, 40152687002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	<2.1	5.0	07/06/17 06:56	
Isopropylbenzene (Cumene)	ug/L	<0.14	1.0	07/06/17 06:56	
m&p-Xylene	ug/L	<1.0	2.0	07/06/17 06:56	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	07/06/17 06:56	
Methylene Chloride	ug/L	<0.23	1.0	07/06/17 06:56	
n-Butylbenzene	ug/L	<0.50	1.0	07/06/17 06:56	
n-Propylbenzene	ug/L	<0.50	1.0	07/06/17 06:56	
Naphthalene	ug/L	<2.5	5.0	07/06/17 06:56	
o-Xylene	ug/L	<0.50	1.0	07/06/17 06:56	
p-Isopropyltoluene	ug/L	<0.50	1.0	07/06/17 06:56	
sec-Butylbenzene	ug/L	<2.2	5.0	07/06/17 06:56	
Styrene	ug/L	<0.50	1.0	07/06/17 06:56	
tert-Butylbenzene	ug/L	<0.18	1.0	07/06/17 06:56	
Tetrachloroethene	ug/L	<0.50	1.0	07/06/17 06:56	
Toluene	ug/L	<0.50	1.0	07/06/17 06:56	
trans-1,2-Dichloroethene	ug/L	<0.26	1.0	07/06/17 06:56	
trans-1,3-Dichloropropene	ug/L	<0.23	1.0	07/06/17 06:56	
Trichloroethene	ug/L	<0.33	1.0	07/06/17 06:56	
Trichlorofluoromethane	ug/L	<0.18	1.0	07/06/17 06:56	
Vinyl chloride	ug/L	<0.18	1.0	07/06/17 06:56	
4-Bromofluorobenzene (S)	%	98	61-130	07/06/17 06:56	
Dibromofluoromethane (S)	%	88	67-130	07/06/17 06:56	
Toluene-d8 (S)	%	107	70-130	07/06/17 06:56	

LABORATORY CONTROL SAMPLE: 1534962

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.8	104	70-130	
1,1,2,2-Tetrachloroethane	ug/L	20	23.3	116	70-130	
1,1,2-Trichloroethane	ug/L	20	22.8	114	70-130	
1,1-Dichloroethane	ug/L	20	22.1	110	71-132	
1,1-Dichloroethene	ug/L	20	17.9	90	75-130	
1,2,4-Trichlorobenzene	ug/L	20	20.6	103	70-130	
1,2-Dibromo-3-chloropropane	ug/L	20	20.3	102	63-123	
1,2-Dibromoethane (EDB)	ug/L	20	20.7	103	70-130	
1,2-Dichlorobenzene	ug/L	20	19.9	100	70-130	
1,2-Dichloroethane	ug/L	20	21.9	109	70-131	
1,2-Dichloropropane	ug/L	20	21.7	108	80-120	
1,3-Dichlorobenzene	ug/L	20	19.6	98	70-130	
1,4-Dichlorobenzene	ug/L	20	20.0	100	70-130	
Benzene	ug/L	20	23.2	116	73-145	
Bromodichloromethane	ug/L	20	21.1	105	70-130	
Bromoform	ug/L	20	20.4	102	67-130	
Bromomethane	ug/L	20	12.8	64	26-128	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

LABORATORY CONTROL SAMPLE: 1534962

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	20	21.1	106	70-133	
Chlorobenzene	ug/L	20	21.2	106	70-130	
Chloroethane	ug/L	20	18.5	92	58-120	
Chloroform	ug/L	20	23.3	116	80-121	
Chloromethane	ug/L	20	20.1	101	40-127	
cis-1,2-Dichloroethene	ug/L	20	21.6	108	70-130	
cis-1,3-Dichloropropene	ug/L	20	19.8	99	70-130	
Dibromochloromethane	ug/L	20	20.2	101	70-130	
Dichlorodifluoromethane	ug/L	20	18.6	93	20-135	
Ethylbenzene	ug/L	20	21.6	108	87-129	
Isopropylbenzene (Cumene)	ug/L	20	20.3	102	70-130	
m&p-Xylene	ug/L	40	40.0	100	70-130	
Methyl-tert-butyl ether	ug/L	20	22.7	114	66-143	
Methylene Chloride	ug/L	20	21.4	107	70-130	
o-Xylene	ug/L	20	19.1	95	70-130	
Styrene	ug/L	20	20.9	104	70-130	
Tetrachloroethene	ug/L	20	17.9	89	70-130	
Toluene	ug/L	20	21.2	106	82-130	
trans-1,2-Dichloroethene	ug/L	20	20.7	104	75-132	
trans-1,3-Dichloropropene	ug/L	20	21.6	108	70-130	
Trichloroethene	ug/L	20	21.6	108	70-130	
Trichlorofluoromethane	ug/L	20	16.8	84	76-133	
Vinyl chloride	ug/L	20	23.4	117	57-136	
4-Bromofluorobenzene (S)	%			104	61-130	
Dibromofluoromethane (S)	%			108	67-130	
Toluene-d8 (S)	%			107	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1535029 1535030

Parameter	Units	40152685024 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<0.50	50	50	58.1	48.3	116	97	70-134	18	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	50	50	63.9	54.1	128	108	70-130	17	20	
1,1,2-Trichloroethane	ug/L	<0.20	50	50	63.1	50.9	126	102	70-130	21	20	R1
1,1-Dichloroethane	ug/L	<0.24	50	50	59.0	49.6	118	99	71-133	17	20	
1,1-Dichloroethene	ug/L	<0.41	50	50	47.0	37.1	94	74	75-136	23	20	M1,R1
1,2,4-Trichlorobenzene	ug/L	<2.2	50	50	59.4	39.5	119	79	70-130	40	20	R1
1,2-Dibromo-3-chloropropane	ug/L	<2.2	50	50	53.8	49.4	108	99	63-123	9	20	
1,2-Dibromoethane (EDB)	ug/L	<0.18	50	50	57.6	46.4	115	93	70-130	22	20	R1
1,2-Dichlorobenzene	ug/L	<0.50	50	50	57.1	42.8	114	86	70-130	29	20	R1
1,2-Dichloroethane	ug/L	<0.17	50	50	59.3	49.5	119	99	70-131	18	20	
1,2-Dichloropropane	ug/L	<0.23	50	50	56.3	48.5	113	97	80-120	15	20	
1,3-Dichlorobenzene	ug/L	<0.50	50	50	56.5	40.3	113	81	70-130	33	20	R1
1,4-Dichlorobenzene	ug/L	<0.50	50	50	56.0	40.3	112	81	70-130	33	20	R1

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1535029 1535030

Parameter	Units	40152685024 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	<0.50	50	50	62.1	51.5	124	103	73-145	19	20	
Bromodichloromethane	ug/L	<0.50	50	50	59.1	49.0	118	98	70-130	19	20	
Bromoform	ug/L	<0.50	50	50	52.0	42.0	104	84	67-130	21	20	R1
Bromomethane	ug/L	<2.4	50	50	36.4	31.7	73	63	26-129	14	20	
Carbon tetrachloride	ug/L	<0.50	50	50	54.3	43.9	109	88	70-134	21	20	R1
Chlorobenzene	ug/L	<0.50	50	50	58.4	44.4	117	89	70-130	27	20	R1
Chloroethane	ug/L	<0.37	50	50	53.8	44.9	108	90	58-120	18	20	
Chloroform	ug/L	<2.5	50	50	61.0	51.3	122	103	80-121	17	20	M1
Chloromethane	ug/L	<0.50	50	50	49.1	40.7	98	81	40-128	19	20	
cis-1,2-Dichloroethene	ug/L	<0.26	50	50	59.8	48.6	120	97	70-130	21	20	R1
cis-1,3-Dichloropropene	ug/L	<0.50	50	50	59.3	49.3	119	99	70-130	18	20	
Dibromochloromethane	ug/L	<0.50	50	50	52.3	42.1	105	84	70-130	21	20	R1
Dichlorodifluoromethane	ug/L	<0.22	50	50	39.4	29.7	79	59	20-146	28	20	R1
Ethylbenzene	ug/L	<0.50	50	50	62.3	46.4	125	93	87-129	29	20	R1
Isopropylbenzene (Cumene)	ug/L	<0.14	50	50	60.4	42.9	121	86	70-130	34	20	R1
m&p-Xylene	ug/L	<1.0	100	100	117	86.5	117	87	70-130	30	20	R1
Methyl-tert-butyl ether	ug/L	<0.17	50	50	58.3	49.1	117	98	66-143	17	20	
Methylene Chloride	ug/L	<0.23	50	50	50.9	42.8	102	86	70-130	17	20	
o-Xylene	ug/L	<0.50	50	50	58.0	44.4	116	89	70-130	27	20	R1
Styrene	ug/L	<0.50	50	50	62.2	47.0	124	94	70-130	28	20	R1
Tetrachloroethene	ug/L	<0.50	50	50	51.9	36.6	104	73	70-130	35	20	R1
Toluene	ug/L	<0.50	50	50	60.7	46.9	121	94	82-131	26	20	R1
trans-1,2-Dichloroethene	ug/L	<0.26	50	50	54.4	43.9	109	88	75-135	21	20	R1
trans-1,3-Dichloropropene	ug/L	<0.23	50	50	55.1	45.1	110	90	70-130	20	20	
Trichloroethene	ug/L	<0.33	50	50	58.1	46.8	116	94	70-130	22	20	R1
Trichlorofluoromethane	ug/L	<0.18	50	50	50.4	35.1	101	70	76-150	36	20	M1,R1
Vinyl chloride	ug/L	<0.18	50	50	59.5	48.0	119	96	56-143	21	20	R1
4-Bromofluorobenzene (S)	%						108	105	61-130			
Dibromofluoromethane (S)	%						105	110	67-130			
Toluene-d8 (S)	%						106	103	70-130			

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

QC Batch: 260611
QC Batch Method: EPA 3541
Analysis Method: EPA 8082
Analysis Description: 8082 GCS PCB
Associated Lab Samples: 40152687003

METHOD BLANK: 1535257
Matrix: Solid
Associated Lab Samples: 40152687003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	<25.0	50.0	07/05/17 17:45	
PCB-1221 (Aroclor 1221)	ug/kg	<25.0	50.0	07/05/17 17:45	
PCB-1232 (Aroclor 1232)	ug/kg	<25.0	50.0	07/05/17 17:45	
PCB-1242 (Aroclor 1242)	ug/kg	<25.0	50.0	07/05/17 17:45	
PCB-1248 (Aroclor 1248)	ug/kg	<25.0	50.0	07/05/17 17:45	
PCB-1254 (Aroclor 1254)	ug/kg	<25.0	50.0	07/05/17 17:45	
PCB-1260 (Aroclor 1260)	ug/kg	<25.0	50.0	07/05/17 17:45	
Decachlorobiphenyl (S)	%	80	53-105	07/05/17 17:45	
Tetrachloro-m-xylene (S)	%	79	50-102	07/05/17 17:45	

LABORATORY CONTROL SAMPLE: 1535258

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg		<25.0			
PCB-1221 (Aroclor 1221)	ug/kg		<25.0			
PCB-1232 (Aroclor 1232)	ug/kg		<25.0			
PCB-1242 (Aroclor 1242)	ug/kg		<25.0			
PCB-1248 (Aroclor 1248)	ug/kg		<25.0			
PCB-1254 (Aroclor 1254)	ug/kg		<25.0			
PCB-1260 (Aroclor 1260)	ug/kg	500	450	90	59-106	
Decachlorobiphenyl (S)	%			81	53-105	
Tetrachloro-m-xylene (S)	%			83	50-102	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1535259 1535260

Parameter	Units	40152537002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/kg	<0.029 mg/kg			<28.9	<28.9					20	
PCB-1221 (Aroclor 1221)	ug/kg	<0.029 mg/kg			<28.9	<28.9					20	
PCB-1232 (Aroclor 1232)	ug/kg	<0.029 mg/kg			<28.9	<28.9					20	
PCB-1242 (Aroclor 1242)	ug/kg	<0.029 mg/kg			<28.9	<28.9					20	
PCB-1248 (Aroclor 1248)	ug/kg	<0.029 mg/kg			<28.9	<28.9					20	
PCB-1254 (Aroclor 1254)	ug/kg	<0.029 mg/kg			<28.9	<28.9					20	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1535259 1535260

Parameter	Units	40152537002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1260 (Aroclor 1260)	ug/kg	<0.029 mg/kg	579	579	488	463	84	80	51-109	5	20	
Decachlorobiphenyl (S)	%						79	73	53-105			
Tetrachloro-m-xylene (S)	%						76	71	50-102			

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

QC Batch: 261367
QC Batch Method: EPA 3546
Analysis Method: EPA 8270 by SIM
Analysis Description: 8270/3546 MSSV PAH by SIM
Associated Lab Samples: 40152687003

METHOD BLANK: 1538951
Matrix: Solid
Associated Lab Samples: 40152687003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<4.0	13.4	07/13/17 20:17	
2-Methylnaphthalene	ug/kg	<5.0	16.7	07/13/17 20:17	
Acenaphthene	ug/kg	<3.9	12.9	07/13/17 20:17	
Acenaphthylene	ug/kg	<3.3	11.0	07/13/17 20:17	
Anthracene	ug/kg	<5.7	19.0	07/13/17 20:17	
Benzo(a)anthracene	ug/kg	<3.2	10.6	07/13/17 20:17	
Benzo(a)pyrene	ug/kg	<2.5	8.4	07/13/17 20:17	
Benzo(b)fluoranthene	ug/kg	<2.8	9.4	07/13/17 20:17	
Benzo(g,h,i)perylene	ug/kg	<2.0	6.8	07/13/17 20:17	
Benzo(k)fluoranthene	ug/kg	<2.5	8.4	07/13/17 20:17	
Chrysene	ug/kg	<3.4	11.2	07/13/17 20:17	
Dibenz(a,h)anthracene	ug/kg	<2.2	7.5	07/13/17 20:17	
Fluoranthene	ug/kg	<5.2	17.4	07/13/17 20:17	
Fluorene	ug/kg	<4.1	13.8	07/13/17 20:17	
Indeno(1,2,3-cd)pyrene	ug/kg	<2.2	7.3	07/13/17 20:17	
Naphthalene	ug/kg	<8.4	28.1	07/13/17 20:17	
Phenanthrene	ug/kg	<11.7	38.9	07/13/17 20:17	
Pyrene	ug/kg	<4.5	15.0	07/13/17 20:17	
2-Fluorobiphenyl (S)	%	62	19-96	07/13/17 20:17	
Terphenyl-d14 (S)	%	73	31-98	07/13/17 20:17	

LABORATORY CONTROL SAMPLE: 1538952

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	334	204	61	49-102	
2-Methylnaphthalene	ug/kg	334	215	64	47-91	
Acenaphthene	ug/kg	334	222	66	52-97	
Acenaphthylene	ug/kg	334	222	67	49-97	
Anthracene	ug/kg	334	223	67	62-101	
Benzo(a)anthracene	ug/kg	334	215	64	53-95	
Benzo(a)pyrene	ug/kg	334	230	69	57-108	
Benzo(b)fluoranthene	ug/kg	334	224	67	53-113	
Benzo(g,h,i)perylene	ug/kg	334	203	61	43-114	
Benzo(k)fluoranthene	ug/kg	334	228	68	66-116	
Chrysene	ug/kg	334	224	67	64-109	
Dibenz(a,h)anthracene	ug/kg	334	216	65	50-105	
Fluoranthene	ug/kg	334	233	70	58-107	
Fluorene	ug/kg	334	224	67	52-99	
Indeno(1,2,3-cd)pyrene	ug/kg	334	208	62	51-113	
Naphthalene	ug/kg	334	201	60	50-91	

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QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

LABORATORY CONTROL SAMPLE: 1538952

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phenanthrene	ug/kg	334	224	67	57-101	
Pyrene	ug/kg	334	222	66	50-102	
2-Fluorobiphenyl (S)	%			62	19-96	
Terphenyl-d14 (S)	%			65	31-98	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1538953 1538954

Parameter	Units	40152670031 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1-Methylnaphthalene	ug/kg	376	377	377	536	488	43	30	37-102	9	29	M1
2-Methylnaphthalene	ug/kg	92.4J	377	377	286	285	51	51	44-91	0	36	
Acenaphthene	ug/kg	384	377	377	633	555	66	45	46-97	13	26	M1
Acenaphthylene	ug/kg	<29.8	377	377	242	254	58	61	47-97	5	29	
Anthracene	ug/kg	277	377	377	298	322	6	12	50-101	8	28	M1
Benzo(a)anthracene	ug/kg	714	377	377	330	371	-102	-91	48-95	12	28	M1
Benzo(a)pyrene	ug/kg	864	377	377	296	345	-151	-137	47-108	16	36	M1
Benzo(b)fluoranthene	ug/kg	731	377	377	273	323	-122	-108	42-113	17	34	M1
Benzo(g,h,i)perylene	ug/kg	720	377	377	296	339	-113	-101	18-114	14	30	M1
Benzo(k)fluoranthene	ug/kg	824	377	377	294	339	-141	-129	50-116	14	27	M1
Chrysene	ug/kg	815	377	377	354	401	-122	-110	55-109	12	28	M1
Dibenz(a,h)anthracene	ug/kg	220	377	377	251	280	8	16	39-105	11	29	M1
Fluoranthene	ug/kg	1700	377	377	439	513	-334	-314	41-107	16	28	M1
Fluorene	ug/kg	184	377	377	357	359	46	46	48-99	0	28	M1
Indeno(1,2,3-cd)pyrene	ug/kg	591	377	377	267	304	-86	-76	27-113	13	30	M1
Naphthalene	ug/kg	428	377	377	404	353	-6	-20	40-91	13	37	M1
Phenanthrene	ug/kg	1070	377	377	563	600	-134	-124	46-101	6	40	M1
Pyrene	ug/kg	1500	377	377	568	637	-248	-229	50-102	11	31	M1
2-Fluorobiphenyl (S)	%						54	51	19-96			
Terphenyl-d14 (S)	%						51	50	31-98			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 2133 SOLVAY
Pace Project No.: 40152687

QC Batch: 260980
QC Batch Method: ASTM D2974-87
Associated Lab Samples: 40152687003

Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture

SAMPLE DUPLICATE: 1537264

Parameter	Units	40152686004 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.6	17.6	6	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: 2133 SOLVAY
Pace Project No.: 40152687

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: 261436

[IP]	Benzo(b)fluoranthene and benzo(k)fluoranthene were in the check standard but did not meet the resolution criteria in SW846 Method 8270C. Whereas sample results included are reported as individual isomers, the lab and the customer must recognize them as an isomeric pair.

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1	RPD value was outside control limits.
W	Non-detect results are reported on a wet weight basis.

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(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 2133 SOLVAY
Pace Project No.: 40152687

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40152687003	**062917003**	EPA 3541	260611	EPA 8082	260612
40152687001	**062917001**	EPA 3010	261201	EPA 6010	261277
40152687003	**062917003**	EPA 3050	261258	EPA 6020	261464
40152687001	**062917001**	EPA 7470	260584	EPA 7470	260624
40152687003	**062917003**	EPA 7471	260854	EPA 7471	260977
40152687003	**062917003**	EPA 3546	261367	EPA 8270 by SIM	261436
40152687003	**062917003**	EPA 5035/5030B	260465	EPA 8260	260470
40152687004	**062917004**	EPA 5035/5030B	260757	EPA 8260	260760
40152687001	**062917001**	EPA 8260	260510		
40152687002	**062917002**	EPA 8260	260510		
40152687003	**062917003**	ASTM D2974-87	260980		

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EMM Level II

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www.pacelabs.com

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

Page 1 of 40152687

Courier: Pace/CS Logistics COC# 2133-0617-010

QC: MJM 6/30/17

CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	Natural Resource Tech
Branch/Location:	Milwaukee, WI
Project Contact:	Andrew Cawrse
Phone:	414-837-3645
Project Number:	2133
Project Name:	Solvay
Project State:	WI
Sampled By (Print):	Andrew Cawrse
Sampled By (Sign):	Andrew C
PO #:	3400010643
Regulatory Program:	

Quote #:	
Mail To Contact:	gdsdata@obg.com
Mail To Company:	Natural Resource Tech
Mail To Address:	234 W Florida St Milwaukee, WI
Invoice To Contact:	Bob Paulson
Invoice To Company:	We Energies
Invoice To Address:	231 W Michigan St Milwaukee, WI
Invoice To Phone:	

Data Package Options (billable)
- ☐ EPA Level III
- ☐ EPA Level IV

MS/MSD
- ☐ On your sample (billable)
- ☐ NOT needed on your sample

Matrix Codes
A = Air, B = Biota, C = Charcoal, O = Oil, S = Soil, SI = Sludge, W = Water, DW = Drinking Water, GW = Ground Water, SW = Surface Water, WW = Waste Water, WP = Wipe

FILTERED? (YES/NO)
PRESERVATION (CODE)*

Analyses Requested	RCRA Metals 6020	VOC 8260
Y/N	N	N
Pick Letter	D	B

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	RCRA Metals 6020	VOC 8260	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	062917001	6/29/17	11:00	W	X	X		1-250mLp D, 3-40mLv B	
002	062917002	+	–	–		X	Trip Blank	2-40mLv B	

OGC

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Andrew C	6/30/17 10:30	[signature] Pace	7/1/17 0800

PACE Project No. 40152687

Receipt Temp = ROI °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal
Present / Not Present
Intact / Not Intact

Custody Seal # 2133-01+02

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

Level II

Pace Analytical® www.pacelabs.com

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

Courier: Pace/CS Logistics

QC: MJM 6/30/17

Page 1 of 1

4015268 7

COC # 2133-0617-011

Page 37 of 39

CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	Natural Resource Tech
Branch/Location:	Milwaukee, WI
Project Contact:	Andrew Cawse
Phone:	414-837-3645
Project Number:	2133
Project Name:	Solvay
Project State:	WI
Sampled By (Print):	Andrew Cawse
Sampled By (Sign):	
PO #:	3400010643
Regulatory Program:	

Quote #:	
Mail To Contact:	gdsdata@obg.com
Mail To Company:	Natural Resource Tech
Mail To Address:	234 W Florida St Milwaukee, WI
Invoice To Contact:	Bob Paulson
Invoice To Company:	We Energies
Invoice To Address:	231 W Michigan St Milwaukee, WI
Invoice To Phone:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes

A = Air	W = Water
B = Biota	DW = Drinking Water
C = Charcoal	GW = Ground Water
O = Oil	SW = Surface Water
S = Soil	WW = Waste Water
Sl = Sludge	WP = Wipe

FILTERED? (YES/NO)
PRESERVATION (CODE)*

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Y/N	Pick Letter	Analyses Requested: VOC 8260	PAH 8270	RCRA Metals 6020	PCB 8082	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
003	062917003	6/29/17	1130	S	N	F	X	X	X	X		3-4ozAG^A, 1-4ozP^A, 1-40mLV^F	
004	062917004	"	-	-	N	F	X				Trip Blank	↓	

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Andrew Cawse	6/30/17 10:30	[signature]	7/1/17 0800

PACE Project No.: 4015268 7

Receipt Temp = 0.1 °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal Present / Not Present Intact / Not Intact

Custody Seal # 2133-01+02

C019a(27Jun2006)

Version 6.0 06/14/06

ORIGINAL

40152687

From: <notifications@cslog.com>
To: <gbsr@pacelabs.com>
Date: 7/1/2017 12:15 AM
Subject: Auto-Notification Shipment #1586.062917

The following shipment sent by Alee Her of PACE
has been delivered and signed for by: CSL warehouse MIKE @ 07/01/2017 00:15

OrderTrackingID: 1586.062917
Ref#: Schaumburg
Pieces: 7
Weight: 1.00

[Pickup]
PACE Labs Schaumburg
870 E Higgins Rd
Suite 143
Schaumburg IL, 60173-4796

[Delivery]
CS Logistics MKE
11001 W Mitchell St
Milwaukee WI, 53214-3805

If you would like to track this shipment online, please visit:
http://www.cslogisticsinc.com/xcelerator/Online/QuickTrack.aspx?OrderTrackingID=1586.062917&Key=C3E15

[Shipment delivered by CS Logistics, Inc.]

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Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical™

Project # WO# : 40152687

40152687

Client Name: NRT

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: CS Logistics

Tracking #: 1586.062917

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other

Thermometer Used N/A **Type of Ice:** (Wet) Blue Dry None ☒ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: Rot /Corr: **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☒ no

Person examining contents:
Date: 7/1/17
Initials: SSM

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

				Comments:
Chain of Custody Present:	☒Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☒Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☒Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☒Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☒Yes	☐No	☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes	☐No		Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes	☒No	☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☒No	☐N/A	7.
Sufficient Volume:	☒Yes	☐No	☐N/A	8.
Correct Containers Used:	☒Yes	☐No	☐N/A	9.
-Pace Containers Used:	☒Yes	☐No	☐N/A	
-Pace IR Containers Used:	☐Yes	☐No	☒N/A	
Containers Intact:	☒Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☒Yes	☒No SSM 7/1/17	☐N/A	11.
Sample Labels match COC:	☒Yes	☐No	☐N/A	12.
-Includes date/time/ID/Analysis Matrix: S/W				
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☒Yes	☐No	☐N/A	13. ☒ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☒Yes	☐No	☐N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☒Yes	☐No		Initial when completed SSM / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes	☒No	☐N/A	14.
Trip Blank Present:	☒Yes	☐No	☐N/A	15.
Trip Blank Custody Seals Present	☒Yes	☐No	☐N/A	
Pace Trip Blank Lot # (if purchased): 381/1623301UB				

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:** 7-3-17

F-GB-C-031-Rev.04 (12Dec2016) SCUR.xls
Pace Analytical Services LLC. - Green Bay WI

Appendix H

Stockpile Assessment and Locations

SURFICIAL TAR AREAS
FORMER TAR TANK
WET AREAS - **(NO ENTRY / OFF LIMITS)**
BLUE-STAINED SOIL AND CONCRETE
ALTA SURVEY BOUNDARY

PILE DISPOSAL DESTINATION

C&D CAT 1
CAT 1 OR FRIABLE
FRIABLE CO-MINGLED
COAL/COKE
OTHER

KINNICKINNIC RIVER

MATCHLINE

15 97 16 25 24 23 22 48 7 9 6 8 1006 98 13 19 20 18 21 62 1005 55 54 46 47 45 1003 5 4 1002 3 99 1001 17 1004 1009 1010 1 11 1000 1008 57 42 43 44 12 51 53 50 52

Service Layer Credits: Milwaukee County Land Information Office

0 62.5 125
SCALE IN FEET

DRAWN BY/DATE:
TDC 7/6/17
REVIEWED BY/DATE:
JFK 7/6/17
APPROVED BY/DATE:
JFK 9/22/17

MAY 2017 APPROXIMATE PILE LOCATIONS AND DISPOSAL TYPE

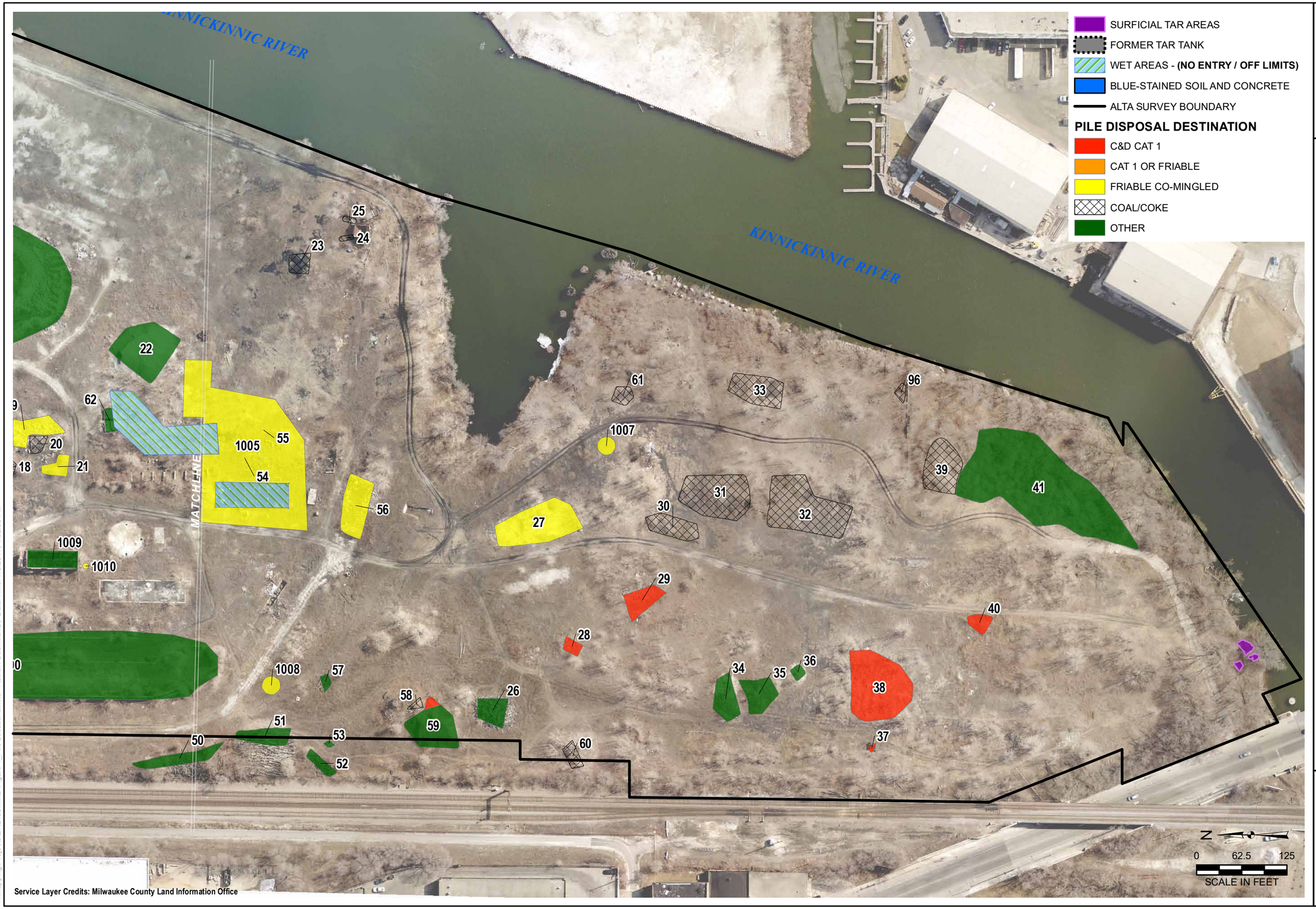
FORMER MILWAUKEE SOLVAY COKE AND GAS SITE - NORTHERN PORTION
311 EAST GREENFIELD AVENUE
MILWAUKEE, WISCONSIN

PROJECT NO: 2133

FIGURE NO: 1A

Natural Resource Technology
AN OBG COMPANY

Y:\Mapping\Projects\2112133\MXD\Figure 4_Pile Locations.mxd Author: CushmaTD: Date/Time: 7/6/2017, 4:04:57 PM



Service Layer Credits: Milwaukee County Land Information Office

DRAWN BY/DATE: TDC 7/6/17
REVIEWED BY/DATE: JFK 7/6/17
APPROVED BY/DATE: JFK 9/22/17

MAY 2017 APPROXIMATE PILE LOCATIONS AND DISPOSAL TYPE

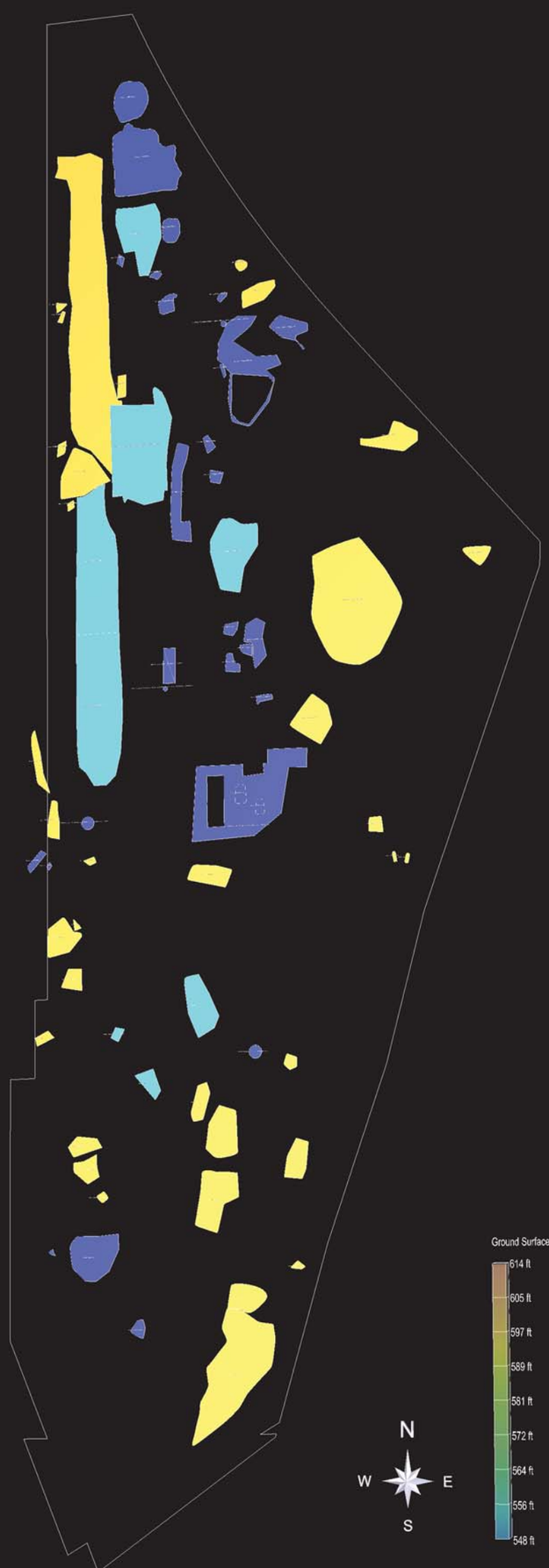
FORMER MILWAUKEE SOLVAY COKE AND GAS SITE - SOUTHERN PORTION
311 EAST GREENFIELD AVENUE
MILWAUKEE, WISCONSIN

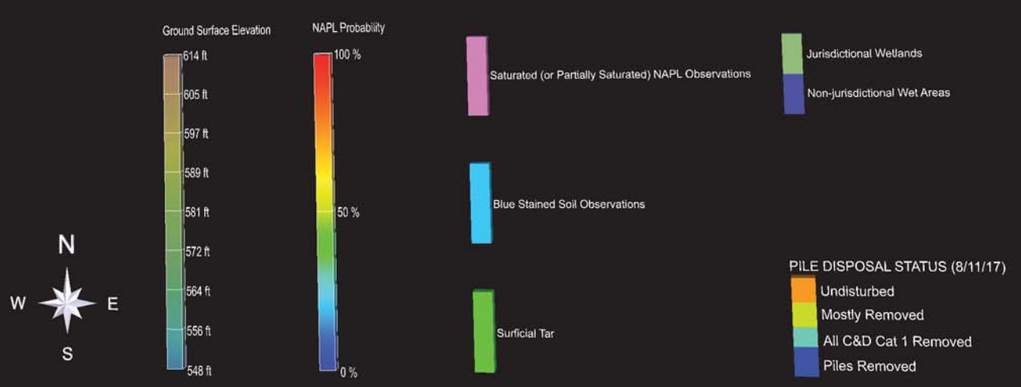
PROJECT NO: 2133

FIGURE NO: 1B

Natural Resource Technology
AN OBG COMPANY

Y:\Mapping\Projects\21\2133\MXD\Figure 4_Pile Locations.mxd Author: CushmaTD: Date/Time: 7/6/2017, 4:02:55 PM





3-DIMENSIONAL CONCEPTUAL SITE MODEL
FORMER MILWAUKEE SOLVAY COKE AND GAS SITE
311 EAST GREENFIELD AVENUE
MILWAUKEE, WISCONSIN

NOTE: ALL INTERPOLATIONS ARE PRELIMINARY ESTIMATES AND ARE SUBJECT TO CHANGE

Natural Resource Technology
AN ODG COMPANY

PROJECT NO: 2133

FIGURE NO: 3D-1

AUGUST 2017 STOCKPILE STATUS

FORMER MILWAUKEE SOLVAY COKE AND GAS SITE
311 EAST GREENFIELD AVENUE
MILWAUKEE, WISCONSIN

DRAWN BY/DATE:
TDC 8/17/17
REVIEWED BY/DATE:
JMH 8/17/17
APPROVED BY/DATE:
JFK 9/22/17

Appendix I

2017 Waste Profile Information and Pile Quantities

Table 1
Pile Contents, Volumes and Areas
Solvay Coke and Gas Site

Pile Number	Primary Pile Contents	Area (Square Feet)	Volume (Cubic Yards)	Disposal Destination	Disposition of Pile
1	BRICK	63,011	12,911.83	Friable Co-mingled	Being prepared for crushing of brick
3	BRICK	12,521	526.20	C&D Cat 1	Removed
4	CONCRETE	259	0.61	N/A	Prepared for crushing
5	CONCRETE	1,107	7.00	N/A	Prepared for crushing
6	METAL	448	3.77	other	In process of being removed for recycling
7	DIRT	2,265	192.97	other	Undisturbed
8	CONCRETE	236	1.69	N/A	Removed
9	CONCRETE	15,764	901.82	C&D Cat 1	Removed
11	COAL	6,849	1,495.96	other	Undisturbed
12	CONCRETE	220	2.07	N/A	Mostly Removed
13	CONCRETE	10,293	1,393.36	C&D Cat 1	All C&D Cat 1 Removed. Concrete being prepared for crushing
15	STONE	1,347	185.01	N/A	Undisturbed
16	CONCRETE	33,955	12,756.48	other	Concrete being crushed, soil being set aside for disposal
17	METAL	786	3.25	Friable Co-mingled	Friable material removed. Concrete in process of being prepared for recycling
18	COAL	590	7.53	other	Removed
19	CONCRETE	2,642	8.42	Friable Co-mingled	Friable material removed. Concrete in process of being prepared for recycling
20	COAL	467	15.46	other	Removed
21	DEBRIS	782	24.90	Friable Co-mingled	Removed
22	ASPHALT	4,964	1,523.58	other	Being prepared for off-site recycling
23	COAL	765	55.09	other	Undisturbed
24	COAL	126	0.45	other	Undisturbed
25	COAL	137	0.31	other	Undisturbed
26	WOOD	1,397	170.54	other	Undisturbed
27	DIRT	5,276	475.96	Friable Co-mingled	All C&D Cat 1 Removed
28	CONCRETE	445	6.23	C&D Cat 1	All C&D Cat 1 Removed
29	BRICK	1,520	30.66	C&D Cat 1	All C&D Cat 1 Removed
30	COAL	1,841	81.06	other	Undisturbed
31	COAL	5,067	527.48	other	Undisturbed
32	COAL	6,755	600.36	other	Undisturbed
33	COAL	2,654	146.02	other	Undisturbed
34	CONCRETE	1,715	122.42	other	Being processed for crushing
35	CONCRETE	1,824	101.52	other	Being processed for crushing
36	CONCRETE	297	15.64	other	Being processed for crushing
37	BRICK	76	0.16	C&D Cat 1	Removed
38	BRICK	6,832	328.47	C&D Cat 1	Removed
39	COAL	3,144	606.87	other	Undisturbed
40	BRICK	678	20.46	C&D Cat 1	Removed
41	ASPHALT	20,232	1,500.19	other	In process of being assessed for disposition (recycling or disposal)

Natural Resource Technology
AN OBG COMPANY

Table 1
Pile Contents, Volumes and Areas
Solvay Coke and Gas Site

Pile Number	Primary Pile Contents	Area (Square Feet)	Volume (Cubic Yards)	Disposal Destination	Disposition of Pile
42	CONCRETE	278	0.48	N/A	Being processed for crushing
43	METAL	217	0.54	N/A	Undisturbed
44	CONCRETE	422	15.42	Friable Co-mingled	Being processed for crushing
45	BRICK	5,160	221.39	C&D Cat 1	Removed
46	CONCRETE	509	5.93	C&D Cat 1	Removed
47	CONCRETE	588	2.64	C&D Cat 1	Removed
48	CONCRETE	3,326	134.24	C&D Cat 1	Removed
50	WOOD	1,727	24.32	other	Off-Site
51	CONCRETE	1,490	116.38	N/A	Being processed for crushing
52	WOOD	620	3.85	other	Off-Site
53	WIRE	87	0.46	N/A	Off-Site
54	WOOD	747	3.47	other	Removed
55	WOOD	478	0.00	other	Removed
56	STONE	2,841	7.53	Friable Co-mingled	Asbestos removed
57	WOOD	251	3.44	other	Removed
58	COAL	178	19.26	other	Undisturbed
59	DIRT	3,503	557.29	other	Undisturbed
60	COAL	583	14.33	other	Undisturbed
61	COAL	580	26.63	other	Undisturbed
62	CONCRETE	530	2.80	C&D Cat 1	Removed
96	COAL	257	2.22	other	Undisturbed
97	WOOD	3,712	150.24	other	Undisturbed
98	WOOD	175	0.27	other	Removed
99	WOOD	251	1.18	other	Removed
1000	CONCRETE	49,513	8,919.33	Friable Co-mingled	All C&D Cat 1 Removed - Concrete top and interior walls of foundation removed for crushing
1001	BRICK	5,001	555.69	C&D Cat 1	Removed
1002	BRICK	16,896	1,877.36	C&D Cat 1	Removed
1003	BRICK	1,641	182.39	C&D Cat 1	Removed
1004	co-mingled material to be scraped	21,875	150.00	Friable Co-mingled	All C&D Cat 1 Removed
1005	co-mingled material to be scraped	22,000	100.00	Friable Co-mingled	Removed
1006	Galbestos material and area surrounding	100	1.00	Friable Co-mingled	Removed
1007	Former Galbestos Area	500	5.00	Friable Co-mingled	Removed
1008	Area where Galbestos was placed	500	5.00	Friable Co-mingled	Removed
1009	Former Garage Area	4,000	10.00	C&D Cat 1	Removed

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Table 1
Pile Contents, Volumes and Areas
Solvay Coke and Gas Site

Pile Number	Primary Pile Contents	Area (Square Feet)	Volume (Cubic Yards)	Disposal Destination	Disposition of Pile
1010	Soil/debris pile associated with former garage prep.	50	5.00	Friable Co-mingled	Removed

Notes:

1. Northern 2/3 taken initially, remainder was taken after biological waste was removed
2. Removal included scraping of area around pile. Wetland area not disturbed
3. Edgerton removed remaining concrete prior to excavation and disposal activities
4. Non-metal removed in junction with scraping of area 1004
5. Edgerton removed concrete prior to Balestieri addressing co-mingled materials
6. Taken with Pile 45
7. Taken/scraped with Pile 9
8. Edgerton moved stone prior to scrape

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Table 2

Waste Profile Summary

Solvay Coke and Gas Plant Site

Profile Number	Material Profiled	Waste Disposal Facility
127497WI	Railroad Ties	Waste Management - Wisconsin
617821IL	Coal Tar	Waste Management - Illinois
ASB127411WI	Friable co-mingled waste	Waste Management - Wisconsin*
ASB127410WI	Non-Friable co-mingled Waste	Waste Management - Wisconsin*
127576WI	Coal and Coke	Waste Management - Wisconsin*

*Wisconsin = Orchard Ridge or Metro

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Appendix J

Multi-Site Program Standard Operating Procedures

SOP SERIES SAS-01
FILE AND DATA MANAGEMENT

STANDARD OPERATING PROCEDURE NO. SAS-01-01

FIELD ACTIVITY DOCUMENTATION Revision 1

1.0 PURPOSE

This Standard Operating Procedure (SOP) describes procedures for documenting field activities and guidance on types and specificity of data to be recorded. Procedures are included for documentation on field logbooks, field forms, and/or field electronic data recorders. This standard is also applicable to photographic documentation collected to support field observations of site conditions and field data entries.

2.0 EQUIPMENT AND MATERIALS

- Field logbooks;
- Field forms;
- Camera and/or camcorder; and
- Waterproof pens with non-erasable ink.

3.0 HEALTH AND SAFETY

Potentially hazardous conditions relating to chemicals under investigation, equipment and tools in use, utility services in investigation areas, or certain work activities may exist on the site. Protocols are established in each site-specific Health & Safety Plan (HASP) based on corporate health and safety policies and manuals, past field experience, specific site conditions, and chemical hazards known or anticipated to be present from available site data. Before site operations begin, all employees, and subcontractor personnel will have read and understood the HASP and all revisions. Before work begins, all site project staff will sign an agreement and acknowledgment form indicating that they have read and fully understood the HASP and their individual responsibilities, and fully agree to abide by the provisions of the HASP.

4.0 FORMAT

4.1 FIELD LOGBOOK

Field logbooks shall be bound books that are permanently assigned to a specific project. The cover of each logbook will provide the following identifying information:

- Name of project/site;
- Project number; and
- Book number.

The consultant's contact person(s), address and phone number should be recorded on the inside cover of the field logbook. Only field logbooks with pre-numbered pages shall be used and no pages shall be removed from the logbook.

4.2 Field Forms

Field recording forms are also used for data collection in a variety of activities. The forms include logs for boreholes, well construction, well sampling, etc. It is not necessary to duplicate information recorded on field forms into the field logbooks.

5.0 ENTRIES

5.1 Daily Entries

At the beginning of each daily entry, the following information is recorded:

- Date;
- Time of arrival at the site;
- Weather conditions;
- Physical/environmental conditions at the field site;
- Field personnel present and their responsibilities;
- Level of personal protection if other than Level D; and
- Signature of the person making the entry.

For investigation activities, the entry for each day will contain a complete record of the day's activities including, but not limited to, the following information, unless the data is recorded on field forms.

- Names and titles of site visitors;
- Information concerning sampling changes, scheduling modifications and change orders.
- Location, description and log of photographs of sampling points;
- Description of reference points for maps and photographs of sampling site;
- Field observations;
- Field measurements;
- Equipment calibration and maintenance;
- Sample identification numbers;
- Name of laboratory and overnight delivery service provider or name of laboratory courier and time of sample pick-up;
- Sample documentation, such as chain-of-custody form numbers and shipment air bill numbers;
- Decontamination procedures used;
- Documentation for investigation-derived wastes, such as contents and approximate waste volume in each drum, and number of drums generated;
- Time of departure from the site; and
- Signature of person responsible for observations and date.

Field logbooks are also used as a daily record for remediation activities. General entries similar to the ones listed above are used in remediation activity logbooks. In addition, daily entries regarding excavation activities, waste disposal quantities and methods of transport, system performance data from any remediation systems (e.g. soil vapor extraction systems, recovery well systems, etc.), system or equipment calibration or maintenance performed, and any other pertinent information regarding daily activities.

All logbook entries shall be printed legibly using a pen with waterproof, non-erasable ink. Any lines or pages inadvertently left blank will have a single line drawn through them with the logging person's initials and date written on the line.

When a field log form is used to record field data, all form fields will be completed in full on a daily basis. If a specific data entry area is not applicable, it will be clearly marked as such with the use of "NA" or a dashed

line drawn through it. A single line will be drawn through any unused data entry areas on the form with the field person's signature on the line.

5.2 Entry Changes

Entry changes should be avoided by carefully entering data in the logbook. If a change is required, it should be made by drawing a single line through the original entry such that the original entry is not obscured and entering the correct information next to the original entry. The change in entry will be initialed and dated by the logger. Only the person making the entry may change it.

If there is a change in the person recording field notes during a particular day, that person shall be identified in the logbook prior to making entries. The new logger shall sign and date the logbook at the beginning and end of his entry.

6.0 FORM AND LOGBOOK MANAGEMENT

Site-specific field logbooks and forms will be kept in the in-office project file when not in use. If forms or logbooks are used in the field for an extended period of time, copies of used pages will be made, delivered to the office, and filed in the project file on a periodic basis.

7.0 PHOTOGRAPHIC AND VIDEO RECORDS

7.1 Photographic Record

Photographs shall be taken in the field on a daily basis to document field activities. Field log entries for each photograph may include:

- Photographer’s name;
- Project name and project number;
- Roll and frame number, or digital photograph number;
- Date and time;
- Description of photograph including sampling point, sample name, depth and other relevant identifying information, such as direction faced (e.g. “looking south”) and relationship of photograph to site features.

Photograph prints and negatives will be stored in the project file. Digital photographs will be stored in the electronic project file. If digital photographs are downloaded from the camera in the field, they will be transferred to the in-office electronic file on a regular basis. Photographic prints or paper copies of digital images will be identified with recorded field book entry information.

7.2 Video

Video site recordings will be logged in the field logbook with the following information:

- Recorder's name;
- Project name and project number;
- Date and time;
- Description of subject of video including identification of any persons appearing in video.

If video does not have accompanying audio, record a placard of the site name, date and time and subject of video at the beginning of the video. If the video recorder has an audio recording feature, a narration of the video identifying information may be used. The video tape or digital video disk (DVD) will be labeled with the project name, project number, date, location, and subject). The original, unaltered tape shall be placed in the official files.

8.0 REFERENCES AND ADDITIONAL RESOURCES

ASTM International, D0420-98R03 Guide to Site Characterization for Engineering Design and Construction Purposes.

ASTM International, D4840-99R04 Guide for Sample Chain-of-Custody Procedures.

ASTM International, D5434-03 Guide for Field Logging of Subsurface Explorations of Soil and Rock.

ASTM International, D6089-97R03E01 Guide for Documenting a Ground-Water Sampling Event.

USEPA, 2001, Environmental Investigations Standard Operating Procedures and Quality Assurance Manual (EISOPQAM), Region 4, Enforcement and Investigations Branch, SESD, Athens, Georgia, www.epa.gov/region4/sesd/eisopqam/eisopqam.html.

USEPA, April 2007, Guidance for Preparing Standard Operating Procedures (SOPs), EPA/600/B-07/001.

STANDARD OPERATING PROCEDURE NO. SAS-01-02

PROJECT FILE MANAGEMENT Revision 0

1.0 PURPOSE

This Standard Operating Procedure (SOP) describes the guidelines to assure the integrity and preservation of electronic files within the Network. It also describes the manner in which electronic files are to be identified and handled in the routine entry of data, reports, proposals, etc. onto computer hard drives and tapes.

2.0 EQUIPMENT AND MATERIALS

- Project files including, but not limited to, documents, data, photographs, correspondence and maps.
- Appropriate paper document storage supplies, furniture and facilities.
- Permanent electronic file storage equipment (computer hard drives and random access memory computer disks [CD-ROMs]).

3.0 FILE SECURITY

Adequate security will be maintained for both paper and electronic files relating to each project in accordance with its corporate document security policies.

4.0 PAPER FILES

4.1 ACTIVE PROJECTS

Paper files containing documents relating to an active project will be maintained at the consultant's office. All paper files will be sorted according to type and filed in accordance with the consultant's internal project-specific paper filing system. Paper documents from field activities will be brought

from the field to the consultant's office for filing on a regular basis. All paper documents will be maintained in the active project files until final closure of the project.

4.2 CLOSED PROJECTS

Upon final closure of the project, all paper files containing documents relating to the project will be permanently archived in accordance with the consultant's internal file retention policies and client-specified file retention or archiving requirements. Discuss these procedures with the Project Manager.

5.0 ELECTRONIC FILES

5.1 ACTIVE PROJECTS

Electronic files containing documents relating to active project will be maintained at the consultant's office. All electronic files will be sorted according to type and filed in accordance with the consultant's internal electronic project filing system. Data saved electronically to field computers will be transferred to the consultant's in-office computer network on a regular basis via CD-ROMs or as attachments to electronic mail (email) transmissions. All electronic documents will be maintained in the active project files until final closure of the project.

5.2 CLOSED PROJECTS

Upon final closure of the project, all electronic files containing documents relating to the project will be permanently archived in accordance with the consultant's internal file retention policies and client-specified file retention or archiving requirements.

5.0 REFERENCES AND ADDITIONAL RESOURCES

USEPA, April 2007, Guidance for Preparing Standard Operating Procedures (SOPs), EPA/600/B-07/001.

SOP SERIES SAS-02

FIELD MEASUREMENTS - GENERAL

STANDARD OPERATING PROCEDURE NO. SAS-02-01

EQUIPMENT CALIBRATION, OPERATION, AND MAINTENANCE Revision 0

1.0 PURPOSE

This Standard Operating Procedure (SOP) describes the guidelines for controls, calibration, and maintenance of measurement and testing equipment to be used for obtaining samples for chemical analyses, for measuring field parameters, and for testing various parameter/characteristics. The purpose of this SOP is to ensure the validity of field measurement data generated during field activities as required in the Work Plan or as otherwise specified.

2.0 EQUIPMENT AND MATERIALS

- Measurement and testing equipment ;
- Equipment/instrumentation-specific operation manuals;
- Equipment/instrumentation-specific cases, battery chargers, and attachments; and
- Calibration standards (e.g. standard gas(es), calibration fluids, pH standards, etc.).

3.0 HEALTH AND SAFETY

Potentially hazardous conditions relating to chemicals under investigation, equipment and tools in use, utility services in investigation areas, or certain work activities may exist on the site. Protocols are established in each site-specific Health & Safety Plan (HASP) based on corporate health and safety policies and manuals, past field experience, specific site conditions, and chemical hazards known or anticipated to be present from available site data. Before site operations begin, all employees, and subcontractor personnel will have read and understood the HASP and all revisions. Before work begins, all site project staff will sign an agreement and acknowledgment form indicating that they have read and fully understood the HASP and their individual responsibilities, and fully agree to abide by the provisions of the HASP.

4.0 EXECUTION

4.1 General

Field measurements are used to verify sampling procedures, assist in sample selection, and evaluate field conditions. A variety of equipment/instrumentation may be utilized to obtain the field measurements required to satisfy and document project goals outlined in Work Plans or otherwise specified. Therefore, instrument operators must be thoroughly familiar with the operation of measuring instruments. Users will complete the appropriate training and be certified, if required, before using the instrument in the field.

All equipment/instrumentation will be uniquely and permanently identified (model/serial number, equipment inventory number, etc.). Manufacturer's guides/operation manuals will be kept with the instrument or a designated area on the Site, as appropriate. The Site Manager or designee will obtain, identify, and control all equipment/instrumentation to be used during the project.

4.2 Calibration

Measuring equipment/instrumentation must be calibrated before initial use as recommended in the manufacturer's guide/operation manual. Equipment/instrumentation shall be re-calibrated following 1) the manufacturer's recommended calibration frequency, 2) long periods between uses, 3) readings observed above or below the range of the instrument, and/or 4) signs or evidence of equipment malfunction. Daily calibration and re-calibration activities will be recorded in the field logbook and/or on the appropriate field form and will include the following information:

- Date and time of calibration or re-calibration;
- Equipment/instrumentation manufacturer, make, and model;
- Equipment/instrumentation serial or unique inventory number;
- Method of calibration (may reference procedures outlined in the guide/instrument manual);
- Calibration standard(s) used; and
- Deviations, if any, from the manufacturer's recommended procedure(s) or calibration frequency.

4.3 Operation

Manufacturer's instructions will be followed for correct method(s) of operation. Equipment malfunctions and deviations, if any, from the manufacturer's recommended method(s) of operation will be documented in the field logbook and/or on the appropriate field form. Readings obtained from each instrument shall be recorded in the field logbook or on the appropriate field form.

4.4 Maintenance

Equipment/instrumentation will be maintained in accordance with the manufacturer's recommendations. Equipment/instrumentation that malfunctions or is scheduled for routine maintenance will be clearly labeled to prevent its continued use until repairs/maintenance is completed. The Site Manager or her/his designee will be responsible for ensuring that malfunctioning equipment is identified, marked for repair, repaired either in-house or by an outside company in accordance with manufacturer guidelines, checked following repair, and returned to service. The Site Manager or her/his designee will maintain an equipment log, which contains the following:

- Equipment/instrumentation manufacturer, make, and model;
- Equipment/instrumentation serial or unique inventory number;
- Recommended calibration frequency;
- Recommended maintenance frequency, as appropriate;
- Status (in service, not in use, or out of service for repair/maintenance);
- Dates of status changes (e.g. date returned to service); and
- Inspection and maintenance/repair dates.

5.0 REFERENCE

USEPA, April 2007, Guidance for Preparing Standard Operating Procedures (SOPs), EPA/600/B-07/001

STANDARD OPERATING PROCEDURE NO. SAS-02-02

SURVEYING Revision 0

1.0 PURPOSE

This Standard Operating Procedure (SOP) describes the guidelines for surveying activities that will be performed by the consultant. Timeframes or budgets may not always allow for surveying by licensed surveying professionals. The consultant may need to obtain information in a timely and cost effective manner that will aid in project decisions (e.g. groundwater flow direction, hydraulic gradient, etc.). In these cases, the consultant will perform basic surveying to obtain this information. The purpose of this SOP is to outline general procedures to obtain reliable surveying data in support of project goals and decisions as required in the Work Plan or as otherwise specified.

2.0 EQUIPMENT AND MATERIALS

- Topcon Auto Level or equivalent;
- Tripod;
- Plumb line;
- Graduated surveying stick; and
- Field logbook and/or appropriate field form.

3.0 HEALTH AND SAFETY

Potentially hazardous conditions relating to chemicals under investigation, equipment and tools in use, utility services in investigation areas, or certain work activities may exist on the site. Protocols are established in each site-specific Health & Safety Plan (HASP) based on corporate health and safety policies and manuals, past field experience, specific site conditions, and chemical hazards known or anticipated to be present from available site data. Before site operations begin, all employees, and subcontractor personnel will have read and understood the HASP and all revisions. Before work begins, all site project staff will sign an agreement

and acknowledgment form indicating that they have read and fully understood the HASP and their individual responsibilities, and fully agree to abide by the provisions of the HASP.

4.0 EXECUTION

4.1 General

Survey equipment shall be inspected prior to commence of surveying activities to ensure that all components are present and functional. Graduations on the surveying stick should be well marked. Equipment not in satisfactory condition should be removed from service and repaired or replaced, as appropriate.

Operators must be thoroughly familiar with the operation of surveying equipment. Operators should complete the appropriate training and be certified, if required, before using the equipment in the field.

4.2 Benchmark Selection

A fixed, permanent reference point is critical for tying in surveying results to known site features and reproducing surveying results in the field. The benchmark should be a unique location, preferable one that would appear on a plat of survey, that is not likely have its elevation affected by field or outside activities (e.g. flange bolt on a fire hydrant, base of a property boundary stake, corner of a loading dock, etc.). The benchmark shall be documented and clearly described in the field logbook and/or on the appropriate field form. The location of the benchmark should also be measured relative to a minimum of two other permanent site features. These measurements should also be recorded in the field logbook and/or on the appropriate field form. Typically, a licensed surveyor will establish the benchmark which will be used on the site. If the benchmark cannot be established by a licensed surveyor, make sure the Project Manager is informed.

4.3 General Procedures

Surveying will be conducted following the procedures outlined below:

1. Make a table in the field logbook or utilized the appropriate field form to record the following information:
    a. Benchmark;
    b. Assigned benchmark elevation;

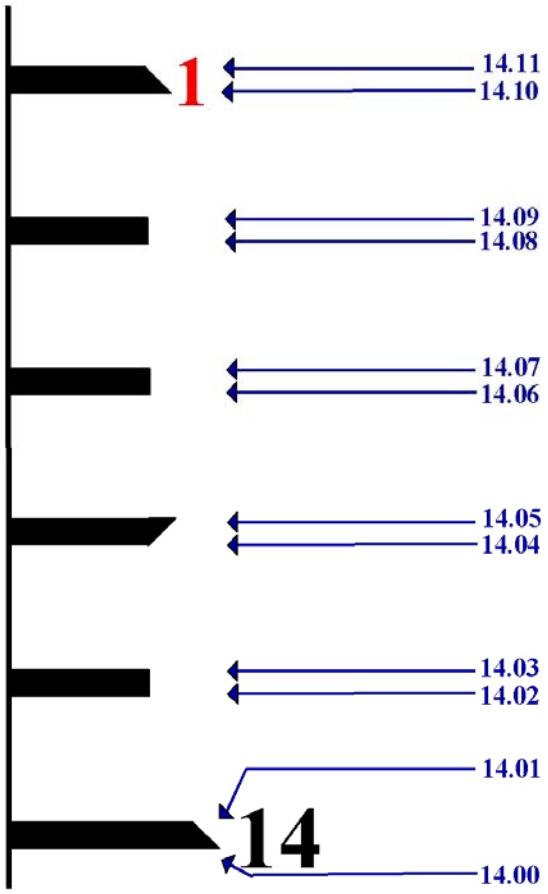
c. Instrument Height(s);
d. Temporary Benchmark(s);
e. Survey points (e.g. monitoring well top of casing, ground surface, etc.); and
f. Surveying stick graduation.

2. Locate a benchmark (BM).
3. Describe the BM in the field logbook and/or on the appropriate field form. The description must be detailed enough to allow a person unfamiliar with the Site to locate the BM.
4. Measure the location of the BM from at least two other permanent site features and record the measurements in the field logbook and/or on the appropriate field form.
5. Choose a location for the tripod that is in view of the benchmark and as many surveying points as possible.
6. Set up the tripod and attach the plumb line.
7. Adjust the tripod legs until the plumb line hangs at a 90-degree angle from the top plate of the tripod.
8. Place the Topcon Auto Level (or equivalent) on the tripod.
9. Adjust the auto level legs until the Topcon Auto Level is level as indicated by the leveling bubble (Note: The bubble should be centered in the circle).
10. Verify the auto level is level by rotating the auto level 90, 180, and 270-degrees. The bubble should be centered in the circle at all three positions. If the bubble is not centered in the circle, repeat Steps 7 through 10.
11. The surveying assistant will stand the surveying stick on the benchmark.
12. The operator should view the surveying stick through the Topcon Auto Level (or equivalent), read and record the surveying stick graduation that intercepts the center crosshairs of the auto level electronically or in the field logbook and/or on the appropriate field form as the back sight measurement.
13. The operator shall record Instrument Height #1 (IH_1), which is obtained by adding the surveying stick graduation to the arbitrary benchmark elevation (usually 100.00 feet), in the field logbook and/or on the appropriate field form.
14. The surveying assistant will stand the surveying stick on a surveying point.

15. The operator should view the surveying stick through the Topcon Auto Level (or equivalent), read and record the surveying stick graduation that intercepts the center crosshairs of the auto level in the field logbook and/or on the appropriate field form as the front sight measurement.
16. The operator shall record Survey Point #1 (SP_1) elevation, which is obtained by subtracting the surveying stick graduation from IH_1, electronically or in the field logbook and/or on the appropriate field form.
17. Repeat Steps 14 through 16 until all survey points or all survey points visible from the first instrument location have been measured.
18. Locate a Temporary Benchmark (TBM_1).
19. The surveying assistant will stand the surveying stick on TBM_1.
20. The operator should view the surveying stick through the Topcon Auto Level (or equivalent), read and record the surveying stick graduation that intercepts the center crosshairs of the auto level in the field logbook and/or on the surveying data form as the front sight measurement.
21. The operator shall record TBM_1 elevation, which is obtained by subtracting the surveying stick graduation from IH_1, electronically or in the field logbook and/or on the appropriate field form.
22. The operator shall relocate the instrument and repeats Steps 6 through 10. Note: During this time the surveying assistant should not remove the surveying stick from the top of TBM_1.
23. Once the instrument has been relocated and leveled, the operator should view the surveying stick through the Topcon Auto Level (or equivalent), read and record the surveying stick graduation that intercepts the center crosshairs of the auto level in the field logbook and/or on the surveying data form as the back sight measurement.
24. The operator shall record Instrument Height #2 (IH_2), which is obtained by adding the surveying stick graduation to the TBM_1 elevation determined in Step 21, electronically or in the field logbook and/or on the appropriate field form.
25. If all surveying points have been measured, skip to Step 36. If all surveying points have not been measured, proceed to step 26.
26. Repeat Steps 14 through 16 until all survey points or all survey points visible from the instrument location have been measured.
27. Locate another Temporary Benchmark ($TBM_{\#}$).
28. The surveying assistant will stand the surveying stick on $TBM_{\#}$.

29. The operator should view the surveying stick through the Topcon Auto Level (or equivalent), read and record the surveying stick graduation that intercepts the center crosshairs of the auto level in the field logbook and/or on the surveying data form as the front sight measurement.
30. The operator shall record $TBM_{\#}$ elevation, which is obtained by subtracting the surveying stick graduation from $IH_{\#}$, electronically or in the field logbook and/or on the appropriate field form.
31. The operator shall relocate the instrument and repeats Steps 6 through 10. Note: During this time the surveying assistant should not remove the surveying stick from the top of $TBM_{\#}$.
32. Once the instrument has been relocated and leveled, the operator should view the surveying stick through the Topcon Auto Level (or equivalent), read and record the surveying stick graduation that intercepts the center crosshairs of the auto level electronically or in the field logbook and/or on the appropriate field form as the back sight measurement.
33. The operator shall record Instrument Height # ($IH_{\#}$), which is obtained by adding the surveying stick graduation to the $TBM_{\#}$ elevation determined in Step 30, electronically or in the field logbook and/or on the appropriate field form.
34. Repeat Steps 14 through 16 until all survey points or all survey points visible from the instrument location have been measured.
35. If all surveying points have been measured, skip to Step 36. If all surveying points have not been measured, proceed to step 27.
36. The surveying assistant will stand the surveying stick on the benchmark.
37. The operator should view the surveying stick through the Topcon Auto Level (or equivalent), read and record the surveying stick graduation that intercepts the center crosshairs of the auto level in the field logbook and/or on the surveying data form as the front sight measurement.
38. The operator record BM elevation, which is obtained by subtracting the surveying stick graduation from $IH_{\#}$, electronically or in the field logbook and/or on the appropriate field form.
39. If the BM elevation is within 02/100 of an inch ($\pm$0.02) of the initial or assigned BM elevation, the surveying has been completed successfully. If the BM elevation is not within 02/100 of an inch ($\pm$ 0.02) of the initial or assigned BM elevation, an error was made or the tripod and/or auto level were bumped during surveying. In this case, the surveying activities were not completed successfully and must be repeated.

4.4 Reading the Surveying Stick



5.0 REFERENCE

USEPA, April 2007, Guidance for Preparing Standard Operating Procedures (SOPs), EPA/600/B-07/001

SOP SERIES SAS-03

SAMPLE COLLECTION - GENERAL

STANDARD OPERATING PROCEDURE NO. SAS-03-01

SAMPLE IDENTIFICATION, LABELING, DOCUMENTATION AND PACKING FOR TRANSPORT Revision 2

1.0 PURPOSE

This Standard Operating Procedure (SOP) describes procedures for identifying, logging, packing, preserving and transporting environmental samples for chemical or physical analysis.

2.0 EQUIPMENT AND MATERIALS

- Sample containers;
- Sample labels;
- Field logbook;
- Pens with waterproof, non-erasable ink;
- Chain-of-custody (COC) forms;
- Custody seals
- Clear plastic sealing tape;
- Coolers for transporting samples to the laboratory;
- Ice (if required)
- Gallon-size sealable plastic bags; and
- Air bills or similar transportation provider forms.

3.0 HEALTH AND SAFETY

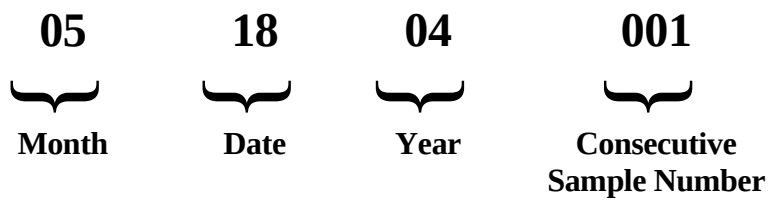
Potentially hazardous conditions relating to chemicals under investigation, equipment and tools in use, utility services in investigation areas, or certain work activities may exist on the site. Protocols are established in each site-specific Health & Safety Plan (HASP) based on corporate health and safety policies and manuals, past field experience, specific site conditions, and chemical hazards known or anticipated to be present from

available site data. Before site operations begin, all employees, and subcontractor personnel will have read and understood the HASP and all revisions. Before work begins, all site project staff will sign an agreement and acknowledgment form indicating that they have read and fully understood the HASP and their individual responsibilities, and fully agree to abide by the provisions of the HASP.

4.0 SAMPLE IDENTIFICATION

A unique 9-digit identification code will be assigned to each sample retained for analysis on all United States Environmental Protection Agency (USEPA) sites and on a site-specific basis as determined by the project manager. This code will be formatted as a number series with the sample month (2-digit), date (2-digit), year (2-digit) and consecutive sample number (3-digit).

Example: The first sample for a particular phase of an investigation collected on May 18, 2004 would be identified as 051804001, as detailed below.



Consecutive sample numbers will indicate the individual sample sequence in the total set of samples collected during that phase of investigation.

Duplicate samples will be assigned a unique 9-digit identification code. Samples selected for matrix spike/matrix spike duplicates (MS/MSD) will include "MS/MSD" at the end of the unique 9-digit identification code. The unique 9-digit identification code is compatible with USEPA electronic data submittal requirements. Sample identification numbers will be used on sample labels, COC forms and other applicable sampling activity documentation.

Sample media codes will be noted on field notes and logs using the following media codes:

Sample numbering will consist of up to three components: a three-character alpha Site identification code; a four- to five-character alpha numeric sample type code; and the sample depth below ground surface (bgs, if soil) or the sample depth below top of mudline (sediment). Groundwater samples will typically not include sample depth bgs unless there are multiple intervals sampled in one open borehole. An example of a completely numbered sample, with each component identified follows.

Example: AES-SP01-(0-0.5)
Where: AES – Any Environmental Site
SP01 – Soil probe location number 1
(0-0.5) – soil sample collected 0-0.5 feet bgs

The site identification code (e.g. AES in the sample above) will remain the same for all samples collected at the Site.

The sample type code (SP01) will vary depending on sample type and location. The following are typical alpha codes to be used in the alphanumeric sample type code for samples:

- AS – air sparging sample;
- CF – confirmation soil sample;
- GP – gas probe sample;
- MW – groundwater monitoring well (if deep and shallow wells are sampled for the same location, this type code is modified to DMW (deep well) and SMW (shallow well);
- PZ – piezometer sample;
- RW – recovery well sample;
- SB – soil boring sample;
- SD – sediment sample;
- SP – soil probe sample;
- SS – surface soil sample;
- SR – source material (used if source material is known to exist);

- SV – soil vapor probe sample;
- SW – surface water sample;
- TP – test pit sample; and
- VE – vapor extraction sample.
- WC – waste characterization (may be preceded by S for solid waste or L for liquid waste).

If additional sampling type codes are required, they will be specified in the site-specific work plan.

When completing soil borings and probes, if a water sample is collected from an open boring or probe location a "w" will be attached to the end of the alpha-numeric sample type code (e.g., SB01W). The numerical portion of the sample type code will indicate the sample location (i.e., boring location 01, 02, 03, etc.).

5.0 SAMPLE LABELING

The following information will be included on each sample label: site name/client, sample number, name of sampler, sample collection date and time, depth of sample (if applicable), analyses or tests requested and preservations added. Information known before field activities (site name, analyses requested, etc.) can be preprinted on sample labels. Duplicate sample labels can be prepared when various sample aliquots must be submitted separately for individual analyses.

6.0 SAMPLE DOCUMENTATION

The following itemized list will be used as a general reference for completion of sample documentation:

- Record all pertinent sample activity in the field logbook in accordance with SOP SAS-01-01, Field Documentation and Reporting.
- Make or obtain a list of samples to be packaged and shipped that day.
- Determine number of coolers required to accommodate the day's shipment based on number of samples to be shipped, number of containers per sample and number of sample containers that will fit in each cooler.
- If samples are shipped by Federal Express or other express shipping service, complete an air bill.

- Assign chain-of-custody form to each cooler and determine which sample containers will be shipped in each cooler. (Note: More than one chain-of-custody form may be needed to accommodate number of samples to be shipped in one cooler).
- Determine which samples will be shipped under each chain-of-custody form. Each day that samples are shipped, record chain-of-custody form numbers, and air bill numbers (if used) in field logbook. Cross-reference air bill and chain-of-custody numbers.
- Complete COC forms in accordance with SOP SAS-03-02, Chain of Custody.
- Assign custody seals to each cooler and temporarily clip seals to each chain-of-custody form.
- Group paperwork associated with each cooler with a separate clip.
- Obtain necessary field team members' full signatures or initials on appropriate paperwork.

7.0 SAMPLE PACKING FOR TRANSPORT

The steps outlined below will be followed to pack the sample containers into coolers for shipment.

1. Each glass sample container will be wrapped with protective packing material.
2. Packing material will be placed in the bottom of each cooler for cushioning.
3. Sample containers will be placed inside each cooler, taking care not to overfill the cooler.
4. Ice will be double bagged sealable plastic bags and added to the cooler on top of the samples. Sample containers will be packed so that they are not in direct contact with ice. The remaining empty space in each cooler will be filled with packing material.
5. Packing material will be placed over the top of the bagged ice.
6. The chain-of-custody records will be signed, and the date and time at which the coolers are sealed for transport by a shipping company, or relinquished to a delivery service or the laboratory sample receiving department will be indicated.
7. Copies of chain-of-custody records will be separated. The original signature copies will be sealed in a large, sealable, plastic bag and taped to the inside lid of a cooler. A copy of each COC will be retained by the Site Manager.
8. If any cooler has a drain, the drain will be taped shut.
9. The lid to each cooler will be closed and latched. Custody seals will be affixed to each cooler between the lid and the body of the cooler. One custody seal will be placed on the front of the cooler, and one will

be placed on the back. Custody seals will be covered with clear plastic tape. An example of a custody seal is located in SOP SAS-03-02, Chain-of-Custody.

10. The cooler will be closed and taped shut on both ends with several revolutions of tape. Also, tape will be wrapped several times around the cooler body and the cooler lid to firmly secure the cooler lid and body together.
11. Samples will be packed and transported to the analytical laboratory within one day of collection.

8.0 REFERENCES AND ADDITIONAL RESOURCES

ASTM International, D3694-96(2004) Standard Practices for Preparation of Sample Containers and for Preservation of Organic Constituents

ASTM International, D4220-95R00 Practices for Preserving and Transporting Soil Samples

ASTM International, D4840-99(2004) Standard Guide for Sampling Chain-of-Custody Procedures.

ASTM International, D6911-03 Guide for Packaging and Shipping Environmental Samples for Laboratory Analysis

International Air Transport Association (IATA), 2005, Dangerous Goods Regulations.
USEPA, 1981, *Final Regulation Package for Compliance with DOT Regulations in the Shipment of Environmental Laboratory Samples*, Memo from David Weitzman, Work Group Chairman, Office of Occupational Health and Safety (PM-273), April 13, 1981.

USEPA, April 2007, Guidance for Preparing Standard Operating Procedures (SOPs), EPA/60/B-07/001.

STANDARD OPERATING PROCEDURE NO. SAS-03-02

CHAIN OF CUSTODY Revision 0

1.0 PURPOSE

This Standard Operating Procedure describes procedures for preparation and use of the chain of custody (COC) form that accompanies field-collected soil, sediment, water, air or geotechnical samples. Procedures are also provided for preparation and use of custody seals for securing openings of sample containers during transport of samples to the analytical laboratory. COC forms and custody seals are used to provide documentation of sample integrity from the time of collection to time of sample receipt and acceptance by the analyzing laboratory or testing laboratory.

2.0 EQUIPMENT AND MATERIALS

- COC forms;
- Custody seals;
- Gallon-size plastic sealable bags; and
- Clear plastic packing tape.

3.0 HEALTH AND SAFETY

Potentially hazardous conditions relating to chemicals under investigation, equipment and tools in use, utility services in investigation areas, or certain work activities may exist on the site. Protocols are established in each site-specific Health & Safety Plan (HASP) based on corporate health and safety policies and manuals, past field experience, specific site conditions, and chemical hazards known or anticipated to be present from available site data. Before site operations begin, all employees, and subcontractor personnel will have read and understood the HASP and all revisions. Before work begins, all site project staff will sign an agreement and acknowledgment form indicating that they have read and fully understood the HASP and their individual responsibilities, and fully agree to abide by the provisions of the HASP.

4.0 METHODS/PROCEDURES

4.1 Chain of Custody Form Items to Complete

Attachment A presents an example COC form. The following general information must be completed on the COC form:

- Laboratory name, address, telephone number;
- Document control number;
- Site manager name on Attention line;
- Project number;
- Site name;
- Complete field sample identification number;
- Sample collection date for soil, sediment and water samples or sample start and collection dates for ambient air monitoring samples;
- Time of sample collection for soil, sediment and water samples or sample start and collection times for air monitoring samples;
- Sample matrix (i.e. liquid, solid, or gas);
- Number of containers;
- Analysis or testing method requested;
- End pressure, Summa can identification number, and flow controller serial number for air monitoring BTEX samples and filter identification number for air monitoring PM10 samples.
- Sample preservatives used (other than ice) in Remarks column;
- Turn-around time requested (specify if turn-around time is business or calendar days) in Special Instructions box;
- Signature of person(s) conducting sampling;
- Strike line with samplers initials and the date samples are relinquished in order to complete unused portion of COC form;
- Signature of person relinquishing the sample custody (person relinquishing custody must be a sampler to ensure chain of custody is maintained);
- Signature of person transporting samples to the lab if other than sampler/relinquisher or third-party carrier;

- **DO NOT** write "FedEx" or other third-party carrier's name in the Relinquished To box. The air bill and carrier's established custody documentation procedure is used to verify custody during transportation.
- Date and time samples are relinquished;
- Custody seal identification numbers; and
- Freight bill identification number in Special Instructions box or at bottom of Remarks column (if third party shipper is used to transport).

4.2 Chain of Custody Form and Procedures

- If a sampling event requires the use of more than one shipping container (cooler for soil/sediment/water samples or box for certain air monitoring samples or soil samples for geotechnical testing) a separate COC form must be completed for each shipping container. For each container, the associated COC form must list only the samples contained in that container.
- When it is known that numerous chains of custody will be required for a project or for a single sampling event, it is acceptable to pre-type the laboratory name, address, telephone number, project number, site name, 3-letter project name abbreviation in Document Control Number area, and site manager name. These are the only information fields that may be pre-typed.
- Each COC should contain a unique document control number in the format: 3-letter project name abbreviation – identification number – 4 digit year, e.g. AES-001-2006, AES-002-2006 and so on. For each project COC identification numbers should be assigned sequentially beginning with 001 for each calendar year. (Exception: for remediation ambient air monitoring projects that span two or more calendar years, continue sequential numbering throughout the project.)
- The COC form must be completed in ink.
- Corrections must be made by drawing a single line through the data that is in error and initialing and dating at the end of the line. The use of correction fluid or tape is not allowed. Do not write over text or numbers to correct. If multiple corrections are needed, copy correct information to a new COC and destroy copy with errors.
- If the number of samples included in the shipping container is less than the number of data entry lines on the COC, draw a single diagonal line running from left down to the lower right hand corner of the field sample data area. The sampler's initials and date must appear along the line.

- Seal the completed COC form in a plastic storage bag. For cooler shipping containers, tape the bag to the inside of the cooler lid prior to sealing the cooler. For box shipping containers, insert the bagged COC form into the box prior to sealing the box.
- If samples are to be shipped by a third party carrier (e.g. Federal Express) the third party carrier does not need to sign the chain of custody. The COC form may be sealed inside the container prior to shipping. If samples are to be hand-delivered to a laboratory by someone other than the sampler/relinquisher (e.g., site construction manager or laboratory courier), the sampler/relinquisher must transfer custody by having the carrier sign in the "Received By" section of the COC form and enter the date and time of transfer. Then seal the COC form inside the container.

4.3 Custody Seal Procedures

A sample custody seal is a strip of adhesive paper used to detect unauthorized tampering with samples prior to receipt by the laboratory. Attachment A presents an example of a completed custody seal. Custody seals are pre-numbered and should be used instead of laboratory custody seals whenever possible.

- A minimum of two custody seals are used per shipping container, one on each long side of the cooler or across each opening of a box. For coolers, one of the custody seals must be placed from the lid to the side of the cooler such that it would be necessary to break the seal in order to open the shipping container. Cover each custody seal with a single piece of clear packing tape wrap it around the perimeter of the cooler. For boxes, place a custody seal across each opening of the box (top and bottom) and cover with a piece of packing tape, making sure tape is secured in such a way that it cannot easily be removed.
- The relinquisher must sign and date each custody seal in ink and include the site identification abbreviation in the custody seal number area.
- Each custody seal has a pre-printed unique six-digit identification number. This number along with the site identification abbreviation must be transferred exactly to the Custody Seal Number box on the COC. The identification number of all custody seals used in conjunction with the COC must be listed on the COC. If a custody seal other than the pre-numbered one, a unique identification number must be printed on the seal and transferred exactly to the Custody Seal Number box on the COC.

5.0 DATA MANAGEMENT AND RECORDS MANAGEMENT

A copy of the COC forms and freight bills used in the above procedure will be transferred to the Project Manager and maintained in the project-specific file as part of the official chain of custody record.

6.0 QUALITY CONTROL AND QUALITY ASSURANCE

- Each COC will be checked for accuracy and completeness (i.e. sample list complete, sample data entered correctly etc.) by another member of the field sampling team before samples are relinquished for transport. In the event the sampler is the sole person on-site, the COC will be checked for accuracy and completeness within 24 hours of the sampling event by a member of the project team.
- Review of the COC forms and freight bills used in the above procedure will be conducted during evaluations of sampling procedures by personnel. The COC forms will also be reviewed as part of the data validation process when the laboratory returns the completed COCs following receipt and analysis of samples.

7.0 REFERENCES AND ADDITIONAL RESOURCES

ASTM, International, 1999, D 4840-99 (2004) Standard Guide for Sample Chain-of-Custody Procedures.

USEPA, April 2007, Guidance for Preparing Standard Operating Procedures (SOPs), EPA/600/B-07/001.

ATTACHMENT A
EXAMPLE CHAIN-OF-CUSTODY AND CUSTODY SEAL FORMS

Request for Chemical Analysis and Chain of Custody Record

Send Results to:	Laboratory:	Document Control No.:
	Address:	Lab. Reference No. or Episode N
Attention:	City/State/ZIP:	
	Telephone:	
Project Number:		Sample Type
Site Name:		Matrix

Sample Number			Sample Event		Sample Depth (in feet)		Sample Collected		Matrix			Number of Containers	Parameter/Method Code						Remarks
Group or SWMU Name	Sample Point	Sample Designator	Round	Year	From	To	Date	Time	Liquid	Solid	Gas								

Sampler *(Print Name)*:	Sampler *(signature)*:	Custody Seal Number	Special Instructions

Relinquished By *(signature)*: 1.	Date/Time	Received By *(signature)*: 1.	Date/Time	Ice Present in Container: Yes ☐ No ☐	Temperature Upon Receipt:
Relinquished By (signature): 2.	Date/Time	Received By (signature): 2.	Date/Time	Laboratory Comments:	

Signature _____

Date _____ # -112504

STANDARD OPERATING PROCEDURE NO. SAS-03-03

SAMPLE LOCATION IDENTIFICATION AND CONTROL Revision 1

1.0 PURPOSE

This Standard Operating Procedure (SOP) describes the guidelines for the identification of sample locations and field measurements of topographic features, water levels, geophysical parameters, and physical dimensions frequently required during groundwater, hazardous waste, and related field investigation activities. The scope of such measurements depends on the purpose of the field investigation. Samples collected from each sampling location will have a unique sample identified in accordance with ENV-03-01.

All sampling locations shall be uniquely identified and depicted on an accurate drawing or a topographic or other site map, or be referenced in such a manner that their location(s) are established and reproducible. A sample location must be identified by a coordinate system or other appropriate procedures which would enable an independent investigator, to collect samples from reproducible locations. Repetitive sampling might be performed, for example, to monitor the progress of a remedial program, to check for suspected erroneous results from an initial sampling, or to check the reproducibility of results.

2.0 EQUIPMENT AND MATERIALS

- Site map;
- Surveying equipment;
- Measuring tape;
- Field notebooks/logs; and
- GPS unit.

3.0 SAMPLE LOCATION IDENTIFICATION

Locations for collection of samples are assigned alphanumeric codes which are used to coordinate laboratory data tracking and graphic depiction of sample locations on drawings and figures. Samples collected from each sampling location will have a unique sample identified in accordance with ENV-03-01. Each sample location is issued a unique numeric code that corresponds to a specific map location on a plan view of a site and vicinity. An alpha-code (letter) is used to describe the type of sampling activity performed at the specific numeric location. The following alpha codes will be used:

Air	AS	Air Sparging Point
	GP	Gas Probe
	GM	Gas Monitoring Well
	SV	Soil Vapor Probe
	VE	Soil Vapor Extraction Well
Material	AC	Asbestos Containing Material
	LS	Lead Wipe Sample
Sediment	SD	Sediment
Soil	SB	Soil Boring
	SS	Surface Soil
	TP	Test Pit
	EB	Excavation Base
	EW	Excavation Well
Water	MW	Groundwater Monitoring Well
	PZ	Piezometer
	PW	Potable Water Well
	RW	Recovery Well
	TW	Temporary Monitoring Well
	SW	Surface Water
	SG	Surface Water Staff Gauge

A typical series of alpha numeric codes for a site might include test pit locations TP01 through TP12; borings SB01, SB02, SB03; monitoring wells MW01, MW02, MW03, etc.

Each sample location will have only one alphanumeric code. A borehole drilled for the purpose of installing a monitoring well will be identified as MW01. There should not be a location SB01 for soil sample location identification and MW01 for groundwater sample location identification.

Note that soil borings performed for the purpose of collecting a groundwater grab sample (e.g. through screened auger, open borehole, Geoprobe®, Hydro-Punch®, etc.) are identified as soil borings, not monitoring wells. These types of sampling locations may be further identified on site figures with a clarifying suffix (GW), such as SB01(GW). The site map legend will explain the meaning of all symbols used to identify sampling points.

If previous work has been performed at a site, the alphanumeric code should continue with previous successive numbers. If there is any potential for conflict with existing sample number identifiers, the proposed sample number should begin with series 101, 1001, or other appropriate system. Dashes should be eliminated from sample number identifiers, such as SB101 should be used instead of SB-101.

4.0 SURVEYED LOCATIONS

Survey control should be performed following monitoring well and borehole installations by a surveyor licensed in the state of the project site. Vertical elevations to the top of each new well casing will be established within ± 0.01 foot. Ground surface elevations at each well and borehole location should be established within ± 0.01 foot. Elevations should be referenced to the North American Vertical Datum of 1988 (NAVD 88). Alternative systems may be used on a project-specific basis, with appropriate reference documentation in the master project file and final reports.

Lateral locations based on an established grid system will be determined for each sampling location. Lateral locations should be calculated to within ± 1-foot. The site map should include at minimum sampling locations, structure boundaries, property boundaries, nearby surface water, site grid system origin according

to either a state plane coordinate system or latitude and longitude, bar scale, and a north arrow. Specific state reporting and mapping requirements should be checked prior to final plan development.

In conducting vertical surveys, the following procedures should be used or should be referenced in subcontractor service agreements with licensed surveyor:

- When practical, level circuits will close on a bench mark other than starting bench mark;
- Readings should be recorded to the closest 0.01 foot using a calibrated rod;
- Foresight and backsight distances should be reasonably balanced;
- Rod levels should be used;
- No side shot should be used; and
- Benchmarks should be traceable to USGS benchmarks.

Field staff and contractors will record all field data collected during survey activities in accordance with SOP SAS-01-01 for incorporation into site data reports, maps, tables, etc.

5.0 TRIANGULATION

Triangulation shall be used if a registered surveyor is not contracted. This method encompasses distance measurement from sampling points relative to two and sometimes three known points. Distance measurements should be accurate to within ±1 foot allowing for sag in the measuring tape and other inaccuracies. Measuring to two known points is typically adequate for rough measurements made with a pocket transit and 100-foot tape; however, measuring to three known points reduces potential error. Distance measurements should be made relative to distinctive features having a probable life span in excess of 10 years. Examples include the following:

- Power pole located on north side of plant entrance #1 driveway;
- SE corner of plant building 2 located at 111 Survey Circle; or
- NW corner of retaining wall running north-south along Bass Creek.

Unacceptable triangulation points include fence posts, trees, temporary stakes or markers etc., unless these features are to be located within 15 days by survey.

When locating sampling points, decide which site features will be important to illustrate on a site map in the report. If appropriate, also locate areas of known or suspected spills and manholes which may represent migration pathways. Establish relative locations of these and other pertinent site features by triangulation.

The client should be consulted regarding the existence of plant drawings or other surveyed maps which accurately show the relative location of major site features. The field notebook should record information describing the drawing (e.g., who it was prepared by, date, drawing number, etc.) and describe the points on the drawing being used for triangulation purposes.

If only one site feature is convenient for triangulation, the remaining two reference points can be established by running a line toward a more distant site feature, which can be easily located later, and the recorded distance from a defined point along that line.

6.0 GLOBAL POSITIONING SYSTEM (GPS)

Global Positioning System (GPS) is an appropriate method to determine the location of site investigation features in limited circumstances, and is solely at the discretion of the project manager.

There are significant accuracy limitations with GPS which limits the effectiveness of this technology in the role of sample location. For sites where accuracy less than ± 10 feet is acceptable, or surveying is impractical, GPS is a suitable sample location method. GPS is not suitable for sites requiring a higher degree of accuracy. However, the recording of GPS coordinates is encouraged for all sites where monitoring wells or other permanent features may be obscured by snow, vegetation, or other obstructions. In such cases, GPS may assist in locating the monitoring well, etc. despite the accuracy limitations.

7.0 REFERENCES

ASTM International, 2002, D5906-02 Guide for Measuring Horizontal Positioning During Measurements of Surface Water Depths.

USEPA, 2001, Environmental Investigations Standard Operating Procedures and Quality Assurance Manual (EISOPQAM), Region 4, Enforcement and Investigations Branch, SESD, Athens, Georgia, www.epa.gov/region4/sesd/eisopqam/eisopqam.html.

USEPA, April 2007, Guidance for Preparing Standard Operating Procedures (SOPs), EPA/60/B-07/001.

Zilkoski, David B., J.H. Richards, and G.M. Young , 1992, Results of the General Adjustment of the North American Vertical Datum of 1988, American Congress on Surveying and Mapping, Surveying and Land Information Systems, Vol. 52, No. 3, 1992, pp.133-149.

SOP SERIES SAS-04
SAMPLING QUALITY CONTROL

STANDARD OPERATING PROCEDURE NO. SAS-04-01

DATA QUALITY GENERAL CONSIDERATIONS Revision 0

1.0 PURPOSE

This Standard Operating Procedure (SOP) describes general guidelines that are to be used in conjunction with the USEPA mandatory data quality objectives (DQO) process. Guidelines are intended to assist with planning and conducting quality sampling operations in the field.

2.0 EQUIPMENT AND MATERIALS

Equipment and materials will vary based on the type of data and method of data collection. In general, the following equipment and materials shall be utilized to assist with the collection and recording of quality data:

- Site map(s);
- Field logbook and/or appropriate field forms;
- Method-specific, laboratory-provide containers for the collection of samples for chemical analysis;
- Chain of custody (COC) forms;
- Measuring tape(s), Global Position System (GPS), or other equipment necessary to document sample location; and
- Camera.

3.0 HEALTH AND SAFETY WARNING

Potentially hazardous conditions relating to chemicals under investigation, equipment and tools in use, utility services in investigation areas, or certain work activities may exist on the site. Protocols are established in each site-specific Health & Safety Plan (HASP) based on corporate health and safety policies and manuals, past field experience, specific site conditions, and chemical hazards known or anticipated to be present from available site data. Before site operations begin, all employees, and subcontractor personnel will have read and understood the HASP and all revisions. Before work begins, all site project staff will sign an agreement

and acknowledgment form indicating that they have read and fully understood the HASP and their individual responsibilities, and fully agree to abide by the provisions of the HASP.

4.0 SAMPLING CONSIDERATIONS

There are two categories of sampling collection activities. The categories include 1) collection of screening data with definitive confirmation and 2) collection of definitive data. The decision making process in each category incorporates a wide range of analytical methods and provides quality analytical data.

Screening data provides a quick, preliminary assessment of site contamination that involves rapid, non-rigorous methods of sample preparation and less precise analytical methodologies. Preliminary assessments of types and levels of contaminants can be made quickly which allows for the greatest amount of data with the least expenditure of time and money. Screening data generally produces data that can be identified and quantified, but may not be relatively precise. A minimum of 10 percent of the screening data must be confirmed using definitive data. Without sufficient confirmation data, screening data will not be recognized as quality data.

Data that is generated by stringent analytical methods (e.g. approved USEPA methods) is defined as definitive data. Whether generated on or off-site, the quality assurance/quality control (QA/QC) protocol of the analytical methods must be achieved. Analytical and total measurement of error must be calculated for the data to be considered definitive. Definitive data is generally analyte-specific and can be confirmed by subsequent analysis (e.g. duplicate, matrix spike/matrix spike duplicate, etc.). Printed or electronic data, spectra, and chromatographs are typically provided as backup information.

Several factors must be considered prior to data collection to ensure the data obtained meets the DQOs and is appropriately addressed and incorporated into procedures outlined the Site-Specific Work and/or Field Sampling Plan (FSP) or otherwise specified in activity- or task-specific SOPs:

- Representative Sampling Sites – Selection of representative sampling sites is dependent on the type of investigation undertaken.

- Analytical Methods/Parameters – The analytical methods/parameters shall be dictated by the constituents of potential concern (COPCs), sample media, potential range of chemical concentrations, site conditions, and field investigator's knowledge.
- Sample Collection Method – The sample collection method to be used shall be dictated by the investigation, analytical methods/parameters, and category of data desired (screening data with definitive confirmation or definitive data).
- Sampling Equipment – The sampling equipment shall be dictated by the investigation, category of data desired (screening data with definitive confirmation or definitive data), analytical method, sampling method, and the potential for the equipment materials to affect analytical results (e.g. cross-contamination potential, sorption potential, etc.).

5.0 REFERENCES AND ADDITIONAL RESOURCES

ASTM International, 2000, D6568 Standard Guide for Planning, Carrying Out, and Reporting Traceable chemical Analyses of Water Samples.

ASTM International, 2004, D7069-04 Guide for Field Quality Assurance in a Ground-water Sampling Event.

USEPA. 1994a. Evaluation of Sampling and Field-Filtration Methods for the Analysis of Trace Metals in Ground Water s. September 1994, EPA/600/SR-94/119.

USEPA, 1995. Method 1669: Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria levels. April 1995, EPA/621/R-95/114.

USEPA, April 2007, Guidance for Preparing Standard Operating Procedures (SOPs), EPA/600/B-07/001.

STANDARD OPERATING PROCEDURE NO. SAS-04-02

DATA QUALITY OBJECTIVES Revision 0

1.0 PURPOSE

This Standard Operating Procedure (SOP) describes the guidelines for determining Data Quality Objectives (DQOs). The USEPA has established a mandatory DQO process for sites to ensure that all data is scientifically valid. The DQO process also establishes protocols to support decision making which includes defining the type, number, and quality of the environmental data to be collected.

2.0 DATA QUALITY OBJECTIVES PROCESS

The DQO process is a series of seven steps that facilitate the planning of environmental data collection activities. DQOs are qualitative and quantitative statements developed from the DQO process. The DQO process helps investigators ensure that data collected are of the right type, quantity, and quality needed to support environmental decisions.

The following are the seven steps of the DQO process (USEPA 2006):

1. State the problem.
2. Identify the goal of the study.
3. Identify information inputs.
4. Define the boundaries of the study.
5. Develop the analytic approach.
6. Specify performance or acceptance criteria.
7. Develop the plan for obtaining data.

This DQO process shall define qualitative and quantitative criteria for determining when, where, and how many samples (measurements) to collect for a desired level of confidence. The DQO process shall be employed during the planning stages of any field investigation activities that include analytical data collection. This information along with sampling procedures, analytical procedures, and appropriate quality

assurance/quality control (QA/QC) procedures shall be documented in the Quality Assurance Project Plan (QAPP), Field Sampling Plan and SOPs, and/or Site-Specific Work Plan(s).

3.0 DATA QUALITY OBJECTIVE (DQO) LEVELS

Data collected and analyzed from a field investigation is categorized by five DQO levels. Each of these levels is determined by the types of technology and documentation used, and the analytical degree of sophistication. These DQO levels are numbered I through V, with Level I being the lowest quality data and Level V the highest. These DQO levels will be used when determining the appropriate data collection methods for achieving the goals of the field investigation.

3.1 DQO Level I

DQO Level I data typically are field screening data collected in real-time using portable instruments, e.g. photoionization detector (PID). This DQO level is normally used to aid in sample point selection and to differentiate highly impacted samples from low-level impacts. Level I analyses are used for qualitative data collection only, and results cannot be considered quantitative. Instrument calibration provides the quality control component for Level I data.

3.2 DQO Level II

DQO Level II data is typically characterized by field analysis of samples using portable instruments that can be used on-site, e.g. portable gas chromatograph (GC) instrument. This level is considered semi-quantitative due to lack of supporting QA/QC documentation. Instrument calibration provides the quality control component for Level II data.

3.3 DQO Level III

DQO Level III data is data generated in an analytical laboratory using USEPA and other recognized standard methods with rigorous QA/QC protocols. The analytical laboratory can be either an on-site mobile laboratory or a remote laboratory. Level III data is considered quantitative; it provides identification and quantification of chemicals in environmental samples. This data may be used for evaluating compliance of sample results

relative to environmental standards, in risk assessment studies, and may be compared to results of other samples collected at a similar DQO level.

3.4 DQO Level IV

DQO Level IV data is the same as DQO Level III with the addition of rigorous documentation including raw data from the analytical laboratory instruments. Level IV analytical data is quantitative and defensible. Superfund investigations normally require DQO Level IV for data used in conducting formal human health risk assessment studies. Standard USEPA-designated field procedures are required on all investigations requiring DQO Level IV quality data. Any deviations from these methods shall be documented in the field logbook and/or on the appropriate field form, or in the approved Site-Specific Work and/or Sampling Plan. Field personnel involved in data collection shall be aware that such deviations in the fieldwork may reduce the DQO level of the data, with a subsequent reduction in data usability.

3.5 DQO Level V

DQO Level V data include deviations from the standard suites of parameters normally analyzed under the USEPA protocols. DQO Level V procedures are by definition non-standard and, therefore, they are not discussed in detail. DQO Level V procedures generally require pre-approval before use and shall be addressed in Site-Specific Work and/or FSP(s), as appropriate.

4.0 REFERENCES AND ADDITIONAL RESOURCES

ASTM International, D7069-04 Guide for Field Quality Assurance in a Ground-water Sampling Event.

USEPA, 1990, Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan and Data Validation Procedures, Interim Final, EPA/540/G-90/004.

USEPA, 2001, Environmental Investigations Standard Operating Procedures and Quality Assurance Manual (EISOPQAM), Region 4, Enforcement and Investigations Branch, SESD, Athens, Georgia.

USEPA, 2002a, Quality Management Plan for the Superfund Division, Region 5, Chicago, Illinois.

USEPA, 2002b, Guidance for Quality Assurance Project Plans, EPA QA/G-5, EPA/240/R-02/009.

USEPA, 2006, Guidance on Systematic Planning Using the Data Quality Objectives Process, EPA QA/G-4, EPA/240/B-06/001.

USEPA, April 2007, Guidance for Preparing Standard Operating Procedures (SOPs), EPA/600/B-07/001.

STANDARD OPERATING PROCEDURE NO. SAS-04-03

QUALITY CONTROL SAMPLES Revision 1

1.0 PURPOSE

This Standard Operating Procedure (SOP) describes the guidelines for the collection of quality control (QC) samples. QC samples are utilized to evaluate field and laboratory quality control procedures and the precision, accuracy, representativeness and comparability of data obtained during investigative activities.

2.0 EQUIPMENT AND MATERIALS

Equipment and materials for the collection and analysis for quality control samples shall be identical to those used for the collection and analysis of the sample of similar media and collection method.

3.0 HEALTH AND SAFETY WARNING

Potentially hazardous conditions relating to chemicals under investigation, equipment and tools in use, utility services in investigation areas, or certain work activities may exist on the site. Protocols are established in each site-specific Health & Safety Plan (HASP) based on corporate health and safety policies and manuals, past field experience, specific site conditions, and chemical hazards known or anticipated to be present from available site data. Before site operations begin, all employees, and subcontractor personnel will have read and understood the HASP and all revisions. Before work begins, all site project staff will sign an agreement and acknowledgment form indicating that they have read and fully understood the HASP and their individual responsibilities, and fully agree to abide by the provisions of the HASP.

4.0 QUALITY CONTROL SAMPLES

QC samples include field duplicate samples, matrix spike (MS) and matrix spike duplicate (MSD) samples, trip blanks, and field/equipment blanks.

4.1 Field Duplicate Samples

Duplicate samples are collected from various media to evaluate the representativeness and comparability of data obtained during investigative activities. These samples shall be collected at the same time, using the same procedures, the same equipment, and in the same types of containers as the original sample. They shall also be preserved in the same manner and submitted for the same analyses as the requested analytes. The minimum/required frequency of duplicate sample collection for each sample media shall be specified in the Quality Assurance Project Plan (QAPP), Field Sampling Plan (FSP), and/or Site-Specific Work and/or Sampling Plan(s). If the frequency of collection is in conflict between the above mentioned documents, the Site-Specific Work shall take precedence. The evaluation of these samples is described in the QAPP.

4.2 Matrix Spike and Matrix Spike Duplicate Samples

MS/MSD samples are collected from various media to evaluate the precision and accuracy of laboratory procedures. As with field duplicate samples, MS/MSD samples shall be collected at the same time, using the same procedures, the same equipment, and in the same types of containers as the original sample. They shall also be preserved in the same manner and submitted for the same analyses as the requested analytes. The minimum/required frequency of MS/MSD sample collection for each sample media shall be specified in the QAPP, FSP, and/or Site-Specific Work and/or Sampling Plan(s). If the frequency of collection is in conflict between the above mentioned documents, the Site-Specific Work shall take precedence. The evaluation of these samples is described in the (QAPP).

4.3 Trip Blanks

Trip blanks are used as control or external quality assurance/quality control (QA/QC) samples to detect contamination that may be introduced in the field, in transit to or from the sampling site, or in bottle preparation, sample log-in, or sample storage sites within the laboratory. Trip blanks will also reflect contamination that may occur during the analytical process. Trip blanks are samples of reagent free water, properly preserved, which are prepared in a controlled environment prior to field mobilization. These samples are prepared by the analytical laboratory. The trip blanks are kept with the laboratory provided containers through the sampling process and returned to the laboratory with the other aqueous samples for VOC analysis. Trip blanks must be used for samples intended for VOC analysis and are preserved and analyzed for

VOCs only. One trip blank will accompany each cooler containing aqueous samples for VOC analysis or as specified in the QAPP, FSP, and/or Site-Specific Work and/or Sampling Plan(s). If the frequency of collection is in conflict between the above mentioned documents, the Site-Specific Work shall take precedence. The evaluation of these samples is described in the QAPP.

4.4 Field/Equipment Blanks

Field/equipment blanks are used to determine 1) if non-disposable equipment decontamination procedures are being carried out properly and there is no "carryover" from one sample to another and 2) ensure that disposable equipment is free of measurable concentrations of constituents of potential concern. Field/equipment blank shall be collected by pouring distilled or ultrapure/DI water onto or into the sampling equipment and direct filling the appropriate sample containers with the DI water from the sampling equipment. Field blank will be handled and treated in the same manner as all samples collected unless noted otherwise below. Field/equipment blanks are always collected after sampling equipment has been decontaminated and may be performed prior to collecting the first sample, after collecting highly impacted samples, and/or at the conclusion of sampling. The minimum/required frequency of field/equipment blanks for each sample media shall be specified in the QAPP, FSP, and/or Site-Specific Work and/or Sampling Plan(s). If the frequency of collection is in conflict between the above-mentioned documents, the Site-Specific Work shall take precedence. The evaluation of these samples is described in the QAPP.

5.0 REFERENCES AND ADDITIONAL RESOURCES

USEPA, 1990, Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan and Data Validation Procedures, Interim Final, EPA/540/G-90/004.

USEPA, 2001, Environmental Investigations Standard Operating Procedures and Quality Assurance Manual (EISOPQAM), Region 4, Enforcement and Investigations Branch, SESD, Athens, Georgia.

USEPA, 2002a, Quality Management Plan for the Superfund Division, Region 5, Chicago, Illinois.

USEPA, 2002b, Guidance for Quality Assurance Project Plans, EPA QA/G-5/ EPA/240/R-02/009.

USEPA, April 2007, Guidance for Preparing Standard Operating Procedures (SOPs), EPA/600/B-07/001.

STANDARD OPERATING PROCEDURE NO. SAS-04-04

EQUIPMENT DECONTAMINATION Revision 1

1.0 PURPOSE

This Standard Operating Procedure (SOP) describes the guidelines for decontamination of equipment prior to its 1) initial use onsite 2) reuse at another sampling interval or location, and 3) demobilization from Site as specified in the Site-Specific Work Plan or as otherwise specified. Personnel decontamination is described in the site-specific Health and Safety Plan (HASP).

2.0 EQUIPMENT AND MATERIALS

Decontamination equipment and materials may vary based on the size or type of equipment, but generally include the following:

- Decontamination detergents (e.g. Alconox);
- Tap water;
- Deionized, distilled and organic-free water;
- Acid solution (optional);
- Approved cleaning solvent (e.g. isopropanol, hexane, Stoddard) (optional and/or site-specific);
- Metal scrapers;
- Brushes;
- Buckets;
- Steam cleaner or high-pressure, hot water washer;
- Racks, normally metal (not wood) to hold miscellaneous equipment;
- Buckets, 55-gallon drums, or other approved storage containers;
- Plastic sheeting;
- Utility pump (optional);
- Paper towels;
- Personal protective equipment; and

- Logbook and/or appropriate field form.

3.0 HEALTH AND SAFETY WARNINGS

Potentially hazardous conditions relating to chemicals under investigation, equipment and tools in use, utility services in investigation areas, or certain work activities may exist on the site. Protocols are established in each site-specific HASP based on corporate health and safety policies and manuals, past field experience, specific site conditions, and chemical hazards known or anticipated to be present from available site data. Before site operations begin, all employees, and subcontractor personnel will have read and understood the HASP and all revisions. Before work begins, all site project staff will sign an agreement and acknowledgment form indicating that they have read and fully understood the HASP and their individual responsibilities, and fully agree to abide by the provisions of the HASP.

4.0 EXECUTION

4.1 General Requirements

All expected types and levels of contamination shall be discussed during field activity planning and a decontamination plan sufficiently scoped within the Site-Specific Work Plan. Until proven otherwise, all personnel and equipment exiting the area of potential contamination/work zone will be assumed to be contaminated. Personnel involved in decontamination efforts shall be equipped with the same personal protective equipment as those conducting the field activity until a lower level of risk can be confirmed.

Decontamination procedures may be subject to federal, state, local, and/or the client's regulations. All regulatory requirements shall be satisfied, but the procedures adopted shall be no less rigorous than those presented in this SOP.

Climatic conditions anticipated during decontamination activities may impact the implementation of the procedures describe in this SOP. Special facilities or equipment may be needed to compensate for weather conditions (e.g. temporary, heated structures for winter work). In addition, it may be necessary to establish special work conditions during periods of high heat or cold stress.

4.2 Preparation

4.2.1 Site Selection

The equipment decontamination facility or area shall be located in an area where contaminants can be controlled and at the boundary of a "clean zone" or "cold zone". The location shall also be selected to prevent equipment from being exposed to additional or other contamination. When Site layout and size allow, a formal "contamination reduction zone" or "warm zone" shall be established in which decontamination efforts will be conducted. This area shall be conspicuously marked as "off-limits" to all personnel not involved with the decontamination process.

The equipment decontamination facility or area shall also be located where decontamination fluids and materials can be contained and easily discarded or discharged into controlled areas of waste. This facility or area shall have adequate space for the storage of unused and used storage containers, until such time as they can be relocated or disposed of.

4.2.2 Decontamination Pad

Some Site may have an existing decontamination pad. If a decontamination pad has been previously constructed, it shall be evaluated for logistics capabilities, such as water supply, electrical power, by-product handling capabilities, and cleanliness. An existing decontamination pad shall be used or modified to the extent practical. If a decontamination pad is not present or the existing pad cannot be used or modified for use, a pad consisting of a sturdy base, lined with plastic sheeting of high-density polyethylene with four raised sides and a sump for collection of fluids will be constructed unless otherwise specified by the Site-Specific Work Plan. Some field activities, which consist of hand sampling or other small equipment, may not require a decontamination pad. In these cases, buckets, small wash tubs, or small pools may be sufficient for equipment decontamination.

4.2.3 Water Supply

Large volumes of water, often exceeding 1,000 gallons per day, may be required for decontamination activities, especially for drill rigs and other large equipment. The water used for decontamination must be clean, potable water. In most cases, municipal water supplies are adequate. Private potable water supplies shall be evaluated on a case-by-case basis prior to use.

4.2.4 Cleaning Equipment and Supplies

A portable steam cleaner or high-pressure hot water washer is normally required to clean contaminated heavy machinery (e.g. drill rig, backhoe, etc.) as well as materials and associated tools. Most steam cleaners and washers are commercially available for both portable generators or supplied AC power. Site logistical considerations may dictate the type of equipment required. Typical steam cleaners/washers operated on relatively low water consumption rates (2 to 6 gallons per minute) and can be used in conjunction with other cleaning fluids mixed with the water. High-pressure steam is preferred to high-pressure water because of steam's ability to volatilize organics and to remove oil and grease from equipment. Since units tend to malfunction easily and are susceptible to frequent maintenance and repair (especially under frequent use and freezing conditions), a second or back-up unit should be available onsite or arranged for with a nearby vendor to the extent practical, for longer duration field activities.

Garden sprayers may be used for final rinsing or cleaning. However, these sprayers shall be limited to use with small hand tools and sampling equipment. Since these sprayers tend to malfunction or break down easily, a second or backup sprayer shall be maintained onsite.

Metal scrapers and brushes shall be used to physically remove heavy mud, dust, etc. from equipment prior to and during the equipment rinses. Scrapers and brushes are relatively inexpensive and shall be replaced as necessary to support cleaning activities.

Decontamination solutions may consist of the following:

- Laboratory detergent shall be a standard brand of laboratory detergent such as Alconox® or Liquinox®;
- Nitric acid solution (10 percent) will be made from reagent-grade nitric acid and deionized water;
- Cleaning solvent;
- Potable water;
- Deionized water;
- Distilled water; and
- Organic-free water.

The use of cleaning solvents shall be carefully considered prior to use with respect to safety, handling and disposal, and potential impact to analytical results and the environment.

Potable, deionized, distilled, and organic-free water should contain no heavy metals or other inorganic compounds (i.e., at or above analytical detection limits) as defined by a standard Inductively Coupled Argon Plasma Spectrophotometer (ICP) scan and no pesticides, herbicides, extractable organic compounds, and less than 5 µg/l of purgeable organic compounds as measured by a low-level GC/MS scan. The level of QA/QC required during the project to verify and document the purity of the water and the number of rinsate blanks required to verify and document the effectiveness of decontamination procedures shall be based on data quality and project objectives as specified by the Site-Specific Work and/or Quality Assurance Project Plan (QAPP). The use of non-potable or untreated potable water supply for decontamination is not acceptable.

4.3 Equipment and Vehicle Decontamination Procedures

4.3.1 General Procedures

The following procedures are presented as general guidelines and shall be followed unless otherwise required by the Site-Specific Work Plan or otherwise specified:

1. Physical removal of particles;
2. Steam or water wash with potable water to remove particles;
3. Rinse critical pieces of equipment with an approved cleaning solvent or nitric acid solution (optional and/or site-specific);

4. Steam or water wash with a mixture of detergent and potable water;
5. Steam or water rinse with potable water; and
6. Air dry.

4.3.2 Special Case – Drilling Equipment

During decontamination of drilling equipment and accessories, clean auger flights, drill rods, and drill bits as well as all couplings and threads. Generally, decontamination can be limited to the back portion of the drill rig, drill rig tires, drill rig mast, and parts that come in direct contact with samples or casings or drilling equipment placed into or over the borehole.

Some items of drilling equipment cannot typically be decontaminated. These items include wood materials (e.g. planks), porous hoses, engine filters, etc. These items shall not be removed from site until ready to dispose of in an appropriate manner.

Other drilling equipment that requires extensive decontamination is water or grout pumps. Circulating and flushing with a potable water and detergent solution followed by potable may be sufficient to clean them. However, if high or unknown contaminant concentrations or visible product is known to exist, then disassembly and thorough cleaning of internal parts shall be required before removal of the equipment from the Site.

4.4 Sampling Equipment Decontamination Procedures

4.4.1 General Procedures

Sampling equipment shall be decontaminated prior to its 1) initial use onsite 2) reuse at another sampling interval or location, and 3) demobilization from Site using the following procedure as general guidelines unless otherwise required by the Site-Specific Work Plan or otherwise specified:

1. Physical removal of particles;
2. Rinse with an approved cleaning solvent or nitric acid solution (optional and/or site-specific);
3. Wash and scrub with a detergent and potable water solution;
4. Rinse with potable water;

5. Rinse with high-grade water (deionized, distilled, or organic-free);
6. Air dry; and
7. Wrap in aluminum foil, shiny side out, for transport.

4.4.2 Special Cases

Steel tapes, water and interface probes, transducers, and thermometers, shall be cleaned with a detergent solution and rinsed with high-grade water. Water quality meters shall be rinsed with high-grade water.

Pumps with internal components that contact a water sample (e.g., bladder pump) shall be deconned by pumping a detergent solution (minimum two gallons) followed by potable water rinse (minimum two gallons) and a high-grade water rinse (minimum two gallons). If field conditions (e.g., the presence of product) indicate circulating and flushing a pump with a detergent solution followed by potable water is not an adequate field decontamination procedure, the pump shall be disassembled and internal parts thoroughly cleaned with a detergent solution followed by potable water rinse and a high-grade water rinse.

4.5 Well Material Decontamination Procedures

Well construction materials, including end cap, screen, and riser pipe, whether polyvinyl chloride (PVC), stainless steel, or other material shall be cleaned with a steam cleaner or high-pressure hot water washer before it is installed in the borehole. Well construction materials shall be handled while wearing latex, nitrile, or equivalent gloves.

4.6 Equipment Segregating and Labeling

Decontaminated equipment shall be stored separating from contaminated equipment in a manner that prevents the recontamination of "clean" equipment. Equipment that is cleaned utilizing these procedures shall receive a final decontamination process at the completion of field activities and will be tagged, labeled, or marked with the date that the equipment was cleaned.

4.7 Disposal Practices

4.7.1 General Disposal Requirements

Disposal practices shall be in accordance with the procedures specified in the Site-Specific Work Plan. Decontamination derived waste shall be contained, consolidated, and disposed shall be conducted to prevent the spread of contaminants offsite or to "clean" locations onsite and in a manner consistent with the acceptable disposal practices for the type and concentration of wastes that may be contained in the decontamination derived waste. Contaminated equipment or solutions shall not be discarded in any manner that may lead to the contamination of the environment by the migration of hazardous constituents from the Site by air, surface, or subsurface transport mechanisms.

4.7.2 Onsite Storage, Treatment, and Disposal

On controlled, secured facilities, most decontamination derived waste shall remain onsite pending waste characterization and disposal. The decontamination derived waste shall be labeled and stored in a manner that does not pose a threat to contamination of personnel or areas to be sampled or a threat of release to the environment. Liquids and solids shall be containerized separately in approved storage containers. Each storage container shall be labeled with the following:

- Contents (e.g. decontamination fluids);
- Incompatibilities (if applicable);
- Accumulation date; and
- Contact person and phone number.

In some cases, an onsite treatment system is available for certain types of decontamination derived waste. Treatment of decontaminated derived wastes shall be performed in accordance with any applicable permit requirements and federal, state, and local laws and regulations.

In some cases, certain materials that are not contaminated or contain very low levels of contamination may be disposed of onsite. Such materials may include may include drill cuttings, wash water, drilling fluids, and water removed during the purging or sampling of wells. The low level of contamination (concentrations

below applicable cleanup objectives) shall be confirmed prior to onsite disposal. Onsite disposal shall comply with federal, state, and local laws and regulations.

4.7.3 Offsite Disposal

In most cases, decontamination derived waste cannot be disposed of or treated onsite. Decontaminated derived waste shall be properly characterized prior to shipment to a licensed and approved treatment, storage, and disposal facility. Decontamination fluids discharged to sanitary and/or storm sewers shall be properly permitted prior to discharge. Offsite disposal shall comply with federal, state, and local laws and regulations.

5.0 DOCUMENTATION

Decontamination activities, including deviations for general procedures, shall be recorded in the field logbook and/or on the appropriate field form as specified in SOP ENV-01-01 or as required by the Site-Specific Work.

6.0 REFERENCES

ASTM International, D5088-02 Practices for Decontamination of Field Equipment Used at Waste Sites.

USEPA, Region IV, 2001, Environmental Investigations Standard Operating Procedures and Quality Assurance Manual (EISOPQAM), Enforcement and Investigations Branch, SESD, Athens, Georgia.

USEPA, April 2007, Guidance for Preparing Standard Operating Procedures (SOPs), EPA/60/B-07/001.

SOP SERIES SAS-05
SUBSURFACE INVESTIGATION METHODS

STANDARD OPERATING PROCEDURE NO. SAS-05-01

SUBSURFACE EXPLORATION CLEARANCE Revision 0

1.0 PURPOSE

The purpose of this standard operating procedure (SOP) is to ensure intrusive site activities are conducted with the knowledge and approval of property owners, utility providers, and governmental agencies, as appropriate, in a manner that minimizes potential exposure to subsurface hazards and damage to subsurface utilities. Clearance of intrusive activity areas must be obtained from appropriate authorities and site operators. This clearance comes in the form of 1) permission to enter a property, 2) ensuring subsurface conditions will not be encountered that endanger the safety of site personnel, subcontractors, and authorized visitors, and 3) demarcation of subsurface utilities/structures.

2.0 HEALTH AND SAFETY WARNING

Potentially hazardous conditions relating to chemicals under investigation, equipment and tools in use, utility services in investigation areas, or certain work activities may exist on the site. Protocols are established in each site-specific Health & Safety Plan (HASP) based on corporate health and safety policies and manuals, past field experience, specific site conditions, and chemical hazards known or anticipated to be present from available site data. Before site operations begin, all employees, and subcontractor personnel will have read and understood the HASP and all revisions. Before work begins, all site project staff will sign an agreement and acknowledgment form indicating that they have read and fully understood the HASP and their individual responsibilities, and fully agree to abide by the provisions of the HASP.

3.0 SITE ACCESS AND ENTRY

Access to properties subject to activities conducted under the contracted scope of services/work order is the responsibility of the client as set forth in the environmental engineering and consulting services agreement. The client will give reasonable access to client-owned properties for performance of services. If the client

does not own or operate the property, it will secure an access agreement or other authorization for consultant access to the site that will address the terms of access as well as any access restrictions.

Site entrance procedures are as follows:

- The client will be advised of the date and time of site entrance and the purpose of the entrance.
- In addition, if the site is not owned by the client, the owner of the property will be advised of the date and time of site entrance and the purpose of the entrance.
- Entrance to the site shall be through the main gate or other entrance specified by the client or owner.
- If a site contact is present at the site, the consultant will introduce herself/himself and provide the site contact with a business card. The consultant shall also identify other personnel who are or will be on-site and explain their functions.
- The consultant will complete any general sign-in procedures required for site entrance, unless otherwise instructed by the client or property owner.
- If a liability waiver is presented that is not pre-agreed to by the consulting company and the client or owner, the consultant will call her/his Project Manager for instructions.
- If entry is refused, the consultant will leave the site entrance and call her/his Project Manager for instructions.
- The time of site entrance, or refusal of entrance will be included in the field logbook entry for the day.

4.0 SITE CLEARANCE

Site clearance is required prior to commencement of any investigation or remediation activities. Three categories of site clearance are required:

1. Property boundary identification,
2. Utility clearance, and
3. Clearance of any on-site subsurface obstructions, hazards or protected structures identified by the client or property owner.

4.1 Property Boundary Identification

The first step in site clearance is to demarcate the property boundaries. A client- or property owner-provided plat of survey will be used if available. If no current plat of survey is available, the client or property owner may be asked to have a licensed surveyor conduct a survey and mark the property boundaries or the consultant may hire a surveyor to conduct the survey on behalf of the client. All property boundaries should be fully known and marked prior to commencement of any site investigation activities. If an investigation location appears to be outside of the property boundaries that encompass the area to which access has been granted, the Project Manager shall be consulted prior to commencement of any activity at that location.

4.2 Utility Clearance

Written clearance of all underground utilities (private, commercial, and public) must be obtained prior to commencing intrusive site activities (e.g. soil borings, GeoProbe advancement, test pit or trench excavation). Utility clearance is vital for safe operations and provides notification to utility companies of intrusive work being conducted in the vicinity of underground lines and structures. The utility clearance process is initiated by calling a state- or city-specific one-call utility clearance hotline. One-call center information may be obtained by calling "811" or visiting http://www.call811.com/state-specific.aspx. Generally, utility clearance must be requested at least 48 hours in advance of the commencement of intrusive activities. In some states, including Illinois, utility clearance is the responsibility of the contractor performing the intrusive work (e.g. drilling subcontractor or excavation company) rather than the contracting environmental consultant.

Assemble the following information to make the call or provide this information to the subcontractor:

- Name, address and phone number of person making request;
- Type and extent (size of excavation) of work being performed;
- Start date and time of excavation;
- Address, including street, number, city, and county (township range, section and quarter section information may also be required);
- Nearest crossroad; and
- General legal description, if available.

The following table lists the one-call-center contact information for the Midwest.

	One Call System Name	Non-Emergency	Emergency	Website
Illinois (except City of Chicago)	J.U.L.I.E. Joint Utility Locating Information for Excavators	(800) 892-0123	- - -	http://www.illinois1call.com
City of Chicago	DIGGER	(312) 744-7000	- - -	http://www.cityofchicago.org
Indiana	I.U.P.P.S. Indiana Underground Plant Protection Service	(800) 382-5544	- - -	http://www.iupps.org
Iowa	Iowa One Call	(800) 292-8989	(800) 292-8989	http://www.iowaonecall.com
Kansas	Kansas One Call	(800) 344-7233	- - -	http://kansasonecall.com
Michigan	MISS DIG System Inc.	(800) 482-7171	- - -	http://www.missdig.org/MissDig/
Missouri	Missouri One Call System	(800) 344-7483	- - -	http://www.mo1call.com
Wisconsin	DIGGER	(800) 242-8511	(800) 500-9592	http://www.diggershotline.com

Utility location agencies may only mark-out utilities on public right-of-ways adjacent to the property under investigation and sewer and water departments may not be included in the locating services provided by the one-call centers. Request additional information from any utility companies or public utilities departments not included in the one-call locating services. It may be advisable at some properties to hire a private utility locating contractor to do additional on-site clearance prior to commencement of intrusive activities. Consult with the Project Manager about conducting additional locating activities if the information provided by the one-call center is not complete with respect to what is known about possible underground utilities at the site.

Do not proceed with any intrusive activities until all utility clearances and mark-outs have been performed by the locating services or participating utility companies. Do not proceed without verification from the subcontractor that the utility clearance has been performed if it was the subcontractor's responsibility to request the utility locating service. Prior to start of intrusive activities, walk the site and surrounding public right-of-way with the subcontractor locating any utility markers and discuss procedures for avoiding marked utilities during the site investigation. If at any time, a potential hazard exists at a proposed investigation

location that cannot be resolved with available information and utility location markings, contact the Project Manager for instructions.

4.3 On-Site Subsurface Obstructions, Hazards and Protected Structures Clearance

The property owner (client or third party) or a designated representative shall also be contacted prior to commencement of any intrusive activities to obtain additional information regarding on-site subsurface obstructions, hazards or protected structures and clearance to conduct the activities in pre-determined locations on the site. If possible, as part of the investigation planning activities, obtain architectural or engineering drawings of the site that include building layouts and locations of subsurface utilities and structures. Schedule an on-site meeting prior to commencement of activities to review locations of proposed locations for intrusive activities. Request that the owner or his authorized representative mark or flag the locations of any known subsurface obstruction, hazard or structure that must not be damaged. In some cases, it may be appropriate to make a site visit prior to the on-site review meeting to mark out proposed subsurface investigation locations for approval by the owner or his representative. During the review meeting, if verbal approval is given to proceed, make an entry in the field logbook including the date, time and person granting approval along with details of the approval given. Record any refusals of permission to perform intrusive activities in the same manner. Include detailed information regarding the reason for the refusal in the field logbook.

If permission for any proposed intrusive activities is refused by the property owner or his representative, inform the Project Manager. If the investigation location approval meeting is performed on a day scheduled for investigation activity, and any locations are not authorized by the owner or his representative, contact the site manager immediately for instructions. Do not proceed with any intrusive activity in the non-authorized locations unless subsequent approval is forthcoming, and do so only upon receiving approval to proceed from the owner/representative and the site Project Manager. Make a detailed record of the refusal and subsequent resolution in the field logbook.

On vacant or undeveloped sites, or sites located in remote areas, on-site client/owner approval of investigation areas may not be practical. In such situations, prior approval of investigation areas may be obtained from the client or owner by means of a site investigation map that includes investigation locations (boreholes, test pit

or trench locations, monitoring wells, etc.). Site features, boundary lines, and any known subsurface utilities or structures shall also be included on the site investigation map to provide the reviewer with adequate information to determine if any subsurface hazards exist in the vicinity of any of the proposed intrusive activities.

5.0 REFERENCES

USEPA, April 2007, Guidance for Preparing Standard Operating Procedures (SOPs), EPA/600/B-07/001

USEPA, Region IV, 2001, Environmental Investigations Standard Operating Procedures and Quality Assurance Manual (EISOPQAM), Enforcement and Investigations Branch, SESD, Athens, Georgia

STANDARD OPERATING PROCEDURE NO. SAS-05-02

FIELD LOGGING AND CLASSIFICATION OF SOIL AND ROCKS Revision 1

1.0 PURPOSE

This Standard Operating Procedure (SOP) describes the guidelines for logging and classifying soil samples and rock cores during subsurface explorations as described in the Site-Specific Work Plan, or as otherwise specified, for the purposes of characterizing subsurface geologic conditions at a Site.

2.0 EQUIPMENT AND MATERIALS

General:

- Ruler or tape measure in 0.01-foot increments;
- Field logbook and field boring log forms;
- Pen(s) with waterproof, non-erasable ink;
- Camera;
- 5-gallon bucket and wire or nylon brushes, decontamination water, laboratory grade detergent (Alconox or similar), and paper towels;
- Aluminum foil or roll-plastic; and
- Personnel protective equipment, as appropriate, including nitrile gloves for handling impacted soil samples.

Soil Logging:

- Large sharp stainless-steel knife;
- Slim stainless-steel spatula or carpenter's 5-in-1 tool;
- Color chart;
- Comparative charts; and
- Pocket penetrometer.

Rock Coring and Logging:

- Core box(es);
- Hand lens; and
- Comparative charts.

3.0 HEALTH AND SAFETY

Potentially hazardous conditions relating to chemicals under investigation, equipment and tools in use, utility services in investigation areas, or certain work activities may exist on the site. Protocols are established in each site-specific Health & Safety Plan (HASP) based on corporate health and safety policies and manuals, past field experience, specific site conditions, and chemical hazards known or anticipated to be present from available site data. Before site operations begin, all employees, and subcontractor personnel will have read and understood the HASP and all revisions. Before work begins, all site project staff will sign an agreement and acknowledgment form indicating that they have read and fully understood the HASP and their individual responsibilities, and fully agree to abide by the provisions of the HASP.

4.0 GENERAL PROCEDURES

Geologic logging and material classification shall be conducted only by a trained logging technician (e.g. geologist, hydrogeologist, engineer, or environmental scientist). Field data and observations associated with field logging and material classification shall be documented during logging and for all drilling and sampling activities in accordance with SOP ENV-01-01, Field Documentation and Reporting, if not otherwise specified in this SOP. All field drilling activities should be recorded in a field logbook and/or on a field boring log form. In addition, tools and equipment used while logging boreholes shall be decontaminated between boring/probe locations and prior to each sampling event in accordance with the Quality Assurance Project Plan (QAPP).

5.0 LOGGING AND DOCUMENTATION PROCEDURES

The logging technician shall record all pertinent drilling information in the field logbook and/or on the field boring log form (Attachment A). At a minimum, the following technical information with respect to pre-sampling, drilling operations and observations, and sample recovery loss shall be recorded, if applicable:

- Project name and number;
- Location (well or boring/probe number) or other sample station identification, including a rough sketch;
- Name of the logging technician overseeing the drilling operations;
- Drill rig manufacturer and model;
- Drilling company name and city and state of origin;
- Driller and assistant(s) names;
- Drilling method(s) and fluids used to drill the borehole;
- Drilling fluid manufacturer;
- Drilling fluid gain or loss;
- Depth of drilling fluid loss;
- Water source (e.g. fire hydrant, faucet, municipality, etc.);
- Borehole diameter;
- Borehole start time and date;
- Borehole completion time and date;
- Sample type (e.g. split spoon, macrocore, etc.);
- Hammer weight/drop and blow counts;
- Sample recovery/loss and explanation of loss, if known;
- Drilling rates when applicable to lithology classification;
- Description of soil and/or rock classification and lithology;
- Lithologic changes and boundaries;
- Depth to water (first encountered [during drilling] and stabilized [upon completion of drilling]);
- Total borehole depth;
- Evidence of impact (e.g. staining, odors, free-phase product, etc.);
- Well materials, construction, and placement information (e.g. casing type and diameter, screen type and diameter, etc.);
- Sample identifications and depths for chemical and geotechnical samples;
- A description of any tests conducted in the borehole; and
- Problems with the drill rig or drilling process.

When rock coring is performed, the following information shall also be recorded:

- Top and bottom of cored interval;
- Core length;
- Coring rate in minutes per foot;
- Core breakage due to discontinuities (e.g. natural fractures versus coring-induced breaks);
- Total core breakage; and
- Number of breaks per foot.

6.0 SOIL SAMPLE CLASSIFICATION AND DESCRIPTIONS

6.1 Description of Hierarchy

The required order of terms is as follows:

1. Depth measured in tenths of a foot;
2. Soil color;
3. Major soil type (e.g. CLAY). This descriptor can include the secondary soil constituent as a modifier (e.g. silty CLAY);
4. Unified Soils Classification System (USCS) Group Symbol in parentheses (e.g. ML);
5. Evidence of environmental impacts, if encountered (e.g. free-phase product, staining, sheen, etc.);
6. Other soil components of the sample listed with the appropriate percent descriptor (i.e. “with”, “some” or “trace.”);
7. Consistency, relative density or degree of cementation;
8. Moisture and plasticity, if relevant; and
9. Miscellaneous (e.g. condition of sample, deposition, fractures, seams, bedding dip, bedding features, fossils, oxidation, drilling rate data when applicable for sample classification, etc.).

6.2 Color

The color descriptions will be consistent with the Munsell Soil Color Chart, Geological Society of America (GSA) Rock Color Chart, or as required by the Work Plan or otherwise specified. Write the Munsell color name with the Munsell color identification number in parenthesis following the color name. The major color

is listed first with any accessory color(s) thereafter (e.g. clay, yellowish gray (5Y 7/2) with pale green (5G 7/2) mottles). If descriptors are used for other soil components, the color designation follows each descriptor.

6.3 Soil Types

Soil descriptions and classification shall be conducted in accordance with the USCS (ASTM D2488-06). The order and presentation of the primary textural classification terms is as follows:

1. Major soil type (e.g. CLAY). This descriptor can include the secondary soil constituent as a modifier (gravelly, sandy, silty, or clayey). Nouns are unabbreviated (e.g. CLAY); "TOPSOIL" is an adequate single term for the naturally occurring organic soil found at the ground surface. In urban areas, "FILL" is used to denote previously disturbed soil, followed by a description of the major and minor soil components (e.g. "FILL, silty clay with some fine sand"). USCS Group Symbol follows the major soil component in parentheses.
2. Other soil components of the sample are listed in descending order of percentage using adjectives "with", "some" and "trace."
3. Using the Wentworth Scale in Attachment E, add size, sorting or angularity modifiers to granular material descriptions as appropriate.

6.4 Consistency and Relative Density

The relative density of cohesionless soils and the consistency of cohesive soils should be included in visual classifications. Attachments B and C can be used in describing the consistency of cohesive soils and the relative density of cohesionless soils, respectively.

A pocket penetrometer will be used to measure consistency of cohesive soils with the result recorded on the field boring log form. Attachment B includes information for determining soil consistency from penetrometer measurements.

6.4 Moisture Content

Moisture Content – Criteria for describing moisture content of soils are described in Attachment D.

6.5 Miscellaneous Descriptions

1. Structure – Some soils possess structural features (e.g. fissures, slickensides, or lenses) that if present, should be described.
2. Accessories or Inclusions – Elements such as rock fragments, fine roots, or nodules are included in the soil description following all other modifiers for the major components of the soil matrix. Any mineralogical or other significant components should be described, as well as man-made or apparently foreign constituents that indicate the presence and possible source of fill material.
3. Environmental Impacts – If monitoring instruments or visual observations indicate the potential presence of environmental impacts, it will be noted in detail. Additional information for describing specific types of impacts may be found in the Work Plan.

To provide consistency in logging soils, tables with additional guidelines for soil description are included in Attachment E.

7.0 ROCK CLASSIFICATION

7.1 Lithology and Texture

The logging technician should describe the lithology of the rock and its mineral composition. The geological name, such as granite, basalt, or sandstone, usually describes the rock's origin. The stratigraphic unit should be identified and assigned the local geological name, if appropriate. Stratigraphic age or period should be identified, if possible. Modifiers will be included to describe the rock texture, including grain size, sorting, packing, cementation, etc. (e.g. interlocking, cemented, or laminated-foliated).

7.2 Color

The color descriptions will be consistent with the Munsell Soil Color Chart, Geological Society of America (GSA) Rock Color Chart, or as required by the Work Plan or otherwise specified. Write the Munsell color name with the Munsell color identification number in parenthesis following the color name. The major color is listed first with any accessory colors thereafter. If secondary or tertiary descriptors are used, the color designation follows each descriptor.

7.3 Hardness

Terms used to describe hardness are described below. One common method to determine hardness is the Mohs Scale of Hardness, which is defined as follows:

Descriptive Term	Defining Characteristics
Very Hard	• Cannot be scratched with a knife. • Does not leave a groove on the rock surface when scratched.
Hard	• Difficult to scratch with a knife. • Leaves a faint groove with sharp edges.
Medium	• Can be scratched with a knife. • Leaves a well-defined groove with sharp edges.
Soft	• Easily scratched with a knife. • Leaves a deep groove with broken edges.
Very Soft	• Can be scratched with a fingernail.

7.4 Weathering

Terms used to describe weathering are described below (ASTM D 5434-03):

Descriptive Term	Defining Characteristics
Fresh	• Rock is unstained. • May be fractured, but discontinuities are not stained.
Slightly	• Rock is unstained. • Discontinuities show some staining on the surface, but discoloration does not penetrate rock mass.
Moderate	• Discontinuous surfaces are stained. • Discoloration may extend into rock mass along discontinuous surfaces.
High	• Individual rock fragments are thoroughly stained and can be crushed with pressure of a hammer. • Discontinuous surfaces are thoroughly stained and may crumble.
Severe	• Rock appears to consist of gravel-sized fragments in “soil” matrix. • Individual fragments are thoroughly discolored and can be broken with fingers.

7.5 Rock Matrix Descriptions

Grain size is a term that describes the fabric of the rock matrix. It is usually described as fine-grained, medium-grained or coarse-grained. The modified Wentworth scale should be used or as required by the Work Plan or otherwise specified.

A description of bedding (after Ingram, 1954) or fracture joint spacing should be provided according to the following:

Spacing	Bedding	Joints/Fractures
< 1 inch	Very thin	Very close
1 – 4 inches	Thin	Close
4 inches to 1 foot	Medium	Moderately close
1 foot to 4.5 feet	Thick	Wide
> 4.5 feet	Very Thick	Very Wide

Discontinuity descriptors are terms that describe number, depth, and type of natural discontinuities. They also describe density, orientation, staining, planarity, alteration, joint or fractural fillings and structural features.

8.0 ROCK CORE HANDLING

The following guidelines shall be followed for rock core handling:

1. Core samples must be placed into core boxes in the sequence of recovery, with the top of the core in the upper left corner of the box.
2. At the bottom of each core run, spacer blocks must be placed to separate the runs. The spacer should be indelibly labeled with the drilling depth to the bottom of the core run regardless of how much core was actually recovered from the run.
3. Spacer blocks should be placed in the core box and labeled appropriately to indicate zones of core loss, if known. Where core samples are removed for laboratory testing, blocks equal to the core length removed should be placed in the box. Note: If wooden core boxes are used, spacer blocks should be nailed securely in place.

4. The core boxes for each boring should be consecutively numbered from the top of the boring to the bottom.
5. The core boxes containing recovered rock cores should be photographed. One core box should be photographed at a time with the box lid framed in the picture to include information printed on the inside of the lid. Be sure to include a legible scale in the picture. Photographs are taken in the field most easily and efficiently with natural light and while the core is fresh.
6. When transporting a boxed core, the box should be moved only if the lid is closed and secured with tape or nails.

9.0 REFERENCES AND ADDITIONAL RESOURCES

ASTM International, 2007, D653-07b Terminology Relating to Soil, Rock, and Contained Fluids.

ASTM International, 1999, D1586-99 Standard Method for Penetration Test and Split-Barrel Sampling of Soils.

ASTM International, 2006, D2488-06 Practice for Description and Identification of Soils (Visual-Manual Procedure).

ASTM International, 2001, D4083-89R01E01 Practice for Description of Frozen Soils (Visual-Manual Procedure).

ASTM International, 2007, D4543-07 Practice for Preparing Rock Core Specimens and Determining Dimensional and Shape Tolerances.

ASTM International, 2002, D5079-02 (2006) Practice for Preserving and Transporting Rock Core Samples.

ASTM International, 2003, D5434-03 Guide for Field Logging of Subsurface Explorations of Soil and Rock.

ASTM International, 2000, D5715-00 (2006) Test Methods for Estimating the Degree of Humification of Peat and Other Organic Soils (Visual/Manual Method).

ASTM International, 2004, D6236-98 (2004) Guide for Coring and Logging Cement- or Lime-Stabilized Soil.

ASTM International, 2004, D7099-04 Terminology Relating to Frozen Soil and Rock.

Johnson, R.B., and J.V. DeGraff, 1988, Principles of Engineering Geology, John Wiley and Sons, New York.

U.S. Army Corps of Engineers, 2001, Engineering Manual EM1110-1-1804 - Engineering and Design - Geotechnical Investigations, January 1.

USEPA, April 2007, Guidance for Preparing Standard Operating Procedures (SOPs), EPA/600/B-07/001.

Wentworth, C.R., 1922, A scale of grade and class terms for clastic sediments, Journal of Geology, 30: 377-392.

ATTACHMENT A
DRILLING LOG

Drilling Log

	Project Name	Project No.	Boring/Monitoring Well Number
	Site-Specific Coordinates	Ground Elevation	Page 1 of 1
	Total Depth (feet) / Hole Size (inches)	Driller (s)	
Drilling Rig		Drilling Company	
Date / To	Logged By:	Reviewed by:	Approved by:

Elevation (feet)	Depth (feet)	Description	Graphic Log	SAMPLING: Sample Type	Sample Interval	Blow Counts per 0.5'	N Value	Sample Recovery/Length (feet)	Penetro-meter (TSF)	PID Reading (PPM)	Remarks (▽ Depth to water while drilling; ▼ Depth to water after drilling)
	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
	9										
	10										
	11										
	12										
	13										

ENVIRONMENTAL LOG COPY OF OSI 2003.GPJ BURNS_MO.GDT 8/30/07

ATTACHMENT B
CONSISTENCY OF COHESIVE SOILS

Author: T. Gilles **Q2R & Approval By:** C. Barry **Q3R & Approval By:** M. Kelley

CONSISTENCY OF COHESIVE SOILS

Consistency	Rule-of-Thumb	Blows Per Foot[1] (N value)[2]	Penetrometer (tons/ft^2)
Very Soft	Core (height = twice diameter) sags under own weight	0 – 1	0.0-0.25
Soft	Can be easily pinched in two between thumb and forefinger	2 – 4	0.26-0.49
Firm (Medium Stiff)	Can be imprinted easily with fingers	5 – 8	0.5-0.99
Stiff	Can be imprinted with considerable pressure from fingers	9 – 15	1.0-1.99
Very Stiff	Barely can be imprinted by pressure from fingers	16 – 30	2.0-3.99
Hard	Cannot be imprinted by fingers	> 30	4.0+

Notes:
1) Blows as measure with a 2-inch outer diameter (OD), 1 3/8-inch inner diameter (ID) sampler driven 1 foot by a 140-pound hammer falling 30 inches. See Standard Methods for Penetration Test and Split-Barrel Sampling of Soils, ASTM D1586-99.
2) N value is the sum of the blows from 6 inches to 12 inches and from 12 inches to 18 inches in the 2-foot sample.

ATTACHMENT C
RELATIVE DENSITY OF COHESIONLESS SOILS

Author: T. Gilles **Q2R & Approval By:** C. Barry **Q3R & Approval By:** M. Kelley

RELATIVE DENSITY OF COHESIONLESS SOILS

Consistency	Rule-of-Thumb	Blows Per Foot (N value)[2]
Very Loose	Easily penetrated with a ½-inch diameter steel rod pushed by hand	0 - 4
Loose	Easily penetrated with a ½-inch diameter steel rod pushed by hand	4 - 10
Medium Dense	Easily penetrated with a ½-inch diameter steel rod driven with a 5-pound hammer	11 - 30
Dense	Penetrated a foot with a ½-inch diameter steel rod driven with a 5-pound hammer	31 - 50
Very Dense	Penetrated only a few inches with a ½-inch diameter steel rod driven with a 5-pound hammer	> 50

Notes:
1) Blows as measure with a 2-inch outer diameter (OD), 1 3/8-inch inner diameter (ID) sampler driven 1 foot by a 140-pound hammer falling 30 inches. See Standard Methods for Penetration Test and Split-Barrel Sampling of Soils, ASTM D1586-99.
2) N value is the sum of the blows from 6 inches to 12 inches and from 12 inches to 18 inches in the 2-foot sample.

ATTACHMENT D
CRITERIA FOR ESTIMATING MOISTURE CONTENT OF SOILS

CRITERIA FOR ESTIMATING MOSITURE CONTENT OF SOILS

Adapted from USACE EM 1110-1-1804 and ASTM D 2488-06

Term	Description of Relative Moisture
Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp, no visible water
Wet	Fine grained: well above optimum water content Coarse grained: visible free water
Saturated	Water is dripping from sample, usually encountered below water table

ATTACHMENT E
STANDARD SOIL DESCRIPTORS

Author: T. Gilles **Q2R & Approval By:** C. Barry **Q3R & Approval By:** M. Kelley

STANDARD SOIL DESCRIPTORS

Grain Size Terminology		
Soil Type		**Diameter**
Boulders		12-inches or greater
Cobbles		3- to 12 inches
Gravel	Coarse	0.75-inch to 3 inches
	Fine	0.19-inch to 0.75-inch
Sand	Very Coarse	1 mm to 2 mm
	Coarse	0.5 mm to 1 mm
	Medium	0.25 mm to 0.5 mm
	Fine	0.06 mm to 0.25 mm
Silt		0.004 mm to 0.06 mm
Clay		Less than 0.004 mm

Notes:
1) mm = millimeter
2) Based on Wentworth Grain Size Scale for Sediment (Wentworth 1922).
3) This terminology can also be used to describe clast size in rock cores.

Estimated Plasticity for Silt and Clay Content		
Thread Diameter (inches)	**Plasticity Index (PI)**	**Identification**
1/4	0	Silt
1/8	5 – 10	Clayey Silt
1/16	10 – 20	Clay and Silt
1/32	20 – 40	Silty Clay
1/64	40	Clay

Relative Proportions of Components	
Descriptive Term	**Percent**
Trace	1 – 10
Little	11 – 20
Some	21 – 30
And	30 – 50

Adapted from ASTM D2488-06

STANDARD DESCRIPTORS – VISUAL OBSERVATIONS OF NAPL

Descriptive Term	Definition
No Visible Evidence	No visible evidence of oil on soil or sediment sample
Sheen	Any visible sheen in the water on soil or sediment particles or the core
Staining	Visible brown or black staining in soil or sediment; can be visible as mottling or in bands; typically associated with fine-grained soil or sediment
Coating	Visible brown or black oil coating soil or sediment particles; typically associated with coarse-grained soil or sediment such as coarse sand, gravels, and cobbles.
Oil Wetted	Visible brown or black oil wetting the soil or sediment sample; oil appears as a liquid and is not held by soil or sediment grains

STANDARD OPERATING PROCEDURE NO. SAS-05-03

WELL INSTALLATION Revision 1

1.0 PURPOSE

This Standard Operating Procedure (SOP) describes the guidelines for the installation of monitoring wells, observation wells, and recovery/injection wells as described in the Site-Specific Work Plan, or as otherwise specified. Monitoring and observations wells are installed to 1) determine depth to groundwater and monitor fluctuations in groundwater elevation, 2) determine and monitor the depth and thickness of free-phase products (if present), 3) obtain groundwater and/or free-phase product samples for laboratory analysis, and 4) facilitate aquifer characterization. Recovery wells are installed to conduct testing and operation of systems for groundwater pumping, free-phase product recovery, and aquifer injection.

2.0 EQUIPMENT AND MATERIALS

Field personnel shall use the well construction equipment and materials required by the Site- Specific Work Plan, or as otherwise specified.

3.0 HEALTH AND SAFTEY

Potentially hazardous conditions relating to chemicals under investigation, equipment and tools in use, utility services in investigation areas, or certain work activities may exist on the site. Protocols are established in each site-specific Health & Safety Plan (HASP) based on corporate health and safety policies and manuals, past field experience, specific site conditions, and chemical hazards known or anticipated to be present from available site data. Before site operations begin, all employees, and subcontractor personnel will have read and understood the HASP and all revisions. Before work begins, all site project staff will sign an agreement and acknowledgment form indicating that they have read and fully understood the HASP and their individual responsibilities, and fully agree to abide by the provisions of the HASP.

4.0 CONSIDERATIONS

4.1 General requirements

Well installation procedures should meet regulatory agency requirements. In addition, licensing and/or certification of the driller may be required. A trained supervising technician (e.g. geologist, hydrogeologist, engineer, or environmental scientist) should be present during well installation to document the subsurface stratigraphy and construction details for each well.

The well designs should meet two basic criteria: 1) groundwater and/or other fluids (e.g. free-phase product) must move freely into the well, and 2) vertical migration of surface water or undesired groundwater to the well intake zone must, to the extent possible, be eliminated. In addition to these criteria, factors that influence the location of wells should be considered and include the following:

- Project objectives of the Site-Specific Work Plan;
- Data Quality Objectives outlined in the Quality Assurance Project Plan (QAPP);
- Location of facilities and/or source areas to be monitored;
- Groundwater gradient;
- Location of aboveground and underground utilities and manmade features; and
- Accessibility to desired well location sites.

4.2 Well Installation Materials Selection

Materials used in the construction of wells must remain essentially chemically inert with respect to free-phase products and dissolved contaminants in the groundwater for the duration of the investigation period remedial action.

The most commonly used well construction materials are PVC and stainless steel. PVC is the least expensive and easiest material to use. It is generally believed that PVC does not decompose in contact with groundwater containing low concentrations of organics. Stainless steel is chemically inert, provides greater structural strength, and its use may be advantageous for large-diameter wells or groundwater containing high concentrations of organics or free-phase products. Teflon casing is chemically inert but is very expensive.

Well casing and screen are available in threaded or unthreaded sections and typically in lengths of 5, 10, and 20 feet. Threaded pipe joints may be wrapped with Teflon tape to facilitate joining and to improve the seal. Sections of casing and screen should be assembled onsite to allow inspection immediately before installation. No solvents or adhesive compounds should be used on the threaded PVC or Teflon pipe.

4.3 Well Types and Construction Specifications

4.3.1 Monitoring and Observation Wells

Monitoring and observation wells construction should be performed as outlined in the Site-Specific Work Plan or as otherwise specified. In general, the design of the wells consists of a section of slotted well casing or well screen connected to a riser pipe that extends above the ground surface. Typically, a gravel or sand filter pack is placed in the annular space between the screen and the borehole wall. A 3-foot seal composed of hydrated bentonite pellets/chips is placed on top of the filter pack. The remaining height of annulus is sealed and/or grouted to the surface with a cement, bentonite/cement, or high solid bentonite grout; this annular space will be at least 3-feet in height. A lockable protective casing is constructed over the stick-up portion of the wells. Borehole diameters will be chosen in accordance with state regulations and SSWP specification and will meet the following minimum conditions:

- The diameter of the borehole shall be at least 4 inches greater than the inside diameter of the well casing, unless hollow stem augers are utilized.
- The inside diameter of hollow stem augers should generally be at least 2-¼ inches greater than the inside diameter of the well casing and screen.
- These annular clearances facilitate the placement of the filter pack and grout around the outside of the well screen and casing.

The screens for water table observation wells, typically 10 to 15 feet long, are installed with the center of the screen set at the level of the water table to monitor seasonal fluctuation of the water table. Monitoring screens for wells constructed below the water table, typically 5 feet long, are installed at the chosen monitoring elevation as specified in SSWPs. This SOP discusses stick-up well construction; however, flush-mount well construction may also be used as outlined in the Site-Specific Work Plan or otherwise specified.

4.3.2 Recovery/Injection Wells

Construction specifications for recovery/injection wells can vary based several factors including, but not limited, to 1) the type(s) of recovery/injection to be performed, 2) engineering evaluation objectives, 3) data quality objectives, and 3) site geology. Recovery/injection wells should be constructed as outlined in the Site-Specific Work Plan, or otherwise specified.

4.4 Borehole Advancement

4.4.1 General

Boreholes used to install wells should be drilled with the following objectives:

- To provide geological data on subsurface conditions, namely stratigraphy, occurrence of groundwater, and depth to bedrock;
- To obtain representative disturbed or undisturbed samples for identification and laboratory testing; and
- To install wells.

Prior to drilling, the following steps must be taken:

- Obtain permits from appropriate local, state, and/or federal agencies. If there is a fee for permits, drilling subcontractors usually include this as part of their fee.
- Notify (verbally or in writing) the appropriate local, state, and/or federal authorities, as appropriate, in advance of the date that drilling and installation is scheduled to begin;
- Perform a subsurface utility clearance, as outlined in SOP ENV-05-01, at all planned drilling locations;
- Prepare and implement field health and safety procedures as outlined in the HASP(s); and
- Make provisions for containment, storage, and disposal of all cuttings, drilling fluids, discharge water, and other refuse generated during well installation. Note: Permitting and waste characterization may be necessary prior to disposal activities.

4.4.2 Selection of Drilling Method

Drilling methods should be selected based on the following factors:

- The expected nature of the subsurface materials to be encountered in the boring;

- Site accessibility, considering the size, clearance, and mobility of the drilling equipment;
- Availability of drilling water and the acceptability of drilling fluids (e.g., bentonite based drilling mud) in the well;
- Diameter and depth of the well desired, including consideration of the need to set casing to prevent commingling of different transmissive zones; and
- The nature and effects of contaminants expected during the drilling.

5.0 MONITORING AND OBSERVATION WELL INSTALLATION

5.1 Well Components

Typical well components in general order of placement are as followings:

1. Surface casing (if used);
2. Well casing;
3. Screen(s);
4. Filter pack (gravel or sand pack)
5. Filter pack seal (fine sand; and bentonite seal when grout is placed as the annular seal);
6. Annular seal (bentonite chips or grout);
7. Well head protector casing; and
8. Well head apron and guard posts.

Surface casing, if needed, should be installed during borehole advancement for sealing the ground surface and subsurface transmissive zones not desired to be intercepted by the well from the borehole. Surface casing may also be needed to provide lateral support for loose unconsolidated formations that may slough into or collapse around the borehole during drilling or well installation. Casing may be extended in a telescopic fashion to permit casing through intermittent transmissive zones at greater depths to limit casing size and cost requirements.

The well casing is the primary conduit to the desired borehole interval to be monitored. It serves to seal off other stratigraphic zones from the groundwater inside the well and provides unobstructed access to the well screens. The well casing extends from the top of the well screen to either above or flush with the ground

surface. It is typically a single-walled pipe, flush-threaded, of the smallest diameter to facilitate sampling equipment and to support its own weight during installation.

Screens are perforated or slotted sections of casing typically of the same size and material as the well casing. The purpose of the well screen is to allow water and/or other fluids (i.e., product) to enter the well easily while preventing entry of large amounts of sediment. The slot size of the well screen is usually determined based on selection of the filter pack material. Both are commonly related to the grain size analysis of the formation material. Methods of determining appropriate screen slot size are listed in the EPA Manual of Water Well Construction Practices (USEPA 1976). Typically, 10-slot (0.010 inch slot width) or 20-slot (0.020 inch slot width) screens are used. The length of the screen depends on the sampling objective, water level fluctuations, product thickness, and thickness of the transmissive zone of the formation.

A filter pack consisting of clean silica sand or pea gravel is placed in the annular space extending to at least 2 feet above the top of the screen. Filter pack grain size, sand or pea gravel, is determined based on the well screen slot size selected and the nature of the surrounding native material. The filter pack will stabilize the aquifer formation, minimize the entry of fine-grained material into the screen, permit use of screens with different sizes of slot, and will increase the effective well diameter and water collection zone. A filter pack seal, consisting of at least 2 feet of fine sand, will be placed on top of the filter pack to prevent the intrusion of overlying grout material.

For wells with that utilize grout as an annular space seal, an additional filter pack seal, consisting of bentonite pellets or chips, should be installed above the fine-sand filter pack seal to prevent the intrusion of overlying grout material into the filter pack. The bentonite pellets or chips should be slowly poured from the top of the borehole to prevent bridging. At least 3 feet of bentonite seal should be placed on top of the fine-sand filter-pack seal. If the bentonite seal is above the saturated zone, the bentonite pellets or chips should be hydrated with distilled water before grouting the remaining annular space. The source and volume of water used must be recorded in field notes. The hydrated pellets or chips should be allowed to set for a minimum of 15 minutes. Bentonite chips are preferred over pellets or balls when the seal is below the water table because the chips hydrate less rapidly and bridging is less common.

The annular space above the bentonite seal should be grouted with cement high-solids bentonite, bentonite/cement grout, or bentonite chips, up to 30 inches below the ground surface and shall be at least 2 feet in thickness. The primary purpose of grouting is to minimize the vertical migration of water to the groundwater intake zone and to increase the integrity of the well casing.

A 30 inch concrete plug should be installed above the annular grout, when the surface seal is less than 5-feet in depth. The concrete plug is used to set the protective well cover and to prevent frost heave of the concrete pad or apron. The concrete apron should be at least 3.5 inches thick, and it should be sloped to allow water drainage away from the well.

A protective cover with a locking cap should be installed after the well has been set. This cover will protect the exposed well casing from damage and will provide security against tampering with the well. The protective cover typically consists of a steel pipe or box around the well casing. The protective cover is set at least 5 feet into the surface seal and may be reduce to 2 feet if a flush-mount well cover is placed or a shorter protective cover is required to ensure well construction space for a 2 foot minimum annular space seal.. Weep holes (approximately ¼-inch diameter) may be drilled into the base of the protective cover above the concrete apron to allow drainage. Alternatively, one to two inches of fine-grained sand may be placed at the base of the flush-mounted protective cover to facilitate drainage.

Well-head aprons and guard posts, when used, provide additional surface protection to the well and are generally used for wells in high traffic areas or where a more permanent structure is desired.

5.2 Installation Procedures

The decision to install a well at a particular location is often decided in the field upon completion of the boring and subsurface sampling. If the borehole diameter is not sufficient to install a well, either the borehole should be reamed using a larger diameter auger or a new borehole should be drilled. The new borehole should be at least 5 feet away from the initial boring. The initial soil boring should be abandoned according to the procedures outlined in SOP ENV-05-05. If a well is not installed, the boring should be abandoned in accordance with SOP ENV-05-05.

Over-drilling generally should not be conducted to provide room for a well sump or additional filter pack material at the bottom of the borehole beneath the well casing. However, for wash rotary boreholes drilled in soft or highly plastic sediments, loose cuttings may fall to the borehole bottom after backwashing. In this case, it may be necessary to install a 2-foot layer of sand or gravel at the bottom of the boring to provide a firm base on which to set the well assembly to limit settling of the well casing and screen under its own weight.

For mud rotary boreholes, excess drilling fluids should be flushed from the borehole before installing the filter pack and grout seal. This can be accomplished by one or both of the following means:

- Flush the well using the drilling equipment by pumping clean water down the drill pipe without circulating the returned fluid. This should be accomplished at low pump pressure and with care to avoid scouring or fracturing of the formations. The source and volume of water added to the well must be recorded in field notes.
- Insert casing and screens with a backwash valve on the bottom end, and then flush the borehole via the well casing at low pressures. The backwash valve not only provides an outlet for flushing, but also provides pressure relief so the screens are not damaged by the backwash fluid pressures.

The latter method should be conducted only if it is determined that the former is not possible, or if the drilling fluid must remain in place in order to install the filter pack.

Connect the screen and well casing while wearing latex gloves. Insert and lower the screen and well casing into the borehole in 10-foot increments. Hand-tighten connections to prevent them from leaking or becoming loose. The final section of pipe should be measured and field cut, if necessary, before connecting to allow for a stick-up of at least 2 feet. The cut end should be rasped and/or sanded smooth, taking care not to let fillings of casing material cling to the inside.

Backwash the boring, if necessary, and pour in sand or gravel to seat and support the casing and screen. Based on boring and casing diameters, determine volume of filter pack material required to place the filter approximately 2 feet above the top of the screens. Install filter pack using the following methods, as appropriate.

- Slowly pour filter material down annulus, being careful to evenly distribute the material around the casing and to avoid the material becoming packed between the sidewall and casing. Use a small-diameter pipe to dislodge packed material and to ensure adequate height and settlement of the filter pack.

- Pour filter material down tremie pipe placed between boring sidewall and casing. In this method, clean potable or distilled water should be poured in along with the sand or gravel to prevent packing within the tremie. The source and volume of water added must be recorded in field notes. The bottom of the tremie should be kept above the filter material top by at least 5 feet to permit the filter material to evenly fall around the screens. Pack the material with the tremie pipe to ensure adequate height and settlement of the filter pack.

Pour bentonite pellets or chips down the annulus on top of the filter pack. The bentonite should be placed rapidly to prevent swelling and bridging around the casing when it hydrates. The bentonite should be allowed to hydrate for at least 15 minutes before grouting.

The remaining annulus should be sealed by pumping grout via a tremie pipe from the bottom of the annular space of the borehole until the grout returns to the surface displacing all remaining drilling fluid and formation water. The bottom of the tremie pipe should not be placed within 4 feet of the bentonite seal. Grouting mixture and technique should be in accordance with Site-Specific Work Plan requirements, or as otherwise specified. Grout will typically settle 1 to 2 feet. Remove excess grout to allow 30 inches of annular space for the concrete plug or native material.

After the grout has stiffened sufficiently, install the concrete plug up to the ground surface. Set the protective cover, if possible, such that at least 2 feet of its length is embedded in the concrete below the ground surface. It should also be set such that it is not more than approximately 30 to 36 inches above the level where the sampling personnel must stand. A concrete pad approximately 3 feet in diameter and 3.5 inches thick should be formed around the base of the protective cover. The concrete pad should be sloped away from the protective cover to allow flow away from the well. Weep holes should be drilled through the protective cover nominally 1 inch above the top of the concrete apron.

The protective casing should be marked with identifying decals. A locking device should be installed to prevent unauthorized entry or vandalism of the well. The top of the well casing should be notched with a file to provide a reference point in which to measure water and/or product levels. The elevation of the top of the well casing (reference point) and ground surface at the well should be surveyed relative to a benchmark. The location of the well should also be surveyed in reference to the site coordinate system as required by the Site-Specific Work Plan, or as otherwise specified.

Develop well within 24 to 72 hours following well installation according to the well development procedures outlined in ENV-05-04.

6.0 DOCUMENTATION

Documentation of well installation should be the responsibility of the supervising field technician. A well completion report should be prepared after the well is installed. The Illinois Department of Public Health Well Completion Report is provided as a well completion report example in Attachment A. If the work is performed in a different state, the relevant forms must be obtained.

The drilling and well installation activities should be recorded in the field logbook and/or on the appropriate field forms. The following information should be recorded during and upon completions of every well installation:

- Project name and number;
- Well location identification;
- Date of installation and time completed;
- Drilling method, crew names, and rig identification;
- Drilling depths;
- Generalized subsurface stratigraphy;
- Total length of casing and screens;
- Depth to and length of screened intervals;
- Depth to top of filter pack;

- Depth to top of bentonite seal;
- Depth to top of grout;
- Depth of surface casing (if applicable);
- Elevation of top of well casing and ground surface; and
- Name of supervising field technician.

The driller should also prepare any state-required well completion forms in accordance with state regulatory requirements.

7.0 REFERENCES AND ADDITIONAL RESOURCES

ASTM International, 2004, D5092-04 Standard Practice for Design and Installation of Ground Water Monitoring Wells in Aquifers.

ASTM International, 2005, D6001-05 Guide for Direct-Push Ground Water Sampling for Environmental Site Characterization.

ASTM International, 2004, D6724-04 Guide for Installation of Direct-Push Ground Water Monitoring Wells.

ASTM International, 2004, D67-25-04 Practice for Direct-Push Installation of Prepacked Screen Monitoring Wells in Unconsolidated Aquifers.

USEPA, 1976, Manual of Water Well Construction Practices, EPA/570/9-75/001.

USEPA, 2002, Ecological Assessment Standard Operating Procedures and Quality Assurance Manual, SESD, Region 4, Ecological Assessment Branch, Athens, Georgia.

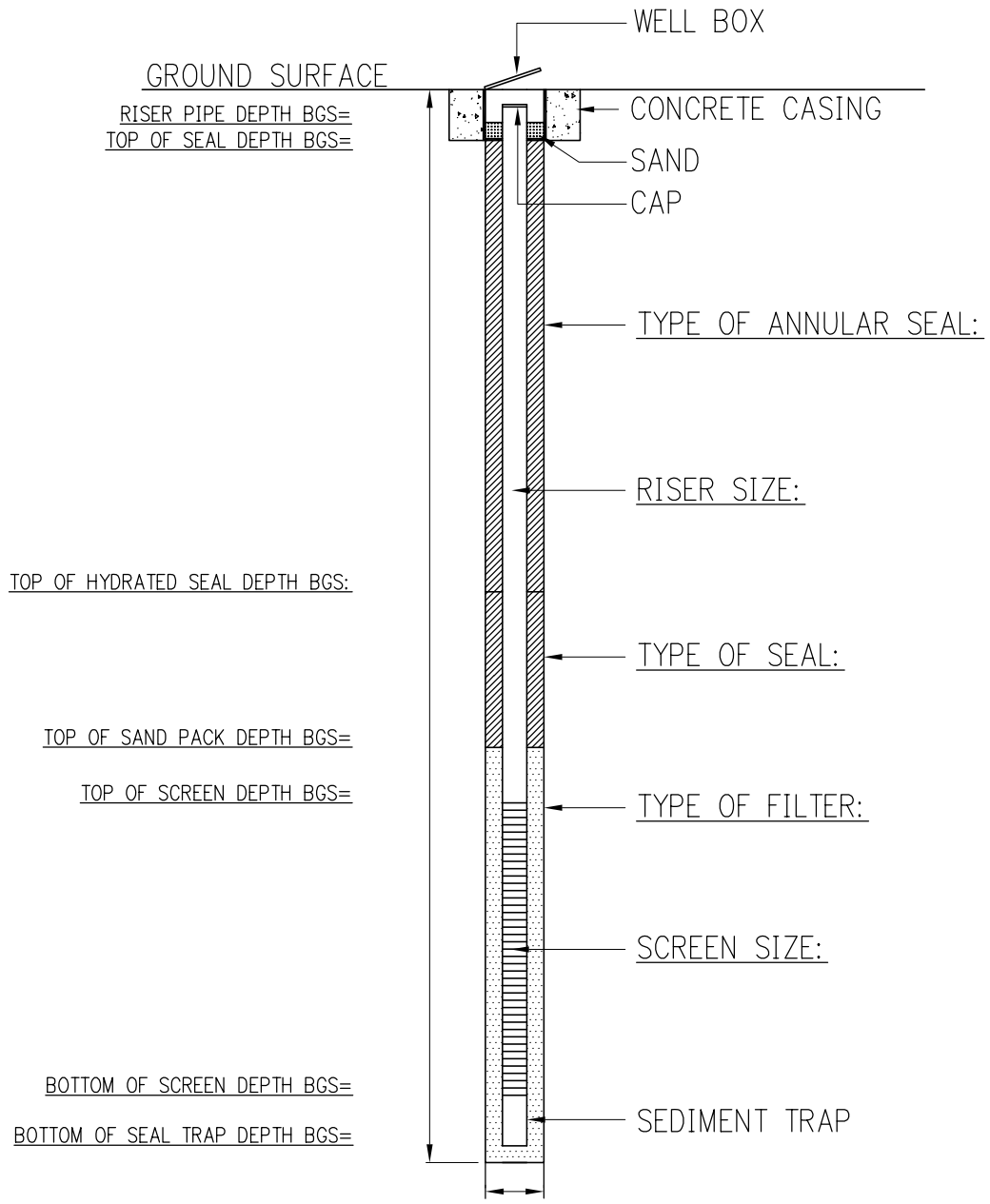
USEPA, April 2007, Guidance for Preparing Standard Operating Procedures (SOPs), EPA/600/B-07/001.

ATTACHMENT A
WELL INSTALLATION LOGS

WELL INSTALLATION LOG

No. _____

CLIENT	COORDINATES N E	PROJECT	PROJECT NO.
PROJECT LOCATION		TOP OF RISER ELEVATION (DATUM)	DATE
STRATUM MONITORED		LOGGED BY	
DRILLING COMPANY		APPROVED BY	



NOT TO SCALE

METHOD OF INSTALLATION:

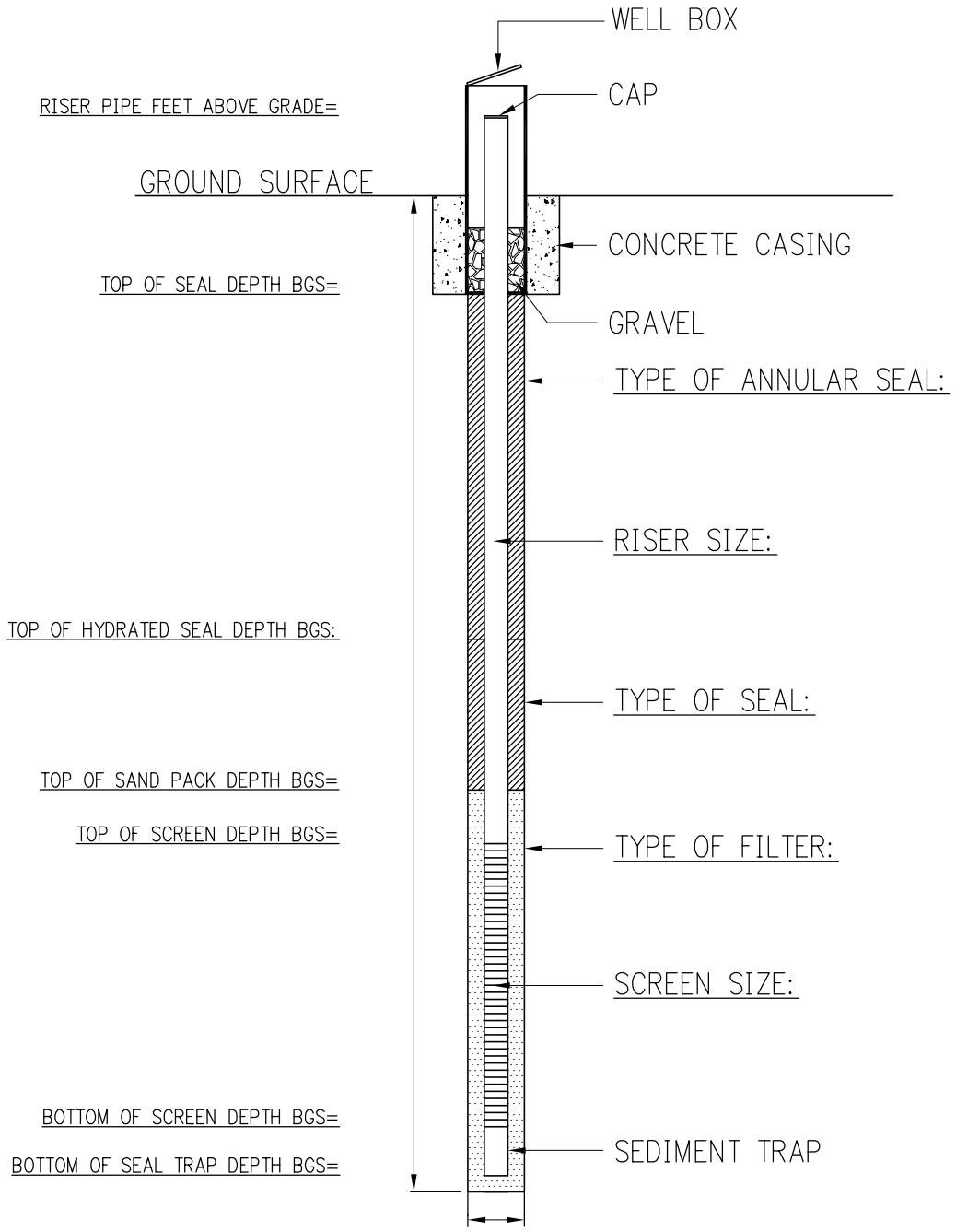
REMARKS:

I:\CAD\BMC\TEMPLATES\FLUSH MOUNT WELL LOG.NL

WELL INSTALLATION LOG

No. _____

CLIENT	COORDINATES N E	PROJECT	PROJECT NO.
PROJECT LOCATION		TOP OF RISER ELEVATION (DATUM)	DATE
STRATUM MONITORED		LOGGED BY	
DRILLING COMPANY		APPROVED BY	



NOT TO SCALE

METHOD OF INSTALLATION:

REMARKS:

I:\CAD\BMC\TEMPLATES\STICK UP WELL LOG NL

STANDARD OPERATING PROCEDURE NO. SAS-05-04

WELL DEVELOPMENT Revision 2

1.0 PURPOSE

This Standard Operating Procedure (SOP) describes the guidelines for developing wells. Well development is conducted to 1) remove drilling fluids or mudcake from the filter pack, borehole wall, and formation materials, 2) remove any loose, fine-grain, formation materials (e.g. fine sand, silt, and clay) from the filter pack and well screen to eliminate, to the extent possible, impact the integrity of groundwater and/or product samples and aquifer characterization test results, and 3) restore the natural permeability of the formation adjacent to the borehole.

2.0 EQUIPMENT AND MATERIALS

Equipment and materials will vary by development method. Field personnel should use the equipment and materials required by the Work Plan or otherwise specified for the development method(s) selected for the project. All non-disposable equipment, including pumps, hoses, containers, and bailers, shall be decontaminated before and after introduction into wells. Equipment decontamination should be performed in accordance with SOP ENV-04-05 and/or requirements of the Site-Specific Work Plan.

3.0 HEALTH AND SAFETY WARNING

Potentially hazardous conditions relating to chemicals under investigation, equipment and tools in use, utility services in investigation areas, or certain work activities may exist on the site. Protocols are established in each site-specific Health & Safety Plan (HASP) based on corporate health and safety policies and manuals, past field experience, specific site conditions, and chemical hazards known or anticipated to be present from available site data. Before site operations begin, all employees, and subcontractor personnel will have read and understood the HASP and all revisions. Before work begins, all site project staff will sign an agreement and acknowledgment form indicating that they have read and fully understood the HASP and their individual responsibilities, and fully agree to abide by the provisions of the HASP.

4.0 DEVELOPMENT METHODS

4.1 Air Lifting

The airlift method involves pumping compressed air down an eductor pipe placed inside the well casing. Due to its inert characteristic, nitrogen is the preferred gas for air lifting. Pressure is applied intermittently and for short periods causing the water to surge up and down inside the casing. Once the desired surging is accomplished, continuously applied air pressure should be used to blow water and suspended sediments upward and out of the well.

The use of standard air for well development may impact permeability of the formation surrounding the well screen and groundwater quality. Considerable care must be exercised to avoid injecting air directly through the well screen. Air can become trapped in the formation materials outside the well screen and affect subsequent chemical analyses of water samples and hydraulic conductivity measurements. The bottom of the air pipe should not be placed below the top of the screened section of casing.

Another restriction of the use of air is the submergence factor. The submergence factor is defined as the height of the water column above the bottom of the air pipe (in feet) divided by the total length of the air pipe. To result in efficient airlift operation, the submergence factor should be at least 20 percent. This may be difficult to achieve in shallow monitoring wells or wells that contain small volumes of water.

4.2 Surging or Plunging

A surge block is a round plunger with pliable edges (constructed of a material such as rubber belting) that will not catch on the well screen. Moving the surge block forcefully up and down inside the well screen causes the water to surge in and out through the screen accomplishing the desired cleaning action. The amount of pressure generated by the surging must be closely monitored to prevent cracking of the well casing or screen.

A well slug may also be used to create a surging effect through the filter pack and formation. A slug consists of a PVC rod or pipe (with capped ends) sufficiently weighted to rapidly sink in water. The slug is alternately lowered into and retrieved from the water in the casing to create a water level differential that induces flow

into or out of the well to accomplish the desired cleaning action. This method is less aggressive than using a surge block. For shallow wells or wells in which the water column in the casing is small, care must be exercised when lowering the slug so as not to drive the slug into the bottom of the casing or against the screens.

4.3 Bailing or Pumping

Bailers may be used for development of low-yielding wells or wells with a significant amount of sediment (approximately 10% in the well screen) to remove excess sediment. A bailer that is heavy enough to sink rapidly through the water can be raised and lowered through the water column to produce the surging action that is similar to that caused by a surge block or well slug. The bailer, however, has the added capability of removing turbid water and fines each time it is brought to the surface. Bailers are very useful for developing shallow and slow yielding wells. As with surge blocks, it is possible to produce pressure great enough to crack PVC casing. Bailers are the simplest and least costly method of developing a well, but are time-consuming.

Pumping can be used effectively in wells where recharge is rapid. The pump may be used to back flush and overpump (at rates that exceed purging and sampling rates) water in and out of the well screen. The type and size of the pump used is contingent upon the well design. Pumps also allow removal of turbid water and fines. However, pumps are more difficult to decontaminate than a bailer is.

5.0 EXECUTION

The following procedures shall be adhered to unless well development requirements are otherwise specified in the Site-Specific Work Plan:

1. Measure the depth to groundwater in accordance with the guidelines described in SOP ENV-08-02. The standing water volume (V) in the well to be developed shall be calculated using one of the following formula in accordance with the Site-Specific Work Plan:

   Borehole Volume Calculation

   $V = nA (B - C) + CD$

   Where, n = porosity of the filter pack;
   A = height (in feet) of the saturated filter pack;

B = volume (in gallons per foot) of water in the borehole (see Table below);
C = volume (in gallons per foot) of water in the well casing (see Table below); and
D = height of standing water column (in feet) in the well.

Well Volume Calculation

V = CD

Where, C = gallons per foot of water in the well casing (see Table below); and
D = height of standing water column (in feet) in the well.

Diameter-Specific Volume Per One Foot of Casing/Borehole

Diameter (Inches)	Volume Per Foot of Casing/Borehole (Gallons)		Diameter (Inches)	Volume Per Foot of Casing/Boring (Gallons)
0.25	0.0026		4.0	0.6528
0.50	0.0102		6.0	1.469
0.75	0.0230		8.0	2.611
1.0	0.0408		10.0	4.081
2.0	0.1632		12.0	5.876

2. Measure water quality parameters immediately prior to and during well development at a minimum frequency of once per well volume removed in accordance with SOP ENV-08-03. The water quality parameters should generally include pH, specific conductance and/or actual conductivity, temperature, dissolved oxygen, and turbidity, unless otherwise specified in the Work Plan. Record water quality parameters, as well as visual turbidity and evidence of impact (e.g. free phase product, sheen, odors, etc.) observations in the field logbook and/or on the appropriate field form.
3. Remove 10 standing water volumes or the volume required to achieve water quality parameter stabilize and visual clarity is achieved, whichever is less. A well that will not yield sufficient volume must be slowly bailed or pumped, allowed to recover to within 90% of the pre-development standing water volume, and then slowly bailed or pumped a second time, with a maximum of five purge periods. The criteria for parameter stability are summarized below.

4. Increase the minimum development water volume when drilling water and/or fluids are lost prior to well development. This additional purge volume shall be at least three times the volume of lost fluid.

Water Quality Parameter	Stability Criteria[1]
pH	+/- 0.1 Std. Units
Temperature	+/- 0.1°C
Specific Conductance or Actual Conductivity	+/- 3% microsiemens/cm
Dissolved Oxygen	+/- 0.3 milligrams/Liter
Turbidity	<10 NTUs or + 10% when turbidity is greater than 10 NTUs and/or visually clear water

5. Containerize development water in approved, labeled containers (e.g. 55-gallon drums, polyethylene storage tanks, baker tanks, etc.) as required by the Site-Specific Work Plan or otherwise specified.

6.0 DOCUMENTATION

Well development activities will be documented in the field logbook and/or appropriate field form included in Appendix B of the FSP, describing the procedures used and any significant occurrences that are observed during development such as apparent recharge rates in the well, condition of the groundwater, and organic vapor readings. Well development data including the depth to static water, standing water volume in the well, standing water volume calculations, total volume of water removed, number of well volumes removed, and water quality parameters will be recorded in the field logbook and/or on the field activity form (Appendix B of the FSP).

7.0 REFERENCES AND ADDITIONAL RESOURCES

USEPA, April 1992, Monitoring Well Development Guidelines for Superfund Project Managers, Office of Solid Waste and Emergency Response, http://www.epa.gov/tio/tsp/download/welldevelp.pdf.

USEPA, 2002, Ecological Assessment Standard Operating Procedures and Quality Assurance Manual, SESD, Region 4, Ecological Assessment Branch, Athens, Georgia.

[1] USEPA, May 2002, Ground-Water Sampling Guidelines for Superfund and RCRA Project Managers, Revision 2, EPA/542/S-02/001.

USEPA, May 2002, Ground-Water Sampling Guidelines for Superfund and RCRA Project Managers, Regions 5 and 10, EPA/542/S-02/001.

USEPA, April 2007, Guidance for Preparing Standard Operating Procedures (SOPs), EPA/600/B-07/001.

STANDARD OPERATING PROCEDURE NO. SAS-05-05

BOREHOLE AND WELL ABANDONMENT Revision 3

1.0 PURPOSE

This Standard Operating Procedure (SOP) describes the guidelines for borehole and well abandonment. When boreholes and wells are no longer needed to complete project goals and objectives, they must be properly abandoned to prevent them from acting as a conduit for migration of contaminants from the ground surface to the water table or between transmissive zones.

2.0 EQUIPMENT AND MATERIALS

Equipment and materials may vary based on borehole and well accessibility and depth and well construction. Field personnel should use the equipment and materials required by the Site-Specific Work Plan or otherwise specified for the project. All non-disposable equipment shall be decontaminated before and after introduction into borehole or well. Equipment Decontamination should be performed in accordance with SOP SAS-04-05 and/or requirements of the Site-Specific Work Plan.

3.0 HEALTH AND SAFETY

Potentially hazardous conditions relating to chemicals under investigation, equipment and tools in use, utility services in investigation areas, or certain work activities may exist on the site. Protocols are established in each site-specific Health & Safety Plan (HASP) based on corporate health and safety policies and manuals, past field experience, specific site conditions, and chemical hazards known or anticipated to be present from available site data. Before site operations begin, all employees, and subcontractor personnel will have read and understood the HASP and all revisions. Before work begins, all site project staff will sign an agreement and acknowledgment form indicating that they have read and fully understood the HASP and their individual responsibilities, and fully agree to abide by the provisions of the HASP.

4.0 CONSIDERATIONS

Borehole and well abandonment procedures should meet applicable regulatory agency requirements. Well abandonment procedures are dependent upon several factors which include:

- Geologic data availability
- Aquifer formation (creviced consolidated)
- Aquifer formation (non-creviced consolidated)
- Aquifer formation (unconsolidated)
- More than one water bearing formation

In addition, licensing and/or certification of the driller are typically required however licensing requirements vary by state. Please refer to the applicable Illinois and Wisconsin Administrative Codes referred to in Section 6.0 of this SOP. A trained supervising technician (e.g. geologist, hydrogeologist, engineer, or environmental scientist) with knowledge of the applicable state regulations should be present during well abandonment to document the activities. The supervising technician should complete and submit a well abandonment form, as required, to the appropriate regulatory agency. Attachment A contains the Illinois Department of Public Health Water Well Sealing Form as an example. If wells are abandoned in other states, the relevant forms and procedures shall be implemented. A brief description of the Wisconsin and Illinois abandonment procedures is provided below.

WISCONSIN – NR141.25(2) Abandonment Procedures

(a) *Boreholes.* Any borehole intersecting the water table or greater than 10 feet deep, whose use has been discontinued, shall be abandoned according to the requirements of part (d).

(b) *Monitoring wells - impermeable annular space seals.* A permanent groundwater monitoring well known to be constructed with an impermeable annular space seal shall be abandoned according to the requirements of part (d) after the protective cover pipe and ground surface seal have been removed and the well casing cut off at least 30 inches below the ground surface. The well casing may be completely removed during abandonment by pulling the well casing, overdrilling around the casing and then pulling the well casing out of the ground or by drilling out the well casing completely. If the well casing is to be removed, the well shall be sealed as the casing is removed.

(c) *Monitoring wells - permeable annular space seals and wells in waste areas.* A groundwater monitoring well not known to be constructed with an impermeable annular space seal or located in an existing or planned future waste disposal or treatment area shall be abandoned by removing the protective cover pipe and the ground surface seal and then completely removing the well casing. The well casing shall be pulled out of the ground as the well is filled according to the requirements of part (d)

(d) *Sealing requirements.* Boreholes and groundwater monitoring wells shall be abandoned by complete filling with neat cement grout, bentonite-cement grout, sand-cement grout, concrete or bentonite-sand slurry. When a tremie pipe is used to place the sealing material, the procedures of s. NR 141.10 (2) shall be followed. A tremie pipe shall be used to abandon groundwater wells and boreholes greater than 30 feet in depth or with standing water. Groundwater monitoring wells and boreholes greater than 100 feet in depth shall be sealed with a tremie pipe-pumped method. Bentonite may be used as a sealing material without the use of a tremie pipe under the following conditions:

1. Bentonite granules may be used for abandonment of boreholes and groundwater monitoring wells less than 25 feet deep and when there is no standing water above the filter pack seal.

2. Bentonite chips no greater than 3/8 inch in diameter or bentonite pellets may be used for abandonment of boreholes and groundwater monitoring wells less than 50 feet deep and the depth of standing water is less than 30 feet.

3. Bentonite chips no greater than 3/8 inch in diameter or bentonite pellets may be used for abandonment of boreholes and groundwater monitoring wells which are greater than 4 inches in diameter and less than 250 feet deep and the depth of standing water is less than 150 feet.

ILLINOIS – Section 920.120 Abandoned Wells (b) Sealing Requirements

Where geologic data does not exist for a particular abandoned drilled water well, the water well shall be sealed, from the bottom up to where the well casing is removed, with neat cement grout or any bentonite product manufactured for water well sealing. Water wells, borings or monitoring wells that are abandoned shall be disinfected by introducing a sufficient amount of chlorine to produce 100 parts per million of chlorine in the water in the well and shall be sealed by placing the sealing materials from the bottom of the well to the surface by methods that will avoid segregation or dilution of material, in accordance with the following requirements:

1) Non-creviced, Consolidated Formations. Wells extending into non-creviced sandstone, or other water-bearing consolidated formations shall be sealed by filling the well with disinfected clean pea gravel or limestone chips to within 10 feet below the top of the water-bearing formation or to within 10 feet of the bottom of the casing, whichever is less. Neat cement grout or any bentonite product manufactured for water well sealing shall be placed for a minimum of 20 feet above this point. The upper part of the well to where the well casing is removed shall be sealed by neat cement grout or any bentonite product manufactured for water well sealing. Concrete or cement may be used for sealing if the upper part of the well is dry.

2) Creviced Formations. Wells extended into creviced formations shall be sealed by filling with disinfected clean pea gravel or limestone chips to within 10 feet below the top of the water-bearing formation or to within 10 feet below the bottom of the casing, whichever is less. Neat cement grout or any bentonite product manufactured for water well sealing shall be placed for a minimum of 20 feet above this point. The upper part of the well to where the well casing is removed shall be sealed by neat cement grout or any bentonite product manufactured for water well sealing. Concrete or cement may be used for sealing if the upper part of the well is dry. If the earth cover is less than 30 feet, the hole shall be grouted from 10 feet below the creviced formation to where the well casing is removed.

3) Unconsolidated Formations. If the water-bearing formation consists of coarse gravel and producing wells are located nearby, the well shall be sealed by filling with disinfected clean pea gravel or limestone chips to 10 feet below the top of water-bearing formation. Neat cement grout or any bentonite product manufactured for water well sealing shall be placed for a minimum of 20 feet above this point. The upper part of the well to where the well casing is removed shall be sealed by neat cement grout or any bentonite product manufactured for water well sealing. Concrete or cement may be used for sealing if the upper part of the well is dry. Abandoned dug and bored wells shall be sealed by using one of the following methods:

   A) Filling with disinfected clean pea gravel or limestone chips to within 20 feet below the top of the casing. The upper part of the well to where the well casing is removed shall be sealed for a minimum of 20 feet by filling with neat cement grout, any bentonite product manufactured for water well sealing, or impervious material such as clay. Concrete or cement may be used for sealing if the upper part of the well is dry;

   B) Placing a one foot layer of any bentonite product manufactured for water well sealing at the bottom of the well, followed by alternating layers of agricultural limestone (limestone fines) and any bentonite product manufactured for water well sealing. The alternating layers of agricultural lime shall be 5 to 7 feet thick and the alternating layers of any bentonite product manufactured for water well sealing shall be 6 inches thick. The uppermost or top layer shall be agricultural lime; or

   C) Completely filling with concrete, cement grout or impervious material such as clay.

4) More than One Water-Bearing Formation. If wells extend into more than one water-bearing formation, each water-bearing formation shall be sealed independently in the manner described in this Section. Neat cement grout or any bentonite product manufactured for water well sealing shall be placed a minimum of 10 feet above and below at all intermittent water-bearing formations except artesian wells and artesian formations. Disinfected clean pea gravel or limestone chips shall be placed in each water-bearing formation between plugs. When the lower formation has an upflow of water into the upper formation, a pressure seal is required to shut off the upflow while a neat cement plug at least 50 feet in length is pumped in place and allowed to set. The upper part of the well to where the well casing is removed shall be sealed with neat cement grout or any bentonite product manufactured for water well sealing. Concrete or cement may be used for sealing if the upper part of the well is dry.

5) Artesian Wells. A cement retainer shall be used with pressure grouting equipment used to place cement grout. Neat cement grout, containing bentonite from 2% to 6% by dry weight, shall be placed for a minimum of 10 feet below and 10 feet above the water bearing formation. The upper part of the well to where the well casing is removed shall be filled with neat cement grout or any bentonite product manufactured for water well sealing. Concrete or cement may be used for sealing if the upper part of the well is dry.

6) Buried Slab Bored Wells. Wells shall be sealed by filling with disinfected clean pea gravel or limestone chips to within 1 foot below the buried slab. The upper part of the well to where the casing is removed shall be sealed with neat cement or any bentonite product manufactured for water well sealing.

7) In lieu of filling the well with disinfected clean pea gravel or limestone chips as required in subsections (b)(1) through (6), wells may be sealed by grouting from the bottom up by using neat cement grout or any bentonite product manufactured for water well sealing. This material shall be applied the full depth of the well and shall terminate within 2 feet of the ground surface. Concrete grout may be used in the upper part of the well if the upper part of the well is dry.

5.0 EXECUTION

Taking into account the applicable state requirements noted above, unless otherwise specified in the Site-Specific Work Plan, either of the following guidelines shall be followed.

5.1 OVERDRILLING WELL ABANDONMENT METHOD

One well abandonment method is to completely remove the well casing and screen from the borehole. This may be accomplished by auguring with a hollow-stem auger over the well casing (overdrilling) down to the bottom of the borehole, thereby removing the grout, bentonite seal, and filter pack from the hole. The well casing shall then be removed from the borehole with the drill rig. The remaining borehole and boreholes not utilized for the construction of a monitoring well, will be subsequently backfilled with the appropriate backfill material. The backfill material (e.g. hydrated bentonite, Neat Portland cement, etc.) shall be placed into the borehole from the bottom to the top by pressure grouting with the positive displacement method (tremie method) to within 30 inches of the ground surface. Bentonite should be hydrated with potable water in lifts not to exceed 5 feet. Neat cement shall be made of the following composition; Neat cement is a mixture of Type I Portland cement and water in the proportion of 5 to 6 gallons of clean water per bag (94 pounds or 1 cubic foot) of cement mixed with 2% to 6% of bentonite by weight. The annular space shall be filled with bentonite chips, grout, or granules to at least 30 inches bgs unless land use requires a design modification to use native material (gravel, soil, etc.) or material in adjacent areas (asphalt, concrete, etc.) to bring the former well location to grade. If the area has heavy traffic and/or construction use, the location will be barricaded until the plug has cured or concrete plug recessed below ground surface will be used to maintain the surface seal. This abandonment method can typically be accomplished on small-diameter wells (4-inches or less in diameter).

On large-diameter wells (diameter greater than 4-inches) with little to no grout, a drill stem with a tapered wedge assembly or solid-stem auger should be used to ream out the borehole and extract the well materials. Wells that are badly corroded and/or have thickly grouted annular space have a tendency to twist and/or break

off in the borehole. Should this occur, the well would be grouted with the remaining casing left in the borehole. In this case, the well and borehole shall be pressure grouted by placing a tremie pipe in bottom of the well casing, which will be the well screen or bottom sump area below the well screen. The pressurized grout will be forced out through the well screen into the filter pack and up the inside of the well casing sealing holes and breaks that are present. The tremie pipe shall be retracted slowly as the grout fills the casing. The annular space shall be filled with bentonite chips, grout, or granules to at least 30 inches bgs. The well casing shall then be cut off at least 30 inches below. Native material (gravel, soil, etc.) or material in adjacent areas (asphalt, concrete, etc.) may be used to bring the former well location to grade. If the casing has been broken off below the surface, the grout shall be tremied to within 30 inches of the ground surface and then finished similar to the surrounding features.

Brittle polyvinyl chloride (PVC) well casings may be more difficult to remove from the borehole than stainless-steel casings. If the PVC well casing breaks during removal, the borehole shall be cleaned out by using a drag bit or roller cone bit with the wet rotary method to grind the casing into small cuttings that will be flushed out of the borehole by the drilling fluid. Another method is to use a solid-stem auger with a carbide auger head to grind the PVC casing into small cuttings that will be brought to the surface by the rotating flights. After the casing materials have been removed from the borehole, the borehole shall be cleaned out and pressure grouted with the approved grouting materials. As previously stated, the borehole shall be finished with a concrete surface plug or site-specific surface restoration material with adequate surface protection, unless otherwise directed or required by the Site-Specific Work Plan.

5.2 IN-PLACE WELL ABANDONMENT METHOD

5.2.1 Cement Grout

The in-place monitoring well or borehole abandonment method completely fills the monitoring well or borehole with concrete, cement grout, or a low permeability material such as bentonite. When using concrete or cement grout the monitoring well or borehole shall be pressure grouted by placing a tremie pipe in bottom of the well casing, which will be the well screen or bottom sump area below the well screen. The pressurized grout will be forced out through the well screen into the filter pack and up the inside of the well casing sealing holes and breaks that are present. The tremie pipe shall be retracted slowly as the grout fills the casing. The well casing shall then be cut off at least 24 inches below ground surface. Native material (gravel, soil, etc.) or material in adjacent areas (asphalt, concrete, etc.) may be used to bring the former well location to grade.

When grout is used for abandonment care should be taken in coarser-grained aquifers or where wells are nested close together as grout can travel or migrate in sand and gravel aquifers. Each well location should be evaluated to see if grout migration may be a concern. If grout migration is a concern, a thicker grout should be mixed or use of bentonite pellets or chips should be used in place of grout if possible.

5.2.2 Dry Bentonite

When granular bentonite, bentonite pellets or bentonite chips are used to abandon the monitoring well or boreholes the following guidelines shall be followed.

- Granular bentonite should be used only when the borehole or well is less than 25 ft deep and when there is no standing water above the filter pack.
- Bentonite chips no greater than 3/8 inch in diameter or bentonite pellets should be used for abandonment of boreholes or monitoring wells less than 50 ft deep and the depth of standing water is less than 50 ft.

Granular bentonite, bentonite chips or bentonite pellets should be placed slowly into the monitoring well or borehole to be sure they reach the bottom of the well to prevent bridging in the well. When the material has risen to the top of the well casing or borehole clean water shall be poured into the well to hydrate the bentonite material. The well casing shall then be cut off at least 24 inches below ground surface. Native material (gravel, soil, etc.) or material in adjacent areas (asphalt, concrete, etc.) may be used to bring the former well location to grade.

6.0 REFERENCES AND ADDITIONAL RESOURCES

ASTM International, 2005, D5299-99 (2005) Standard Guide for Decommissioning of Ground Water Wells, Vadose Zone Monitoring Devices, Boreholes, and Other Devices for Environmental Activities.

USEPA, 2001, Environmental Investigations Standard Operating Procedures and Quality Assurance Manual, Region 4, Enforcement and Investigations Branch, SESD, Athens, Georgia.

USEPA, April 2007, Guidance for Preparing Standard Operating Procedures (SOPs), EPA/600/B-07/001.

Illinois Administrative Code, Title 77: Public Health Chapter I: Water and Sewage Part 920 Illinois Water Well Construction Code Section 920.120 Abandoned Wells

Wisconsin Administrative Code, Chapter NR 141.25, Abandonment Procedures, March 2011

USEPA, 1991 Handbook of Suggested Practices for the Design and Installation of Ground-Water Monitoring Wells, EPA160014-891034

ATTACHMENT A
BOREHOLE / WELL ABANDONMENT FORM

BOREHOLE / WELL ABANDONMENT FIELD FORM

PROJECT INFORMATION

Site: _____ Client: _____

Project Number: _____ Task #: _____ Start Date: _____ Time: _____

Field Personnel: _____ Finish Date: _____ Time: _____

GENERAL INFORMATION

Ownership (Controlling Party): _____

Street Address: _____

City: _____

County: _____

State: _____ Zip: _____

Township: _____ Range: _____ Section: _____

_____ 1/4 of the _____ 1/4 of the _____ 1/4

If Known, Latitude: _____ Longitude: _____

If Known*, Northing: _____ Easting: _____

*Coordinate System: _____

Reason for Abandonment:

Permit Number (If applicable): _____

BOREHOLE / WELL INFORMATION

Borehole / Well ID: _____ Unique Well ID:

Installation Date: _____

☐ Borehole
☐ Monitoring Well
☐ Water Well
☐ Other (specify): _____

Attach Well Completion Report, if available

Construction Type:

☐ Drilled ☐ Driven (Sandpoint)
☐ Other (specify): _____

Formation Type:

☐ Unconsolidated Materials ☐ Bedrock

Borehole/Well Details:

Borehole Diameter: _____ Inches

Total Borehole Depth: _____ FT BGS

Casing Diameter: _____ Inches ☐ Not Applicable

Total Casing Depth: _____ FT BGS ☐ Not Applicable

Depth to Water: FT BGS ☐ Not Encountered

SEALING INFORMATION

Pump & Piping Removed? ☐ Yes ☐ No ☐ Not Applicable

Liner(s) Removed? ☐ Yes ☐ No ☐ Not Applicable

Screen Removed? ☐ Yes ☐ No ☐ Not Applicable

Entire Casing Removed? ☐ Yes ☐ No* ☐ Not Applicable

If No, Upper 2 feet Removed? ☐ Yes ☐ No

Method of Sealing Material Placement:

☐ Conductor Pipe - Gravity ☐ Tremie Pipe - Pumped

☐ Screened & Poured ☐ Other (specify): _____

Sealing Material Rose to Surface? ☐ Yes ☐ No

Material Settled After 24 Hours? ☐ Yes* ☐ No

*If Yes, Was Hole Re-Topped? ☐ Yes ☐ No

Sealing Material Used	From	To	Volume/Quantity
	Surface		

SEALING WORK PERFORMED BY

Individual's Name: _____ License Number:

Company Name: _____

Street Address: _____

City: _____ State: _____ Zip: _____

STANDARD OPERATING PROCEDURE NO. SAS-05-06

TEST PIT EXCAVATION, LOGGING AND SAMPLE COLLECTION Revision 1

1.0 PURPOSE

This Standard Operating Procedure (SOP) describes the guidelines for conducting test pit excavation, logging and sample collection as described in the Site-Specific Work Plan, or as otherwise specified, for the purposes of characterizing subsurface conditions at the site.

2.0 EQUIPMENT AND MATERIALS

- General:
  - Excavator or backhoe;
  - Metal shovel;
  - Spray paint or survey lathe and tape;
  - Visquene sheeting;
  - Tape measure in 0.01-foot increments;
  - Field logbook and field boring log forms;
  - Pen(s) with waterproof, non-erasable ink;
  - 5-gallon bucket and wire or nylon brushes, decontamination water, laboratory grade detergent (Alconox or similar), and paper towels;
  - Aluminum foil or roll-plastic wrap;
  - Stakes and fluorescent flagging tape;
  - Camera; and
  - Personnel protective equipment, as appropriate.
- Soil Logging:
  - Knife, spatula, carpenter's 5-in-1 tool or similar cutting tool;
  - Soil color chart;
  - Comparative charts; and

- Pocket penetrometer.

- Soil Sampling:
  - Sample containers and labels;
  - Sample cutting/extracting equipment (scoops, trowels, shovels, hand augers);
  - Metal mixing bowls;
  - Coolers and ice;
  - Chain of custody forms;
  - Custody seals;
  - Gallon size sealable plastic bags; and
  - Clear plastic packaging tape.

3.0 HEALTH AND SAFETY WARNING

Potentially hazardous conditions relating to chemicals under investigation, equipment and tools in use, utility services in investigation areas, or certain work activities may exist on the site. Protocols are established in each site-specific Health & Safety Plan (HASP) based on corporate health and safety policies and manuals, past field experience, specific site conditions, and chemical hazards known or anticipated to be present from available site data. Before site operations begin, all employees, and subcontractor personnel will have read and understood the HASP and all revisions. Before work begins, all site project staff will sign an agreement and acknowledgment form indicating that they have read and fully understood the HASP and their individual responsibilities, and fully agree to abide by the provisions of the HASP.

4.0 GENERAL PROCEDURES

Test pit procedures shall be conducted only by a trained logging technician. Subsurface utilities shall be cleared prior to mobilization to the site in accordance with SOP ENV-05-01. Field data and observations associated with test pit activities shall be documented in accordance with SOP ENV-01-01, if not otherwise specified in this SOP. All test pit excavation activities should be recorded in a field logbook and/or on a test pit excavation field form. In addition, equipment used while logging shall be decontaminated between test pit locations in accordance with the SOP ENV-04-05 or as otherwise specified in the Quality Assurance Project Plan (QAPP) and/or Site-Specific Work Plan.

5.0 DOCUMENTATION PROCEDURES

The field technician shall record all pertinent excavation information in the field logbook and/or on the appropriate field form. At a minimum, the following technical information with respect to excavation operations and observations shall be recorded, if applicable:

- Project name and number;
- Location (e.g. test pit number) or other sample station identification, including a rough sketch;
- Name of the logging technician overseeing the excavation operations;
- Excavating equipment manufacturer and model;
- Excavating company name and city and state of origin;
- Equipment operator and assistant(s) names;
- Excavation start time and date;
- Excavation completion time and date;
- Excavation dimensions (length and width, and depth)
- Description of soil and/or rock classification and lithology;
- Lithologic changes and boundaries;
- Depth to water first encountered during excavation
- Depth to stabilized water level following excavation
- Sample identifications; depths and time collected for chemical and geotechnical samples;
- Evidence of impact (e.g. staining, odors, free-phase product, etc.); and
- Problems with the excavating equipment or process.

6.0 TEST PIT EXCAVATION PROCEDURES

- Identify the test pit locations and mark limits of excavation using spray paint or survey lathe and tape.
- Confirm absence of subsurface utilities in the test pit excavation areas. If subsurface utilities are present in test pit location, contact the project manager to discuss alternative locations for test pit.

- Lay visquene sheeting to be used for soil stockpiling on ground next to test pit location and secure in place. If topsoil is present, it may be stockpiled separately for restoration of ground surface when test pit is completed.
- Begin excavation making shallow cuts of 6 inches to 1 foot to allow descriptive logging of soil and soil transitions. Stockpile soil on visquene sheeting.
- Sketch the development of the test pit in the field notebook. Complete vertical profiles at multiple locations along the length of the test pit if variation of subsurface materials occurs along the length. Sketch a cross section of the longitudinal length of the test pit.
- Record physical characteristics of the material excavated including Unified Soil Classification System (USCS) soil type, litho logy, color, odor, moisture, structures, foreign objects and observations of environmental impacts in the field logbook or field form. Follow soil description, classification, and visual observations of affected soil procedures provided in SOP ENV-05-02.
- Take photographs to document excavation and log photographs in the field logbook or on the field form.
- If soil samples are required for chemical or geotechnical analysis, collect samples from the base or side walls. If the test pit depth has unsafe conditions (deeper than can be safely accessed, unstable walls, or other safety concerns), collect samples directly from the excavation bucket or soil stockpile. Samples will be collected as soon as possible to minimize potential volatilization from soil in the bucket of the excavator or soil stockpile. Have communication signals set up with excavator operator and/or other subcontractor personnel to indicate that a soil sample will be taken so that the equipment can be stopped for safe sample retrieval. Do not at any time go into the test pit.
- Soil samples shall be collected in accordance with SOP ENV-06-01. Decontaminate sampling equipment between each sample collected in accordance with SOP ENV-04-04. Samples shall be prepared for analysis in accordance with SOP ENV-03-01.
- Once the excavation is complete, record the depth, length and width of the excavation in the field logbook or on the field form.
- Backfill the test pit with the material excavated from the test pit unless other backfilling instructions are specified in the Site-Specific Work Plan. If topsoil was set aside for ground surface restoration, place it on top of the excavation area.
- Decontaminate excavator or backhoe bucket between each test pit in accordance with SOP ENV-04-04.

- Test pits must be backfilled before the end of the work day; no test pits shall be left open overnight.
- Replace markings for limits of test pit excavations if they are to be located by survey at a later date.

7.0 REFERENCES AND ADDITIONAL RESOURCES

USEPA, April 2007, Guidance for Preparing Standard Operating Procedures (SOPs), EPA/600/B-07/001.

STANDARD OPERATING PROCEDURE NO. SAS-05-07

TEST PIT BACKFILLING AND COMPACTION Revision 1

1.0 PURPOSE

This Standard Operating Procedure (SOP) describes the guidelines for backfilling and compacting test pits. When test pits are no longer need to complete project goals and objectives, they must be properly backfilled and compacted to minimize health and safety liabilities, prevent them from acting as a conduit for migration of contaminants, and return the location to pre-excavation conditions.

2.0 EQUIPMENT AND MATERIALS

Equipment and materials may vary based on test pit accessibility and depth. Field personnel should use the equipment and materials required by the Site-Specific Work Plan or otherwise specified for the project. All non-disposable equipment shall be decontaminated after introduction into the test pit. Equipment decontamination should be performed in accordance with SOP ENV-04-04 and/or requirements of the Site-Specific Work Plan.

3.0 HEALTH AND SAFETY

Potentially hazardous conditions relating to chemicals under investigation, equipment and tools in use, utility services in investigation areas, or certain work activities may exist on the site. Protocols are established in each site-specific Health & Safety Plan (HASP) based on corporate health and safety policies and manuals, past field experience, specific site conditions, and chemical hazards known or anticipated to be present from available site data. Before site operations begin, all employees, and subcontractor personnel will have read and understood the HASP and all revisions. Before work begins, all site project staff will sign an agreement and acknowledgment form indicating that they have read and fully understood the HASP and their individual responsibilities, and fully agree to abide by the provisions of the HASP.

4.0 CONSIDERATIONS

The preference for test pit backfilling is generally to return excavated materials to the test pit in the order in which they were excavated. However, the presence of suspected contaminants may require another source of backfill material. The selection of backfill material will be based on several factors, including but not limited to, concentrations of contaminants in excavated materials, test pit location (e.g. street, landscaped area, etc.), subsurface site features, ability to mechanically compact backfill materials, engineering evaluations, health and safety concerns, and access agreements. If the test pit extends below the water table, 3-inch stone shall be used to backfill the excavation to the top of the water table. Backfill material(s) will be specified in the Site-Specific Work Plan. The excavation area shall be returned to pre-excavation conditions or as otherwise specified in the Site-Specific Work Plan, applicable permit(s), and/or access agreement(s). As necessary, a qualified engineer will be consulted prior to selection of backfill and compaction material(s), equipment and method(s).

5.0 BACKFILLING AND COMPACTION

5.1 Trench Box Methods

The test pit excavated using a trench box will be backfilled, as the trench box is systematically raised, to ground surface. Care will be taken to minimize bridging as the backfill is placed. When test pit excavations exceed 4 feet in depth and self-compacting backfill material is not used, the backfill material will be placed in lifts and compacted using the excavator bucket, excavator track/wheel, or vibratory plate compactor or as specified in the Site-Specific Work Plan, applicable permit(s), and/or access agreement(s).

5.2 End Dump Methods

Test pits excavated without a trench box could be backfilled using end dump methods. When test pit excavations exceed 4 feet in depth and self-compacting backfill material is not used, the backfill material will be placed in lifts and compacted using the excavator bucket, excavator track/wheel, or vibratory plate compactor or as specified in the Site-Specific Work Plan, applicable permit(s) and/or access agreement(s).

6.0 REFERENCES AND ADDITIONAL RESOURCES

USEPA, April 2007, Guidance for Preparing Standard Operating Procedures (SOPs), EPA/600/B-07/001.

SOP SERIES SAS-06

SOIL SAMPLING AND MEASUREMENT PROCEDURES

STANDARD OPERATING PROCEDURE NO. SAS-06-01

SOIL SAMPLING FOR CHEMICAL ANALYSES AND GEOTECHNICAL TESTING Revision 1

1.0 PURPOSE

This Standard Operating Procedure (SOP) describes the guidelines for obtaining surface and subsurface soil samples as stated in the Site-Specific Work Plan or as otherwise specified. Soil sampling is conducted for the purpose of chemical analyses and geotechnical testing to evaluate surface and subsurface conditions.

2.0 EQUIPMENT AND MATERIALS

In addition to materials provided by a subcontractor, the field personnel should have the following:

- Sample bottles/containers and labels;
- Sample cutting/extracting equipment (scoops, trowels, shovels, hand augers);
- Field logbook and/or the appropriate field form(s);
- Depth and length measurement devices with 0.01-foot measurement units;
- Camera;
- Stakes and fluorescent flagging tape;
- Decontamination materials;
- Coolers and ice;
- Chain of custody forms;
- Custody seals;
- Gallon size sealable plastic bags;
- Clear plastic packaging tape; and
- Personal protective equipment.

3.0 HEALTH AND SAFETY

Potentially hazardous conditions relating to chemicals under investigation, equipment and tools in use, utility services in investigation areas, or certain work activities may exist on the site. Protocols are established in each site-specific Health & Safety Plan (HASP) based on corporate health and safety policies and manuals, past field experience, specific site conditions, and chemical hazards known or anticipated to be present from available site data. Before site operations begin, all employees, and subcontractor personnel will have read and understood the HASP and all revisions. Before work begins, all site project staff will sign an agreement and acknowledgment form indicating that they have read and fully understood the HASP and their individual responsibilities, and fully agree to abide by the provisions of the HASP.

4.0 SAMPLE TYPE, METHOD, AND EQUIPMENT SELECTION

4.1 Preparation

Site-Specific Work and/or Field Sampling Plans (FSP) which involve soil sampling shall be carefully conceived with respect to data quality objectives (DQOs) and cost effectiveness. Soil samples shall be strategically located to collect a representative fraction of soils with the minimum number of samples. To facilitate complete and successful sampling efforts by minimizing uncertainties with respect to site characterization the following factors shall, at a minimum, by considered during preparation activities:

- Project goals and DQOs;
- Location and duration of historical property uses (if available);
- Location and duration of current property uses;
- Chemical properties of contaminants of potential concern (COPCs);
- Anticipated location(s) of COPCs (e.g. surface, subsurface, etc.);
- Anticipated geologic conditions including presence and elevation of groundwater;
- Site accessibility; and
- Results of previous site reconnaissance and investigations (if available).

4.2 Field Considerations

Field personnel shall review and be familiar with Site-Specific Work and/or FSPs prior to commencement of sampling activities. Field personnel will also facilitate complete and successful sampling efforts by calibrating and operating field instruments/meters used for sample media screening in accordance with SOP ENV-02-01. In addition, field personnel shall be cognizant of the following during investigative activities:

- Indications of COPCs not previously anticipated;
- Evidence (e.g. visual, olfactory, etc.) of COPCs in locations not previously anticipated;
- Geologic conditions not anticipated;
- Changes in site accessibility; and
- Meteorological conditions (e.g. high humidity, rain, etc.) that have the potential to negatively impact operation and performance of field screening instruments, and sample quality.

Field personnel shall notify the Project Manager when field conditions and observations deviate from those anticipated during sampling event preparations. The Project Manager shall approve any deviation from the Work and/or Sampling Plans prior its occurrence. Deviations and approval to deviate from Site-Specific Work and/or FSPs shall be documented in the field logbook and/or on the appropriate field form by the field personnel.

5.0 SAMPLE TYPES

5.1 Grab Samples

Grab samples are collected to identify and quantify compounds at a specific location or interval. Grab samples are limited in areal and vertical extent. A grab sample shall be comprised of no more than the minimum amount of soil necessary to obtain the volume of sample dictated by the required sample container.

5.2 Composite Samples

Composite samples are a mixture of a given number of sub-samples/aliquots and are collected to characterize the average composition of a given surface area, vertical interval, etc. The number of sub-samples/aliquots forming a composite sample shall remain consistent with the context of the investigation. The number and pattern for collection of sub-samples/aliquots within a grid, interval, etc. shall be selected based on project goals and DQOs and shall not change. Composite sampling is associated with two potential interferences:

1. Low concentrations, if present in individual sub-samples/aliquots, may be diluted to the extent that the total composite concentration is below the analytical reporting limits.
2. Sub-samples/aliquots that are predominantly moist clay can be difficult to composite to produce a homogenous mixture. The resulting sample, as represented by the portion selected by the analytical chemist, may not be representative of an average of all the sub-samples/aliquots.

6.0 SAMPLING METHOD

6.1 Random

Random sampling removes the subjective collection of samples based on personal judgment. Soil samples are typically selected from all investigation area(s) when a suspected area of contamination is unknown. Generally, this method is utilized with site screening investigations when there is no strong indication of contamination or distinct depositional areas are present that provide excellent screening samples.

6.2 Biased

Biased sampling involves the collection of samples based on evidence of contamination (e.g. staining, stressed vegetation, elevated field screening results, etc.). Background and control samples are also considered biased, since they are collected from locations anticipated to be impacted or expected to be clean.

6.3 Grid-Based

Grid-based sampling involves the systematic collection of samples based on the size and configuration of an area. This approach is used to characterize the presence and distribution of contaminants and is commonly utilized for large areas. Grid size will be selected during the preparation phase and shall be specified in the Work or Sampling Plan. Common grid sizes shall be developed based on the size and configuration of the area, project goals, and DQOs. It may be appropriate and acceptable to integrate several different grid sizes in a single investigation.

When a Site is extremely large (typically over several acres), it may not be practical and cost-effective to consider sampling every grid. In this case, it will be necessary to statistically select a sub-set of the total number of grids in order to reduce the number of samples collected. On the other hand, it may be more appropriate to use relatively inexpensive screening level analytical techniques to define the areas that will

need to be sampled and analyzed for a higher level of data quality. In all cases, grid points shall be located using a site survey and shall be semi-permanently marked to facilitate relocating the sample locations for subsequent sampling.

7.0 SAMPLING EQUIPMENT AND PROCEDURES

7.1 Manual Sampling

In general, hand sampling using manually operated equipment is a quick and inexpensive sampling technique for shallow depths when precise data or high quality control is generally not required. The most common hand-operated samplers are hand augers, plugs, tubes, split-barrel or fixed piston samplers that are pushed or driven by hand.

Hand augers are easily used at depths less than 10 feet. The most commonly used, manually-operated hand augers include the ship, closed-spiral, and open-spiral augers. In operation, a hand auger shall be attached to the bottom of a length of pipe that has a cross-arm at the top. The hole shall be drilled by turning this cross-arm at the same time the operator presses the auger into the ground. As the auger is advanced and becomes filled with soil, it shall be taken from the hole, and the soil shall be removed. Additional lengths of pipe will be added as required to reach the sampling depth as required by the Site-Specific Work Plan or otherwise specified. Care shall be taken to prevent (to the extent possible) mixing of the soil from upper portions of the hole with lower samples. This is most likely to be a problem when augers are used to advance a hole and obtain samples from soil cuttings.

Pushed samplers can be used to obtain samples within about 3 feet of the surface or, with appropriate extensions, ahead of an augured hole. The sampler will be pushed to the desire depth by the operator. The pusher sampler shall be used with extension(s) and/or in combination with a hand auger to reach sample depths greater than 3 feet below ground surface. When the sampler becomes filled with soil, it shall be taken from the hole and the soil removed. Care shall be taken to prevent mixing of soil from upper portions of the hole with lower samples.

Because of the unpredictable operations that may have been used at many uncontrolled waste sites, sampling devices will never be forced into an abruptly hard material. The stiffness may be a natural lithology change, a rock ledge or cobble, or a buried drum. If resistance is encountered while auguring or pushing a sampler, the procedure will be stopped. The depth at which resistance was met should be recorded into the field logbook and/or on the appropriate field form.

7.2 Split-Spoon Sampler

The split-spoon sampler is a thick-walled steel tube that is split lengthwise. A cutting shoe is attached to the lower end of the barrel; the upper end contains a check valve and is connected to the drilling rods. When a boring is advanced to the point that a sample is to be taken, drill tools are removed, and the sampler is lowered into the hole attached to the bottom of the drill rods.

The split-spoon sampler is driven by a 140-lb hammer falling 30 inches. The split-spoon sampler shall be driven 18 inches into the ground or until 50 blows have been applied in a 6-inch increment, a total of 100 blows have been applied, or there is no observable advance of the sampler after 10 successive blows. The effort taken to drive the sampler shall be recorded at 6-inch intervals and the sampler shall be removed from the boring. The density of the sampled material shall be determined by summing the blow counts for the second and third 6 inches of penetration ("standard penetration resistance" or "N-value") per ASTM D 1586-99. Only disturbed samples are obtained using this procedure.

The standard size split-spoon sampler is 2-inch outside diameter (OD), $1^3/8$-inch inside diameter (ID), and 24 inches long. When soil samples are taken for chemical analysis, a 2- or 2½-inch ID sampler shall be used to provide a larger volume of material, but cannot be used to calculate strength or density properties as stated in the ASTM D 1586-99 test method.

Upon retrieval, excess soil or drilling fluid shall be rinsed or wiped from the sampler's exterior, the cutting shoe removed, and sampler broke open into the two halves. The sample shall be logged and classified in accordance with SOP ENV-05-03. Samples for chemical analyses and/or geotechnical testing shall be collected using the laboratory-approved and analytical-method required sample containers. The sampler tube

shall then be decontaminated. The split-spoon sampler shall be decontaminated between sample intervals in accordance with SOP ENV-04-05.

Liner tubes or sleeves may be incorporated in certain samplers to contain samples temporarily. The liner tubes may be constructed from brass, plastic, or other inert materials used to store and transport the samples. If a sample is to be stored in the liner tube, the tube ends shall first be covered with Teflon film, followed by a plastic slip cap. On each sample end, the Teflon film shall be trimmed, and the cap sealed with vinyl tape to the liner tube. If the sampler is not to be stored in the liner, it will be transferred from the sampler to the appropriate sample container using either the liner tube or a stainless steel or plastic spoon or spatula.

When taking samples for geotechnical testing, the disturbed soil samples shall be removed from the sampler are placed in a sealable glass jar or other containers approved by the geotechnical laboratory and labeled to indicate the project name and number, boring number, sample number, and depths at top and bottom of the sample interval. This information shall be marked on the jar lid using a permanent marker. Other information required by the Site-Specific Work and/or FSP shall be recorded in the field logbook and/or on the appropriate field form.

7.3 Continuous Core Barrel Sampler (CME-Type)

A continuous core barrel sampler (CME-Type) is 5 feet long and fits inside the lead auger of the hollow-stem auger column. The sampler retrieves a 5-foot section of partially disturbed soil samples. The sampler assembly consists of either a split barrel or solid barrel that can be used with or without liners. The split-barrel sampler is most commonly used because it is easier to access and remove the core samples. The core barrel sampler takes the place of the pilot bit, thereby reducing sampling time. The sampler is most efficient in clays, silts, and fine sand.

The sampler shall be attached to the drill rod and locked in-place inside the auger column. The open end of the sampler shall extend a short distance ahead of the cutting head of the lead auger. The hollow-stem auger column shall be advanced 5 feet while the soil enters the non-rotating core sampling barrel. The barrel shall then be retrieved with the drill rod, and the core extruded from the sampler. The sample shall be logged and

classified in accordance with SOP ENV-05-03. Samples for chemical analyses and/or geotechnical testing shall be collected using the laboratory-approved and analytical-method required sample containers. The sampler tube shall then be decontaminated in accordance with SOP ENV-04-05.

7.4 Thin-Walled (Shelby) Tube Samplers

Thin-walled samplers, such as a Shelby tube, should be used to collect relatively undisturbed samples of soil from borings. The samplers are constructed of steel tubing about 1 to 3 mm thick, depending upon its diameter. The lower end has a tapered cutting edge. The upper end is fastened to a sample head adapter with a check valve to help hold the sample in the tube when the tube is being withdrawn from the ground. Thin-walled tube samples are obtained by any one of several methods including pushed-tube, Pitcher sampler, Denison sampler, and piston sampler methods.

In obtaining pushed-tube samples, the tube shall be advanced by hydraulically pushing it in one continuous movement with the drill rig. At the end of the designated push interval and before lifting the sample, the tube shall be twisted to break the bottom of the sample. The tube shall be retrieved from the boring using the drill rig. One of two methods shall be employed for handling the sample once it is retrieved from the boring:

1. Extruding the sample from the sample tube in the field using an extruding device on the drilling rig, and subsequently handling and containerizing the specimen at the drilling site.
2. Leaving the sample in the sampling tube, preparing it for transportation, with subsequent extrusion and handling elsewhere.

A hydraulic extruder shall be used in all cases to minimize disturbance. To extrude the sample from the tube, the tube shall be connected to the extruding device in the appropriate fashion for that type extruder. Some extruding devices push the sample in the same direction that the sample entered the tube, pushing out the top, while others push it out the bottom. It does not matter for environmental sampling, but the orientation of the sample shall be known and kept clear by the sampling personnel. The sample shall be caught on a split section of PVC pipe lined with polyethylene sheeting or aluminum foil. Waxed paper will not be used. Drilling fluids shall be carefully poured off and cuttings or slough material at the top end of the sample raked away, leaving only the true sample interval. The sample shall be transferred to a cutting board by lifting with

the poly/sheeting or aluminum foil and length of the sample shall be measured. The sample shall be logged and classified in accordance with SOP ENV-05-02. Samples for chemical analyses and/or geotechnical testing shall be collected using the laboratory-approved and analytical-method required sample containers. The sampler tube shall then be decontaminated in accordance with SOP ENV-04-04.

Shelby tubes will not be reused for subsequent sampling intervals. A sufficient number of decontaminated sampling tubes shall be brought to the sampling location to complete the required scope of work and protected from being contaminated before use.

7.5 Cuttings or Wash Samples

Drill cuttings or wash samples may be taken as the boring is advanced. A stainless steel or plastic scoop shall be used to obtain a sample from the cuttings pile. The shovel used by drilling personnel to move cuttings shall be stainless steel. The sample shall be logged and classified in accordance with SOP ENV-05-02. Samples for chemical analyses and/or geotechnical testing shall be collected using the laboratory-approved and analytical-method required sample containers. The sampling equipment shall then be decontaminated in accordance with SOP ENV-04-04.

7.6 Test Pit Excavation and Sampling

Test pits, including trenches, consist of open shallow excavations used to determine the subsurface conditions for engineering and geological purposes. Test pits are typically conducted for subsurface characterization and to investigate underground structures that may contain impacts. Test pits shall be excavated manually or by machine (e.g. backhoe, bulldozer, or trackhoe), as required by the Site-Specific Work Plan or otherwise specified, and will be in accordance with OSHA regulations, 29 CFR 1926, 29 CFR 1910.120, and 29 CFR 1910.134. Test pit shall be logged and classified in accordance with SOP ENV-05-06.

Soil samples shall be collected from the backhoe/trackhoe bucket or directly from the wall or base of the test pit, depending on the depth of the pit. Disturbed samples shall be collected using a stainless steel scoop, shovel, or trowel. Undisturbed samples shall typically be collected using a hand auger and/or other coring tool. Samples for chemical analyses and/or geotechnical testing shall be collected using the laboratory-

approved and analytical-method required sample containers. The sampling equipment shall then be decontaminated in accordance with SOP ENV-04-04.

7.7 Surface Soil Sampling

Surface soil samples are collected to determine the surface soil conditions. Surface soil samples are generally collected at depths of less than 1 to 3 feet below the ground surface or as defined in SSWPs, considering DQOs. The use of discrete or composite samples will be determined in the SSWPs.

Before sample collection, all surface materials (i.e., excess gravel, vegetation, etc.) shall be removed from the sample location. Soil samples shall be collected using a stainless steel scoop, trowel, hand auger, or other equipment as required by the Site-Specific Work Plan or otherwise specified. Samples for chemical analyses and/or geotechnical testing shall be collected using the laboratory-approved and analytical-method required sample containers. The sampling equipment shall then be decontaminated in accordance with SOP ENV-04-04. The sample appearance, depth, and location should be recorded in the field logbook and/or on appropriate field form using the standardized descriptions in SOP ENV-05-03, Attachment E.

8.0 ANALYTICAL SAMPLE PREPARATION

Sections of the sample representative of the entire sampling interval shall be selected for chemical analyses and/or geotechnical testing. Based on analytical requirement and contracted laboratory specifications, chemical analysis samples shall be placed in appropriate sample containers. Specific analytical sample preparation procedures are as follows.

- Using a decontaminated sampling instrument, remove the desired thickness and volume of from the sample retrieval device.
- Conduct a direct screening of the sample with a photoionization detector (PID).
- Visual observations of affected soil will use the descriptors from SOP ENV-05-02 Attachment E.
- Describe and classify the sample in accordance with SOP ENV-05-02, Field Logging of Soil and Rocks.
- **Volatile Organic Compounds (VOCs) –** Discrete soil samples for VOC analyses will be collected as soon after sample retrieval as possible. Unless otherwise specified, soil samples for VOC analyses shall be collected by either Powerstop Handle™ or EnCore™ sampler methods in conformance to USEPA

Method 5035 requirements. Attachment A presents procedures for Powerstop Handle™ and EnCore™ sample collection. Secure container lid, apply label containing sample identification information and place in cooler with ice.

- **Semivolatile Organic Compounds (SVOCs), Metals, Cyanide, PCBs, Pesticides, Herbicides, and Organic Carbon –** Soil samples for these analytes will be collected after collecting VOCs. Place soil in a container for homogenization. Samples will be homogenized using clean stainless steel mixing bowls, spoons, knifes, etc. Sample aliquots will be placed directly from the sample retrieval device into the stainless steel bowl. The soil will be thoroughly mixed in the bowl to homogenize the sample and then placed directly into appropriate sample containers. Secure container lid, apply label containing sample identification information and place in cooler with ice.
- **Physical Characteristics –** For geotechnical testing of cohesive samples, cut minimally disturbed sections of the specimen and place it in the appropriate sample container. Samples for geotechnical testing, including Shelby tubes shall be handled and packaged in accordance with standard practices for geotechnical investigations or as required by the Site-Specific Work Plan or otherwise specified. If contamination potentially exists, samples shall be identified as potentially containing hazardous or toxic chemicals.
- Samples shall be identified, labeled, documented and prepared for transport in accordance with SOP ENV-03-01, Sample Identification, Labeling, Documentation and Packaging for Transport.
- SOP ENV-03-2 Chain-of-Custody procedures shall be followed in preparing the samples for transport to the analytical laboratory.
- Sampling equipment and tools shall be decontaminated between each sample in accordance with SOP ENV-04-05.

Containerize any investigation-derived solid and liquid waste, including decontamination water, label and store for disposal at an appropriate disposal facility. Consult with Project Manager regarding disposal of waste.

Samples should be preserved and holding times should be observed according to analytical requirements and laboratory specifications, as required by the Site-Specific Work and/or FSPs, or as otherwise specified. If

replicate or split samples are required, adjust the sections so that the additional samples are essentially identical.

9.0 DOCUMENTATION

Sample identification, labeling, and custody control shall be performed in accordance with requirements specified in SOP ENV-03-01 and ENV-03-02. Specific procedures for describing the samples and logging subsurface soil samples are presented in SOP ENV-05-03. Soil sampling activities shall be recorded in the field logbook and/or on the appropriate field form as specified in SOP ENV-01-01 or as required by the Site-Specific Work Plan.

10.0 REFERENCES AND ADDITIONAL RESOURCES

ASTM International, 1999, D1586-99 Standard Method for Penetration Test and Split-Barrel Sampling of Soils.

ASTM International, 2000, D4220-95 (2000) Practices for Preserving and Transporting Soil Samples.

ASTM International, 2004, D5730-04 Guide for Site Characterization for Environmental Purposes with Emphasis on Soil, Rock, the Vadose Zone, and Ground Water.

USEPA, 2001, Environmental Investigations Standard Operating Procedures and Quality Assurance Manual, Region 4, Enforcement and Investigations Branch, SESD, Athens, Georgia.

USEPA, April 2007, Guidance for Preparing Standard Operating Procedures (SOPs), EPA/600/B-07/001.

ATTACHMENT A
ENCORE™ AND POWERSTOP HANDLE™ SAMPLING PROCEDURES

ENCORE™ SOIL SAMPLING PROCEDURE

- Remove EnCore™ sampler and cap from its re-sealable pouch and attach T-handle to sampler body. (**Note**: when dealing with soft or sandy solid, it may be necessary to retract the plunger in the sampler before sample collection.)
- Using the T-handle for leverage, push the sampler into a freshly exposed surface of soil until the sampler is full.
- Brush any soil off the sampler head and securely attach the sampler cap by pushing with a twisting motion.
- Complete the sample label and attach to the sampler body; place labeled sampler in its re-sealable pouch and seal the pouch.
- Repeat the procedure for two additional samples collected from the same soil stratum or the same area. (**Note:** this step may be eliminated or the number of samples reduced if the suspected level of VOCs is known [i.e., low or high concentration sample]. Consult method 5035 or discuss procedure with an analytical laboratory for further details.)
- Use a stainless steel spoon or similar tool to collect an additional sample from the same soil stratum or the same area. Place collected material in a 2-ounce, wide-mouth jar with no preservatives. (**Note:** this additional soil volume is for dry weight and percent moisture determination. This step is not necessary if additional soil from the sample location is collected for other parameter analyses upon which dry weight and percent moisture will be determined.)
- Immediately place samples in a cooler with ice.

Ship EnCore™ samples (next day priority delivery) to the contract laboratory the day they are collected. Alternatively, arrange to have samples picked-up by the laboratory or delivered to the laboratory by field personnel within 24 hours of collection. These sample shipment or pickup timelines must be achieved to ensure the laboratory performs sample preservation or analysis within 48 hours of sample collection.

POWERSTOP HANDLE™ SAMPLING PROCEDURES

1. Load Sampling Device

Insert EasyDraw Syringe™ into the appropriate slot (5 or 10-gram heavy, 5 or 10-gram medium, 5 or 10-gram light or 13 gram position) on the Powerstop Handle™ device and remove end cap from syringe.

EPA Method 5035 Recommended 5-gram slot positions:

- Use the heavy position for dense clay;
- Use the light position for dry sandy soil; and
- Use the medium position for all others.

2. Collect Sample

Push EasyDraw Syringe™ into a freshly exposed surface of soil until the syringe is full. Continue pushing until the soil column inside the syringe has forced the plunger to the stopping pint. (**Note**: unlike other sample collection devices, there is no headspace air in the syringe to displace.) EasyDraw Syringe™ delivers approximately 5, 10, or 13 grams. Actual weight will be determined at the laboratory. No scale or balance required in the field.

3. Eject Sample Into Vial

Remove the syringe from the Powerstop Handle™ device and insert the syringe into the open end of 40-ml vial, and eject sample into pre-tared vial by pushing on the syringe plunger. Avoid getting dirt on the threads of the 40-ml vial. Cap vial immediately and put on ice. Sample must be received by within 48 hours of sampling if samples are not chemically preserved in the field.

STANDARD OPERATING PROCEDURE NO. SAS-06-02

SOIL SAMPLING FOR MICROORGANISMS Revision 0

1.0 PURPOSE

This Standard Operating Procedure (SOP) describes the guidelines for the collection of soil samples for analysis of their microbial constituents. While samples are generally collected from uncontaminated soils, samples collected from contaminated soils may be used to evaluate the feasibility and/or progress of natural or enhanced biotreatment activities. This SOP shall be used in conjunction with SOP ENV-06-01 (Soil Sampling for Chemical Analyses and Geotechnical Testing), which describe general soil sample collection techniques.

2.0 EQUIPMENT AND MATERIALS

Any of the equipment used to collect surface or subsurface soil samples may be used to obtain a volume of soil from which a sub-sample can be extracted using sterile techniques for microbial analysis. A stainless steel spoon or trowel, as described in the following sections, shall be used to collect the sub-sample. Sample containers must be sterile. Wide-mouthed 500-mL Pyrex or polypropylene bottles with autoclavable screw caps, which have been autoclaved for 15 minutes at 250°F and 15 psi or 530-mL sterile Whirl-pak® bags (Fisher Scientific Company) shall be used unless otherwise specified by the Work and/or Sampling Plan(s).

3.0 SPECIAL CONSIDERATIONS

The stainless steel spoon or towel used to collect the sample or sub-sample shall be decontaminated prior to sampling and following the collection of each sample or sub-sample in accordance with SOP ENV-04-05. Following the decontamination, either of the two sterilization procedures may be followed.

- Sterilization Procedure 1 - Spoons or trowels shall be individually packaged in aluminum foil and autoclaved for 30 minutes and 250°F at 15 psi. Each sterile sampler shall be used only once, decontaminated, and then re-sterilized.

- Sterilization Procedure 2 – The spoon or scoop portion of the trowel shall be dipped in denatured alcohol, shaken gently, and then ignited. Please note that this procedure may only be used if no flammable, ignitable, or explosives are present on Site.

4.0 EXECUTION

4.1 Surface Sample Collection

If samples are desired directly at the surface, sterile spoons or trowels shall be used to collect the samples. Samples shall be collected in accordance with the procedures outlined in SOP ENV-06-01 with the following exceptions:

1. In order to facilitate the collection of a representative sample, the top one-inch of soil shall be scraped from approximately one-square foot and the sample collected from the underlying material.
2. Samples will be placed into sterile containers, which shall be closed immediately and placed on ice. Please note that microbial samples are not to be frozen.

4.2 Subsurface Sample Collection

Shovels, core samplers, backhoes, split-spoon samplers, and thin wall tube samplers may be used to collect subsurface samples for microbial analysis. Augers or any method that disturbs the soil column shall not be used. Sample shall be collected in accordance with the procedures outlined in SOP ENV-06-01 with the following exceptions:

1. Once the volume of soil is collected by one of the above procedures, a sub-sample shall be collected from the center of the soil sample, avoiding all surfaces which have been in contact with the non-sterile sampling device.
2. Samples will be placed into sterile containers, which shall be closed immediately and placed on ice. Please note that microbial samples are not to be frozen.

5.0 REFERENCES AND ADDITIONAL RESOURCES

ASTM International, 2004, D3694-94(2004) Standard Practices for Preparation of Sample Containers and for Preservation of Organic Constituents.

USEPA, 1978, Microbiological Methods for Monitoring the Environment, EPA-600/8-78-017.

USEPA, 2001, Environmental Investigations Standard Operating Procedures and Quality Assurance Manual, Region 4, Enforcement and Investigations Branch, SESD, Athens, Georgia.

USEPA, April 2007, Guidance for Preparing Standard Operating Procedures (SOPs), EPA/600/B-07/001.

SOP SERIES SAS-08

GROUNDWATER SAMPLING AND MEASUREMENT PROCEDURES

STANDARD OPERATING PROCEDURE NO. SAS-08-01

GROUNDWATER AND NON-AQUEOUS PHASE LIQUID MEASUREMENT Revision 1

1.0 PURPOSE

The purpose of this standard operating procedure (SOP) is to describe method(s) to measure groundwater, Light Non-Aqueous Phase Liquids (LNAPL) and Dense Non-Aqueous Phase Liquids (DNAPL) elevations and thicknesses in groundwater monitoring wells, observation wells, and recovery wells as required in the Site-Specific Work Plan or as otherwise specified.

2.0 EQUIPMENT AND MATERIALS

- Notebook, field logbook, and/or the field activity form;
- Steel add-on tape or electronic water level indicator;
- Electronic water level indicator;
- Electronic oil/water interface probe;
- Pressure transducer (as appropriate for the conditions);
- Gasket adapted to the diameter of the transducer cable;
- Data logger;
- Decontamination equipment and supplies (in accordance with the guidelines in SOP ENV-04-05).
- Personal protective equipment; and
- Chalk

3.0 HEALTH AND SAFETY WARNINGS

Potentially hazardous conditions relating to chemicals under investigation, equipment and tools in use, utility services in investigation areas, or certain work activities may exist on the site. Protocols are established in each site-specific Health & Safety Plan (HASP) based on corporate health and safety policies and manuals, past field experience, specific site conditions, and chemical hazards known or anticipated to be present from available site data. Before site operations begin, all employees, and subcontractor personnel will have read

and understood the HASP and all revisions. Before work begins, all site project staff will sign an agreement and acknowledgment form indicating that they have read and fully understood the HASP and their individual responsibilities, and fully agree to abide by the provisions of the HASP.

4.0 GENERAL REQUIREMENTS

Water level, LNAPL, and DNAPL (if present) measurements should be obtained at wells designated in the Site-Specific Work Plan. Water level, LNAPL, and DNAPL levels should be measured in referenced to a common elevation or datum, preferably to a USGS benchmark located at the site. Water level, LNAPL, and DNAPL depths should be measured from a reference point marked on the top of the casing, which, in turn, is referenced to a permanent benchmark.

Water and product level measurement devices shall be decontaminated as per SOP ENV-04-05 or as specified in the Site-Specific Work Plan before and after measuring at each location.

Care shall be exercised to avoid direct skin contact while measuring water level and product depth. All equipment should be decontaminated before and after each measurement as per SOP ENV-04-05. Water and product level measurements should be recorded in the field logbook and/or the field activity form.

5.0 MEASUREMENT METHODS AND PROCEDURES

5.1 Discrete Groundwater Level Measurement

Discrete water level measurements should be made by determining the depth to the water surface from the top of the well casing at the fixed reference point. The fixed reference point is established by permanently marking a point on the outer edge (lip) of the well casing. Caution should be exercised so that filings do not fall into the well.

The depth to water can be determined using a steel add-on tape or electronic water level indicator. The steel add-on tape consists of a measuring tape that has 1-foot increments and a 1-foot section at the end of the tape with 0.01-foot increments. The end of the tape is coated with chalk and lowered into the well. The water depth is read from the saturated mark on the chalked tape and added to the depth interval measured at the top of the well casing

Electronic water level indicators are conducting probes that activate an alarm and a light when they intersect the water. The sounder wire is marked in 0.01-foot intervals to indicate depth. All sounders are equipped with weights to maintain line tension for accurate readings. The typical operating procedures for an electronic water level indicator are as follows:

- Lower the sounder wire until it just makes contact with the water in the well and the indicator light goes on or the pulsating alarm is sounded. Record the position of the wire relative to the reference point at the top of the well casing. Record the actual water level reading to the nearest 0.01-foot. Repeat to confirm depth.
- Withdraw the sounder from the well.
- Record the water depth in the field logbook and/or the field activity form.
- Decontaminate the sounder wire and electrode in accordance with SOP ENV-04-05.

Discrete water levels are typically required from a series of wells when data for preparing groundwater contour maps are needed. However, discrete water levels may also be required when monitoring the changes in water level during aquifer testing if aquifer response is sufficiently slow. Continuous water level measurements are discussed in Section 5.4 of this SOP.

5.2 Discrete LNAPL Level Measurement

Discrete LNAPL or product level measurements should be made by determining the depth to the product and water surface from the top of the well casing at the fixed reference point. The fixed reference point is established by permanently marking a point on the outer edge (lip) of the well casing. Caution should be exercised so that filings do not fall into the well.

The depth of the product and water level may be obtained using an electronic oil/water interface probe. An oil/water interface probe has a multi-conducting probe that activates different signals, typically pulsating beeps and continuous alarms, when they intersect the product and water, respectively. The sounder wire is marked in 0.01-foot increments to indicate depth. The interface probe is equipped with a weight to maintain line tension and obtain accurate readings. The typical operating procedures for an electronic oil/water interface probe are as follows:

- Check the interface probe battery by pressing the test button to ensure the device is operating properly before and after taking the level measurement. Daily battery checks should also be made and documented in the logbook.
- Lower the interface probe until it makes contact with the product in the well and the product indicator light goes on or the continuous alarm is sounded. Record the position of the wire relative to the reference point to the nearest 0.01-foot. Repeat to confirm the depth of the product.
- Continue to lower the interface probe, through the product layer, until it makes contact with the water level in the well and the water indicator light goes on or the pulsating alarm is sounded. Record the position of the wire to the reference point to the nearest 0.01-foot. Repeat to confirm the depth of the water.
- Withdraw the probe from the well.
- Record the product and water depth in the field logbook and/or the field activity form.
- Decontaminate the sounder wire and probe in accordance with the guidelines in SOP ENV-04-05.

Alternatively, the depth to the top of LNAPL may be approximated to the tenth of an inch with a weighted standard measuring tape. The thickness of LNAPL will be approximated using a bottom filling, clear, disposable bailer. The bailer may be slowly lowered into the water column, just below the approximate surface and allowed to fill. The bailer will be gently removed from the well to minimize disturbance. Measurements of the observed thickness of LNAPL will be measured to the nearest 0.1-foot using a standard measuring tape and recorded in the field logbook and/or the field activity form.

5.3 Discrete DNAPL Level Measurement

Discrete DNAPL or product level measurements should be made by determining the depth to the product and water surface from the top of the well casing at the fixed reference point. The fixed reference point is established by permanently marking a point on the outer edge (lip) of the well casing. Caution should be exercised so that filings do not fall into the well.

The depth of the water and product level may be obtained using an electronic oil/water interface probe. An oil/water interface probe has a multi-conducting probe that activates different signals, typically continuous alarms and pulsating beeps, when they intersect the water and product, respectively. The sounder wire is

marked in 0.01-foot increments to indicate depth. The interface probe is equipped with a weight to maintain line tension and obtain accurate readings. The typical operating procedures for an electronic oil/water interface probe are as follows:

- Check the interface probe battery by pressing the test button to ensure the device is operating properly before and after taking the level measurement. Daily battery checks should also be made and documented in the logbook.
- Lower the interface probe until it makes contact with the water in the well and the water indicator light goes on or the beeping alarm is sounded. Record the position of the wire relative to the reference point to the nearest 0.01-foot. Repeat to confirm the depth of the water.
- Continue to lower the interface probe, through the water, until it makes contact with the product level in the well and the product indicator light goes on or the continuous alarm is sounded. Record the position of the wire to the reference point to the nearest 0.01-foot. Repeat to confirm the depth to the product.
- Withdraw the probe from the well.
- Record the water and product depth in the field logbook and/or the field activity form.
- Decontaminate the sounder wire and probe in accordance with the guidelines in SOP ENV-04-05.

Alternatively, the measurements of DNAPL may be approximated using a bottom filling, clear, disposable bailer. The bailer may be slowly lowered into the water column, to the bottom of the well and allowed to fill. The bailer will be gently removed from the well to minimize disturbance. Measurements of the observed thickness of DNAPL will be measured to the nearest 0.1-foot using a standard measuring tape and recorded in the field logbook and/or the field activity form.

5.4 Continuous Water Level Measurement

Continuous water level measurements are made by determining the height of the water column above a pressure transducer and electronically recording fluctuations in this height with a data logger. The continuous recording of height of water above the transducer is used for aquifer testing where rapid changes in water level are anticipated. The typical operating procedures for a continuous water level system are as follows:

- Enter the program into a data logger that has fully charged batteries. Alkaline batteries are preferred. During use, the battery voltage should not drop below the minimum voltage specified by the manufacturer; damage to the data logger and loss of recorded data could result.

- Select a pressure transducer for use in a given well that is compatible with both water quality and anticipated pressure sensitivity range (i.e., 5 psi, 30 psi, etc.). The pressure range selected is dictated by the anticipated range in the water column above the transducer and by the desired precision in measurement.
- Connect the transducers to the data logger in the field following manufacturer's instructions. Typically, four to eight input channels are available on the system. Other factors affecting the sampling configuration include cable length; distance between monitored wells; terrain; local human activities (traffic, plant operations); and the ability to secure the system from weather and vandals.
- Attach the transducer cable to the data logger and calibrate in air according to manufacturer's instructions. If multiple data loggers are used, internal clock synchronization should also be performed.
- Measure water level and depth to the bottom of the well before lowering the transducer into the well. Water levels are measured with an electrical water level indicator; total depth of the well is measured with a device compatible with well depth.
- Secure a sanitary fitting (commonly a gasket adapted to the cable diameter) at the surface of the well. Lower transducer into the well through the sanitary fitting to a depth between the water level and the bottom of the well. The transducer must be kept submerged during the period of measurement. Take care to keep the piezometric crystal at the tip of the transducer out of any fine sediment that has accumulated in the bottom of the well. On some transducers, the crystal is protected from sediment intrusion. Measure water level again; record the time indicated on the data logger digital display and water level. From these readings (and other periodic manual water level measurements), the water levels can be converted to elevations.
- Transfer data stored in the data logger periodically to a portable computer. The frequency of data transfer depends on available memory and conditions encountered in the field. Data may be transferred as frequently as daily. If the data logger has a wrap-around memory, the information should be transferred so that records are not recorded over.

6.0 REFERENCES AND ADDITIONAL RESOURCES

USEPA, April 2007, Guidance for Preparing Standard Operating Procedures (SOPs), EPA/600/B-07/001.

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STANDARD OPERATING PROCEDURE NO. SAS-08-02

LOW-FLOW GROUNDWATER SAMPLING Revision 2

1.0 PURPOSE

This Standard Operating Procedure (SOP) describes the procedures and guidelines for conducting low-flow groundwater sampling. This SOP provides a method that minimizes the impact of the purging process on groundwater chemistry and volume of water for disposal.

2.0 EQUIPMENT AND MATERIALS

- Map of well locations;
- Well construction information;
- Tools and well keys, as required to facilitate access to wells;
- Water level measuring device (electronic water level indicator, interface probe, or weighted steel tape);
- Adjustable rate peristaltic pump or an adjustable rate low-flow submersible or positive displacement bladder pump (Note: The Site-Specific Work and/or Field Sampling Plan (FSP) shall specify the type of pump required);
- 1/4 to 3/8-inch Teflon®, polyvinyl chloride (PVC), or polypropylene tubing;
- Flow measurement supplies (e.g. graduated cylinder and stop watch);
- Power source, if applicable;
- Compressed inert gas source (for use with bladder pump), if applicable;
- Flow-through cell;
- Groundwater quality/indicator parameter monitoring instruments (flow-through cell capable);
- Instrument operation manual(s);
- Instrument calibration standard(s);
- Container(s) for purge water storage (e.g. 5-gallon buckets, polyethylene storage tank, etc.);
- Sample containers and labels, as appropriate for the analytical method(s) selected;
- Field filtration equipment, if applicable;

- Chain of custody forms and seals;
- Cooler(s) with double-bagged ice;
- Polyethylene sheeting, as appropriate;
- Decontamination materials;
- Personal protection equipment; and
- Field logbook and/or appropriate field form.

3.0 HEALTH AND SAFETY

Potentially hazardous conditions relating to chemicals under investigation, equipment and tools in use, utility services in investigation areas, or certain work activities may exist on the site. Protocols are established in each site-specific Health & Safety Plan (HASP) based on corporate health and safety policies and manuals, past field experience, specific site conditions, and chemical hazards known or anticipated to be present from available site data. Before site operations begin, all employees, and subcontractor personnel will have read and understood the HASP and all revisions. Before work begins, all site project staff will sign an agreement and acknowledgment form indicating that they have read and fully understood the HASP and their individual responsibilities, and fully agree to abide by the provisions of the HASP.

4.0 APPLICATION OF SAMPLING METHOD

Low-flow is one of several acceptable sampling procedures and may be performed using bladder or peristaltic pumps. Peristaltic pumps may be used when the well depth is less than or equal to fifteen feet, in zones of high contamination, or as approved in a SSWP. The sampling method may be modified to demonstrate attainment of cleanup goals in the future. Low-flow sampling shall not be used when one or more of the following conditions are present:

- Well will not accept or allow placement of the sampling device;
- Non-aqueous phase liquids (NAPLs). Reference SOP SAS-08-07 when sampling wells with NAPL;
- Formation screened will not allow drawdown to stabilize; and
- Water column is less than 2 feet in height.

5.0 EXECUTION

To the extent practical, sampling shall begin at the monitoring well with the least contamination and proceed systematically to the monitoring wells with the most contamination using the procedure outlined in the following subsections unless otherwise required by the Site-Specific Work and/or FSPs.

5.1 Preparation

The sampler shall create a work area around the monitoring well to minimize the potential for cross-contamination. Work area preparations may include the placement of polyethylene sheeting prevent sampling equipment from coming in contact with the ground surface. The sampler shall barricade and/or flag the work area, if required by the Site-Specific HASP. The sampler shall also arrange the sampling equipment and supplies to facilitate efficient execution of groundwater sampling procedures.

5.2 Well Gauging

Groundwater and NAPL, if present, elevation measurements shall be obtained in accordance with SOP SAS-08-01 or as otherwise specified in the Site-Specific Work and/or FSPs. Following sampling, the sampler may obtain the total well depth from top of casing (in feet to the nearest 0.01-foot) using a water level indicator, interface probe, or steel tape, as detailed in SOP SAS-08-05 and as required by the Site-Specific Work and/or FSP or otherwise specified. Measuring the total well depth prior to sampling should be avoided. Total well depths may be obtained following sampling activities or at least two weeks prior to the sampling. If total well depth is required to be measured immediately prior to sampling, the sampler will take precautions to minimize the displacement of sediments, if present, within the well during gauging activities. In general, the use of an interface probe shall be limited to wells containing NAPL or elevated concentrations of constituents of concern. Groundwater and NAPL elevation measurements and total well depth measurements shall be recorded in the field logbook and/or on the appropriate field form.

5.3 Pump/Tubing Intake Positioning

The sampler should determine and place or position the pump/tubing intake as appropriate relative to the position of the water level, screened interval, and constituents of concern. The position the pump/tubing intake should be a minimum of one foot above the well sump to the extent practical and preferably at an elevation near the center of the well screen. The sampler shall slowly raise or lower the pump or tubing when

placing or positioning intake in order to minimize the displacement of sediments, if present, within the well. The pump model/type, tubing (type, inner diameter, and length), and pump/tubing intake depth/elevation shall be recorded in the field logbook and/or on the appropriate field form. If the water quality instruments can be programmed to calculate the one tubing volume, the data collected during pump/tubing intake placement/positioning shall be entered into the instrument. If the instrument cannot be programmed to calculate the tubing volume, this volume shall be calculated by the sampler using the following formula.

$$\text{Tubing Volume}_{(\text{Gallons})} = \text{Tubing Length}_{(\text{Feet})} \times \text{Volume per One Foot of Tubing}^{TDS}_{(\text{Gallons/Foot})}$$

Where: ^{TDS} = Tubing inner diameter-specific; tubing manufacturer provided information.

The calculated tubing volume shall also be recorded in the field logbook and/or on the appropriate field form.

5.4 Equipment Assembly and Calibration

The sampler shall connect the tubing from the well to the inflow fitting at the bottom of the flow-through cell. A length of tubing shall be connected to the outflow fitting at the top of the flow-through cell with the other end extending into a 5-gallon bucket. The 5-gallon bucket shall be used to collect the purge water. Groundwater quality/indicator parameter monitoring instruments will be calibrated in accordance with the instrument operation manual(s) and SOP SAS-02-01 using the manufacturer prescribed calibration standards. During instrument calibration, the instrument shall be set up to measure and record data in the units (e.g. microsiemens per centimeter (uS/cm), milligrams per liter (mg/L), etc.) specified in the Site-Specific Work and/or Sampling Plan(s). Calibration shall be documented in the field logbook and/or on the appropriated field form. Following calibration, the instruments shall be connected to the flow-through cell.

5.5 Flow Rate and Drawdown Determination

The sampler shall re-gauge the depth to groundwater from the top of well casing. The sampler shall turn on the pump at its lowest setting and determine the flow rate by measuring the volume of water removed over a one-minute period using a graduated cylinder and stop watch or other approved flow rate measuring device. The sampler shall monitor the water column drawdown and shall adjust the pump to avoid a drawdown of more than 0.1 meter or 0.3 feet (4 inches). The flow rate of the pump shall generally be adjusted to between 0.2 and 0.5 liters per minute (L/min). During pump start-up, drawdown may exceed 0.3 feet provided the drawdown stabilizes and the groundwater level does not fall below the intake level. The water level shall not

fall below the top of the well screen if the water level was greater than 0.5 feet above the well screen prior to commencing pumping activities. Pump adjustments shall be made within the first 15 minutes of purging. The final flow rate and stabilized drawdown shall be recorded in the field logbook and/or on the appropriated field form.

5.6 Purging and Groundwater Quality/Indicator Parameter Monitoring

The Site-Specific Work and/or FSPs shall specify the groundwater quality/indicator parameters to be monitored, which typically include temperature, pH, specific conductance or actual conductivity, oxidation-reduction potential, dissolved oxygen, and turbidity. Parameter monitoring will begin after a minimum of tubing volume has been purged from the well. The sampler shall monitor and record in the field logbook and/or on the appropriate field form parameters every three to five minutes (during continuous purging) until parameters have stabilized. A generic groundwater sampling field form is provided in Appendix B. Five-minute intervals are typical; three-minute intervals are used during flow rates in highly permeable media that will allow pumping rates that exceed typical low-flow rates. Parameter stabilization is considered to be achieved when three consecutive readings, spaced approximately 2 to 10 minutes, or 0.5 well volumes or more apart, are within the parameter-specific limit listed in the table below or as specified in the Site-Specific Work and/or Sampling Plan(s).

Parameter	**Stabilization Criteria**[1]
Conductance, Specific Electrical	+/- 3% µS/cm @ 25°C
Conductivity, Actual[2]	+/- 3% µS/cm
Dissolved Oxygen	+/- 0.3 mg/L
Oxidation-Reduction Potential	+/- 10 mV
pH	+/- 0.1 standard units
Temperature	+/- 0.1 °C
Turbidity	<10 NTUs or ± 10% when turbidity is greater than 10 NTUs and/or visually clear water

[1] USEPA, 2002, Ground-Water Sampling Guidelines for Superfund and RCRA Project Managers, EPA 542-S-02-001
[2] Based on the stabilization criteria for specific electrical conductance as published in the documented cited above

Once the parameters have stabilized, purging is considered complete and sample collection shall commence.

5.7 Sample Collection

While water is being purged from the well, groundwater samples shall be collected directly into the laboratory provided sample containers from the tubing, before the water has passed through the flow-through cell. This shall be accomplished by using a by-pass assemble or disconnecting the flow-through cell to obtain the sample. Water collected for analysis requiring field filtration will be filtered with an in-line Nalgene© disposable 0.45 micron (µm) filter, or equivalent. Water will be discharged directly from the in-line filter into the sample container following a filter pre-rinse, which will be performed by passing water through the filter, minimum of 500 milliliter (mL), and discharging prior to collection of the sample(s). Samples collected with bailers will be collected in intermediated unpreserved laboratory-provided containers and immediately field filtered as previous described with in-line filters.

Samples shall be collected in order of analyte stability, as summarized below, unless otherwise specified by the Site-Specific Work and/or FSPs:

- Volatile organic compounds (VOCs);
- Semi-volatile organic compounds (SVOCs);
- Non-filtered, non-preserved samples (e.g. PCBs, sulfate, etc.);
- Non-filtered, preserved samples (e.g. phenols, nitrogen, cyanide, total metals, etc.);
- Filtered, non-preserved samples;
- Filtered, preserved samples (e.g. dissolved metals); and
- Miscellaneous parameters.

Quality Control (QC) samples, if required, will be collected consecutively to ensure appropriate duplicate sample collection in accordance with SOP SAS-04-03. Immediately following collection, samples shall be placed in an iced cooler.

5.8 Post-Sample Collection

Non-Dedicated and dedicated sampling equipment, which does not remain within the well casing, shall be removed from the monitoring well. The reusable and/or dedicated equipment and instruments shall be decontaminated in accordance with SOP SAS-04-04 or as otherwise specified by the Site-Specific Work and/or Sampling Plan(s). Disposable equipment and supplies shall be disposed of in accordance with procedures outlined in the Site-Specific Work and/or FSPs. The sampler shall secure the well casing using a slip or expandable well cap. The flush-mount lid shall be bolted down or the protective cover closed and locked, as appropriate.

6.0 DOCUMENTATION

Sample information, labeling, and custody control shall be performed in accordance with requirements specified in SOP SAS-03-01 and SAS-03-02. Sampling activities shall be recorded in the field logbook and/or on the appropriate field form as specified in SOP SAS-01-01 or as required by the Site-Specific Work and/or FSPs. A generic groundwater sampling field form is provided in Appendix B.

7.0 REFERENCES AND ADDITIONAL RESOURCES

USEPA, 2002, Ground-Water Sampling Guidelines for Superfund and RCRA Project Manager, Region 5 and Region 10, EPA 542-S-02-001.

USEPA, April 2007, Guidance for Preparing Standard Operating Procedures (SOPs), EPA/60/B-07/001.

STANDARD OPERATING PROCEDURE NO. SAS-08-03

WELL-VOLUME APPROACH GROUNDWATER SAMPLING Revision 2

1.0 PURPOSE

This Standard Operating Procedure (SOP) describes the guidelines for obtaining groundwater samples using the well-volume approach from groundwater monitoring wells, recovery wells, or observation wells as described in the Site-Specific Work Plan or as otherwise specified for the purpose of determining groundwater quality. The well-volume approach involves the purging of the stagnant water within the well and stabilization of water quality indicator parameters prior to sampling.

2.0 EQUIPMENT AND MATERIALS

- Map of well locations;
- Tools and well keys, as required to facilitate access to wells;
- Water level measuring device (e.g. electronic water level indicator, interface probe, or weight steel tape);
- Well construction information, as appropriate;
- Calculator / Conversion Chart
- Pump, if required by the Site-Specific Work and/or Field Sampling Plan (FSP);
- Teflon®, polyvinyl chloride (PVC), or polypropylene pump-specific tubing, if applicable;
- Power Source, if applicable;
- Bailer – Disposable (disposable for purging and sampling), PVC (for purging only), and/or stainless steel (for purging and/or sample collection), if required by the Site-Specific Work and/or FSP;
- Rope, if applicable;
- Disposable plastic cups or stainless steel cup;
- Groundwater quality/indictor parameter monitoring instruments;
- Instrument operation manual(s);
- Instrument calibration standard(s);

- Container(s) for purge water volume measurements and storage (e.g. 5-gallon bucket, polyethylene storage tank, etc.);
- Sample containers and labels, as appropriate for the analytical method(s) selected;
- Field filtration equipment, if applicable;
- Chain of custody forms and seals;
- Cooler(s) with double-bagged ice;
- Polyethylene sheeting, as appropriate;
- Personal protective equipment;
- Decontamination materials and supplies;
- Field logbook and/or appropriate field form; and

3.0 HEALTH AND SAFETY WARNINGS

Potentially hazardous conditions relating to chemicals under investigation, equipment and tools in use, utility services in investigation areas, or certain work activities may exist on the site. Protocols are established in each site-specific Health & Safety Plan (HASP) based on corporate health and safety policies and manuals, past field experience, specific site conditions, and chemical hazards known or anticipated to be present from available site data. Before site operations begin, all employees, and subcontractor personnel will have read and understood the HASP and all revisions. Before work begins, all site project staff will sign an agreement and acknowledgment form indicating that they have read and fully understood the HASP and their individual responsibilities, and fully agree to abide by the provisions of the HASP.

4.0 APPLICATION

The well-volume approach is one of several acceptable sampling procedures. The well-volume approach involves the purging of the stagnant water within the well and stabilization of water quality indicator parameters prior to sampling. While this method can be used in wells screened in any formation, it is generally used to sample low-permeability formations (i.e., low-yielding wells).

Newly constructed and developed wells shall be allowed a minimum of 48 to72 hours to stabilize before sampling is performed. Once a well is purged, it should be sampled within 2 hours. If a purged well is

allowed to sit longer than the prescribed 2 hours the water contained in the well casing may no longer be representative of aquifer conditions and the well shall be re-purged with one exception. If a water table well is purged dry, it should be sampled when a sufficient volume of water is present. In general, the sample collection shall take place within 24 hours of bailing or pumping the well dry. Purging a water table well dry should be avoided if possible. Wells screened below the water table should never be purged dry. Purging wells screened across water table must be performed at a rate that prevents significant reduction in the water table elevation. Wells that are purged dry should be sampled at least 2 hours after purging activities. Sampling of wells that are known to contain NAPL will follow procedures in SOP SAS-08-07.

5.0 EXECUTION

To the extent practical, sampling shall begin at the monitoring well with the least contamination and proceed systematically to the monitoring wells with the most contamination using the procedure outlined in the following subsections unless otherwise required by the Site-Specific Work and/or FSPs.

5.1 Preparation

The sampler shall create a work area around the monitoring well to minimize the potential for cross-contamination. Work area preparations may include the placement of polyethylene sheeting prevent sampling equipment from coming in contact with the ground surface. The sampler shall barricade and/or flag the work area, if required by the Site-Specific HASP. The sampler shall also arrange the sampling equipment and supplies to facilitate efficient execution of groundwater sampling procedures.

5.2 Well Gauging

Groundwater and non-aqueous phase liquid (NAPL), if present, elevation measurements shall be obtained in accordance with SOP SAS-08-01 or as otherwise specified in the Site-Specific Work and/or FSP. The sampler shall also obtain the total well depth from top of casing (in feet to the nearest 0.01-foot) using a water level indicator, interface probe, or steel tape, as required by the Site-Specific Work and/or FSP or otherwise specified. Total well depths may be obtained prior to the sampling and provided to the sampler. If total well depth is required to be measured immediately prior to sampling, the sampler will take precautions to minimize the displacement of sediments, if present, within the well during gauging activities. In general, the use of an interface probe shall be limited to wells containing NAPL or elevated concentrations of constituents

of concern. Groundwater and NAPL elevation measurements and total well depth measurements shall be recorded in the field logbook and/or on the appropriate field form.

5.3 Standing Water Column Calculation

The sampler shall calculate the standing water column using the following formula:

Standing Water Column $_{(Feet)}$ = TD $_{(FT\ BTOC)}$ − DTW $_{(FT\ BTOC)}$

Where: TD = Total Well Depth
FT BTOC = Feet below top of well casing
DTW = Depth to Water

The sampler shall record the calculation in the field logbook and/or on the appropriate field form.

5.4 Volume Calculations

The sampler shall calculate the volume of water required to be purged prior to sampling. Depending on data quality objectives, state- or regulatory program-specific requirements, and the Site-Specific Work and/or FSP, one of two methods may be used: casing volume or borehole volume. In general, a minimum of three volumes of water, casing or borehole, shall be purged prior to sample collection (see section 5.6 below) in addition to stabilization of groundwater quality indicator parameters.

5.4.1 Casing Volume Calculation:

The sampler shall calculate the casing volume, which is the volume of water inside the well casing only, using the following formula.

One Casing Volume $_{(Gallons)}$ = Standing Water Column $_{(Feet)}$ X Volume per One Foot of Casing ^{WDS} $_{(Gallons/Foot)}$

Where: ^{WDS} = Well diameter-specific (see table below)

Well Diameter-Specific Volume Per One Foot of Casing				
Well Diameter (Inches)	**Volume Per Foot of Casing (Gallons)**		**Well Diameter (Inches)**	**Volume Per Foot of Casing (Gallons)**
0.25	0.0026		4.0	0.6528
0.50	0.0102		6.0	1.469

Well Diameter-Specific Volume Per One Foot of Casing			
0.75	0.0230	8.0	2.611
1.0	0.0408	10.0	4.081
2.0	0.1632	12.0	5.876

The sampler shall record the calculation in the field logbook and/or on the appropriate field form.

5.4.2 Borehole Volume Calculation

The sampler shall calculate the borehole volume, which is the volume of water inside the well casing and volume of water inside the filter pack, using the following formula. Please note that this calculation requires the sampler to know the borehole diameter, filter pack height/elevation, and filter pack porosity.

One Borehole Volume $_{(Gallons)}$ = n ((A X B) – (A X C)) + (C X D)

Where: n = porosity of the filter pack (generally assumed to be 25% or 0.25)

A = height (in feet) of saturated filter pack

B = borehole diameter-specific volume (see table below)

C = well diameter-specific volume (see table below)

D = standing water column (see Section 5.4.1 above)

Diameter-Specific Volume Per One Foot of Borehole or Casing			
Diameter (Inches)	**Volume Per Foot of Borehole or Casing (Gallons)**	**Diameter (Inches)**	**Volume Per Foot of Borehole or Casing (Gallons)**
0.25	0.0026	4.0	0.6528
0.50	0.0102	6.0	1.469
0.75	0.0230	8.0	2.611
1.0	0.0408	10.0	4.081
2.0	0.1632	12.0	5.876

The sampler shall record the calculation in the field logbook and/or on the appropriate field form.

5.5 Equipment Assembly and Preparation

5.5.1 Pumps

Extreme caution should be exercised to ensure that the equipment does not cause cross-contamination from one well to the next. Therefore, dedicated tubing and pumps are preferred. Peristaltic pumps may be used when the well depth is less than or equal to fifteen feet, in zones of high contamination, or as approved in a SSWP. If it is not practical to dedicate a pump to a specific well, the pump shall be decontaminated in accordance with SOP ENV-04-04. Tubing should always be dedicated and never used for more than one well.

The sampler shall place or position the pump/tubing intake not greater than 6 feet below the dynamic water level in the well and a minimum of one foot above the well sump to the extent practical. Ideally, in non-water table wells, the pump shall be placed within the well screen section. The sampler shall slowly raise or lower the pump or tubing when placing or positioning intake in order to minimize the displacement of sediments, if present, within the well. The pump model/type, tubing (type, inner diameter, and length), and pump/tubing intake depth/elevation shall be recorded in the field logbook and/or on the appropriate field form.

5.5.2 Bailers

Bailers will be used for sampling activities when site-specific work plans provide rational and justification for the use. If a non-dedicated PVC and/or stainless steel bailer(s) is/are used, the bailer(s) must be decontaminated in accordance with SOP ENV-04-04 prior to well purging. The bailer shall be secured using rope to a purge water storage container, protective cover, flush-mount lid, or other object such that the bailer can be retrieved from the well. The rope that will enter the well casing shall not come in with the ground. Bailer samples will be collected using bottom valve sampling devices to limit sample aeration.

5.6 Purging and Groundwater Quality/Indicator Parameter Monitoring

The Site-Specific Work and/or FSP shall specify the groundwater quality/indicator parameters to be monitored, which typically include temperature, pH, specific conductance or actual conductivity, oxidation-reduction potential, dissolved oxygen, and turbidity. Parameter monitoring will begin after a minimum of one volume, casing or borehole (as specified by the Site-Specific Work and/or FSP) has been purged from the well. The sampler shall monitor and record in the field logbook and/or on the appropriate field form

parameters a minimum of every well volume until parameters have stabilized. A generic Groundwater Sampling Field Form is provided in Appendix B. When pumps are utilized for purging, stabilization parameters will be monitored with a flow through cell in accordance with SOP SAS-08-02. Parameter stabilization is considered to be achieved when three consecutive readings, taken every well volume with bailer purging, are within the parameter-specific limit listed in the table below or as specified in the Site-Specific Work and/or FSP and a minimum of three volumes, casing or borehole (as specified by the Site-Specific Work and/or FSP), have been evacuated from the well or the well is purged dry, whichever occurs first. Purging methods are discussed in Sections 5.6.1 and 5.62 below.

Parameter	**Stabilization Criteria**[1]
Conductance, Specific Electrical	+/- 3% µS/cm @ 25°C
Conductivity, Actual[2]	+/- 3% µS/cm
pH	+/- 0.1 standard units
Dissolved Oxygen	+/- 0.3 mg/L
Oxidation-Reduction Potential	+/- 10 mV
Temperature	+/- 0.1 °C
Turbidity	<10 NTUs or ± 10% when turbidity is greater than 10 NTUs and/or visually clear water

Once the parameters have stabilized and a minimum of three volumes, casing or borehole (as specified by the Site-Specific Work and/or FSP), have been evacuated from the well or the well is purged dry, sample collection shall commence (see Section 5.7 below).

5.6.1 Pumps

Following pump/tubing intake placement, the sampler shall commence with purging by turning on the pump. During pumping, intermittently collect pump discharge in a container of known volume for a period of not less than 1 minute to determine the pump flow rate. The approximate pump flow rate shall be documented in the field logbook and/or on the appropriate field form. The sampler shall monitoring groundwater quality/indicator parameters, as described in above, preferably using a flow through cell in accordance with

[1] USEPA, 2002, Ground-Water Sampling Guidelines for Superfund and RCRA Project Managers, EPA 542-S-02-001
[2] Based on the stabilization criteria for specific electrical conductance as published in the documented cited above

SOP SAS-08-03. Groundwater quality/indicator parameters shall be recorded in the field logbook and/or on the appropriate field form along with the time and volume of water purged (to the gallon). Periodic measurements of the flow rate will also be recorded during sampling. The evacuated/purged water shall be containerized in an approved storage container as required by the Site-Specific Work and/or FSP.

5.6.2 Bailers

The sampler shall slowly lower and raise the bailer in the well in order to minimize the displacement of sediments, if present, within the well. The sampler shall monitoring groundwater quality/indicator parameters by collecting bailer discharge in a disposable plastic cup, stainless steel cup, or other manner befitting the monitoring instruments (e.g., down-hole probe). Groundwater quality/indicator parameters shall be recorded in the field logbook and/or on the appropriate field form along with the time and volume of water purged. The evacuated/purged water shall be containerized in an approved storage container as required by the Site-Specific Work and/or FSP.

5.7 Sample Collection

5.7.1 Pumps

In general, groundwater samples shall only be collected from adjusted rate peristaltic pumps or adjustable rate low-flow submersible or positive displacement pumps. Groundwater samples shall be collected directly into the laboratory provided sample containers from the tubing, before the water has passed through the flow-through cell. This shall be accomplished by using a by-pass assemble or disconnecting the flow-through cell to obtain the sample. Samples shall be collected in order of analyte stability, as summarized below, unless otherwise specified by the Site-Specific Work and/or FSP:

- Volatile organic compounds (VOCs);
- Semi-volatile organic compounds (SVOCs);
- Non-filtered, non-preserved samples (e.g. Polychlorinated biphenyls (PCBs), sulfate, etc.);
- Non-filtered, preserved samples (e.g. phenols, nitrogen, cyanide, total metals, etc.);
- Filtered (reference SAS-SOP-08-02), non-preserved samples;
- Filtered (reference SAS-SOP-08-02), preserved immediately samples (e.g. dissolved metals); and
- Miscellaneous parameters.

Immediately following collection, samples shall be placed in a cooler with double-bagged ice.

5.7.2 Bailers

In general, groundwater samples shall only be collected from disposable or stainless steel bailers, when pumps are not applicable for sample collection (e.g., low-yielding wells). Groundwater samples shall be collected directly into the laboratory provided sample containers from the bailer. Samples shall be collected in order of analyte stability, as summarized below, unless otherwise specified by the Site-Specific Work and/or FSP:

- VOCs;
- SVOCs;
- Non-filtered, non-preserved samples (e.g. PCBs, sulfate, etc.);
- Non-filtered, preserved samples (e.g. phenols, nitrogen, cyanide, total metals, etc.);
- Filtered (reference SAS-SOP-08-02), non-preserved samples;
- Filtered, (reference SAS-SOP-08-02) preserved samples (e.g. dissolved metals); and
- Miscellaneous parameters.

Immediately following collection, samples shall be placed a cooler with double-bagged ice.

5.7.3 Quality Control Samples

Quality Control (QC) samples, if required, will be collected consecutively to ensure appropriate duplicate sample collection in accordance with SOP SAS-04-03. Immediately following collection, samples shall be placed in a cooler with double-bagged ice.

5.8 Post-Sample Collection

Non-dedicated and dedicated sampling equipment, which does not remain within the well casing, shall be removed from the monitoring well. The reusable and/or dedicated equipment and instruments shall be decontaminated in accordance with SOP SAS-04-04 or as otherwise specified by the Site-Specific Work and/or FSP. Disposable equipment and supplies shall be disposed of in accordance with procedures outlined in the Site-Specific Work and/or FSP. The sampler shall secure the well casing using a slip or expandable

well cap. The flush-mount lid shall be bolted down or the protective cover lid closed and locked, as appropriate.

6.0 DOCUMENTATION

Sample information, labeling, and custody control shall be performed in accordance with requirements specified in SOP SAS-03-01 and SAS-03-02. Sampling activities shall be recorded in the field logbook and/or on the appropriate field form as specified in SOP SAS-01-01 or as required by the Site-Specific Work and/or FSP. A generic Groundwater Sampling Field Form is provided in Appendix B.

7.0 REFERENCES AND ADDITIONAL RESOURCES

ASTM International, D4448-01 Standard Guide for Sampling Groundwater Monitoring Wells

ASTM International, D5903-96(2001) Standard Guide for Planning and Preparing for a Groundwater Sampling Event

ASTM International, D6089-97(2003)e1 Standard Guide for Documenting a Ground-Water Sampling Event

ASTM International, D6301-03 Practice for the Collection of Samples of Filterable and Nonfilterable Matter in Water

ASTM International, D6452-99(2005) Standard Guide for Purging Methods for Wells Used for Ground-Water Quality Investigations

ASTM International, D6564-00(2005) Standard Guide for Field Filtration of Ground-Water Samples

ASTM International, D6634-01 Guide for the Selection of Purging and Sampling Devices for Ground- Water Monitoring Wells

ASTM International, D6771-02 Practice for Low-Flow Purging and Sampling for Wells and Devices Used for Ground-Water Quality Investigations

USEPA, 2001, Environmental Investigations Standard Operating Procedures and Quality Assurance Manual (EISOPQAM), Region 4, Enforcement and Investigations Branch, SESD, Athens, Georgia, www.epa.gov/region4/sesd/eisopqam/eisopqam.html.

USEPA, 2002, Ground-Water Sampling Guidelines for Superfund and RCRA Project Manager, Region 5 and Region 10, EPA 542-S-02-001.

USEPA, April 2007, Guidance for Preparing Standard Operating Procedures (SOPs), EPA/60/B-07/001.

STANDARD OPERATING PROCEDURE NO. SAS-08-04

AQUIFER TESTING Revision 2

1.0 PURPOSE

This Standard Operating Procedure (SOP) describes the guidelines for field evaluation of aquifer hydraulic conductivity. Variations in the hydraulic conductivity within or between formations or strata can create irregularities in groundwater flow paths. Formations of high hydraulic conductivity represent areas of greater groundwater flow and, therefore, zones of potential preferred contaminant migration. Further, anisotropy within strata or formations affects the magnitude and direction of groundwater flow. Thus, information on hydraulic conductivities is necessary to evaluate preferential flow paths and groundwater velocity.

Hydrogeologic assessments should contain data on the hydraulic conductivities of the significant formations underlying the site as measured in monitoring wells. It may be beneficial to use numerical or laboratory methods to augment results of field tests. However, field methods provide the best definition of the horizontal hydraulic conductivity in most cases. Field methods differ from laboratory methods which measure vertical hydraulic conductivity, typically in Shelby tube samples.

2.0 EQUIPMENT AND MATERIALS

- Pump (and generator if required) capable of withdrawal at a constant or predetermined variable rate that can meet the designed pumpage rate and lift requirements
- Water pressure transducers and data logger (bring transducers for the pumping well and each observation well as well as extras in case of malfunction)
- A flow meter or other type of water measuring device to accurately measure and monitor the discharge from the pumping well
- Sufficient hose or pipe to convey discharge outside the recharge area of the pumping well and observation wells
- Electric water level indicator(s) capable of measurement to the hundredth of a foot
- Watch or stopwatch with second hand

- Barometer (some groundwater multiprobes include a barometer)
- Tape Measure of appropriate length based on distance to observation wells.
- Flashlights, lanterns, alarm clock, electrical tape
- Semi-log graph paper, pens, and field book

3.0 HEALTH AND SAFETY WARNINGS

Potentially hazardous conditions relating to chemicals under investigation, equipment and tools in use, utility services in investigation areas, or certain work activities may exist on the site. Protocols are established in each site-specific Health & Safety Plan (HASP) based on corporate health and safety policies and manuals, past field experience, specific site conditions, and chemical hazards known or anticipated to be present from available site data. Before site operations begin, all employees, and subcontractor personnel will have read and understood the HASP and all revisions. Before work begins, all site project staff will sign an agreement and acknowledgment form indicating that they have read and fully understood the HASP and their individual responsibilities, and fully agree to abide by the provisions of the HASP.

4.0 FIELD METHODS

Varieties of procedures are available for evaluating hydraulic conductivity in the field. ASTM D4043-96(2004) Guide for Selection of Aquifer Test Method in Determining Hydraulic Properties by Well Techniques should be consulted in selecting an appropriate test method. Field methods for collecting hydraulic conductivity data are described in a number of ASTM standard practices:

- D2434-68(2000) Test Method for Permeability of Granular Soils (Constant Head)
- D4044-96(2002) Test Method (Field Procedure) for Instantaneous Change in Head (Slug) Tests for Determining Hydraulic Properties of Aquifers
- D4050-96(2002) Test Method (Field Procedure) for Withdrawal and Injection Well Tests for Determining Hydraulic Properties of Aquifer Systems
- D4104-96(2004) Test Method (Analytical Procedure) for Determining Transmissivity of Nonleaky Confined Aquifers by Overdamped Well Response to Instantaneous Change in Head (Slug Tests)
- D4105-96(2002) Test Method (Analytical Procedure) for Determining Transmissivity and Storage Coefficient of Nonleaky Confined Aquifers by the Modified Theis Nonequilibrium Method

- D4106-96(2002) Test Method (Analytical Procedure) for Determining Transmissivity and Storage Coefficient of Nonleaky Confined Aquifers by the Theis Nonequilibrium Method
- D4511-00 Test Method for Hydraulic Conductivity of Essentially Saturated Peat
- D4630-96(2002) Test Method for Determining Transmissivity and Storage Coefficient of Low-Permeability Rocks by In Situ Measurements Using the Constant Head Injection Test
- D4631-95(2000) Test Method for Determining Transmissivity and Storativity of Low Permeability Rocks by In Situ Measurements Using Pressure Pulse Technique
- D5269-96(2002) Test Method for Determining Transmissivity of Nonleaky Confined Aquifers by the Theis Recovery Method
- D5270-96(2002) Test Method for Determining Transmissivity and Storage Coefficient of Bounded, Nonleaky, Confined Aquifers
- D5472-93(2005) Test Method for Determining Specific Capacity and Estimating Transmissivity at the Control Well
- D5473-93(2000) Test Method for (Analytical Procedure for) Analyzing the Effects of Partial Penetration of Control Well and Determining the Horizontal and Vertical Hydraulic Conductivity in a Nonleaky Confined Aquifer
- D5720-95(2002) Practice for Static Calibration of Electronic Transducer-Based Pressure Measurement Systems for Geotechnical Purposes
- D5785-95(2000) Test Method for (Analytical Procedure) for Determining Transmissivity of Confined Nonleaky Aquifers by Underdamped Well Response to Instantaneous Change in Head (Slug Test)
- D5786-95(2000) Practice for (Field Procedure) for Constant Drawdown Tests in Flowing Wells for Determining Hydraulic Properties of Aquifer Systems
- D5850-95(2000) Test Method for (Analytical Procedure) Determining Transmissivity, Storage Coefficient, and Anisotropy Ratio from a Network of Partially Penetrating Wells
- D5855-95(2000) Test Method for (Analytical Procedure) for Determining Transmissivity and Storage Coefficient of a Confined Nonleaky or Leaky Aquifer by Constant Drawdown Method in a Flowing Well
- D5881-95(2005) Test Method for (Analytical Procedure) Determining Transmissivity of Confined Nonleaky Aquifers by Critically Damped Well Response to Instantaneous Change in Head (Slug)
- D5912-96(2004) Test Method for (Analytical Procedure) Determining Hydraulic Conductivity of an Unconfined Aquifer by Overdamped Well Response to Instantaneous Change in Head (Slug)

- D5920-96(2005) Test Method (Analytical Procedure) for Tests of Anisotropic Unconfined Aquifers by Neuman Method
- D6028-96(2004) Test Method (Analytical Procedure) for Determining Hydraulic Properties of a Confined Aquifer Taking into Consideration Storage of Water in Leaky Confining Beds by Modified Hantush Method
- D6029-96(2004) Test Method (Analytical Procedure) for Determining Hydraulic Properties of a Confined Aquifer and a Leaky Confining Bed with Negligible Storage by the Hantush-Jacob Method
- D6030-96(2002) Guide for Selection of Methods for Assessing Groundwater or Aquifer Sensitivity and Vulnerability
- D6034-96(2004) Test Method (Analytical Procedure) for Determining the Efficiency of a Production Well in a Confined Aquifer from a Constant Rate Pumping Test
- D6391-99(2004) Test Method for Field Measurement of Hydraulic Conductivity Limits of Porous Materials Using Two Stages of Infiltration from a Borehole

5.0 SINGLE WELL TESTS

Hydraulic conductivity can be determined in the field using a variety of test methods, each addressing specific conditions, and/or data collection objectives. These methods are commonly referred to as bail down or slug tests and are performed by adding or removing a slug (known volume of water or solid inert material) from a well and observing the recovery of the water surface to its original level. Similar results can be achieved by pressurizing the well casing, depressing the water level, and suddenly releasing the pressure to simulate removal of water from the well. One method is described by McLane, et. al. (1990) and is contained in references to the Standard Practices.

When reviewing information obtained from slug tests, several criteria should be considered. First, they are run on one well and, as such, the information is limited to the geologic area directly adjacent to the screen. Second, the vertical extent of screen will control the part of the geologic formation that the test analyzes. Portions of the geologic formation(s) above or below the screen and sand filter pack and seal intervals may also require separate hydraulic conductivity testing. Third, the methods used to collect single well test data should accurately measure parameters such as changing static water (prior to initiation, during, and following completion of the test), the amount of water removed from the well (or slug volume introduced), and the

elapsed time of recovery. The use of pressure transducers and high speed recording equipment is critical in highly permeable formations.

Observation wells with screens that intersect the water table (i.e. water table wells) will be tested only by methods involving removal of water or a slug from the well in order to minimize the potential for well screen filter pack interference. The addition of water to any monitoring well shall be avoided whenever possible, since the addition may affect water quality in sampling events. When addition of water to a well is unavoidable, the water must be of documentable quality and three times the volume added to the well must be removed immediately upon completion of the test. Addition of water to an observation well is appropriate only to piezometer installation when the dynamic water level is above the well screen and sand filter pack and seal elevations.

Full development of the well screen and filter pack adjacent to the interval under examination, in accordance with SOP SAS-05-04, should be completed following well construction to ensure the removal of fines or correct deleterious drilling effects. Determination of well integrity, SOP SAS-08-05, should be determined prior to performance of the well test.

It is important that slug tests be of sufficient duration to provide representative measures of hydraulic conductivity. Slug tests will range in length from less than a minute to several hours. The time required for a test is a function of the volume of the slug added or removed the formation hydraulic conductivity, and well construction.

Slug tests should be performed at least twice to ensure the accuracy of data collection. General procedures for a slug test are summarized below. The procedures required for a slug test may vary, depending on site-specific-conditions. Modifications to the test procedures will be contained in site-specific work plans.

5.1 Slug Test Procedures with Pressure Transducer and Data Logger

An individual Slug Test Field Form (Appendix B) should be completed for each well tested and should contain at least:

- Project ID - A number assigned to identify a specific site.
- Well ID - The location of the well in which water level measurements are being taken.
- Personnel - The personnel conducting the pumping test.
- Measurement Methods - Type of pump, type of data logger(s) used to record water levels, transducer ID number, and acquisition rate (i.e. data recorded on a log scale). The transducer psi range should be appropriate to the test (e.g. 0 to 5 or 0 to 10 psi).
- Initial Static Water Level (Test Start) - Depth to water, to the nearest 0.01 feet, in the observation well at the beginning of the slug test.
- Slug Withdrawal / Addition Start Time - The date when the test began, and start time using a 24-hour clock.
- Test End Date/Time - The date and time when water level readings were discontinued.
- Final Static Water Level (Test End) - Depth to water, to the nearest 0.01 feet, in the observation well at the end of the slug test.
- Elapsed Time (min) - Time of manual measurement record from time 0.00 (start of test) recorded in minutes and seconds.
- Notes - Appropriate observations or information that has not been recorded elsewhere, including notes on sampling, pH readings, and conductivity readings.

Prior to commencing the slug test, enter site-specific information in the data logger per manufacturer instructions. Store all logger data internally; and on laptop computer and/or portable data key. The data should be transferred to the chosen backup storage device as soon as practical after the test is completed.

Water levels should be measured as specified in the SOP SAS-08-02. Manual measurements are required as a backup to and verification of the data logger(s). It is critical that depth to water readings be measured accurately and the exact time of readings is recorded. Determine the static water level in the well; measure the depth to water periodically for several minutes to several hours, and taking the average of the readings (see SOP SAS-07-02). Record information on the Slug Test Field Form (Attachment B). Additional information should be recorded on the Daily Activity Log in SOP SAS-01-04.

5.2 Slug Test Preparation

- Lower the transducer and cable in the well below the estimated target drawdown depth, ensuring the depth of submergence is within the transducer design range.
- Tape the transducer cable to the exterior of the well casing or protective cover to hold the transducer at a constant depth
- Connect the transducer cable to the data logger.
- Check the transducer accuracy by raising and lowering the transducer and comparing the change in water level from the transducer reading to the distance the transducer is raised or lowered.
- Enter the initial water level and transducer design range into the recording device according to the manufacturer's operating instructions.
- Allow the static water level to equilibrate to within 0.1 feet of the initial water level.

5.3 Slug Test with Transducer Procedure

- Turn the data logger on and begin collecting data points.
- Smoothly lower the slug/bailer into the well and allow the water level to stabilize within 0.1 feet of the initial water level.
- Remove the slug/bailer as quickly and smoothly as practical. A smooth, rapid removal is required as slug test analysis assumes an instantaneous change in volume is created in the well when the slug is removed.
- The moment the volume is removed is time zero. Collect hand measured water level measurements (Table 1) as a data backup and to verify transducer data.
- Continue measuring and recording depth/time measurements until the water level returns to equilibrium conditions or a sufficient number of readings have been made to show a trend on a plot of water level recovery versus the logarithm of time in accordance with the chosen analysis method. Time will range from less than 1 minute to a few hours.
- Repeat the slug test once the static water level has recovered to within 95 % of the original water level.

Table 1: Time Intervals for Measuring Recovery in Slug Test Well

Elapsed Time Since Start or Stop of Test (Minutes)	OR (which ever is greater)	Percent Water Level Recovery (%)	Interval Between Measurements (Minutes)
0-2		0-30	0.1
2-5		30-50	0.5
5-10		50-60	1
10-60		60-70	5
60-120		70-80	10
120-240		80-100	30

5.4 Slug Test with Water Level Meter

This slug test method should only be used if a transducer/data recorder cannot be obtained or are malfunctioning. This method cannot be used for saturated zones with high hydraulic conductivities because stabilization of groundwater will occur rapidly. Slug test data should be recorded on the Slug Test Data form (Attachment B) in accordance with the completion instructions. Follow the same procedures for Slug Test with Transducer with increased data collection frequency.

Table 2: Time Intervals for Measuring Recovery in Slug Test Well

Elapsed Time Since Start or Stop of Test (Minutes)	Interval Between Measurements (Minutes)
0-2	0.1
2-10	0.5
10-30	1
30-60	5
60-120	10
120-240	30

The interpretation of the single well test data should be consistent with the existing geologic information (boring log data). Staff should be aware of initial rapid water level recovery during a slug test may represent drainage of the filter pack material around the well screen. This is of particular concern in wells screened in low hydraulic conductivity formations (e.g. silty clay, shale). These data points should be ignored when selecting the appropriate data points to establish a water level recovery slope.

6.0 MULTIPLE WELL TESTS

Multiple well tests, more commonly referred to as pumping tests, are performed by pumping water from one well and observing the resulting drawdown in nearby wells. Tests conducted with wells screened in the same water-bearing formation provide hydraulic conductivity data. Tests conducted with wells screened in different water-bearing zones furnish information concerning hydraulic communication between units. Multiple well tests for hydraulic conductivity are advantageous because they characterize a greater proportion of the subsurface and thus provide a greater amount of detail. Multiple well tests are subject to similar constraints to those listed above for single well tests. Some additional problems that should have been considered in conducting a multiple well test include: (1) storage of potentially contaminated water pumped from the well system, and (2) potential effects of groundwater pumping on existing waste plumes. The geologic constraints should be considered to interpret the pumping test results. Incorrect assumptions regarding geology may translate into incorrect estimations of hydraulic conductivity.

7.0 LABORATORY METHODS

Laboratory analysis of undisturbed samples (e.g. Shelby tube) provides values of vertical hydraulic conductivity. When laboratory methods are to be used, the specific ASTM Standard Practice shall be referenced in samples provided to subcontractors. ASTM methods shall be consulted to assure that test methods specified are applicable to the sample to be tested.

8.0 CONTROLLED PUMPING TESTS

The most representative method for determining aquifer characteristics is by controlled aquifer pumping tests, because these tests stress a much larger volume of the formation than slug tests and laboratory tests. Pumping tests require a higher level of effort and expense than other types of aquifer tests, and are not always justified.

As an example, slug tests may be acceptable for site characterization, whereas pumping tests may be performed to support remedial design or modeling.

Aquifer characteristics that may be obtained from pumping tests include transmissivity (T), hydraulic conductivity (K), specific yield (Sy) for unconfined aquifers, and storage coefficient (S) for confined aquifers. These parameters can be determined by graphical solutions and computerized programs, such as Aqtesolv®.

These are standard (i.e., typically applicable) operating procedures which may be varied or changed as required dependent on site conditions, equipment limitations, or limitations imposed by the procedure. In all instances, the ultimate procedures employed should be documented and associated with the final report.

8.1 Summary

If possible, continuously monitor pre-test water levels at the test site for about one week prior to performance of the pump test. This information allows for the determination of the barometric efficiency of the aquifer, as well as noting changes in head due to recharge or pumping in the area adjacent to the well. Prior to initiating the long-term pump test, a step test (Section 5.5) is performed to estimate the greatest flow rate that may be sustained by the pump well.

After the pumping well has recovered from the step test, the long-term pumping test begins. At the beginning of the test, the discharge rate is set as quickly and accurately as possible. The water levels in the pumping well and observation wells are recorded following a set schedule. The duration of the test is determined by project needs and aquifer properties; typically three days or until water levels becomes constant.

8.2 Interferences and Potential Problems

Prior to conducting a pumping test, efforts should be made to anticipate and resolve interferences and potential problems that could affect the aquifer or the test. These problems could be caused by changing atmospheric conditions, impact of local potable wells, contaminants in the aquifer, etc. Note that if it is necessary for a neighboring well to pump during the test, pumping should commence as early as feasible prior to start of the test at a constant rate and not started or stopped for the duration of the test.

8.3 Pumping Discharge

If a pumping test will be conducted in an area with contaminated groundwater, special arrangements must be made for proper handling, treatment, and disposal of the water. The preferred method is to discharge to a sanitary sewer, with prior approval.

Uncontaminated groundwater discharge generated during a pumping test should be sent to storm or sanitary sewers, abiding by all applicable regulations. If there are no sewers in the vicinity of the pumping well, the discharge may be sent to a river or pond. If the previously mentioned discharge options are not available, the groundwater may be discharged to the ground surface under either of the following conditions:

- The aquifer being tested is confined; or
- The end of the discharge hose/pipe is outside of the cone of depression created by the pumping well when testing an unconfined aquifer.

8.4 Pre-Test Procedures

The hydrostratigraphy of the aquifer should be fully characterized prior to performance of the test to identify formation thickness, whether it is confined or unconfined, whether confining layers are leaky and to identify any lateral boundaries that may influence results.

If the pumping test occurs at a site where existing production and/or monitoring wells will be used, confirm that the locations and screened intervals of the wells are within the same aquifer, and meet the requirements of the method of analysis.

If possible, continuously measure water levels in the pumping well and all observation wells for a period at least equal to the length of the test. Trends should be similar in all wells. A well with an unusual trend may indicate some local stress in the aquifer.

The magnitude of water-level fluctuations due to changes in barometric pressure will change throughout the test and should be adjusted based on the changes in the barometric pressure recorded during the test. Changes in barometric pressure will be recorded during the test in order to correct water levels for any possible

fluctuations that may occur due to changing atmospheric conditions. These barometric changes are used to "correct" water levels during the test so they are representative of the hydraulic response of the aquifer due to pumping of the test well. Ideally, water levels should be measured in a well outside of the cone of depression before, during, and after pumping to determine background changes in water levels during the test and to establish correction factors for the wells within the cone of depression.

8.5 Step Test

The step drawdown test is performed to determine the maximum pumping rate that the pumping well can sustain and the minimum pumping rate necessary to assure drawdown in the observation wells. The pumping and observation wells are equipped with transducers prior to the test. Check the transducer accuracy by raising and lowering the transducer and comparing the change in water level from the transducer reading to the distance the transducer is raised or lowered.. The test is then performed by pumping at a low rate, relative to the expected final rate of pumpage, until drawdown in the pumping well stabilizes. The rate is then increased again until drawdown in the pumping well stabilizes (step 2). A minimum of three steps will be tested; the duration of each step will be similar, and should be between 30 minutes and 2 hours.

The data are then plotted on semi-log paper or on a computer. The maximum sustainable pumping rate that yields drawdown in the closest observation wells will be used as the target-pumping rate for the long-term test. These data may also be used to determine aquifer properties and well loss in the pumping well.

8.6 Pump Test Time Intervals

Commence the long-term pumping test after the pumping well has fully recovered from the step test. Place transducers into the observation wells prior to starting the test and allow time for them to equilibrate to the water temperature within the well and to collect pre-test water level data. At the beginning of the test, the discharge rate should be set as quickly and accurately as possible. Record the pumping and observation well water levels with transducers and a data logger(s) set to record logarithmically. As backup in case of transducer malfunction, manually record water levels on field forms and/or field notebooks according to the schedules in Tables 3 and 4:

Table 3: Time Intervals for Measuring Drawdown in the Pumped Well

Elapsed Time Since Start or Stop of Test (Minutes)	Interval Between Measurements (Minutes)
0-10	0.5-1
10-15	1
15-60	5
60-300	30
300-1440	60
1440-termination	480

Table4: Time Intervals for Measuring Drawdown in an Observation Well

Elapsed Time Since Start or Stop of Test (Minutes)	Interval Between Measurements (Minutes)
0-60	2
60-120	5
120-240	10
240-360	30
360-1440	60
1440-termination	480

For wells with a transducer malfunction, water levels records should be manually recorded on field forms and/or field notebooks according to the schedule in Table 5:

Table 5: Time Intervals for Measuring Drawdown in the Observation Wells with Transducer Malfunction

Elapsed Time Since Start or Stop of Test (Minutes)	Interval Between Measurements (Minutes)
0-2	0.1
2-10	0.5
10-20	1
20-100	5
100-200	10
200-300	30
300-1440	60
1440-termination	480

8.7 Water Level Measurements

Water levels will be measured as specified in the SAS-08-02. During the early part of the test, sufficient personnel are required to initiate the pumping test data loggers and assist with manual water level measurements of the pumping well and flow rate measurements. Manual measurements are required as a backup to and verification of the data logger(s). After the first two hours, one to two people are usually sufficient to continue the test. It is not necessary that readings at the wells be taken simultaneously. It is very important that depth to water readings be measured accurately and the exact time of readings is recorded.

During a pumping test, the following data must be recorded accurately on the log book and/or the aquifer test data form.

- Project ID - A number assigned to identify a specific site.
- Well ID - The location of the well in which water level measurements are being taken.
- Distance and Direction from Pumped Well - Distance and azimuth to each observation well from the pumping well in feet.
- Personnel - The personnel conducting the pumping test.

- Pumping Start and End Date/Time - The date when the pumping began, and start time using a 24-hour clock.
- Initial Static Water Level (Test Start) - Depth to water, to the nearest 0.01 feet, in the observation well at the beginning of the pumping test.
- Test End Date/Time - The date and time when water level readings were discontinued.
- Final Static Water Level (Test End) - Depth to water, to the nearest 0.01 feet, in the observation well at the end of the pumping test.
- Target Pumping Rate
- Measurement Methods - Type of pump, type of data logger(s) used to record water levels, transducer ID number, and acquisition rate (i.e. data recorded on a log scale). The transducer psi range should be appropriate to the test (e.g. 0 to 5 or 0 to 10 psi).
- Notes - Appropriate observations or information that has not been recorded elsewhere, including notes on sampling, pH readings, and conductivity readings.
- Elapsed Time (min) - Time of manual measurement record from time 0.00 (start of test) recorded in minutes and seconds.
- Depth to Water (ft) – Manual depth to water measurement, to the nearest 0.01 feet, in the observation well at the time of the water level measurement.
- Flow Rate (gal/min) - Flow rate of pump measured from an orifice, weir, flow meter, container, or other type of water measuring device.

8.8 Pump Test Duration

The duration of the test is determined by the needs of the project and properties of the aquifer. One simple test for determining adequacy of data is when the log-time versus drawdown for the most distant observation well begins to plot as a straight line on the semi-log graph paper. There are several exceptions to this simple rule of thumb; therefore, it should be considered a minimum criterion. Different hydrogeologic conditions can produce straight-line trends on log-time versus drawdown plots. In general, longer tests produce results that are more definitive. Duration of one to three days is desirable, followed by a similar period of monitoring the recovery of the water level. Unconfined aquifers and partially penetrating wells may have shorter test durations. Knowledge of the local hydrogeology, combined with a clear understanding of the

overall project objectives is necessary in judging appropriate test duration. There is no need to continue the test once the water levels in the observation wells stabilize.

The recovery of water levels following pumping phase may be measured and recorded for a period equal to the pumping phase. The frequency of the water level measurements should be similar to the frequency of water level measurements during the pumping phase (Table 1).

9.0 POST OPERATION

The following activities are performed after completion of water level recovery measurements following a slug or pumping/recovery test:

- Decontaminate and/or dispose of equipment per SAS-04-05.
- When using an electronic data-logger, use the following procedures:
  - Stop logging sequence
  - Check file size, print data, and/or save memory to a reliable storage device (i.e. hard drive or USB drive): Backup the data as soon as possible upon completion of a test!
  - Do not clear the memory of the transducer until the data has been saved onto a hard drive
- Review field forms for completeness.
- Replace testing equipment in storage containers
- Check sampling equipment and supplies. Repair or replace all broken or damaged equipment.
- Interpret slug or pumping/recovery test field results.

10.0 CALCULATIONS

Upload the data from the test into a spreadsheet to be entered into a computerized program, such as Aqtesolv®. Use the information entered into the Data Acquisition Form to complete the computer analysis of the data. There are several accepted methods for determining aquifer properties such as transmissivity, storativity, and conductivity. The appropriate method to use is dependent on the characteristics of the aquifer being tested (confined, unconfined, leaky confining layer etc.). When reviewing slug and pump test data, the following text and/or documents may be used to determine the method most appropriate to your case:

- Analysis and Evaluation of Pumping Test Data (Kruseman and Ridder, 1989)
- Applied Hydrogeology (Fetter, 2000)

- Groundwater and Wells (Driscoll, 1986)
- ASTM D4105-96(2002)
- ASTM D4106-96(2002)

11.0 QUALITY ASSURANCE/ QUALITY CONTROL (QA/QC)

Gauges, transducers, flow meters, and other equipment used in the pumping tests will be calibrated before use at the site. Copies of the documentation of instrumentation calibration will be filed with the test data records. The calibration records will consist of laboratory measurements and, if necessary, any on-site zero adjustment and/or calibration that were performed. Where possible, all flow and measurement meters will be checked on-site using a container of measured volume and stopwatch; the accuracy of the meters must be verified before testing proceeds. For QA/QC purposes, a minimum of two single well tests (slug test) should be performed in each well that hydraulic conductivity testing is performed.

12.0 DATA REDUCTION AND INTERPRETATION

Slug and multiple well test data can be analyzed by a variety of methods, depending on the responses observed, geologic conditions, and specific well parameters. Texts such as Driscoll (1986) or other well hydraulics references should be consulted for selection of the proper method of data analysis. In reviewing hydraulic conductivity measurements, the following criteria should be considered to evaluate the accuracy or completeness of information.

- Values of hydraulic conductivity between wells in similar lithologies should generally not exceed one order of magnitude difference.
- Hydraulic conductivity determinations based upon multiple well tests are preferred. Multiple well tests provide more complete information because they characterize a greater portion of the subsurface.
- Use of single well tests will require that more individual tests be conducted at different locations to sufficiently define hydraulic conductivity variation across the site.
- Hydraulic conductivity information generally provides average values for the entire area across a well screen. For more depth discrete information, well screens will have to be shorter. If the average hydraulic conductivity for a formation is required, entire formations may have to be screened, or data taken from overlapping clusters.

It is important that measurements define hydraulic conductivity both vertically and horizontally across the site. Laboratory tests may be necessary to ascertain vertical hydraulic conductivity in saturated formations or strata. Results from boring logs should also be used to characterize the site geology. Zones of high permeability or fractures identified from drilling logs should be considered in the determination of hydraulic conductivity. Additionally, information from boring logs can be used to refine the data generated by single well or pumping tests.

13.0 REFERENCES AND ADDITIONAL RESOURCES

Bouwer, H., and Rice, R.C., "A Slug Test for Determining Hydraulic Conductivity of Unconfined Aquifers with completely or Partially Penetrating Wells", Water Res. Res., 12 p. 423-428, 1976.

Driscoll, F. G., 1986, Groundwater and Wells, Johnson Division, St. Paul, MN, 1089 p.

McLane, G. A., D. A. Harrity, K. O. Thomsen, "Slug Testing In Highly Permeable Aquifers Using a Pneumatic Method", Hazardous Materials Control Research Institute, Conference Proceedings, November, 1990, pp 300-303.

ASTM International, D2434-68(2000) Test Method for Permeability of Granular Soils (Constant Head)

ASTM International, D4043-96(2004) Guide for Selection of Aquifer Test Method in Determining Hydraulic Properties by Well Techniques

ASTM International, D4044-96(2002) Test Method (Field Procedure) for Instantaneous Change in Head (Slug) Tests for Determining Hydraulic Properties of Aquifers

ASTM International, D4050-96(2002) Test Method (Field Procedure) for Withdrawal and Injection Well Tests for Determining Hydraulic Properties of Aquifer Systems

ASTM International, D4104-96(2004) Test Method (Analytical Procedure) for Determining Transmissivity of Nonleaky Confined Aquifers by Overdamped Well Response to Instantaneous Change in Head (Slug Tests)

ASTM International, D4105-96(2002) Test Method (Analytical Procedure) for Determining Transmissivity and Storage Coefficient of Nonleaky Confined Aquifers by the Modified Theis Nonequilibrium Method

ASTM International, D4106-96(2002) Test Method (Analytical Procedure) for Determining Transmissivity and Storage Coefficient of Nonleaky Confined Aquifers by the Theis Nonequilibrium Method

ASTM International, D4511-00 Test Method for Hydraulic Conductivity of Essentially Saturated Peat

ASTM International, D4630-96(2002) Test Method for Determining Transmissivity and Storage Coefficient of Low-Permeability Rocks by In Situ Measurements Using the Constant Head Injection Test

ASTM International, D4631-95(2000) Test Method for Determining Transmissivity and Storativity of Low Permeability Rocks by In Situ Measurements Using Pressure Pulse Technique

ASTM International, D5269-96(2002) Test Method for Determining Transmissivity of Nonleaky Confined Aquifers by the Theis Recovery Method

ASTM International, D5270-96(2002) Test Method for Determining Transmissivity and Storage Coefficient of Bounded, Nonleaky, Confined Aquifers

ASTM International, D5472-93(2005) Test Method for Determining Specific Capacity and Estimating Transmissivity at the Control Well

ASTM International, D5473-93(2000) Test Method for (Analytical Procedure for) Analyzing the Effects of Partial Penetration of Control Well and Determining the Horizontal and Vertical Hydraulic Conductivity in a Nonleaky Confined Aquifer

ASTM International, D5720-95(2002) Practice for Static Calibration of Electronic Transducer-Based Pressure Measurement Systems for Geotechnical Purposes

ASTM International, D5785-95(2000) Test Method for (Analytical Procedure) for Determining Transmissivity of Confined Nonleaky Aquifers by Underdamped Well Response to Instantaneous Change in Head (Slug Test)

ASTM International, D5786-95(2000) Practice for (Field Procedure) for Constant Drawdown Tests in Flowing Wells for Determining Hydraulic Properties of Aquifer Systems

ASTM International, D5850-95(2000) Test Method for (Analytical Procedure) Determining Transmissivity, Storage Coefficient, and Anisotropy Ratio from a Network of Partially Penetrating Wells

ASTM International, D5855-95(2000) Test Method for (Analytical Procedure) for Determining Transmissivity and Storage Coefficient of a Confined Nonleaky or Leaky Aquifer by Constant Drawdown Method in a Flowing Well

ASTM International, D5881-95(2005) Test Method for (Analytical Procedure) Determining Transmissivity of Confined Nonleaky Aquifers by Critically Damped Well Response to Instantaneous Change in Head (Slug)

ASTM International, D5912-96(2004) Test Method for (Analytical Procedure) Determining Hydraulic Conductivity of an Unconfined Aquifer by Overdamped Well Response to Instantaneous Change in Head (Slug)

ASTM International, D5920-96(2005) Test Method (Analytical Procedure) for Tests of Anisotropic Unconfined Aquifers by Neuman Method

ASTM International, D6028-96(2004) Test Method (Analytical Procedure) for Determining Hydraulic Properties of a Confined Aquifer Taking into Consideration Storage of Water in Leaky Confining Beds by Modified Hantush Method

ASTM International, D6029-96(2004) Test Method (Analytical Procedure) for Determining Hydraulic Properties of a Confined Aquifer and a Leaky Confining Bed with Negligible Storage by the Hantush-Jacob Method

ASTM International, D6030-96(2002) Guide for Selection of Methods for Assessing Groundwater or Aquifer Sensitivity and Vulnerability

ASTM International, D6034-96(2004) Test Method (Analytical Procedure) for Determining the Efficiency of a Production Well in a Confined Aquifer from a Constant Rate Pumping Test

ASTM International, D6391-99(2004) Test Method for Field Measurement of Hydraulic Conductivity Limits of Porous Materials Using Two Stages of Infiltration from a Borehole

USEPA, April 2007, Guidance for Preparing Standard Operating Procedures (SOPs), EPA/60/B-07/001.

STANDARD OPERATING PROCEDURE NO. SAS-08-05

WELL INTEGRITY INSPECTION, MAINTENANCE, AND REHABILITATION Revision 1

1.0 PURPOSE

This Standard Operating Procedure (SOP) describes the guidelines for inspecting groundwater monitoring well integrity. The well integrity inspection identifies wells that in their current condition are not suitable for obtaining groundwater/product elevations, water quality and/or hydraulic information, groundwater/product samples and/or other data obtained using the well. The results of the evaluation shall be used to ensure the integrity of wells over extended periods of time by identifying conditions that warrant well maintenance and/or rehabilitation. This SOP also describes well maintenance and rehabilitation.

2.0 EQUIPMENT AND MATERIALS

- Map of well locations;
- Tools and well keys, as required to facilitate access to wells;
- Water level measuring device (electronic water level indicator, interface probe, or weighted steel tape);
- Adjustable rate pump, adjustable rate submersible or positive displacement bladder pump (Note: The Site-Specific Work and/or Field Sampling Plan (FSP) shall specify the type of pump required);
- 1/4 to 3/8-inch Teflon®, polyvinyl chloride (PVC), or polypropylene tubing, if applicable;
- Power source, if applicable;
- Compressed inert gas source (for use with bladder pump), if applicable;
- PVC or stainless steel bailer or solid slug;
- Rope;
- Pressure transducer and automatic data logger, if applicable;
- Container(s) for purge water storage (e.g. 5-gallon buckets, polyethylene storage tank, etc.);
- Existing well boring/construction logs, if available;
- Groundwater elevation table, if available;
- Polyethylene sheeting, as appropriate;

- Camera;
- Personal protection equipment; and
- Field logbook and/or appropriate field forms.

3.0 HEALTH AND SAFETY WARNINGS

Potentially hazardous conditions relating to chemicals under investigation, equipment and tools in use, utility services in investigation areas, or certain work activities may exist on the site. Protocols are established in each site-specific Health & Safety Plan (HASP) based on corporate health and safety policies and manuals, past field experience, specific site conditions, and chemical hazards known or anticipated to be present from available site data. Before site operations begin, all employees, and subcontractor personnel will have read and understood the HASP and all revisions. Before work begins, all site project staff will sign an agreement and acknowledgment form indicating that they have read and fully understood the HASP and their individual responsibilities, and fully agree to abide by the provisions of the HASP.

4.0 EXECUTION

Inspections shall be performed at the frequencies described below or as required by the Site-Specific Work Plan to 1) verify the structural integrity of the wells above and below ground, 2) identify significant silt/sediment buildup in wells, and 3) identify biofouling that could contribute to corrosion of structures or decrease in the efficiency of recovery and pumping operations.

4.1 Well Location Verification

The location of each well shall be compared to that given on the site map. If the well location is found to be in error, the well shall be resurveyed and/or re-delineated relative to site features and its position adjusted on the map.

4.2 Aboveground Structural Integrity Inspection

The physical condition of the well will be determined by visually inspecting aboveground components during each monitoring and/or sampling event. Components to be inspected include:

- Protective casing/flush-mount cover;
- Bumper posts, if applicable;
- Concrete pad or apron, if applicable;
- Well cap (expandable or slip);
- Locking mechanism;
- Exposed top of casing; and
- Surface drainage around the wells.

If the aboveground components are damaged, well maintenance or rehabilitation is required (see Section 4.3).

4.3 Below Ground Well Structural Integrity Inspection

4.3.1 General

Total depth measurements shall be obtained annually in accordance with SOP ENV-08-01 and compared to the baseline total depth measurements obtained at the time of well installation, development, and/or start of the project. If a significant amount of silt/sediment is present, well maintenance or rehabilitation is required (see Section 4.4). Additionally, single well aquifer testing may be performed to determine if silt/sediment has decreased the well hydraulic conductivity, indicating well maintenance or rehabilitation is necessary for collection of representative data. Use of this test will be determined on a site-specific basis or as otherwise determine in the SSWPs.

4.3.2 Monitoring Wells

A stainless steel or PVC bailer or slug, with a diameter and length equivalent to a sampling pump or bailer, shall be lowered the entire length of the well to identify obstructions or damage to the well casing and screen. If the bailer or slug cannot be lowered to within the screened interval, an obstruction or damage exists that requires well maintenance or rehabilitation (see Section 4.4). If well yield decreases significantly, well

integrity may be assessed using a single well aquifer test to determine if well maintenance or rehabilitation is required.

4.3.3 Vapor Extraction Wells

Vacuum and air flow rates shall be measured periodically in accordance with system-specific procedures and compared to previous steady-state measurements and the current operational status of the system. If a significant change in vacuum and/or air flow rates is observed and not substantiated by the current operational status of the system, well maintenance or rehabilitation is required (see Section 4.4).

4.3.4 Recovery Wells

Recovery rates shall be evaluated at least once every quarter and compared to previous measurements. If a significant change in rates is observed and not substantiated by current product/water levels, well maintenance or rehabilitation is required (see Section 4.4).

4.4 Well Maintenance or Rehabilitation

Deficiencies or damage identified during aboveground and below ground well integrity inspections shall be evaluated on a case-by-case basis. Well maintenance or rehabilitation that cannot be implemented at the time of inspection shall be implemented within a reasonable period of time. Well maintenance or rehabilitation may include, but is not limited to, the following:

- Replacement of aboveground components;
- Silt/sediment removal;
- Well surging and redevelopment;
- Biomass removal and/or cleaning with an approved biocide; and
- Equipment (e.g. pumps, etc.) repair or replacement.

If deficiency or damage cannot be corrected through well maintenance or rehabilitation, the well shall be abandoned in accordance with SOP ENV-05-05 and applicable federal, state, and local regulations. Wells critical to site activities and/or operations shall be replaced in accordance with SOPs ENV-05-03 and ENV-05-04, applicable federal, state, and local regulations, and the Site-Specific Work Plan.

4.5 Decontamination

Non-Dedicated and dedicated equipment used for inspection and/or corrective action activities, which does not remain within the well casing, shall be removed from the well. The reusable and/or dedicated equipment and instruments shall be decontaminated in accordance with SOP ENV-04-04 or as otherwise specified by the Site-Specific Work Plan. Disposable equipment and supplies shall be disposed of in accordance with procedures outlined in the Site-Specific Work Plan.

5.0 DOCUMENTATION

Inspection, maintenance, and rehabilitation activities shall be recorded in the field logbook and/or on the appropriate field form as specified in SOP ENV-01-01 or as otherwise required by the Site-Specific Work Plan.

6.0 REFERENCES AND ADDITIONAL RESOURCES

ASTM International, D6089-97(2003) Standard Guide for Documenting a Ground-Water Sampling Event

ASTM International, D4448-01 Standard Guide for Sampling Groundwater Monitoring Wells

USEPA, 2001, Environmental Investigations Standard Operating Procedures and Quality Assurance Manual (EISOPQAM), Region 4, Enforcement and Investigations Branch, SESD, Athens, Georgia, www.epa.gov/region4/sesd/eisopqam/eisopqam.html.

USEPA, April 2007, Guidance for Preparing Standard Operating Procedures (SOPs), EPA/600/B-07/001.

STANDARD OPERATING PROCEDURE NO. SAS-08-06

POTABLE WATER WELL SAMPLING Revision 1

1.0 PURPOSE

This Standard Operating Procedure (SOP) describes the guidelines for the collection of water samples from water supply wells. Potable water samples are collected to evaluate the potable water supply. In some cases, potable water samples may be collected to evaluate the delivery system (e.g. well casing, pump, piping, etc.). The sampling guidelines described in the SOP are intended to facilitate the collection of representative samples.

2.0 EQUIPMENT AND MATERIALS

- Hand tools (e.g. crescent wrenches, pipe wrenches, and slip joint pliers), as needed;
- Garden water hose;
- Plastic sheeting;
- Graduated cylinder;
- Stopwatch;
- Sample containers and labels;
- Cooler with ice;
- Chain of custody forms and seals; and
- Personal protective equipment.

3.0 HEALTH AND SAFETY WARNINGS

Potentially hazardous conditions relating to chemicals under investigation, equipment and tools in use, utility services in investigation areas, or certain work activities may exist on the site. Protocols are established in each site-specific Health & Safety Plan (HASP) based on corporate health and safety policies and manuals, past field experience, specific site conditions, and chemical hazards known or anticipated to be present from available site data. Before site operations begin, all employees, and subcontractor personnel will have read

and understood the HASP and all revisions. Before work begins, all site project staff will sign an agreement and acknowledgment form indicating that they have read and fully understood the HASP and their individual responsibilities, and fully agree to abide by the provisions of the HASP.

4.0 PREPARATIONS

4.1 Sample Location Selection

In general, the installation of a sampling tap to obtain samples shall not be warranted. Potable water samples shall be collected from taps or spigots on the existing delivery system. Prior to sampling, the tap closest to the well shall be identified for sample collection. This location, to the extent practical, should be upstream of any filtration or water treatment device(s). If the location is not upstream of any filtration or water treatment device, the sampler shall recorded the type, manufacturer, and model of each filtration or water treatment device in the field logbook and/or on the appropriate field form. On rare occasions a tap or spigot may not be available for sampling. In these instances, the closest access point to the wellhead shall be selected for sampling. When project objectives include an evaluation of the water delivery, a representative location downstream of filtration or water treatment devices, may be selected. The selected or preferred sample locations shall be described in the Site-Specific Work and/or Field Sampling Plan (FSP).

4.2 Groundwater Elevation and Well Depth Measurements

In general, it is preferred to not obtain groundwater elevations and well depth measurements from public or private water supply wells. In most cases, groundwater elevation and well depth shall be estimated based on the driller's log and/or well completion report. In rare instances it may be necessary to measure groundwater elevation. In these cases, measurements shall be obtained using an electronic water level indicator or an un-weighted steel tape with the loop removed, which has been dedicated for use in potable water wells only and has been properly decontaminated and stored to prevent the introduction of contamination into the well. In addition, the water level indicator shall not be lowered any deeper than is necessary to obtain the groundwater elevation measurement. The need to use chlorine pellets to sanitize the well after measurements are collected will be evaluated on a site-specific basis, as described in SSWPs.

4.3 Calculation of the Pre-Sample Purge Volume

When potable water samples are being collected to evaluate the potable water source, all standing/stagnant water shall be purged from the delivery system immediately prior to sample collection. The volume of water contained in the well casing, pressure or holding tanks, and other plumbing and appurtenances (pipes, hoses, etc.) shall be estimated by the sampler. All estimated volumes of water contained in plumbing and appurtenances, assumptions, and calculations shall be recorded in the field logbook and/or on the appropriate field form.

5.0 EXCUTION

5.1 Pre-Sample Purging

If sample(s) are being collected to evaluate the delivery system, a first draw sample shall be collected prior to the purging (see Section 5.3 below). If samples are being collected to evaluate the potable water supply, the system shall then be purged with a minimum of three times the calculated purge volume before sampling commences. If no information regarding well depth is available, purging shall be performed a minimum of 15 minutes after the well pump engages prior to sampling in addition to the time required to evacuate pre-sample port systems (e.g. pressure tank, water softener, etc.). Pre-sample purging shall also take into account the following, if known:

- Pump intake level;
- Specific capacity of the aquifer; and
- Well efficiency.

Purged water if discharged to the ground surface shall be done in a manner that prevents icy conditions or damage on the property. In addition, the sampler shall divert purge water away from the wellhead or building using hoses, plastic sheeting, irrigation pipe, or other appropriate means, to the extent practical. Purge waters shall be disposed at the nearest sump or drain available whenever possible.

If samples are being collected to evaluate the delivery system, the initial/first draw sample shall be collected prior to purging activities.

5.2 Groundwater Quality/Indicator Parameter Monitoring

The Site-Specific Work and/or Sampling Plan(s) shall specify the groundwater quality/indicator parameters to be monitored, which typically include temperature, pH, specific conductance or actual conductivity, oxidation-reduction potential, dissolved oxygen, and turbidity. Parameter monitoring will begin at the start of purging from the delivery system. The sampler shall monitor and record in the field logbook and/or on the appropriate field form parameters every five to ten minutes (during continuous purging) until parameters have stabilized. Parameter stabilization is considered to be achieved when three consecutive readings, taken within 2 to 3 minute intervals are within the parameter-specific limit listed in the table below or as specified in the Site-Specific Work and/or Sampling Plan(s).

Parameter	**Stabilization Criteria[1]**
Conductance, Specific Electrical	+/- 3% µS/cm @ 25°C
Conductivity, Actual[2]	+/- 3% µS/cm
Dissolved Oxygen	+/- 0.3 mg/L
Oxidation-Reduction Potential	+/- 10 mV
pH	+/- 0.1 standard units
Temperature	+/- 0.1 °C
Turbidity	+/- 10% NTUs or three consecutive readings less than or equal to 10 NTUs

Once the parameters have stabilized, purging is considered complete and sample collection shall commence, with the exception of the collection of a first draw sample. The first draw sample shall be collected prior to delivery system purging.

[1] USEPA, 2002, Ground-Water Sampling Guidelines for Superfund and RCRA Project Managers, EPA 542-S-02-001
[2] Based on the stabilization criteria for specific electrical conductance as published in the documented cited above

5.3 SAMPLING PROCEDURES

The sampler shall collect the potable water sample(s) from a tap or spigot on the existing delivery system, which is closest to the well. This location, to the extent practical, should be upstream of any filtration or water treatment device(s). If the location is not upstream of any filtration or water treatment device, the sampler shall recorded the type, manufacturer, and model of each filtration or water treatment device in the field logbook and/or on the appropriate field form. The location, including a sketch, shall also be documented in the field logbook and/or on the appropriate field form.

Following purging activities, the sampling tap shall be shut off. The tap shall be turned on and adjusted to an approximate flow of 100 ml/min using a graduated cylinder and a stopwatch. The flow rate shall be recorded in the field logbook and/or on the appropriate field form. Sample bottles shall be filled in a manner which minimizes aeration. The sample bottles shall be filled as required in order of decreasing volatility. Any pertinent field observations (e.g. odors, discoloration, etc.) shall also be recorded in the field logbook and/or on the appropriate field form.

6.0 POST-SAMPLING PROCEDURES

Following sample collection, any filters, aerators, and/or treatment systems disconnected prior to sampling activities shall be reconnected. In addition, the sampling site shall be cleaned before leaving the vicinity.

7.0 DECONTAMINATION

Following sample collection, all equipment shall be decontamination as described in SOP ENV-04-04 or as otherwise specified by the Site-Specific Work and/or Sampling Plan(s).

8.0 DOCUMENTATION

Sample information, labeling, and custody control shall be performed in accordance with requirements specified in SOP ENV-03-01 and ENV-03-02. Sampling activities, including pertinent field information and observations, shall be recorded in the field logbook and/or on the appropriate field form as specified in SOP ENV-01-01 or as required by the Site-Specific Work and/or FSP including, but not limited to, the following:

- Condition of the well and dedicated equipment;
- Owner’s and occupant’s name(s);

- Facility name and address;
- Sampling location (specific tap or spigot);
- Filtering or treatment systems on delivery systems (if applicable);
- Aerator or filter on sampling tap;
- Pressure on holding tank volume (if applicable);
- Purge flow rate;
- Purge time;
- Total purge volume;
- Sample appearance (odor, color, turbidity, etc.); and
- Calculations for purge volumes.

9.0 REFERENCES AND ADDITIONAL RESOURCES

ASTM International, 1994, D5612-94R03 Guide for Quality Planning and Field Implementation of a Water Quality Measurement Program

ASTM International, 1995, D5851-95R00 Guide for Planning and Implementing a Water Monitoring Program

ASTM International, 2001, D5903-96(2001) Standard Guide for Planning and Preparing for a Groundwater Sampling Event

USEPA, 2001, Environmental Investigations Standard Operating Procedures and Quality Assurance Manual (EISOPQAM), Region 4, Enforcement and Investigations Branch, SESD, Athens, Georgia.

USEPA, April 2007, Guidance for Preparing Standard Operating Procedures (SOPs), EPA/600/B-07/001.

STANDARD OPERATING PROCEDURE NO. SAS-08-07

NON-AQUEOUS PHASE LIQUID SAMPLING Revision 1

1.0 PURPOSE

This Standard Operating Procedure (SOP) describes the guidelines for the collection of non-aqueous phase liquid (NAPL) samples from monitoring, observation, and/or recovery wells. NAPL samples are collected to support plume characterization and/or treatment/recovery system design. Light and dense NAPL, also referred to as LNAPL and DNAPL, may be collected for physical parameter determination (e.g. density, viscosity, etc.), simulated distillation, fingerprinting, waste characterization, etc.

2.0 EQUIPMENT AND MATERIALS

Equipment and materials may vary based on the type of NAPL being sampled (light or dense). In general, the following equipment and materials shall be required unless otherwise specified by the Site-Specific Work and/or Field Sampling Plan (FSP):

LNAPL Sample Collection:

- Bailer (disposable or dedicated);
- Rope;
- Peristaltic pump;
- Polyvinyl chloride or Teflon tubing (disposable or dedicated), as appropriate; and
- Silicone tubing (disposable or dedicated).

DNAPL Sample Collection:

- Solinst Model 425 Discrete Interval Sampler or equivalent;
- Low density polyethylene (LDPE) tubing;
- Solinst Reel or equivalent;
- High pressure hand pump or compressed air source with regulator; and
- Rope.

General:

- Water and NAPL gauging equipment (see SOP ENV-08-01);
- 5-gallon bucket;
- Approved storage container(s) (55-gallon drum, polyethylene tank, etc.);
- Sample containers and labels;
- Chain of custody forms and seals;
- Decontamination materials/equipment;
- Personal protective equipment; and
- Field logbook and/or appropriate field form.

3.0 HEALTH AND SAFETY

Potentially hazardous conditions relating to chemicals under investigation, equipment and tools in use, utility services in investigation areas, or certain work activities may exist on the site. Protocols are established in each site-specific Health & Safety Plan (HASP) based on corporate health and safety policies and manuals, past field experience, specific site conditions, and chemical hazards known or anticipated to be present from available site data. Before site operations begin, all employees, and subcontractor personnel will have read and understood the HASP and all revisions. Before work begins, all site project staff will sign an agreement and acknowledgment form indicating that they have read and fully understood the HASP and their individual responsibilities, and fully agree to abide by the provisions of the HASP.

4.0 EXECUTION

4.1 Preparation

The sampler shall create a work area around the monitoring well to minimize the potential for cross-contamination. Work area preparations may include the placement of polyethylene sheeting prevent sampling equipment from coming in contact with the ground surface. The sampler shall barricade and/or flag the work area, if required by the Site-Specific HASP. The sampler shall also arrange the sampling equipment and supplies to facilitate efficient execution of NAPL sampling procedures.

4.2 Well Gauging

Groundwater and NAPL elevation measurements shall be obtained in accordance with SOP ENV-08-01 or as otherwise specified in the Site-Specific Work and/or FSP. Following sampling activities, the sampler shall also obtain the total well depth from top of casing (in feet to the nearest 0.01-foot) using a water level indicator, interface probe, or steel tape, as required by the Site-Specific Work and/or FSP or otherwise specified. Total well depths may be obtained prior to the sampling (at least one to two weeks in advance) and provided to the sampler. Groundwater and NAPL elevation measurements and total well depth measurements shall be recorded in the field logbook and/or on the appropriate field form.

4.3 Standing NAPL Column and Casing Volume Calculations

The sampler shall calculate the standing NAPL column and casing volume using the following formulas:

4.3.1 LNAPL Column

Standing LNAPL Column $_{(Feet)}$ = DTW $_{(FT\ BTOC)}$ – $DTP_{L\ (FT\ BTOC)}$

Where: DTW = Depth to Water
FT BTOC = Feet below top of well casing
DTP_L = Depth to Product (LNAPL)

4.3.2 DNAPL Column

Standing DNAPL Column $_{(Feet)}$ = TD $_{(FT\ BTOC)}$ – $DTP_{D\ (FT\ BTOC)}$

Where: TD = Total Well Depth
FT BTOC = Feet below top of well casing
DTP_D = Depth to Product (DNAPL)

4.3.3 Casing Volume

Casing Volume $_{(Gallons)}$ = Standing NAPL Column $_{(Feet)}$ X Volume per One Foot of Casing ^{WDS} $_{(Gallons/Foot)}$

Where: ^{WDS} = Well diameter-specific (see table below)

Well Diameter-Specific Volume Per One Foot of Casing			
Well Diameter (Inches)	Volume Per Foot of Casing (Gallons)	Well Diameter (Inches)	Volume Per Foot of Casing (Gallons)
0.25	0.0026	4.0	0.6528
0.50	0.0102	6.0	1.469
0.75	0.0230	8.0	2.611
1.0	0.0408	10.0	4.081
2.0	0.1632	12.0	5.876

The sampler shall recorded calculations in the field logbook and/or on the appropriate field form.

4.4 Bailer/Tubing/Sampler Intake Position Determination

The sampler should determine the position/depth of the bailer/tubing/sampler intake, using the water and NAPL elevation measurements, such that the intake will be positioned within the bottom quarter of the NAPL column. The intake position (depth/elevation) shall be recorded in the field logbook and/or on the appropriate field form. In addition, the sampling equipment shall also be recorded in the field logbook and/or on the appropriate field form.

4.5 Well Evacuation

In order to obtain a representative NAPL sample from an existing well, the product that has stagnated and/or may have chemically changed in the well casing shall be removed prior to sampling. The evacuation will allow fresh NAPL to enter the well from the formation.

4.5.1 LNAPL Evacuation

If using a bailer, the sampler shall slowly lower the bailer to the intake position. The bailer shall be slowly retrieved from the well and the contents emptied into a 5-gallon bucket or an approved storage container. This process shall continue until no measurable amount (< 0.01 foot) of LNAPL remains or one casing volume of LNAPL has been removed, whichever occurs first. If using a peristaltic pump, the sampler shall

slowly lower the tubing to the intake position. The pump shall be turned on and the removed LNAPL shall be collected in a 5-gallon bucket or an approved storage container. The pump process shall continue until no measurable amount (< 0.01 foot) of LNAPL remains or one casing volume of LNAPL has been removed, whichever occurs first.

The volume of LNAPL evacuated from the well shall be recorded in the field logbook and/or on the appropriate field form.

4.5.2 DNAPL Evacuation

The discrete interval sampler shall be connected to the tubing and reel. The high pressure hand pump or compressed air shall be connected to the reel. The sampler shall be pressured to the recommended operating pressure for the intake position/depth according to the following unless otherwise specified by the sampler operations manual and/or Site-Specific Work and/or FSP.

Recommended Operating Pressure[1]			
Depth		**Pressure**	
Feet	**Meters**	**psi**	**kPa**
25	8	20	148
50	15	30	217
100	30	50	364
200	61	95	670
300	90	140	952
500	150	225	1,495

Notes: 1. Operating pressure = (Sample depth in feet X 0.43) + 10 psi

2. Operating pressure = (Sample depth in meters X 9.8) + 70 kPa

3. psi = pounds per square inch

4. kPa = kiloPascals

[1] http://www.groundwatersoftware.com/Equipment/solinst_model_425.htm

While pressurized, the sampler shall then be lowered to the intake position/depth. At the desire depth, the pressure shall be released, which will allow the sampler to fill by hydrostatic pressure. The sampler shall then be re-pressurized to the recommended operating pressure. Following, re-pressurization, the sampler shall be slowly raised to the surface. The contents shall be transferred to the 5-gallon bucket or approved storage container via the sample release device. This process shall continue until no measurable amount (< 0.01 foot) of DNAPL remains or one casing volume of DNAPL has been removed, whichever occurs first.

4.6 Post NAPL Evacuation Activities

Groundwater and NAPL elevation measurements shall be measured and monitored in accordance with SOP ENV-08-01 or as otherwise specified in the Site-Specific Work and/or FSP. Once the NAPL column has recovered to a level equivalent or greater than the prescribed sample volume, sampling may commence.

4.7 Sample Collection

4.7.1 LNAPL Sample Collection

If using a bailer, the sampler shall slowly lower the bailer to the intake position. The bailer shall be slowly retrieved from the well and the contents emptied into the appropriate sample container(s).

If using a peristaltic pump, the sampler shall slowly lower the tubing to the intake position. The pump shall be turned on and the removed LNAPL shall be emptied into the appropriate sample container(s).

4.7.2 DNAPL Sample Collection

The discrete interval sampler shall be connected to the tubing and reel. The high pressure hand pump or compressed air shall be connected to the reel. The sampler shall be pressured to the recommended operating pressure for the intake position/depth according to the following unless otherwise specified by the sampler operations manual and/or Site-Specific Work and/or FSP (see Section 4.5.2). While pressurized, the sampler shall then be lowered to the intake position/depth. At the desire depth, the pressure shall be released, which will allow the sampler to fill by hydrostatic pressure. The sampler shall then be re-pressurized to the recommended operating pressure. Following, re-pressurization, the sampler shall be slowly raised to the

surface. The contents shall be transferred to the appropriate sample container(s) via the sample release device.

4.8 Post Sample Collection

Non-Dedicated and dedicated sampling equipment, which does not remain within the well casing, shall be removed from the monitoring well. The reusable and/or dedicated equipment and instruments shall be decontaminated in accordance with SOP ENV-04-04 or as otherwise specified by the Site-Specific Work and/or FSP. Disposable equipment and supplies shall be disposed of in accordance with procedures outlined in the Site-Specific Work and/or FSP. The sampler shall secure the well casing using a slip or expandable well cap. The flush-mount lid shall be bolted down or the protective cover lid closed and locked, as appropriate.

5.0 Documentation

Sample information, labeling, and custody control shall be performed in accordance with requirements specified in SOP ENV-03-01 and ENV-03-02. Sampling activities shall be recorded in the field logbook and/or on the appropriate field form as specified in SOP ENV-01-01 or as required by the Site-Specific Work and/or FSP.

6.0 REFERENCES AND ADDITIONAL RESOURCES

http://www.groundwatersoftware.com/Equipment/solinst_model_425.htm

USEPA, 2002, Ground-Water Sampling Guidelines for Superfund and RCRA Project Manager, Region 5 and Region 10, EPA 542-S-02-001.

USEPA, April 2007, Guidance for Preparing Standard Operating Procedures (SOPs), EPA/60/B-07/001.

SOP SERIES SAS-09

SURFACE WATER SAMPLING AND MEASUREMENT PROCEDURES

STANDARD OPERATING PROCEDURE NO. SAS-09-01

SURFACE WATER SAMPLING FOR CHEMICAL AND BIOLOGICAL ANALYSIS Revision 1

1.0 PURPOSE

This Standard Operating Procedure (SOP) describes the guidelines for the collection of grab surface water samples for chemical and biological analysis using manual sampling techniques. The collection of composite surface water samples using automatic samplers shall be address in an equipment-specific SOP or the Site-Specific Work Plan, as needed. Surface water samples are utilized for the characterization of surface water and assessment of human and ecological receptors.

2.0 EQUIPMENT AND MATERIALS

Sampling equipment and materials vary by collection method. However, some standard equipment and materials are required regardless of collection method:

- Hip or chest waders, as appropriate;
- Boat and personal floatation devices (PFDs), as needed;
- Sample bottles/containers and labels;
- Field logbook and/or the appropriate field form(s);
- Pens with waterproof, non-erasable ink;
- Chain of custody forms;
- Depth and length measurement devices;
- Survey stakes, flags, or buoys and anchors;
- Decontamination materials;
- Coolers and ice packs/double-bagged ice;
- Personal protective equipment; and
- Camera.

3.0 HEALTH AND SAFETY WARNINGS

Aquatic environments present unique health and safety concerns ranging from accessibility to water depth and velocity to indigenous species. Potentially hazardous conditions relating to chemicals under investigation, equipment and tools in use, utility services in investigation areas, or certain work activities may exist on the site. Protocols are established in each site-specific Health & Safety Plan (HASP) based on corporate health and safety policies and manuals, past field experience, specific site conditions, and chemical hazards known or anticipated to be present from available site data. Work on water requires that marine health and safety procedures are used in addition to standard health and safety procedures. Before site operations begin, all employees, and subcontractor personnel will have read and understood the HASP and all revisions. Before work begins, all site project staff will sign an agreement and acknowledgment form indicating that they have read and fully understood the HASP and their individual responsibilities, and fully agree to abide by the provisions of the HASP.

4.0 PERMITTING

Sampling performed within navigable waters and critical habitats may fall under the jurisdiction of one or more federal, state, or local agencies, including by not limited to the United States Army Corp of Engineers (USACOE), US Department of Fish and Wildlife, and State Departments of Natural Resources. Prior to the commencement of sampling activities, appropriate permit(s), if applicable, shall be obtained.

5.0 EXECUTION

5.1 General Considerations

The scope or extent of the sampling effort, data quality objectives, type(s) of samples (e.g. surface or depth grab), and sampling technique shall be determined prior to sample site selection and sample collection. In addition, the hydrology and morphometrics of a stream or impoundment shall be determined to the extent practical prior to sample collection. Water quality data (e.g. dissolved oxygen, pH, and temperature, etc.) shall be collected prior to sample collection, to the extent practical, to determine if stratification is present. These sampling activities should be restricted to seasons when ice is not present, unless specified by a Site-Specific Work Plan and/or Field Sampling Plan (FSP). The Site-Specific Work Plan and/or FSP, as appropriate, shall specify the type(s) of samples to be collected and the collection technique(s).

5.2 Sample Site Selection

An initial reconnaissance shall be performed, to the extent practical, identify suitable sampling locations. Bridges and piers shall generally be deemed acceptable sampling locations since they provide ready access and permit water sampling at any point across the width of the water body. However, data quality objectives (DQOs) must be reviewed prior to final acceptance of these structures as sampling locations, since these structures alter the nature of water flow. When samples will be collected by wading in lakes, ponds, and slow-moving rivers and streams, sampling locations shall be selected that allow the sampler to approach the location from downstream in order to minimize the disturbance of sediments. Sampling station locations shall be selected without regard to other means of access if the stream is navigable by boat. However, other factors including but not limited to the following shall be considered in the sample site selection process:

- Project goals and DQOs;
- Field personnel health and safety;
- Manmade structures that alter the nature of water flow and mixing;
- General water environment characteristics (e.g. flow, depth, stratification, etc.);
- Potential disturbance of threatened or endangered species or critical habitat; and
- Type of water environment: river, streams, creeks; lakes, ponds, impoundments, estuarine, etc.

5.3 Surface Grab Sample Collection Procedures

Surface grab samples shall be collected from the top 12 inches of the water column. Samples shall be collected in a manner that avoids skimming of the surface and disturbance of sediments. If sample collection is performed by wading in the stream, the location shall be approached from a downstream location and efforts shall be made to minimize sediment disturbance, which has the potential to bias the sample. Wading shall be deemed acceptable if a noticeable current is present and the samples can be collected directly into the bottle from a location upstream of the field personnel. The field personnel shall approach the sample location slowly from downstream in order to minimize sediment disruption and sample corruption.

5.3.1 Direct Grab Sampling

Where practical, use of the actual sample container as the collection device is preferred since the same container can be submitted for laboratory analysis. This procedure reduces sample handling and potential loss of analytes or contamination from the sample from other sources. The following procedure shall be used for direct grab sample collection using unpreserved sample containers:

1. Remove the container cap or lid.
2. Slowly submerge the container, opening first, into the water.
3. Invert the container so the opening is upright and pointing towards the direction of water flow (if applicable) and allow water to slowly run into and fill the container.
4. Return the filled container to the surface.
5. If field preservation is required, proceed to Step 6; otherwise, secure the container cap or lid and proceed to Step 10.
6. Pour out a small volume of sample away from and downstream of the sampling location. (Do not use this step for volatile organics or other analytes that require zero headspace.)
7. Add the appropriate volume of the analytical method-prescribed preservative and secure the container cap or lid.
8. Invert the container several times to ensure sufficient mixing of the sample and preservative.
9. Check the preservation of the sample; adjust the pH of the sample with additional preservative, if necessary; and re-secure the cap or lid.
10. Label the sample container in accordance with SOP ENV-03-01 and place in cooler with double-bagged ice for in preparation for transportation to the analytical laboratory.

5.3.2 Sampling with an Intermediate Vessel or Container

If the sample cannot be collected directly in the sample container(s), an unpreserved sample container or an intermediate vessel (e.g. beaker, bucket, or dipper with or without an extension arm) shall be used to obtain the sample using the following procedure:

1. Decontamination the intermediate vessel in accordance with SOP ENV-04-04 or use certified clean, laboratory provided, unpreserved bottles.
2. Fill the intermediate vessel or container by slowly dipping it into the water with the opening pointing towards the direction of water flow (if applicable);

3. Allow water to slowly run into and fill the intermediate vessel or container in a manner that minimizes agitation of the sample;
4. If field preservation is required, ensure the preservative is present in the sample container prior to transfering water from the intermediate vessel;
5. Remove the sample container lid and fill the sample container(s) from the intermediate vessel or container while avoid direct contact between them;
6. Secure the sample container lid.
7. Label the sample container in accordance with SOP ENV-03-01 and place in cooler with double-bagged ice for in preparation for transportation to the analytical laboratory.

5.3.3 Sampling with a Pump and Tubing

The following procedure shall be used for the collection of a surface grab sample using a pump and dedicated tubing:

1. Decontaminate the pump in accordance with SOP ENV-04-04, as appropriate.
2. Lower the tubing or pump intake to a depth of 6 to 12 inches below the water surface, where possible. The pump intake or intake tubing shall be maintained below the water surface during sample collection.
3. Pump several tubing volumes through the system prior to collecting the first sample.
4. If field preservation is required, ensure the preservative is present in the sample container prior to filling the sample container;
5. Fill the sample container(s) from the discharge tubing.
6. Secure the sample container lid.
7. Label the sample container in accordance with SOP ENV-03-01 and place in cooler with double-bagged ice for in preparation for transportation to the analytical laboratory.

5.4 Depth Grab Sample Collection Procedures

Depth grab samples shall be collected from at least below the top 12 inches of the water column to within 6 inches of the stream or impoundment bed, at depths to satisfy the DQOs specified by a Site-Specific Work Plan and/or determined in the field based on field encountered conditions (i.e., stratification, water column depth, etc.). Specific sample collection procedures for depth grab samples are presented below. If sample collection is performed by wading in the stream, the location shall be approached from a downstream location

and efforts made to minimize sediment disturbance, which has the potential to bias the sample. Wading shall be deemed acceptable if a noticeable current is present and the samples can be collected from a location upstream of the field personnel. The field personnel shall approach the sample location slowly from downstream in order to minimize sediment disruption and sample corruption.

5.4.1 Sampling with Kemmerer, Niskin, or Van Dorn Type Devices

To the extent practical, devices constructed of stainless steel or Teflon or with Teflon-coated surfaces shall be used. Samplers that are constructed of plastic and rubber shall not be used to collect samples for extractable organics or volatile organic compound (VOC) analysis. The following procedure shall be used to collect depth grab samples using these devices:

1. Decontaminate the device in accordance with SOP ENV-04-04;
2. Measure the water column to determine the maximum depth and sampling depths;
3. Mark the line attached to the device with depth increments so that the sampling depth can be accurately recorded;
4. Slowly lower the device to the desired sampling depth in a manner that minimizes sediment disturbance;
5. At the desired depth, send the messenger weight down to trip the closure mechanism;
6. Slowly retrieve the device;
7. Rinse the outside of the device with distilled water;
8. Remove the sample container cap or lid and fill the container via the discharge tube;
9. If field preservation is required, follow Step 6 through Step 9 in Section 5.3.1 above; otherwise, proceed to Step 10 below.
10. Secure the sample container lid.
11. Label the sample container in accordance with SOP ENV-03-01 and place in cooler with double-bagged ice for in preparation for transportation to the analytical laboratory.

5.4.2 Sampling with Double Check-Valve Bailers

If DQOs do not necessitate a sample from a strictly discrete interval of the water column, a double check-valve bailer may be used. The following procedure shall be used to collect a depth grab sample with a double check-valve bailer:

1. Decontaminate the bailer in accordance with SOP ENV-04-04, or use a clean disposable bailer at each sampling location.
2. Measure the water column to determine the maximum depth and sampling depths.
3. Mark the line attached to the bailer with depth increments so that the sampling depth can be recorded.
4. Slowly lower the bailer to the desired sampling depth in a manner that minimize sediment disturbance.
5. Slowly retrieve the bailer.
6. Rinse the outside of the bailer with distilled water.
7. Remove the sample container cap or lid and fill the containers via the discharge port.
8. If field preservation is required, follow Step 6 through Step 9 in Section 5.3.1 above; otherwise, proceed to Step #9 below.
9. Secure the sample container lid.
10. Label the sample container in accordance with SOP ENV-03-01 and place in cooler with double-bagged ice for in preparation for transportation to the analytical laboratory.

5.4.3 Sampling with a Pump and Tubing

The following procedure shall be used for the collection of a depth grab sample using a pump and dedicated tubing:

1. Decontaminate the pump in accordance with SOP ENV-04-04, as appropriate.
2. Measure the water column to determine the maximum depth and sampling depths.
3. Secure the pump intake or intake tubing to a stiff pole or weight.
4. Lower the pump intake or intake tubing to the desire sample depth.
5. Pump several tubing volumes through the system prior to collecting the first sample.
6. Remove the sample container cap or lid and fill the sample container from the discharge tubing.
7. If field preservation is required, follow Step 6 through Step 9 in Section 5.3.1 above; otherwise, proceed to Step 8 below;
8. Secure the sample container lid.
9. Label the sample container in accordance with SOP ENV-03-01 and place in cooler with double-bagged ice for in preparation for transportation to the analytical laboratory.

5.5 Sampling for Biological Analysis

When sampling for biological or bacteriological examination, the procedures described above shall be followed with one exception, unless otherwise specified in the Site-Specific Work and/or FSP. Samples shall be collected in bottles properly sterilized and protected against contamination. As with any sample collection procedure, while the bottle is open, both the bottle and stopper shall be protected against contamination from other sources and the bottle closed at once following sample collection.

6.0 DOCUMENTATION

Sample information, labeling, and custody control shall be performed in accordance with requirements specified in SOP ENV-03-01 and ENV-03-02. Sampling activities shall be recorded in the field logbook and/or on the appropriate field form as specified in SOP ENV-01-01 or as required by the Site-Specific Work and/or FSP.

7.0 REFERENCES

ASTM International, D3977-97 (2002), Standard Test Methods for Determining Sediment Concentration in Water Samples.

ASTM International, D4581-86 (2005), Guide for Measurement of Morphologic Characteristics of Surface Water Bodies.

ASTM International, D5073-02, Practice for Depth Measurement of Surface Water.

Florida Department of Environmental Protection, February 2004, DEP-SOP-001/01 FS 2100 Surface Water Sampling.

USEPA, November 1994, SOP 2013: Surface Water Sampling, Rev. 0.0, Environmental Response Team.

USEPA, July 2002. Standard Operating Procedures for the Collection of Chemical and Biological Ambient Water Samples. Revision 1.

USEPA. 40 CFR Part 136.3 (e) Table II

USEPA, April 2007, Guidance for Preparing Standard Operating Procedures (SOPs), EPA/600/B-07/001.

STANDARD OPERATING PROCEDURE NO. SAS-09-02

STREAMFLOW MEASUREMENT Revision 1

1.0 PURPOSE

This Standard Operating Procedure (SOP) describes guidelines for the calculation of velocity and stream discharge measurements in rivers and streams. Procedures are given for measurements that can be conducted from water vessels (i.e. boats or barges), bridges (if traversing a representatives section of the river) or by wading with assistance from other field personnel working from the stream bank.

2.0 EQUIPMENT AND MATERIALS

- Flow Meter;
- Top-setting wading rod (measured in tenths of a foot);
- Tape measure or tagline (long enough to traverse the stream bed)
- Stakes to anchor tape to shore;
- Mallet or hammer;
- Field logbook and applicable field data sheets;
- Pen(s) with waterproof, non-erasable ink;
- Waders; and
- Personal protective equipment.

3.0 HEALTH AND SAFETY WARNINGS

Potentially hazardous conditions relating to chemicals under investigation, equipment and tools in use, utility services in investigation areas, or certain work activities may exist on the site. Work on water requires that marine health and safety procedures are used in addition to standard health and safety procedures. Protocols are established in each site-specific Health & Safety Plan (HASP) based on corporate health and safety policies and manuals, past field experience, specific site conditions, and chemical hazards known or anticipated to be present from available site data. Before site operations begin, all employees, and

subcontractor personnel will have read and understood the HASP and all revisions. Before work begins, all site project staff will sign an agreement and acknowledgment form indicating that they have read and fully understood the HASP and their individual responsibilities, and fully agree to abide by the provisions of the HASP.

4.0 GENERAL PROCEDURES

4.1 Standard Field Procedures

Streamflow measurements shall be conducted only by a trained technician. Field data and observations associated with streamflow measurements shall be documented in accordance with SOP ENV-01-01, if not otherwise specified in this SOP. All activities should be recorded in a field logbook and/or on a streamflow measurement field form.

4.2 Site Selection

The stream transect location is a critical component of streamflow measurement. A site where the stream is most consistent in depth and flow rate across its width is easier to sample and provides more accurate results. Flow sites should be free of eddies, slack water, and excessive turbulence. Avoid areas where islands, ox-bows, piles of debris, aquatic plants or tributaries are present.

4.3 Flow Meter Selection

Several flow meters are available for measuring stream velocity. Some specific meters are the Price Model #1210 (AA); Price Model #1205 (Pygmy) for small, shallow streams; the March-McBirney 201D; and the March-McBirney Flo-Mate 2000. Selection of an appropriate flow meter will depend on the width and depth of the stream being measured, as well as stream features and irregularities. Additional guidance for selection of flow meters may be given in the Site-specific Work Plan.

4.4 Calculation of Stream Discharge

Stream discharge is determined by multiplying the mean stream velocity by the cross sectional area of the flow. The general form of the discharge equation is:

$$Q = A \text{ x } v$$

Where: Q = discharge in cubic feet per second (cfs)
A = cross section area of the channel at the transect in square feet (ft^2)
v = mean water column velocity at the transect in feet per second (ft/s)

To measure discharge (Q), a transect of the stream is divided into subsections and velocity, width and depth measurements are made within each subsection. Discharge of the stream at the transect is calculated by a form of the general equation:

$$Q = \sum_{i=1}^{n} (A_i \, x \, v_i)$$

Where: Q = discharge (cfs)
A_i = cross-sectional area of subsection I (ft^2)
v_i = velocity of subsection (ft/s)

A variation of this equation for mid-section method from Rantz (1982) is presented is Section 7.0 below. Other variations can be found in references listed at the end of this SOP and may be used as specified in the Site-specific Work Plan.

5.0 FIELD MEASUREMENT PROCEDURES

1. Calibrate the flow meter as specified in the manufacturer's instructions.
2. Attach the flow meter to the top set wading rod.
3. Measure the width of the stream at the selected transect location is measured by staking one end of the tape measure or pre-measured and incrementally marked tagline on the right bank. Pull the tape measure across the stream keeping it perpendicular to the flow and stake it on the left bank or use GPS to establish a transect location if sampling from a vessel. Measure the width of the stream from left edge of water (LEW) to right edge of water (REW). LEW is defined as the point where water flow begins on the transect as you face downstream. REW is where water flows ends on the transect.

4. Determine the spacing of transect subsections to be used for velocity measurements. Each subsection should have a width of 5% to 10% of the stream width. For an accurate measurement of discharge, velocity should be measured in 20 to 30 subsections. If inconsistencies in flow rate or streambed topography are present, the number and sizes of subsections can be adjusted to accommodate the differences. Additional guidance on subdividing the transect may be given in the Site-specific Work Plan.
5. Determine the mid-point of each subsection. Use a cumulative measurement. If the stream is 30 feet wide with 20 subsections, the first mid-point is located at 0.75 feet from LEW, the second is located at 2.25 feet from LEW, etc. Draw a rough sketch of the transect with subsections and mid-point measurements in the field logbook and/or on the appropriate field form.
6. Begin the velocity and depth measurements at the first subsection mid-point as measured from the LEW. Measure the total depth of water using the scale on the lower portion of the wading rod or 2-inch diameter graduated aluminum pole. Single indentations on the rod indicate 0.1 foot, double indentations indicate 0.5 foot and triple indentations indicate 1.0 foot. Depending on water depths, velocity measurements will be taken at one or two depths as follows:
    - Depths ≤ 2.5 feet – one measurement is taken at 60% of the total depth when measured from the surface of the water. To set the sensor of the flow meter at 60% of the depth, line up the foot scale on the sliding rod with the tenth scale on the top of the depth gauge rod. For example, if the first subsection is 1.5 feet deep, line up the 1 foot indentation on the sliding rod with the 5 on the tenth scale on the depth gauge rod.
    - Depths > 2.5 feet – two measurements are taken: one at 20% of the total depth and one at 80% of the total depth when measured from the surface of the water. To set the 20% depth point, multiply the depth of the water by two and move the sliding rod so that the foot measurement on it lines up with the tenth of a foot measure on the depth gauge rod. For example, if the first subsection is 2.8 feet deep, twice the depth is 5.6 feet. Line up the number 5 on the sliding rod with the 6 on the depth gauge rod. To set the 80% depth point, divide the depth of the water by two and move the sliding rod to line up with the depth gauge rod based on the results. For example, 2.8 feet divided by 2 equals 1.4 feet. Line up the number 1 on the sliding rod with the 4 on the depth gauge rod. The average of the two velocity measurements are used in the flow calculation.

Take the velocity measurement(s) following the manufacturer's instructions and record them in the field logbook or on the field log form. Proceed to the next subsection of the transect and repeat the procedure across the stream towards the REW.

7. If required, continue to next transect location and repeat the measurement procedures.

6.0 DISCHARGE CALCULATIONS

Calculate the discharge in each transect subsection by multiplying the average velocity (>2.5-foot depth subsection) or single velocity (≤ 2.5-foot depth) by the subsection width and average depth using the equation:

$$Q = (\frac{D_1 + D_2}{2})(\frac{v_1 + v_2}{2})W_1 + ... + (\frac{D_m + D_n}{2})(\frac{v_m + v_n}{2})W_m$$

Where: Q = discharge (cfs)
v = velocity of subsection (ft/s)
W = width of subsection (ft)

Note: The first and last subsections are located at the edges of the stream and have a depth and velocity of zero (D_1, D_n, v_1 and v_n).

7.0 QUALITY ASSURANCE/QUALITY CONTROL

7.1 Equipment Calibration, Operation, and Maintenance

All field equipment shall be calibrated, operated, and maintained in accordance with SOP ENV-02-01 and manufacturer's instructions.

7.2 Calculations

All calculations shall be checked by another person for correctness and use of appropriate equations. Any corrections required will be made by the person originally performing the calculations. These corrections will be checked for correctness and approved for publication.

8.0 REFERENCES AND ADDITIONAL RESOURCES

Carter, R. W. and Davidian, J., 1969, General Procedure for Gaging Streams: Techniques of Water Resources Investigations of the U.S. Geological Survey, Book 3.

California Department of Pesticide Regulation, Environmental Monitoring Branch, 2004, Standard Operating Procedure for Determining Wadable Stream Discharge with Price Current Meters, SOP Number: FSWA009.01.

Rantz, S.E., 1982, *Measurement and Computation of Streamflow: Volumes 1 and 2*, "Measurement of Stage and Discharge", U.S. Geological Survey Water-Supply Paper 2175.

Florida Department of Environmental Protection, Bureau of Watershed Management, Watershed Assessment Section, February 2004, FT 1800 Field Measurement of Water Flow and Velocity. DEP-SOP-001/01.

USEPA, Region 6, January 2003, Standard Operating Procedure for Streamflow Measurement.

USEPA, April 2007, Guidance for Preparing Standard Operating Procedures (SOPs), EPA/600/B-07/001.

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THERE'S A WAY