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June 9, 2016

Ms. Susan Kennedy
Environmental Cleanup and Brownfields Program
Pennsylvania Department of Environmental Protection
Southeast Regional Office
2 East Main Street
Norristown, PA 19401-4915

RE: Revised Site Characterization Report
Herr Foods, Inc.
273 Old Baltimore Pike
West Nottingham Township, Chester County
Facility ID No. 15-24418
Incident No. 47318
RETTEW Project No. 101722001
FED-EX

Dear Ms. Kennedy:

RETTEW Associates, Inc. has prepared the enclosed Revised Site Characterization Report on behalf of Herr Foods, Inc. (Herr's) to describe corrective action performed to date to address a subsurface release of petroleum from a regulated underground storage tank system at the referenced location. The Site-Specific Standard has been selected for groundwater to address off-site dissolved benzene and MTBE impacts to wetlands and surface water. As such, this report includes fate and transport analyses, development of water quality-based effluent limits and an ecological risk assessment.

If you have any questions regarding the attached report, please contact me at edziedzic@rettew.com (717) 205-2217.

Sincerely,

Edward Dziedzic, P.G.
Project Manager

Enclosures

copy: Matthew Gojmerac, Herr's

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REVISED SITE CHARACTERIZATION REPORT

**HERR FOODS, INC. MANUFACTURING FACILITY
273 OLD BALTIMORE PIKE
WEST NOTTINGHAM TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA
FACILITY ID No. 15-24418**

PREPARED FOR:

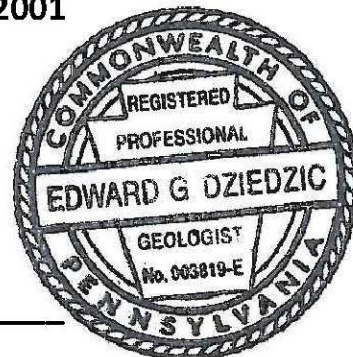
**Herr Foods, Inc.
20 Herr Drive
Nottingham, Pennsylvania 19362**

PREPARED BY:

**RETTEW Associates, Inc.
3020 Columbia Avenue
Lancaster, Pennsylvania 17603**

RETTEW Project No. 101722001**June 10, 2016**

*Edward Dziedzic, P.G.
Senior Geologist*



REVISED SITE CHARACTERIZATION REPORT

HERR FOODS, INC. MANUFACTURING FACILITY
273 OLD BALTIMORE PIKE
NOTTINGHAM, PENNSYLVANIA
RETTEW PROJECT NO. 101722001

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REVISED SITE CHARACTERIZATION REPORT

**HERR FOODS, INC. MANUFACTURING FACILITY
273 OLD BALTIMORE PIKE
NOTTINGHAM, PENNSYLVANIA
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REVISED SITE CHARACTERIZATION REPORT

**HERR FOODS, INC. MANUFACTURING FACILITY
273 OLD BALTIMORE PIKE
NOTTINGHAM, PENNSYLVANIA
RETTEW PROJECT NO. 101722001**

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1.0 INTRODUCTION

This Revised Site Characterization Report (SCR) has been prepared by RETTEW Associates, Inc. on behalf of Herr Foods, Inc. (Herr's), to document corrective action activities conducted at Herr's manufacturing facility, located at 273 Old Baltimore Pike in West Nottingham Township, Chester County, Pennsylvania. A Site Location Map is included as **Figure 1**.

This report was prepared in accordance with the corrective action regulations defined in Title 25 Pennsylvania Code Chapter 245 titled *Administration of the Storage Tank and Spill Prevention Program* and the requirements of the Pennsylvania Land Recycling and Remediation Standards Act (Act 2). Herr's owns the subject property, which is currently operating as a snack food manufacturing facility. Corrective action focused on a regulated underground storage tank (UST) system located at the facility truck garage on the property, which is used for maintaining and fueling Herr's fleet vehicles. Corrective action was initiated following the discovery of petroleum impacted soil during due diligence performed at the property in October 2014. A Notification of Reportable Release was submitted by Herr's to the Pennsylvania Department of Environmental Protection (PADEP) on December 22, 2014.

Site characterization was performed in several iterative phases between February 2015 and April 2016 to delineate soil and groundwater impacts resulting from the release. The methods and findings of each phase of site characterization were presented in various reports submitted to the PADEP, including a Preliminary Site Characterization Report (April 23, 2015), a Remedial Action Progress Report (August 13, 2015), and a Site Characterization Report (November 11, 2015). This Revised SCR summarizes site characterization activities completed to date, fate and transport analysis and remediation standard selection.

2.0 SITE DESCRIPTION AND BACKGROUND

Herr's facility is a 13.8-acre property owned and operated by Herr's and historically used for snack food manufacturing. The property is currently improved with three permanent structures: a 312,000 square-foot manufacturing facility (known as Nottingham Plant 1), a wastewater treatment plant (WWTP) and a truck garage. Paved access drives, parking lots and grass lawn areas cover the remainder of the property as shown on **Figure 2**. Nottingham Plant 1 is served by a water supply well located 3,100 feet southeast of the truck garage on a separate parcel owned by Herr's. Sanitary and process wastewater generated at Nottingham Plant 1 is treated at the WWTP. Treated wastewater is discharged off-site to a land application facility in accordance with a PADEP Part II Water Quality Permit.

The truck garage is located on the southern portion of the property as shown on **Figure 2**. The truck garage was built in 1978 and is currently used for the maintenance of Herr's fleet vehicles. Four sub-slab hydraulic lifts are located within the service bays of the truck garage for vehicle maintenance. The area surrounding the truck garage is covered with impervious asphalt paving and is used for parking Herr's fleet trucks and trailers. The truck garage is connected to the off-site water supply well that serves Plant 1; however, the truck garage was previously served by a decommissioned water supply well located on the property (**Figure 3**). The former supply well is disconnected from the truck garage and is no longer used. The truck garage is also served by a septic drainfield. A Site Plan showing the truck garage, the former supply well, and the location of the septic drainfield is included as **Figure 3**.

Regulated gasoline and diesel UST systems and associated dispensers are used for vehicle fueling at the property (PADEP Facility ID No. 15-24418). The current UST systems include a 10,000-gallon unleaded gasoline tank (Tank 008) and a 10,000-gallon diesel tank (Tank 009). These tanks were installed in 1997

and replaced five former USTs (Tank 003 through Tank 007). Current and former UST locations are shown on **Figure 3** and are described below.

Tank Registration No.	Capacity	Contents	Status
003	4,000-gallons	New Motor Oil	Removed
004	4,000-gallons	Unleaded Gasoline	Removed
005	15,000-gallons	Unleaded Gasoline	Removed
006	12,000-gallons	Diesel Fuel	Removed
007	1,000-gallons	Waste Oil	Removed
008	10,000-gallons	Unleaded Gasoline	In-Service
009	10,000-gallons	Diesel Fuel	In-Service

2.1 1997 UST CLOSURE SUMMARY

Tanks 003 through 007 were removed from service between May 28 and June 4, 1997 by a PADEP certified contractor, Clayton Services Corporation, of North Wales, Pennsylvania. During UST closure activities, petroleum impacted soil was encountered and removed. A closure report submitted to the PADEP dated July 2, 1997 detailing the removal of Tank 003 through Tank 007 indicated the following:

- Piping associated with Tank 005 and Tank 006 was described as “suspect” at unions and connections under the pumps;
- Holes were observed in the bottom of Tank 005 and Tank 006;
- Obvious contamination was not observed at Tank 003 or Tank 007, and confirmatory soil samples were collected for laboratory analysis;
- Obvious, localized contamination (elevated soil screening data) was observed at Tank 004;
- Obvious, localized contamination (holes in USTs) was observed at Tank 005 and Tank 006;
- Petroleum-impacted soil was excavated within two feet of the UST systems for Tank 004, Tank 005, and Tank 006, and confirmatory soil samples were collected for laboratory analysis;
- Confirmatory soil sample analytical results revealed concentrations of methyl tert butyl ether (MTBE) exceeding the unsaturated soil standard/action level of 2,000 micrograms per kilogram (µg/kg) in soil samples 004-2, PI-5, and PI-6 (**Figure 3**); and
- A total of 1,200 tons of petroleum-impacted soil was excavated and removed from the Site for proper disposal.

The confirmatory soil samples that exceeded the unsaturated soil standard/action level for MTBE were collected at depths ranging from nine to 12 feet below grade. On July 2, 1997, a Notification of Reportable Release was submitted to the PADEP. The notification indicated that contamination was confirmed at the Site and was described as product stained or product saturated soil, and free product or sheen on ponded water. It is noted that ponded water was described as runoff that collected in the UST excavation and was not groundwater. In correspondence dated November 17, 1997, PADEP indicated that they accepted the Closure Report, and that “no further action is required regarding the closure of the tanks”. The UST Closure Report, Notification of Reportable Release, and the PADEP response is included as **Appendix A**.

2.2 PHASE I AND PHASE II ESA SUMMARY

A previous Phase I and Phase II Environmental Site Assessment (ESA) was conducted at the property by RETTEW between April and October 2014 to satisfy environmental due diligence as part of a loan application package, which identified several recognized environmental conditions (RECs) associated with

both past and current land uses. The identified RECs at the property included several trench-style floor drains, which discharge to the septic drainfield, and the five subgrade hydraulic lifts located in the truck garage. The purpose of the Phase II ESA was to investigate soil quality at each REC and compare results to applicable remediation standards. Details of the Phase II ESA methods and findings are documented in the Limited Phase II Environmental Site Assessment Report dated November 17, 2014.

On October 16, 2014, five soil borings (identified as SB-6 through SB-10 – see **Figure 3**) were advanced at the truck garage to investigate soil quality near the locations of the hydraulic lifts, floor drains and septic drainfield. RETTEW personnel documented the lithology encountered in each soil boring and field-screened the soil using a photoionization detector (PID) to detect the presence of volatile organic petroleum compounds.

The soil sample with the highest PID reading in each soil boring was submitted for laboratory analysis. Soil samples collected from SB-6 through SB-8 near the hydraulic lifts were submitted for laboratory analysis of the PADEP Short List of Petroleum Products for lubricating oils. Soil samples collected from SB-9 and SB-10 near the septic drainfield were submitted for laboratory analysis of Priority Pollutant List volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and metals. A soil sample analytical data summary is presented as **Table 1**.

Soil sample analytical results showed that benzene, ethylbenzene and toluene were detected in SB-7 and SB-8 at concentrations exceeding their Act 2 non-residential Statewide Health Standards. Naphthalene was detected in SB-8 at a concentration exceeding the Act 2 non-residential Statewide Health Standard of 25,000 ppb. Generally, most of the Short List Products for lubricating oils were detected at SB-7 and SB-8 at concentrations below the non-residential Statewide Health Standards. Benzene, toluene, ethylbenzene, xylenes, naphthalene, flourene, phenanthrene and pyrene were also detected at SB-6 at concentrations below the Act 2 non-residential Statewide Health Standards.

The detected concentrations of benzene at SB-7 and SB-8 exceeded their soil-to-groundwater Medium Specific Concentrations (MSCs) protective of groundwater. Similarly, the detected concentration of naphthalene at SB-8 exceeded its soil-to-groundwater MSC. This suggests that benzene and naphthalene could potentially leach from the soil to the groundwater at concentrations exceeding their respective groundwater MSCs. The occurrence of VOCs (i.e., benzene and naphthalene) downgradient of the UST system also suggested that the regulated UST system or former UST system could potentially be a source of the soil impacts.

2.3 INTERIM REMEDIAL ACTION

Herr's maintains and inspects the USTs and leak detection systems on a regular basis. During June 2014, a certified inspector performed a storage tank facility operations inspection that included the results of line tightness testing and leak detection system inspection. The inspection did not reveal any significant compliance issues associated with the UST system. The inspection indicated that the Veeder Root interstitial leak detection system was operational with maintenance and calibration records for the past year. The only noted item was that the tank top sumps contained water, which was removed. Line tightness testing was completed on March 3, 2014 with no leaks detected. The Facility Operations Inspection Report and the results of the line tightness testing is included in **Appendix B**.

3.0 GEOLOGIC AND HYDROGEOLOGIC SETTING

According to publications of the Pennsylvania Bureau of Topographic and Geologic Survey¹, the property is located in the Piedmont Upland Section of the Piedmont Physiographic Province of Pennsylvania, and is underlain by complexly folded and faulted schist, gneiss, quartzite and some saprolite. Local topography is characterized by broad, rounded to flat-topped hills and shallow valleys. According to the USGS 7.5-minute Rising Sun Quadrangle (**Figure 1**), the truck garage is situated at an approximate elevation of 510 feet. Surface topography slopes gently to the southeast. The headwater of an unnamed tributary (UNT) to North East Creek is located approximately 300 feet east of the truck garage and flows generally to the southeast.

Soils mapped at the truck garage by the U.S. Department of Agriculture (USDA) Soil Conservation Service's Web Soil Survey are described as the Glenelg silt loam, 3 to 8 percent slopes (GgB), the Glenville silt loam, 3 to 8 percent slopes (GIB), the Urban land, 0 to 8 percent slopes (UrB), and the Urban land-Glenelg complex, 0 to 8 percent slopes (UrmB)². The Urban land map units are comprised of highly disturbed or worked soils that show the effects of earth grading and compaction. Urban land is mapped over the majority of the truck garage. The Glenelg soil series consists of very deep, well drained soils formed in residuum weathered from micaceous schist on uplands of the Blue Ridge and the Northern Piedmont. Depth to bedrock is six to 10 feet or more. Saturated hydraulic conductivity is moderately high in the subsoil and moderately high to high in the substratum. The Glenville soil series consists of very deep, moderately well drained or somewhat poorly drained soils formed primarily in colluvium or residuum affected by soil creep that is weathered from phyllite, micaceous schist, granitic gneiss and other acid crystalline rocks. Depth to bedrock is more than five feet. The profile contains a dense, restrictive horizon called a fragipan that restricts root and water movement. Saturated hydraulic conductivity is moderately low to moderately high.

The geology mapped by the Chester County Water Resources Authority, in cooperation with the USGS³, indicates that the property is underlain by the Wissahickon Schist of the Glenarm Supergroup (see **Figure 4**). The Wissahickon Schist is described as light to medium gray schist and gneiss. The rocks of the Glenarm Supergroup surround massifs of older pre-Cambrian felsic and ultramafic gneiss basement rock. Ultramafic rock (i.e., serpentinite) associated with the Baltimore Mafic Complex is mapped approximately 1,000 feet south of the property. Geologic strike and structural trend of the Wissahickon Formation is generally oriented to the east-northeast.

In the area of the property, the fractured bedrock aquifers are characterized as crystalline rocks (Wissahickon Schist³). In the crystalline rocks, groundwater moves through the granular primary porosity of the weathered saprolite to a network of interconnected secondary fractures and joints in the bedrock aquifer. The groundwater flow systems are local and discharge to streams. Groundwater flows from areas of higher elevation to adjacent streams and flow paths tend to be short. Groundwater basins and surface water basins tend to coincide. Crystalline rock aquifers are generally under water-table (unconfined) conditions and the water table generally mimics surface topography; however, semi-confined conditions may be present locally.

¹ W.D. Sevon, 2000, Map 13, Physiographic Provinces of Pennsylvania, Pennsylvania Bureau of Topographic and Geologic Survey, Harrisburg, Pennsylvania.

² Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at <http://websoilsurvey.nrcs.usda.gov/app/> accessed [November 3, 2014].

³ Sloto, R., 1994, Geology, Hydrology, and Ground-Water Quality of Chester County, Pennsylvania, Chester County Water Resources Authority, Water Resource Report 2, West Chester, Pennsylvania.

In the Piedmont Upland, the soils (regolith) are composed of granular to clayey soil, saprolite, and decomposed bedrock⁴. The regolith allows the infiltration of precipitation and is capable of storing large quantities of water in the intergranular pore spaces. Water is then slowly released to the underlying fractured bedrock aquifer. Generally, the porosity of the regolith exceeds the porosity of the fractured bedrock aquifer. The direction and rate of groundwater flow within the regolith can be affected by the degree of bedrock weathering, mineral composition of the parent bedrock, orientation of mineral grains (mica), the presence of shear zones, quartz veins and fractures.

The UNT to North East Creek is classified as an intermittent stream according to the USGS National Hydrography Dataset (NHD). Intermittent streams have flowing water during the wet season (i.e., winter and spring), but are normally dry during hot summer months. Intermittent streams do not have continuous flowing water year-round. The headwater of the UNT is located approximately 300 feet east of the truck garage adjacent to a railroad right of way (**Figure 3**) and is characterized as an area of seasonal groundwater discharge. During the wet season, standing water forms in this area and flows to a culvert under the railroad, and continues to flow as surface water to the south and southeast toward North East Creek, located 6,700 feet southeast of the property.

4.0 SITE CHARACTERIZATION METHODS AND FINDINGS

Site characterization was performed in iterative phases between February 2015 and April 2016 to delineate soil and groundwater impacts resulting from the release. The discovery of VOCs (i.e., benzene and naphthalene) during the Phase II ESA downgradient of the UST system suggests that the source of the subsurface petroleum impacts likely originated from the UST system area of the Site. For this reason, site characterization focused on delineating soil and groundwater impacts surrounding the unleaded gasoline and diesel UST systems. Site characterization methods included the installation of 20 soil borings to delineate soil quality, and the installation of 13 groundwater monitoring wells to define the hydraulic gradient. Quarterly groundwater monitoring was also initiated at the truck garage in March 2015 to delineate groundwater quality. Site characterization methods are described in the following sections.

4.1 SOIL BORING INSTALLATION AND SOIL SAMPLE ANALYSIS

A total of 20 soil borings (identified as SB-11 through SB-30) were advanced at the truck garage to delineate soil quality as shown on **Figure 3**. The 20 soil borings were advanced using a track-mounted Geoprobe® operated by Odyssey Environmental Services, Inc. (Odyssey) of Harrisburg, Pennsylvania. The 20 soil borings were completed during two separate mobilizations that occurred in February 2015 and June 2015. Undisturbed soil samples were recovered continuously with the Geoprobe®, and RETTEW personnel documented the lithology encountered in each soil boring and field-screened the soil using a PID to detect the presence of VOCs. The soil borings were advanced to a maximum depth of 20 feet, except where equipment refusal was encountered. Lithology encountered consisted of asphalt, sub-base and gravel fill, and soils were generally classified by RETTEW as micaceous silt and sand overlying saprolitic schist and gneiss. Groundwater was noted in most borings at depths ranging from 10 feet to 18 feet below grade. Boring logs are attached in **Appendix C**.

The soil sample with the highest PID reading in each soil boring was submitted for laboratory analysis. A soil sample was collected at the terminal depth in the borings if PID readings were less than one part per million (ppm). Where PID readings were elevated, more than one soil sample was submitted for laboratory

⁴ D.J. Low, D.J. Hippe and D. Yannacci, 2002, Geohydrology of Southeastern Pennsylvania, United States Geological Survey, Water-Resources Investigations Report 00-4166.

analysis in an effort to vertically delineate soil impacts. Each soil sample was preserved in the field, placed in a cooler with ice, and delivered to Lancaster Laboratories Environmental (LLE) of Lancaster, Pennsylvania, following standard chain-of-custody procedures. All soil samples collected at the truck garage were submitted for laboratory analyses of the PADEP Short List of Petroleum Products for unleaded gasoline and diesel fuel. One soil sample, collected at a depth of 14 feet below grade immediately above the water table at SB-11 and considered to be representative of upgradient aquifer material, was submitted to LLE for analysis of organic carbon content. A soil sample analytical data summary is presented as **Table 2**. Soil sample analytical data sheets are provided in **Appendix D**.

In addition to the soil sampling and analysis described above, an undisturbed soil sample was collected in the acetate liner of the Geoprobe tooling at SB-11 at a depth of 14 feet below grade. This sample was delivered to Jay Kay Testing, Inc. (Jay Kay) of Spring Grove, Pennsylvania, following standard chain-of-custody procedures. The undisturbed sample was submitted for laboratory analyses of bulk density and grain size analysis. Analytical results for the sample of representative aquifer material are summarized below.

Physical Parameter	Result
Organic Carbon Content	0.0118% (by weight)
Dry Bulk Density	111.6 PCF
Percent Sand	56.2%
Percent Gravel	0.3%
USCS Classification	Silty Sand (SM)
Moisture Content	17.4%

Notes:

PCF – Pounds per cubic foot

USCS – Unified Soil Classification System

4.2 GROUNDWATER MONITORING WELL INSTALLATION

A total of 13 groundwater monitoring wells (MW-1 through MW-13) were installed by Eichelbergers, Inc., a Pennsylvania licensed driller, under the direction of a RETTEW geologist to delineate groundwater quality. Monitoring wells MW-1 through MW-5 were installed during February 2015. Monitoring wells MW-6 through MW-10 were installed during June 2015. Off-site monitoring wells MW-11 through MW-13 were installed on an adjacent parcel owned by Herr's during December 2015. On-site monitoring well locations are shown on **Figure 3**. Off-site monitoring wells are shown on **Figure 2**. Drilling logs are attached in **Appendix C**.

MW-1 through MW-10 were installed in eight-inch diameter boreholes drilled using air-rotary drilling methods. Due to saturated conditions and borehole collapse below a depth of 10 feet, six-inch steel casing was installed into each boring and reamed with six-inch drilling tools to keep the borehole open. MW-11 through MW-13 were installed in a six-inch diameter borehole drilled using air-rotary drilling methods and a roller bit to minimize disturbance. Weathered schist and quartz fragments were observed at MW-4, MW-5, MW-6, MW-7, MW-9 and MW-10 at depths of ranging from 15 to 18 feet below grade. During drilling, borehole cuttings were containerized in 55-gallon open-top drums and staged on-site pending proper disposal.

Each well was constructed with appropriate lengths of two-inch diameter Schedule 40 PVC 0.020-inch slotted well screen and solid two-inch PVC well casing. The annular space between the borehole wall and the well casing was filled with a gravel filter pack and a hydrated bentonite seal, and capped with

bentonite slurry to fill the remaining annular space to surface grade. A flush-mount manhole and locking well cap was installed on MW-1 through MW-10 to prevent unauthorized access. MW-11 through MW-13 were completed with a protective stickup steel riser and locking lid. Monitoring well construction details are summarized in the following table.

Well No.	Date Drilled	Borehole Diameter	Well Diameter	Total Depth	Screen Interval	Solid Interval	Initial Water
MW-1	2/24/15	8 inch	2 inch	27 feet	7–20 feet	0–7 feet	17 feet
MW-2	2/25/15	8 inch	2 inch	23 feet	3–23 feet	0–3 feet	12 feet
MW-3	2/25/15	8 inch	2 inch	25 feet	5–25 feet	0–5 feet	13 feet
MW-4 ¹	2/26/15	8 inch	2 inch	19 feet	0–19 feet	None	10 feet
MW-5	2/26/15	8 inch	2 inch	27 feet	7–27 feet	0–7 feet	12 feet
MW-6	6/18/15	8 inch	2 inch	20 feet	3–20 feet	0–3 feet	Unknown
MW-7	6/18/15	8 inch	2 inch	20 feet	3–20 feet	0–3 feet	18 feet
MW-8	6/18/15	8 inch	2 inch	20 feet	3–20 feet	0–3 feet	Unknown
MW-9	6/18/15	8 inch	2 inch	20 feet	3–20 feet	0–3 feet	10 feet
MW-10	6/18/15	8 inch	2 inch	20 feet	3–20 feet	0–3 feet	Unknown
MW-11	12/16/15	6 inch	2 inch	15 feet	2–15 feet	0–2 feet	9 feet
MW-12	12/16/15	6 inch	2 inch	12 feet	2–12 feet	0–2 feet	6 feet
MW-13	12/16/15	6 inch	2 inch	12 feet	2–12 feet	0–2 feet	8 feet
P-1	3/25/16	2 inch	1 inch	8 feet	4–8 feet	0–4 feet	Unknown

Upon completion of drilling and well construction, each well was developed by surging and over-pumping to remove drilling residuals. The purged water generated during well development was containerized in 55-gallon open-top drums and staged on-site pending proper disposal. Due to the low volume of purged water generated during the development of MW-11 through MW-13, purge water was treated with granular activated carbon and discharged to the surface. All drilling waste was transported and disposed as residual waste at a PADEP-approved facility by Environmental Recovery Corporation (ERC) of Lancaster, Pennsylvania. Non-hazardous waste disposal manifests are provided in **Appendix E**.

The top-of-casing elevation of each monitoring well was surveyed by a RETTEW professional land surveyor and referenced to sea-level datum. Groundwater monitoring well top-of-casing elevations are shown on **Table 3**.

Two drive point wells (DPW-1 and DPW-2) were manually installed on April 6, 2016 in the area of seasonal groundwater discharge (see **Section 6.0**) as shown on **Figure 3**. The purpose of the drive point wells was to provide water level measurements and to aide in the delineation of discharging groundwater. Each drive point consisted of a 24-inch length of 1.25-inch diameter galvanized steel inner pipe with 60-mesh stainless steel gauze and screen and a cast iron point. Each drive point was installed in a three-inch diameter hand-augured hole to a depth of 24 inches below grade, and then driven to a depth of 30 inches with a threaded coupling and a 24-inch galvanized steel riser pipe and threaded cap. The annular space around the screen was filled with clean gravel and capped with bentonite hole plug to prevent surface infiltration of water. The top of each drive point was surveyed by RETTEW and referenced to sea-level datum.

4.3 GROUNDWATER SAMPLING AND ANALYSIS

RETTEW initiated groundwater sampling at the truck garage on March 9, 2015, with subsequent sampling events conducted on April 1, 2015, July 9, 2015, October 6, 2015, January 14, 2016 and April 6, 2015. In

addition, groundwater levels were collected from the monitoring well network on June 25 and September 10, 2015. During each monitoring event, groundwater levels were measured with an electronic water level indicator capable of measuring water levels to the nearest 0.01 foot. Water levels were also measured at the former supply well beginning on June 25, 2015. Low flow groundwater purging and sampling techniques were used during each monitoring event as described below. Groundwater monitoring data collected to date is summarized on **Table 3**. Since the expansion of the monitoring well network in December 2015, quarterly groundwater monitoring was conducted on January 14, 2016 and April 6, 2016. Groundwater elevation contours and resulting groundwater sample analytical data for each groundwater sampling event is illustrated on **Figure 5** through **Figure 12**.

RETTEW performed groundwater sampling on March 9, 2015 and April 1, 2015, and retained Suburban Testing Labs (STL) of Gilbertsville, Pennsylvania to conduct the groundwater monitoring events on July 9, 2015, October 6, 2015, January 14, 2016 and April 6, 2016. After gauging static water levels, groundwater was purged from each well with a peristaltic pump to maintain flow rates at approximately 250 milliliters per minute (ml/min) with minimal drawdown in accordance with the PADEP *Groundwater Monitoring Guidance Manual* (December 2001) low-flow purging methods. The pump tubing was set at a depth of eight to 10 feet below grade, corresponding to the depth of the greatest observed soil impacts at the truck garage. Purged groundwater was routed through a flow-cell and a YSI 556 water quality meter to monitor intrinsic groundwater quality parameters including pH, conductivity, dissolved oxygen (DO), total dissolved solids (TDS), temperature, and oxidation-reduction potential (ORP). Intrinsic parameters were monitored frequently until stabilization, indicative of representative groundwater chemistry. Purged groundwater was then treated with granular activated carbon (GAC) and discharged to the surface. Low flow purging and monitoring data sheets for each groundwater monitoring event are included as **Appendix F**.

Upon intrinsic parameter stabilization, groundwater samples were collected from the pump discharge tubing. To reduce the likelihood of cross-contamination, new tubing was used and nitrile gloves were worn during the collection of each groundwater sample. Groundwater samples were collected in laboratory bottleware, placed in a cooler with ice, and delivered to STL for analysis of PADEP Short List parameters for unleaded gasoline and diesel fuel. A summary of groundwater sample analytical data is provided as **Table 3**. Groundwater sample analytical reports are provided in **Appendix G**.

Groundwater samples were collected from the drive point wells (DPW-1 and DPW-2) by RETTEW on April 13, 2016 by manually bailing three well volumes from each point, and collecting a sample with a disposable bailer and nitrile gloves. Groundwater samples were collected in laboratory bottleware, placed in a cooler with ice, and delivered to LLE for analysis of PADEP Short List parameters for unleaded gasoline and diesel fuel. It is noted that drive point wells are generally not properly constructed for groundwater quality analyses. The purpose of collecting groundwater samples was to improve delineation of groundwater quality as it discharges for use in subsequent phases of site characterization. Groundwater sample analytical reports are provided in **Appendix G**. Drive point well water level measurements and groundwater sample analytical results are discussed further in **Section 6.0**.

4.4 SPL BAILODOWN TESTING AND ANALYSIS

Separate phase liquid (SPL) petroleum was observed in MW-4 during the June 25 and July 9, 2015 groundwater monitoring events. An SPL baildown test was performed by RETTEW at MW-4 on July 9, 2015 to evaluate the recoverability of SPL at the Site. Prior to the baildown test, SPL and water levels were measured with an electronic interface probe capable of measuring SPL and water levels to the nearest 0.01 foot. An apparent SPL thickness of 0.15 feet was noted in MW-4 (**Table 3**). A bailer was then used to manually remove SPL from the well. After removing SPL, water and SPL measurements were recorded in

MW-4 each minute for the first 10 minutes, then every 10 minutes thereafter to monitor SPL recharge to the well.

The plotted baildown test data indicated that a mobile SPL thickness of 0.04 feet recharged and stabilized in MW-4 after approximately 20 minutes. At the conclusion of the baildown test, the remaining SPL was removed from MW-4. All recovered SPL was placed into laboratory bottleware and transported in a cooler with ice to LLE for analysis of PADEP Short List parameters for unleaded gasoline and diesel fuel, and for quantitative fingerprint analysis. It is noted that on July 10, 2015, an apparent SPL thickness of 0.02 feet was measured at MW-4 by STL prior to groundwater purging and sampling, over 24 hours after the MW-4 baildown test. This suggests that the mobile SPL thickness ranges from 0.02 to 0.04 feet and the potential for SPL recovery at MW-4 is low. SPL was not detected in MW-4 during any subsequent groundwater monitoring events. Baildown test data and data plot are provided in **Appendix H**.

The findings of the quantitative fingerprint analysis characterized the SPL as gasoline. Based on the chromatograph peak intensities and ratios, the fingerprint analysis concluded that the SPL did not appear to be weathered, and that hydrocarbons in the C₈-C₄₀ range were present at 56 percent by weight. A summary of SPL sample analytical data is provided below.

Analytical Parameter	Concentration in SPL	Aqueous Solubility	Abundance in SPL
Benzene	600,000 µg/L	1780.5 mg/L	0.4%
Ethylbenzene	12,000,000 µg/L	161 mg/L	8.3%
Isopropylbenzene	1,300,000 µg/L	50 mg/L	0.9%
MTBE	< 10,000 µg/L	45,000 mg/L	0%
Naphthalene	380,000 µg/L	30 mg/L	0.3%
Toluene	22,000,000 µg/L	532 mg/L	15.1%
1,2,4-TMB	38,000,000 µg/L	56 mg/L	26.1%
1,3,5-TMB	12,000,000 µg/L	48.9 mg/L	8.3%
Xylenes	59,000,000 µg/L	175 mg/L	40.6%

The above parameters comprise over 14.5 percent of the SPL sample by weight. It is noted that the two most soluble parameters, benzene and MTBE, are either present at relatively low concentrations or are not detected in the SPL sample. Most of MTBE in the SPL appears to have dissolved and migrated from the source in the aqueous-phase. Both benzene and MTBE were detected in groundwater at downgradient wells MW-10 and MW-11. It is noted that the original composition of the gasoline released at the Site and the mole fraction of each parameter in the released gasoline are unknown. The SPL sample analytical report is included in **Appendix I**.

4.5 AQUIFER TESTING

Three short-duration constant-rate groundwater pumping tests were performed by RETTEW at selected wells (MW-3, MW-5 and MW-7) on July 14, 2015 to determine the hydraulic conductivity of aquifer materials. A submersible Mega Monsoon pump and control box was used for each test to maintain a constant pumping rate less than one gallon per minute (gpm). The duration of each test was approximately 40 minutes. During the tests, water levels were continuously monitored using an In-Situ, Inc. LevelTroll® pressure transducing data logger. All groundwater withdrawn during the test was treated with GAC and discharged to the surface. After pumping was terminated, water levels were continuously monitored until each well recovered to within 90 percent of the static water level. Plotted pumping test data is summarized below.

Well	Static Water Level	Pump Setting	Available Drawdown	Pumping Rate	Pumping Level	Drawdown
MW-3	3.68 feet	24 feet	20.32 feet	0.875 gpm	8.08 feet	4.40 feet
MW-5	3.61 feet	25 feet	21.39 feet	0.875 gpm	6.87 feet	3.28 feet
MW-7	4.47 feet	19 feet	14.53 feet	0.625 gpm	11.90 feet	7.43 feet

A review of the plotted pumping test data included as **Appendix J** shows the following:

- The downward slope of the plotted data for MW-5 remained constant as pumping continued, suggesting that groundwater was removed from storage as the cone of depression expanded into areas of groundwater recharge;
- The downward slope of the plotted data for MW-7 decreases after four minutes of pumping, suggesting that casing storage was depleted and the cone of depression expanded into areas of groundwater recharge; and
- The slope of the plotted data for MW-3 stabilizes after three minutes of pumping, then decreases sharply after 15 minutes of pumping, suggesting that a shallow water-bearing zone was dewatered.

Aquifer parameters were calculated using the Cooper and Jacob straight-line method⁵. The Cooper and Jacob method was derived from the Theis nonequilibrium equation and can be used to predict drawdown in the aquifer at any time after pumping begins but before the cone of depression fully stabilizes. Drawdown data for each well was plotted to determine the slope of the time-drawdown curve and calculate the aquifer transmissivity.

Transmissivity is defined as the rate at which water flows through a vertical section of the aquifer with a width of one foot extending through the full saturated thickness under a hydraulic gradient of one. When the pumping rate (Q) is held constant, transmissivity (T) is constant, and a best-fit line is drawn through the plotted data points. The slope of the line (Δs or drawdown) is used to estimate the aquifer transmissivity using the modified nonequilibrium equation as follows:

$$T = 264 Q / \Delta s$$

, where T is in units of gallons per day (gpd) per foot.

Recovery data collected at the completion of each pumping test were used to calculate residual drawdowns, which were plotted to provide an independent check on the transmissivity calculated from the pumping test results. In theory, complete recovery will occur when residual drawdown reaches "0" as the time ratio approaches "1" in an ideal aquifer, and the transmissivity can be estimated from the slope of the curve. The estimated transmissivities from the pumping and recovery tests are provided below.

	MW-3	MW-5	MW-7
Pumping Test Transmissivity	7.5 ft ² /day	29.4 ft ² /day	10.0 ft ² /day
Recovery Test Transmissivity	23 ft ² /day	28 ft ² /day	8.7 ft ² /day

The time-recovery plot is often more accurate than the time-drawdown plot. Recovery data can be collected without being disturbed or influenced by pump vibrations and momentary variations in pumping

⁵ F.G. Driscoll, 1986, Groundwater and Wells, Johnson Division, St. Paul, Minnesota.

rate⁵. The hydraulic conductivity (**K**) of the saprolite aquifer was calculated from the recovery test data using the saturated aquifer thickness (**b**) as follows:

$$K = T/b$$

, where **K** is in units of feet per day.

A saturated aquifer thickness of 61 feet was used based on the casing depth (74 feet) and static water level (3.3 feet) observed in the former supply well as described in **Section 4.6**, assuming the casing is set at a depth of 10 feet into competent bedrock. Calculated hydraulic conductivities are provided below.

	MW-3	MW-5	MW-7
Recovery Test Transmissivity	23 ft ² /day	28 ft ² /day	8.7 ft ² /day
Recovery Test Hydraulic Conductivity	0.37 ft/day	0.45 ft/day	0.14 ft/day

4.6 FORMER SUPPLY WELL DECOMMISSIONING, SAMPLING AND ANALYSIS

RETTEW retained Odyssey to decommission the former supply well on February 29, 2016 using a portable pump hoist. Upon removal of the pump, power cable and the one-inch diameter black poly piping, the pump setting was determined to be 200 feet below the pitless adapter (total depth 203 feet below grade). RETTEW and Odyssey returned on March 1, 2016 and video-logged the former supply well. During video logging, the water table was observed at a depth of 3.3 feet below grade and the bottom of the six-inch diameter well casing was observed at 74 feet below grade. Significant iron flaking and scaling resulted in poor visibility in the open rock portion of the well; however, fractures and weathered zones were noted at 121 feet, 132 feet, 145 to 148 feet, and 172 feet. At a depth of 196 feet, water quality became clear and a steep open fracture was observed, followed by a broken and weathered zone from 198 feet to 204 feet. The well was observed to have a total depth of 210 feet, and it appears that drilling was terminated after a significant water bearing zone was encountered from 198 feet to 204 feet.

The former supply well was purged on March 25, 2016 by Odyssey using an electric submersible pump set at a depth of 100 feet. A static water level of 5.17 feet was measured prior to purging the well. Groundwater was purged from the well at a rate of 9.3 gpm for approximately 180 minutes, resulting in a pumping level of 33.09 feet and a drawdown of 28.92 feet. Over 1,700 gallons (equivalent to 5.7 well volumes) of water was purged and treated through a 55-gallon GAC vessel and discharged to the surface. Based on a drawdown of 28.92 feet and a pumping rate of 9.3 gpm, the specific capacity of the well is approximately 0.32 gpm/ft.

During the April 6, 2016 groundwater sampling event, STL collected a groundwater sample from the former supply well. Low flow groundwater purging and sampling techniques were used to collect the sample. Groundwater was purged with an electric submersible Mega Monsoon SS™ pump to maintain flow rates at approximately 250 milliliters per minute (ml/min) with minimal drawdown in accordance with the PADEP *Groundwater Monitoring Guidance Manual* (December 2001) low-flow purging methods. The pump was set at a depth of 100 feet below grade, below the casing depth observed in the well. Purged groundwater was routed through a flow-cell and a YSI 556 water quality meter to monitor intrinsic groundwater quality parameters including pH, conductivity DO, TDS, temperature, and ORP. Intrinsic parameters were monitored frequently until stabilization, indicative of representative groundwater chemistry. Purged groundwater was then treated with GAC and discharged to the surface.

Upon intrinsic parameter stabilization, a groundwater sample was collected from the pump discharge tubing. Groundwater samples were collected in laboratory bottleware, placed in a cooler with ice, and delivered to STL for analysis of the PADEP Short List parameters for unleaded gasoline and diesel fuel. Groundwater sample analytical results are provided in **Table 3**. Groundwater sample analytical reports are provided in **Appendix G**.

4.7 WATER SUPPLY SAMPLING

During the April 6, 2016 groundwater sampling event, RETTEW collected a raw groundwater sample from the water supply well for Plant 1 and the truck garage. The supply well is located 3,100 feet southeast of the truck garage on a separate parcel owned by Herr's as shown on **Figure 1**. Raw water is conveyed from the supply well 3,700 feet to Plant 2, located on an adjacent parcel (Parcel 68-2-96, **Figure 2**). A raw groundwater sample was collected inside Plant 2 from in-line sample ports installed prior to chlorination and distribution to Plant 1 and the truck garage. The raw groundwater sample was collected in laboratory bottleware, placed in a cooler with ice, and delivered to STL for analysis of the PADEP Short List parameters for unleaded gasoline and diesel fuel using EPA Method 524.2. The sample analytical results indicate that none of the PADEP Short List parameters for unleaded gasoline and diesel fuel were detected. The raw groundwater sample analytical report is provided in **Appendix G**.

5.0 SOIL QUALITY

During the collection of continuous soil samples with the Geoprobe®, lithology was observed to be primarily micaceous silty sand overlying completely decomposed saprolitic schist. Saprolitic schist was generally encountered at depths ranging from seven to 14 feet below grade. Groundwater was first encountered in the borings at depths ranging from 10 to 18 feet below grade. Geoprobe® refusal was noted in several borings (SB-12, SB-16, SB-17, SB-20 and SB-21) at depths ranging from 15 to 18 feet below grade, where weathered schist bedrock was encountered. During the drilling of MW-4 and MW-5, weathered schist and quartz fragments were observed during air rotary drilling at depths ranging from 14 to 18 feet below grade. A strike-perpendicular geologic cross-section is provided as **Figure 13**.

Static groundwater levels measured at the truck garage between March 2015 and April 2016 (**Table 3**) show that the water table fluctuated between two and six feet below grade. Soil between two and six feet below grade is within the zone of groundwater saturation during the wetter seasons, and soil below a depth of six feet is in contact with groundwater on a year-round basis. For these reasons, one-tenth of the Generic Value was used in the process to determine the Act 2 soil-to-groundwater MSC for each parameter in soil as shown on **Table 1** and **Table 2**.

Soil sample analytical results (**Table 1** and **Table 2**) show that benzene was detected in six borings (SB-7, SB-8, SB-18, SB-20, SB-23 and SB-24) at concentrations exceeding the Act 2 non-residential Statewide Health Standard of 500 µg/kg. Toluene was detected in SB-7 and SB-8 at concentrations exceeding the Act 2 non-residential Statewide Health Standard of 100,000 µg/kg. Ethylbenzene was detected in SB-7, SB-8 and SB-17 at concentrations exceeding the Act 2 non-residential Statewide Health Standard of 70,000 µg/kg. Naphthalene was detected in SB-7 and SB-8 at concentrations exceeding the Act 2 non-residential Statewide Health Standard of 10,000 µg/kg. 1,2,4-trimethylbenzene (1,2,4-TMB) and 1,3,5-TMB were detected in SB-12, SB-23, SB-27 and SB-29 at concentrations exceeding their respective Act 2 non-residential Statewide Health Standards of 6,200 µg/kg and 5,300 µg/kg. The regulated substances exceeding their Act 2 remediation standards noted above occurred at depths ranging from five to 13 feet below grade. Shallow soil impacts were observed at three feet below grade at SB-29 inside the truck garage. Isopropylbenzene, MTBE and xylenes were also detected in soil, but at concentrations below their respective non-residential Statewide Health Standards.

Of the six regulated substances exceeding the Statewide Health Standard, benzene is present in soil at the greatest distance from the UST system area, while 1,2,4-TMB and 1,3,5-TMB are present at the shortest distance. The aerial distribution of benzene in soil is shown on **Figure 13**. Maximum xylene concentrations were also detected near the UST system area, while maximum ethylbenzene and toluene concentrations were detected at an intermediate distance from the UST system area.

The aerial distribution of BTEX in soil is reflective of the aqueous solubility of each substance, which are provided below.

Parameter	Benzene	Toluene	Ethylbenzene	Xylenes	1,2,4-TMB	1,3,5-TMB
Solubility (mg/L)	1,780.5	532	161	175	56	48.9
K _{oc} (l/kg)	58	130	220	350	2,200	660

Notes:

K_{oc} = Soil-water partitioning coefficient

Due to their lower solubilities, ethylbenzene, xylenes and TMB are preferentially retained in soil and are more resistant to degradation than benzene and toluene. In contrast, the higher solubility of benzene may account for its presence in soil at a greater distance from the current and former UST systems.

The vertical distribution of benzene in soil is shown on **Figure 14**. The maximum benzene concentrations were observed in the eight to 12-foot depth range.

6.0 GROUNDWATER FLOW

Groundwater at the property occurs in pores and relict fractures in the weathered decomposed schist saprolite overlying a fractured bedrock aquifer system. Based on static water level data, the water table is generally within six feet of surface grade. Groundwater flow patterns and hydraulic gradients are similar during each monitoring event, with an apparent groundwater flow direction to the east (N 80° E) and an average hydraulic gradient of 0.018 as shown on **Figure 5** through **Figure 12**. As groundwater flows off the property, the hydraulic gradient shows an apparent groundwater flow direction to the southeast as shown on **Figure 17**. Groundwater elevations shown on **Figure 17** were based in part on water levels measured during the April 6, 2016 monitoring event at selected monitoring wells surrounding Herr's wastewater disposal fields.

The median thickness of the regolith (including saprolite) in the Piedmont Upland is reported to be 40 feet⁶. The degree of fracturing in the parent rock contributes to the development of saprolite, as more highly fractured parent rocks tend to weather and produce a thicker saprolite mantle. The saprolite thickness at the property is assumed to be 61 feet based on the observed water level (3.3 feet) and casing depth (74 feet) of the former supply well described in **Section 4.5**.

The property is located in an upland area within 1,000 feet of the drainage divide between Octoraro Creek and North East Creek (**Figure 1**). The groundwater recharge area for the property extends to the northwest and southwest toward the divide, with elevations of the contributing areas ranging from 540 to 560 feet. Based on local topography, regional drainage patterns and interpreted fracture traces (**Figure 4**), regional groundwater is expected to flow to the east and southeast toward the UNT to North East Creek, located 150 feet east of the property boundary. An inferred fracture trace trends from northwest to southeast through the property, resulting in a topographic depression (**Figure 2**). Surface elevations at the property

⁶ D.J. Low, D.J. Hippe and D. Yannacci, 2002, Geohydrology of Southeastern Pennsylvania, United States Geological Survey, Water-Resources Investigations Report 00-4166.

range from 513 feet (MW-1) to 508 feet (MW-10). As described in **Section 3.0**, groundwater flow systems in the area of the property are local and discharge to streams. Groundwater from contributing areas of higher elevation flows across the property to the inferred fracture trace, and ultimately discharges to form the headwater of the UNT to North East Creek southeast of the property on the downgradient parcel owned by Herr's. Culverted stormwater flow from Plant 1 and the parking area north of the truck garage also discharges at the endwall (**Figure 3**) located at the headwater of the UNT.

The UNT is classified as an intermittent stream according to the USGS (see **Section 3.0**). Intermittent streams do not have continuous flowing water year-round. Water level data collected from MW-11 and the drive point wells between April 6 and April 13, 2016 is presented in the following table.

Well	Screened Interval	Depth to Water	Casing Elevation	Groundwater Elevation	Surface Elevation
MW-11	2 to 13 feet	0.34 feet	501.65 feet	501.31 feet	498.65 feet
DPW-1	0 to 2 feet	2.76 feet	499.03 feet	496.26 feet	497.15 feet
DPW-2	0 to 2 feet	1.86 feet	500.00 feet	498.14 feet	498.26 feet

The observed water levels indicate the depth of groundwater is 0.89 feet below grade at DPW-1 and essentially at-grade at DPW-2. Based on the greater depth of MW-11 and the higher groundwater elevation, an upward hydraulic gradient is apparent, which supports the surface water flow observed adjacent to MW-11 and DPW-2.

7.0 GROUNDWATER QUALITY

Groundwater sample analytical results (**Table 3**) for wells at the truck garage show that all of the PADEP Short List parameters for unleaded gasoline and diesel fuel except isopropylbenzene were detected at concentrations exceeding their Act 2 non-residential Statewide Health Standards in MW-3, MW-4, MW-5, MW-7 and the former supply well. SPL petroleum was observed in MW-4 during the June 25 and July 9, 2015 groundwater monitoring events. None of the PADEP Short List parameters for unleaded gasoline and diesel fuel were detected in groundwater at MW-1, MW-2, MW-6 and MW-8. Benzene and MTBE are the only parameters detected at concentrations exceeding their Act 2 non-residential Statewide Health Standards in MW-10 at the downgradient property boundary (the Act 2 point of compliance [POC]). Groundwater monitoring data collected during site characterization is shown on **Figure 5** through **Figure 12**.

Groundwater sample analytical results (**Table 3**) for the off-site wells (MW-11, MW-12 and MW-13) show that benzene and MTBE were detected at MW-11, located 150 feet downgradient of MW-10. Maximum concentrations of dissolved benzene and MTBE detected at MW-11 were 19.4 µg/L and 137 µg/L, respectively, and exceed their Act 2 non-residential Statewide Health Standards. To date, none of the PADEP Short List parameters for unleaded gasoline and diesel fuel have been detected at MW-12 or MW-13. Groundwater sample analytical results for parameters detected in the samples collected on April 13, 2016 from the shallow drive point wells DPW-1 and DPW-2 are presented in the table below.

Detected Parameters	DPW-1	DPW-2
Benzene	< 0.5 µg/L	13 µg/L
MTBE	2 µg/L	5 µg/L
Xylenes	< 0.5 µg/L	0.7 µg/L J

Notes:

J = Parameter not detected above the laboratory limit of quantitation.

The results indicate that off-site groundwater discharge is impacted by dissolved benzene and MTBE.

Intrinsic groundwater quality parameters monitored during low-flow purging and sampling on October 10, 2015 are provided in **Appendix F** and are summarized below.

Well	DO	ORP	pH
MW-1	5.47 mg/l	99.1 mV	6.86
MW-2	1.12 mg/l	128.4 mV	6.10
MW-3	3.21 mg/l	-151.8 mV	6.62
MW-4	4.53 mg/l	-145.2 mV	6.51
MW-5	1.51 mg/l	-51.5 mV	7.60
MW-6	6.54 mg/l	73.3 mV	6.76
MW-7	2.22 mg/l	-14.0 mV	6.75
MW-8	3.86 mg/l	98.9 mV	6.48
MW-9	1.32 mg/l	97.8 mV	6.39
MW-10	1.18 mg/l	13.0 mV	8.84

The intrinsic parameters indicate that dissolved oxygen decreases with groundwater flow along the centerline of the plume (MW-3, MW-5 and MW-10). The lowest ORP was observed in the source area (MW-3 and MW-4). This suggests that as groundwater flows from the UST systems toward downgradient areas, aerobic biodegradation ($DO > 2.0$ mg/l) is occurring⁷. As oxygen is depleted, anaerobic conditions ($DO < 2.0$ mg/l) have developed at MW-5, MW-9 and MW-10. Although MW-10 is downgradient of the source area, the plume is covered by an impervious asphalt surface, which restricts infiltration and recharge of groundwater to replenish dissolved oxygen in the subsurface.

As described in **Section 5.0**, benzene diffuses most rapidly out of SPL and partitions into groundwater, followed by toluene, ethylbenzene and xylenes. **Table 3** shows that the highest dissolved benzene concentrations in groundwater typically occur at MW-7 and MW-10. Lower detected dissolved benzene concentrations were observed at MW-3 nearest the UST system area. The highest dissolved toluene concentrations were observed at MW-3, and with lower concentrations observed at MW-10. Toluene is known to have the highest biodegradation rate of the BTEX compounds, and coupled with evidence of anaerobic conditions along the centerline of the plume, may be evidence of natural attenuation. The highest dissolved ethylbenzene and xylenes concentrations were observed at MW-4 and MW-7.

Maximum dissolved concentrations of BTEX in water were estimated based on the SPL fingerprint analysis (see **Section 4.4**) and the reported fuel-water partition coefficient (K_{fw}) for each substance⁸. The fuel-water partition coefficient of a substance is related to the solubility in water using the equation $K_{fw} = C_f / C_w$, where C_f is the concentration in fuel and C_w is the concentration in water. Using published values of K_{fw} for a typical gasoline blend, the estimated BTEX concentrations in water are provided in the following table.

⁷ 2004, How To Evaluate Alternative Cleanup Technologies For Underground Storage Tanks: A Guide For Corrective Action Plan Reviewers, United States Environmental Protection Agency, Document No. EPA 510-R-04-002.

⁸ L. Bruce, T. Miller and B. Hockman, 1991, Solubility Versus Equilibrium Saturation of Gasoline Compounds: A Method to Estimate Fuel/Water Partition Coefficient Using Solubility or K_{oc} , Amoco Corporation, Tulsa, Oklahoma.

Substance	Concentration in SPL (C_f)	Fuel/Water Partition Coefficient (K_{fw})	Estimated Concentration in Water (C_w)	Maximum Observed Concentration	Location of Maximum Observed Concentration
Benzene	600,000 µg/L	248	2,419 µg/L	2,770 µg/L	MW-7
Toluene	22,000,000 µg/L	1,062	20,715 µg/L	17,000 µg/L	MW-3
Ethylbenzene	12,000,000 µg/L	3,488	3,440 µg/L	2,820 µg/L	MW-4
Xylenes	59,000,000 µg/L	3,859	15,289 µg/L	10,300 µg/L	MW-7
MTBE	< 10,000 µg/L	15.5	< 645 µg/L	137 µg/L	MW-11

The original composition of the gasoline released at the truck garage and the fraction of each substance in the released gasoline are unknown; however, the maximum observed concentrations of BTEX that occur within the source area compare closely to the estimated concentrations. Although MTBE was not detected in the SPL, its concentration within the source area is uncertain. MTBE was detected in MW-5 at a maximum concentration of 21 µg/L near the source area, and at a concentration of 137 µg/L at MW-11, located 320 feet downgradient of MW-4 where SPL was observed.

8.0 SOIL GAS SAMPLING AND ANALYSIS

Soil vapor intrusion to non-residential indoor air was evaluated in accordance with the PADEP guidance document titled *Vapor Intrusion into Buildings from Groundwater and Soil under the Act 2 Statewide Health Standard*. Soil impacted by the release is within the zone of groundwater saturation, and compounds of potential indoor air concern (COPIACS) are present in groundwater (see **Table 3**). There is less than five feet of soil-like material present. Therefore, the Site cannot “screen out” of vapor intrusion. As an alternative, an assessment was conducted inside the truck garage through the collection and analysis of soil gas samples.

On February 29, 2016, RETTEW installed a permanent, sub-slab soil gas sampling implant (SG-1) below the truck garage as shown on **Figure 15**. SG-1 was installed below the truck garage within the area of maximum observed impacts of unleaded gasoline and diesel to soil and groundwater (near SB-7 and MW-4). The truck garage is a slab-on-grade structure. The exterior area surrounding the truck garage is paved with impervious asphalt cover with minimal air permeability. No preferential pathways were observed at the truck garage.

SG-1 was installed using direct-push Geoprobe® methodology to a depth of 3.5 feet below grade based on observed water levels at MW-4. A smooth, eight-inch diameter core was removed from the building slab prior to installation. The slab was observed to be eight inches thick with an additional four inches of crushed stone subbase. A six-inch stainless steel screened implant, manufactured by Geoprobe®, was advanced 2.5 feet into native soil with associated Teflon tubing and attached to an anchor point used during installation when the target depth was reached. As the drilling tools were removed from the borehole, the implant and 0.275-inch inner-diameter Teflon tubing remained firmly anchored at the bottom. The annular space around the stainless steel screen was packed with silica sand to a depth of two feet below grade, and capped with a granular bentonite seal above the subbase to prevent atmospheric short-circuiting during soil vapor sample collection. Construction of the soil vapor implant was completed with a flush mount manhole set in concrete. A schematic of SG-1 is presented in **Appendix C**.

RETTEW attempted to collect a soil gas sample at SG-1 on March 1, 2016; however, the sample point became vacuum-locked due to the presence of shallow water and a sample could not be collected. For this reason, a sub-slab soil gas sample port (SG-2) was installed on March 25, 2016 by using a hammer drill

to advance a 0.375-inch hole through the slab and subbase material into native soil at a depth of 13 inches. The upper two inches of the hole was over-drilled to one-inch diameter. Swagelok™ stainless steel fittings were attached to 0.250-inch outer-diameter 316 stainless steel tubing and inserted into the 0.375-inch hole to a depth of 12.5 inches. The fittings and tubing were sealed with Quickrete™ sealant and allowed to cure for two hours. SG-2 was completed with a threaded plug flush to the slab floor. A schematic of SG-2 is presented in **Appendix C**.

Two rounds of sub-slab soil gas sampling were conducted at SG-2 on March 25 and April 13, 2016 using evacuated 6 liter (L) stainless steel Summa canisters provided by LLE, a PADEP-certified laboratory, connected directly to the stainless steel sub-slab tubing with a one-hour regulator set at a sampling flow rate of 83 mL/min. Prior to each sampling event, a shut-in test was performed to verify the airtightness of the compression fittings by applying a vacuum to the sample train tubing between SG-2 and the Summa canister. During the shut-in test, valves to SG-2 and Summa canister are closed and air is removed (using a 60 ml syringe) from the sampling train, inducing a vacuum of 15 inches of mercury. No changes in vacuum were observed for two minutes. The sampling train was then purged a minimum of three volumes of air through SG-2 and connecting tubing with a 60 ml syringe. The purge volume ($V = 3.0\pi r^2 h$, where r is the inner radius of the probe and connecting tubing, and h is the length of the implant and the connecting tubing. The soil vapor samples were submitted to LLE for analysis of PADEP Short List petroleum products for unleaded gasoline and diesel fuel by EPA Method TO-15 following standard chain-of-custody protocols.

The laboratory analytical results indicated that none of the PADEP Short List petroleum products for unleaded gasoline and diesel fuel were detected in the sample collected on March 25, 2016. Toluene and xylenes were the only parameters detected in the soil gas sample collected on April 13, 2016; however, both parameters were detected at concentrations below the laboratory limit of quantitation. Concentrations of toluene and total xylenes were estimated to be 0.98 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), or 0.61 parts per billion volume (ppbv), and 2.7 $\mu\text{g}/\text{m}^3$ (or 0.64 ppbv), respectively. Soil gas sample laboratory analytical reports are attached in **Appendix K**.

The PADEP has set Statewide Health Standard MSCs for unleaded gasoline and diesel fuel parameters in indoor air. The MSCs for soil gas are calculated as 100x the MSC for indoor air and are compared to the soil gas sample results below.

Parameter	MSCs for Non-Residential Indoor Air	3/25/2016 Sample Results	4/13/2016 Sample Results
Benzene	0.011	< 0.00064	< 0.00064
Cumene	1.1	< 0.00098	< 0.00098
Ethylbenzene	0.073	< 0.00087	< 0.00087
MTBE	0.31	< 0.00072	< 0.00072
Naphthalene	0.0088	< 0.00260	< 0.00260
Toluene	1.2	< 0.00075	0.00098 J
1,2,4-TMB	0.017	< 0.00098	< 0.00098
1,3,5-TMB	0.017	< 0.00098	< 0.00098
Total Xylenes	0.3	< 0.00174	0.00270 J

Notes:

All units in milligrams per cubic meter (mg/m^3).

MSCs for Soil Gas $\text{MSC}_{\text{SG}} = \text{MSC}_{\text{IAQ}}/0.01$ transfer factor.

J = Parameter not detected above the laboratory limit of quantitation.

Detected concentrations of toluene and total xylenes are below their respective non-residential soil gas MSCs of 120 mg/m³ and 30 mg/m³. Based on the soil vapor sample analytical results, the non-residential vapor intrusion pathway is not a concern at the truck garage in accordance with the Act 2 vapor intrusion guidance.

9.0 SEDIMENT AND SURFACE WATER SAMPLING AND ANALYSIS

Sediment and surface water samples were collected at various points in the UNT to North East Creek to determine the extent of petroleum impacts resulting from discharging groundwater. Two sediment samples (Sed-1 and Sed-2) and two surface water samples (Stream-1 and Stream-2) were collected on February 22, 2016 as shown on **Figure 15** and **Figure 16**. Sampling was initiated at the downstream location (Sed-2 and Stream-2) and proceeded toward the upstream location (Sed-1 and Stream-1) to preclude disturbance of the stream and the potential sample interference. Sediment samples were collected at a depth of approximately six inches below the stream bed using a hand auger and placed directly into laboratory bottleware. The hand auger was decontaminated with an Alconox™ solution and rinsed with clean water between sampling locations. Surface water samples were collected with a decontaminated 500 ml plastic bottle, which was used to fill laboratory bottleware. All samples were stored in a cooler with ice and delivered to LLE for analysis of the PADEP Short List parameters for unleaded gasoline and diesel fuel. The sediment and surface water sample analytical reports are provided in **Appendix L** for February 22, 2016, and detected parameters are summarized in the following table.

Analytical Parameter	Stream-1	Stream-2	Sed-1	Sed-2
Benzene	19 µg/L	1 µg/L	5 µg/kg	< 0.5 µg/kg
MTBE	25 µg/L	12 µg/L	160 µg/kg	< 0.5 µg/kg

The results show petroleum impacts to surface water and sediment at the upstream sampling locations Stream-1 and Sed-1. Petroleum impacts were not detected in the downstream sample Sed-2. Benzene and MTBE were detected in surface water in the downstream sample Stream-2, but at lower concentrations than Stream-1. The lower dissolved petroleum concentrations at Stream-2 are likely due to dilution and mixing with discharging groundwater as surface water flows downstream.

An additional set of sediment samples (Sed-3 and Sed-4), surface water samples (Stream-1, Stream-3 and Stream-4) and a stormwater sample (Stormwater-1) were collected on April 6, 2016 to delineate petroleum impacts to surface water and sediment as shown on **Figure 18**. Sampling was initiated at the downstream location (Stream-1) and proceeded toward the first upstream location (Sed-3 and Stream-3 adjacent to MW-11), and then to the second upstream location (Sed-4 and Stream-4 adjacent to DPW-2) to preclude potential sample interference. The stormwater sample was collected from within the endwall culvert piping prior to discharging to the UNT. All samples were collected, transported and analyzed using the same methodology as the February 22, 2016 sampling event described above. The sample analytical reports are provided in **Appendix L** for April 6, 2016 and detected parameters in surface water are summarized in the following table.

Analytical Parameter	Stormwater	Stream-1	Stream-3	Stream-4
Benzene	< 0.5 µg/L	14 µg/L	< 0.5 µg/L	< 0.5 µg/L
MTBE	< 0.5 µg/L	19 µg/L	0.7 µg/L	< 0.5 µg/L

The surface water sample analytical results show that dissolved benzene and MTBE are discharging with groundwater to surface water between the endwall and Stream-4, adjacent to DPW-2. No dissolved petroleum substances were detected in surface water from upstream areas (i.e., stormwater flow or

surface water upstream of Stream-3). The detected parameters in sediment are summarized in the following table.

Analytical Parameter	Sed-1	Sed-2	Sed-3	Sed-4
Benzene	5 µg/kg	< 0.5 µg/kg	< 2 µg/kg	38 µg/kg
MTBE	160 µg/kg	< 0.5 µg/kg	< 2 µg/kg	5 µg/kg
Isopropylbenzene	< 0.9 µg/kg	< 1 µg/kg	< 3 µg/kg	6 µg/kg

The sediment impacts are not likely the result of source erosion, since source soils are covered by paved surfaces and the truck garage. In addition, benzene and MTBE partition into water easily and have a low affinity to sorb to soil; therefore, these detections in sediment are probably more indicative of petroleum impacts to pore water resulting from discharging groundwater.

10.0 FATE AND TRANSPORT ANALYSIS

Fate and transport analysis was performed for detected substances in groundwater (**Table 3**) that exceeded the Statewide Health Standards at monitoring wells MW-3, MW-4, MW-5, MW-7 and MW-10. Groundwater sample analytical data was plotted over time for each well. Concentration trends over time were analyzed to determine if concentrations are increasing, decreasing, or stable. A trend line was fitted to each plot and an R-squared value was determined to describe the trend variation as “high” (R-squared value ranging from 0 to 30%), “moderate” (R-squared value ranging from 30% to 60%), or “low” (R-squared value ranging from 60% to 100%). Concentration versus time plots are presented in **Appendix M**. The findings of the trend analysis are summarized in **Table 4**.

The concentration versus time plots indicate a decreasing trend at MW-3 nearest the UST systems. Trends are also generally decreasing at MW-5, although the trends have high variation. Trends are generally decreasing at MW-4 with the exception of benzene and 1,3,5-TMB; however, the decreasing trends have high variation. Increasing trends are generally noted at MW-7, although there is high variation in the trends. In particular, benzene concentrations are increasing at MW-4 and MW-7, and migrating downgradient with groundwater flow.

Trends could not be evaluated at MW-10 for most of the substances analyzed in groundwater due to non-detect data and/or insufficient data; however, benzene and MTBE have been detected at MW-10 during each of the four groundwater sampling events since MW-10 was installed. Dissolved benzene and MTBE concentrations are increasing at MW-10, and both substances have been detected above their respective Statewide Health Standards during each sampling event.

The concentration versus time plots show high variation in data from source area wells MW-4 and MW-5. This could indicate that trends are somewhat stable, or that a weak decreasing trend is occurring. Increasing trends are apparent at MW-7, and MW-10 at the POC, suggesting that the plume is expanding downgradient. This is particularly true for benzene. Due to the presence of SPL at MW-4 during site characterization, and benzene detected in groundwater at concentrations exceeding estimated concentrations based on SPL fingerprint analysis (see **Section 7.0**), there is little evidence of source decay in the area of MW-4 and MW-7. Further groundwater monitoring is required to verify trends over time.

RETTEW evaluated the migration of dissolved benzene and MTBE using the PADEP Quick Domenico (QD) model spreadsheet following the methodologies presented in the PADEP guidance document titled *User's Manual for the Quick Domenico Groundwater Fate and Transport Model*. The QD model was selected based on the presence of an unconsolidated (saprolite) aquifer, organic petroleum contaminants and a

non-decaying source. The QD model was used to estimate steady state concentrations of benzene and MTBE at the point of groundwater discharge (MW-11). The findings will be used to support subsequent modelling to evaluate the loading of the benzene and MTBE plumes to surface water (see **Section 11.0**).

A systematic approach was used to calibrate the QD model by matching the model to actual field data along the centerline of the plume. A range of selected model calibration parameters were used in various combinations to identify the model(s) that closely approximates observed concentrations. This approach utilized nine combinations of parameters, referred to as Model 1 through Model 9. The QD model input parameters and their sources used in the calibration process are described below.

Parameter	Symbol	Value	Comments
Source Concentration	C_o	2.419 mg/L	Estimated benzene concentration in SPL
Source Concentration	C_o	0.200 mg/L	Estimated MTBE concentration in SPL
Longitudinal Dispersivity	α_x	3 to 150 feet	Variable calibration parameter scaled to plume
Transverse Dispersivity	α_y	$\alpha_x/10$	Estimate
Vertical Dispersivity	α_z	0.001 foot	Minimized for 2-D transport
Source Width	Y	40 feet	Estimated SPL plume width
Source Depth	Z	10 feet	Site characterization data
Hydraulic Conductivity	K	0.03 to 3.1 ft/day	Site characterization data, calibration parameter
Hydraulic Gradient	i	0.018 ft/ft	Groundwater monitoring data
Effective Porosity	n_e	0.08	Published value for Wissahickon Formation
Density	ρ	1.788 g/cm ³	Site characterization data
Organic Carbon Coefficient	K_{oc}	58 L/kg	Chapter 25 Table VA for Benzene
Organic Carbon Coefficient	K_{oc}	12 L/kg	Chapter 25 Table VA for MTBE
Fraction Organic Carbon	f_{oc}	0.0118	Site characterization data
Degradation Coefficient	λ	0.00096 day ⁻¹	Chapter 25 Table VA initial value for Benzene
Degradation Coefficient	λ	0.0019 day ⁻¹	Chapter 25 Table VA initial value for MTBE

Notes:

Shaded parameters are used as model calibration variables.

The source is considered to be the extent of SPL. The estimated benzene concentration in groundwater based on SPL fingerprint analysis (2,419 µg/L, see **Section 7.0**) is slightly less than the maximum benzene concentrations detected in MW-5 and MW-7. This suggests that the SPL plume surrounds MW-4 and extends outward toward MW-5, MW-7 and the former supply well as shown on **Figure 17**. The average benzene concentrations in MW-4, MW-5 and MW-7 are below the estimated concentration by at least a factor of 1.7. For this reason, and the observed increasing benzene trends in MW-4, MW-7 and MW-10, the estimated benzene concentration of 2.419 mg/L was used as the source concentration.

MTBE has been mostly non-detect in groundwater within the source area, with a maximum concentration of 21 µg/L at MW-5. MTBE was detected in soil at SB-18 within the source area at a depth of 10 feet and a concentration of 260 µg/kg. An initial source concentration of 200 µg/L (0.200 mg/L) was used based on the observed occurrence of MTBE in saturated soil and the estimated concentration in groundwater based on SPL fingerprint analysis (< 645 ug/L).

The range of values used for longitudinal dispersity were scaled with the distance to the surface water receptor within the plume at a distance of 300 feet measured from the source to MW-11 (i.e., the point of groundwater discharge) as shown on **Figure 17**. An initial value of α_x was set equal to 10 percent of the distance from the source to MW-11 (30 feet). A range of values from one-tenth (0.3 feet) to five times (150 feet) the initial value was used to represent an order of magnitude uncertainty factor. It is noted that calibration well MW-10 is located along the plume centerline 140 feet from the source.

The range of hydraulic conductivity (K) values used was based on the calculated values from the aquifer testing described in **Section 4.5**. The average calculated hydraulic conductivity of 0.31 ft/day was varied by an order of magnitude to produce a range of values from 0.031 ft/day to 3.1 ft/day. The average porosity of saprolite developed from rocks of the Wissahickon Formation is reported to be about 48 percent, and estimates of the effective porosity of the saturated decomposed saprolite in the Piedmont Upland range from eight percent to 10 percent⁹.

The time used in the calibration models was based on the number of elapsed days (6,888) between the discovery of contamination (May 28, 1997) and the most recent groundwater monitoring event (April 6, 2016). The model domain was set to 300 feet, equal to the distance to MW-11. Average centerline concentrations for MW-10 (140 feet) and MW-11 (300 feet) were used to calibrate the models. The QD model output is attached in **Appendix N**. Calibration data and the resulting degradation coefficients are summarized in the following table.

Model No.	K (ft/day)	α_x (ft)	Benzene λ (day ⁻¹)	MTBE λ (day ⁻¹)	Comment
1	0.31	30	0	0	Baseline model calibrated to MW-10
2	0.31	3	0	0	
3	0.31	150	0	0	
4	0.031	30	0	0	
5	0.031	3	0	0	
6	0.031	150	0	0	
7	3.1	30	0	0	
8	3.1	3	0.00006	0.00056	Benzene is not at steady state
9	3.1	150	0	0	

Model 8 is the only calibration model that achieves a centerline concentration for benzene and MTBE at MW-10 with some degree of degradation. All other calibration models result in centerline concentrations below observed concentrations with no degradation. In addition, Model 8 is the only calibration model that is not at steady state for benzene. For this reason, Model 8 was selected for further calibration.

Model 8 was further calibrated for benzene and MTBE by adjusting the hydraulic conductivity downward to closely approximate the plume centerline concentrations at MW-10 and MW-11. During the final step in the calibration process, the source concentration of MTBE was adjusted due to uncertainty to more closely match centerline concentrations. An MTBE source concentration of 0.16 mg/L results in the best match. The recalibrated Model 8 is referred to as Model 10, with calibration data summarized in the following table.

Model No.	K (ft/day)	α_x (ft)	Benzene λ (day ⁻¹)	MTBE λ (day ⁻¹)	Comment
10	2.46	3	0.00006	0.00056	Calibrated to centerline at MW-10 and MW-11

Model 10 results indicate that the benzene plume has not reached steady state conditions, whereas the MTBE plume has reached steady state conditions. A predictive model was developed by increasing the time parameter in Model 10 to incrementally evaluate steady state conditions. Predictive model plots are

⁹ D.J. Low, D.J. Hippe and D. Yannacci, 2002, Geohydrology of Southeastern Pennsylvania, United States Geological Survey, Water-Resources Investigations Report 00-4166.

provided for benzene and MTBE at various times in **Appendix N** and are summarized in the following table.

Time	Benzene Concentration at MW-11	MTBE Concentration at MW-11	Comment
7,670 days	218 µg/L	79 µg/L	21-year projection (5/28/2018)
10,958 days	1,167 µg/L	79 µg/L	30-year projection (5/29/2027)
11,689 days	1,210 µg/L	79 µg/L	Benzene at steady state (5/29/2029)
14,000 days	1,233 µg/L	79 µg/L	38-year projection (9/26/2035)

Benzene concentrations at MW-11 are expected to increase to over 200 µg/L by May 28, 2018, and continue to increase until the benzene plume essentially reaches steady state during 2029. The steady state benzene plume is not expected to exceed the Statewide Health Standard (5 µg/L) beyond a distance of 610 feet and should not be detected in groundwater at MW-12, located 700 feet downgradient of the source. The MTBE plume has reached steady state, and MTBE concentrations are not expected to increase at MW-11. Additional groundwater monitoring will be required to verify predicted QD model trends.

11.0 SURFACE WATER IMPACTS FROM GROUNDWATER DISCHARGE

RETTEW evaluated impacts to surface water from diffuse groundwater flow using the PADEP's SWLOAD5 model spreadsheet. The SWLOAD5 model was used to develop average concentrations of benzene and MTBE in a cross-sectional flow of the plume discharging to surface water, and to estimate the mass loading of benzene and MTBE to surface water under steady state conditions. The SWLOAD5 output was then used to determine applicable surface water quality standards for benzene and MTBE using the PADEP's PENTOXSD model.

The selection of the SWLOAD5 model is based on the same assumptions as the QD model (i.e., an unconsolidated [saprolite] aquifer and organic petroleum contaminants). The SWLOAD5 model input parameters and their sources are generally the same as the QD model to describe two dimensional flow. The sources of the SWLOAD5 input parameters are, for the most part, taken from the calibrated QD models described in **Section 10**. Key parameter input differences between the models pertain to time, vertical dispersivity, and the "edge criterion" established for each substance at the edge of the plume as described in the *Act 2 Technical Guidance Manual (TGM)*, Section IV.A.3. These SWLOAD5 input parameters are described below.

Parameter	Symbol	Value	Comments
Time	t	1×10^{99} days	Assures model output is at steady state
Vertical Dispersivity	α_z	0.00001 foot	Variable calibration parameter
Benzene Plume View Width	None	112.1 feet	Variable calibration parameter
Benzene Plume View Depth	None	10.2 feet	Variable calibration parameter
Benzene Edge Criterion	None	5 µg/L	Per Table IV-1 of the TGM
MTBE Plume View Width	None	60 feet	Variable calibration parameter
MTBE Plume View Depth	None	10.1 feet	Variable calibration parameter
MTBE Edge Criterion	None	20 µg/L	Per Table IV-1 of the TGM

A vertical dispersivity value of 0.00001 was used to match the edge criterion concentration for each substance at a plume depth of 10 feet, since the entire source thickness and plume depth is assumed to discharge to surface water. The plume view width was adjusted to match the edge criterion

concentrations for each substance at the lateral bounds of each plume. The SWLOAD5 output is attached in **Appendix O** and summarized in the following table.

Substance	Highest Modeled Concentration	Average Concentration	Plume Flow
Benzene	1,233.6 µg/L	421.2 µg/L	0.00059 cfs
MTBE	78.9 µg/L	47.9 µg/L	0.00031 cfs

Notes:

cfs = Cubic feet per second

The PENTOXSD surface water mixing model was then used to calculate Water Quality Based Effluent Limits (WQBELs) for the portions of the benzene and MTBE plumes that exceeded their edge criterion based on the SWLOAD5 model output. Specifically, the average groundwater concentrations and plume flow rates noted above were used as PENTOXSD input parameters. The analysis was performed for a reach of the UNT to North East Creek shown on **Figure 18**, from Node 1, located at the Stream-1 sampling point, to Node 2, located at the confluence of the UNT with North East Creek. Hydrodynamic input parameters used in the PENTOXSD model are listed in the following table.

Parameter	Node 1	Node 2	Source
River Mile Index	1.44 mi	0.0 mi	GoogleEarth measurement
Elevation	495 ft	390 ft	GoogleEarth measurement
Drainage Area	0.04 mi ²	0.98 mi ²	StreamStats
Qh Flow	0.0083 cfs	0.29 cfs	StreamStats
Q7-10Flow	0.0012 cfs	0.0059 cfs	StreamStats
Qh Width	3.3 ft	6 ft	GoogleEarth measurement
Q7-10 Width	1.5 ft	3 ft	Estimated (approx. ½ Qh width)

The PENTOXSD output and the StreamStats datasheets used in the model are attached in **Appendix P**. The waste load allocations (WLAs) calculated by PENTOXSD are provided in the following table.

Water Quality Criteria	Benzene WLAs	MTBE WLAs
Acute Fish Criterion (AFC)	14,351 µg/L	NA
Chronic Fish Criterion (CFC)	2,915 µg/L	NA
Threshold Human Health (THH)	NA	448 µg/L
Cancer Risk Level (CRL)	185 µg/L	NA
Governing Criteria	185 µg/L	47.9 µg/L

Notes:

NA = Not applicable

The PENTOXSD model selects the most restrictive WLA as the Governing Criterion, which is the applicable water quality criteria. The PENTOXSD model results indicate that the maximum average benzene concentration at steady state (421.2 µg/L) exceeds the Governing Criterion (CRL - 185 µg/L); therefore, attainment of surface water criteria has not been obtained for benzene. The maximum average MTBE concentration at steady state (47.9 µg/L) is more restrictive than any of the calculated WLAs; therefore, attainment of surface water criteria is successful for MTBE.

12.0 EXPOSURE PATHWAY EVALUATION

The findings of site characterization were used to conduct an evaluation of present and future exposure pathways to aid in the selection of a remediation standard. Potential exposure pathways are described in the following sections.

12.1 DIRECT CONTACT

None of the PADEP Short List Petroleum Products for diesel and unleaded gasoline detected in soil during site characterization exceeded the non-residential Statewide Health Standard Direct Contact MSCs (see **Table 1** and **Table 2**). Based on these results, the exposure pathway of potential direct contact with petroleum impacted soil is acceptable.

12.2 INGESTION – GROUNDWATER AND SURFACE WATER

According to the West Nottingham Township Public Works Department, the area surrounding the property is not provided with a public water supply system. Local water supplies are provided through the use of private water wells. A search of available well records using the Pennsylvania Ground Water Information System (PaGWIS) revealed 13 existing private water wells within one-quarter mile of the Site. Six of the wells identified are owned by Herr's and are no longer in service. The remaining seven wells are privately owned and located upgradient of the truck garage to the north and west. The PaGWIS database information is attached in **Appendix Q**.

According to Chester County parcel data, Herr's owns and controls all properties south and east of the truck garage, from the property boundary to Stoney Lane and east of Stoney Lane, approximately 3,000 feet downgradient (**Figure 2**). The results of fate and transport analysis (**Section 10.0**) show that no groundwater impacts above the applicable MSCs are expected downgradient of MW-12. Based on these findings, the release does not pose an immediate threat to private water supply wells.

The surface water ingestion pathway was evaluated by performing a review of the eMapPA¹⁰ database for public water supplies and surface water intakes downstream of the property in North East Creek. The eMapPA database did not reveal the presence of any surface water withdrawals in North East Creek between the property and the Maryland state line, located 2.5 miles downstream.

12.3 INHALATION - VAPOR INTRUSION

Vapor intrusion to non-residential indoor air from groundwater was evaluated for the Site in accordance with the PADEP guidance document titled *Vapor Intrusion into Buildings from Groundwater and Soil under the Act 2 Statewide Health Standard*. As described in **Section 8.0**, detected concentrations of toluene and total xylenes in sub-slab soil gas samples collected at the truck garage are below their respective non-residential soil gas MSCs of 120 mg/m³ and 30 mg/m³. No other parameters were detected in the soil gas samples. Based on the soil vapor sample analytical results, the vapor intrusion pathway is incomplete at the truck garage in accordance with the Act 2 vapor intrusion guidance.

12.4 EVALUATION OF ECOLOGICAL RECEPTORS

Groundwater quality does not meet the Statewide Health Standard MSCs for benzene and MTBE at the POC (parcel boundary). Benzene and MTBE have been detected in surface water and sediment samples in an area of groundwater discharge downgradient of the truck garage on an adjacent parcel owned by

¹⁰ Pennsylvania Department of Environmental Protection, eMapPA, Available online at <http://www.depgis.state.pa.us/emappa/>, accessed [May 13, 2016].

Herr's. The presence of dissolved benzene and MTBE in surface water and sediment samples warranted an evaluation of ecological receptors identified in 25 PA Code Chapter 250.311, which was performed as described in **Section 13.0**.

13.0 ECOLOGICAL RISK ASSESSMENT

A site-specific ecological risk assessment was performed in accordance with the process outlined in TGM Section IV.H and the Statewide Ecological Screening Process to evaluate eco-exposure to the media (groundwater) and substances (benzene and MTBE) addressed under the Site-Specific Standard. The assessment focused on the field identification of wetlands and habitat types present in the area of plume discharge, and an evaluation of the overall health and ecological value of the wetlands and habitats in reference areas adjacent to the area of plume discharge. A search of the Pennsylvania Natural Diversity Index (PNDI) was also conducted for species and habitats of concern within 1,000 feet. A summary memo of the ecological risk assessment is included as **Appendix R**.

The findings of the ecological risk assessment indicated that there is no substantial ecological risk associated with the release based on the following:

- No species of concern were identified.
- No evidence of stressed, discolored or deformed vegetation was observed.
- Benzene and MTBE are not known to bioaccumulate and are not known to have an adverse effect on the food chain or present a food-chain exposure hazard.
- The wetland in the area of plume discharge compared closely to the reference wetland with respect to the abundance and diversity of species present. No substantial ecological impacts were identified.
- The AFC and CFC surface water quality standards (see **Section 11.0**) are met and are protective of aquatic ecological receptors.
- Published sediment screening values indicate that the potential adverse effect of the release on terrestrial ecological receptors is low.
- No additional ecological risk assessment is warranted.

Three wetland areas were identified that contain suitable bog turtle habitat within the study area. It is noted that bog turtles were not observed during the ecological risk assessment. Potential impacts of remediation on wetlands and bog turtle habitat will be considered during the development of a Remedial Action Plan.

14.0 CONCEPTUAL SITE MODEL

A release of petroleum was discovered at the truck garage during UST system closure activities in May 1997. During UST closure, holes were noted in two USTs containing diesel fuel and unleaded gasoline. Approximately 1,200 tons of petroleum impacted soil and fill material were removed and disposed; however, complete source removal was not feasible due to space constraints and concerns regarding the structural integrity of the truck garage. Although water was observed in the UST excavation, it was not characterized as groundwater. A UST Closure Report was prepared in July 1997, which indicated concentrations of MTBE exceeding the unsaturated soil standard/action level in three soil samples. A new UST system was installed in the excavation following UST closure activities, and no further assessment or remediation was conducted at that time.

Site characterization performed between February 2015 and April 2016 by RETTEW at the truck garage has delineated the extent of soil and groundwater impacts resulting from the 1997 release as shown on **Figure 17**. Some of the key findings of site characterization are summarized below.

- The truck garage is underlain by micaceous schist bedrock and approximately 64 feet of saprolite comprised of micaceous silt and sand that forms an unconsolidated, unconfined aquifer.
- The area of maximum soil impacts (benzene concentrations greater than 500 µg/kg) is delineated and located directly downgradient of the UST system at depths ranging from three to 13 feet below grade. The aerial distribution of BTEX in soil is reflective of the aqueous solubility of each substance.
- Soil impacted by the release is below the seasonally high water table (two feet below grade) and within the zone of groundwater saturation.
- SPL has been observed in MW-4 within the area of maximum soil impacts. The occurrence of SPL at MW-4 coincides with the highest concentrations of BTEX in soil (SB-7). The SPL thickness is low (0.02 feet), and the recoverability of the SPL is low. Fingerprint analysis characterized the SPL as unweathered gasoline.
- All of the substances monitored in groundwater (except isopropylbenzene) have been detected at concentrations exceeding their Act 2 non-residential Statewide Health Standards in groundwater. Groundwater quality meets the Statewide Health Standard MSCs at the POC (downgradient property boundary) for all of the PADEP Short List Petroleum Products for diesel and unleaded gasoline except benzene and MTBE.
- Based on local topography, regional drainage patterns and interpreted fracture traces (**Figure 4**), regional groundwater is expected to flow to the east and southeast across the property toward the UNT to North East Creek, located 150 feet east of the property boundary.
- Groundwater discharges to the UNT downgradient of the property on an adjacent, separate parcel owned by Herr Foods, Inc. Discharging groundwater also supports a wetland, which forms the headwater to the UNT to North East Creek.
- Benzene and MTBE have been detected above Statewide Health Standard MSCs in groundwater at the point of groundwater discharge (MW-11).
- Benzene and MTBE have been detected in surface water and sediment in the northern portion of the wetland area.

The property obtains its water supply from an off-site groundwater source owned and operated by Herr's located 3,100 feet downgradient of the truck garage. Raw water sample analytical results indicated no detectable concentrations of diesel or gasoline parameters in the water supply. The area surrounding the property obtains domestic water supplies from water wells. There are no downgradient water supplies threatened by the release, and Herr's owns and controls land downgradient of the property.

Fate and transport analysis shows that the plume is not stable for benzene in groundwater. The benzene plume is expanding and is not expected to reach steady state for 13 years. The MTBE plume is currently at steady state. Groundwater monitoring data shows that there is some evidence of natural attenuation and degradation of petroleum substances in groundwater; however, fate and transport modelling of benzene and MTBE suggests that degradation rates are low.

Fate and transport analysis also shows that surface water will continue to be impacted by dissolved benzene and MTBE into the future. Steady state discharge of MTBE is not expected to exceed applicable water quality criteria; however, steady state discharge of benzene is expected to exceed the calculated Cancer Risk Level (CRL) water quality criteria for the UNT to North East Creek. Steady state discharge of benzene is expected to meet the calculated Acute Fish Criteria (AFC) and Chronic Fish Criteria (CFC) water

quality criteria for fish and aquatic life in the UNT to North East Creek. A search of the eMapPA database did not reveal the presence of any public water supplies or surface water withdrawals in North East Creek between the property and the Maryland state line, located 2.5 miles downstream. An ecological risk assessment of the area of plume discharge indicated that no species of concern were identified within the study area, no evidence of stressed vegetation was observed, and no substantial ecological impacts were identified.

15.0 REMEDIATION STANDARD SELECTION

Per Act 2, the extent of petroleum impacts resulting from the release within the property boundaries, and all areas in close proximity to the impacts necessary for the implementation of remediation action, is defined as the "Site". At the truck garage, the Site includes the area defined by UST system, the benzene plume in groundwater, and the UNT to North East Creek as shown on **Figure 17**. The Site represents the area proposed for remediation and attainment of an Act 2 standard.

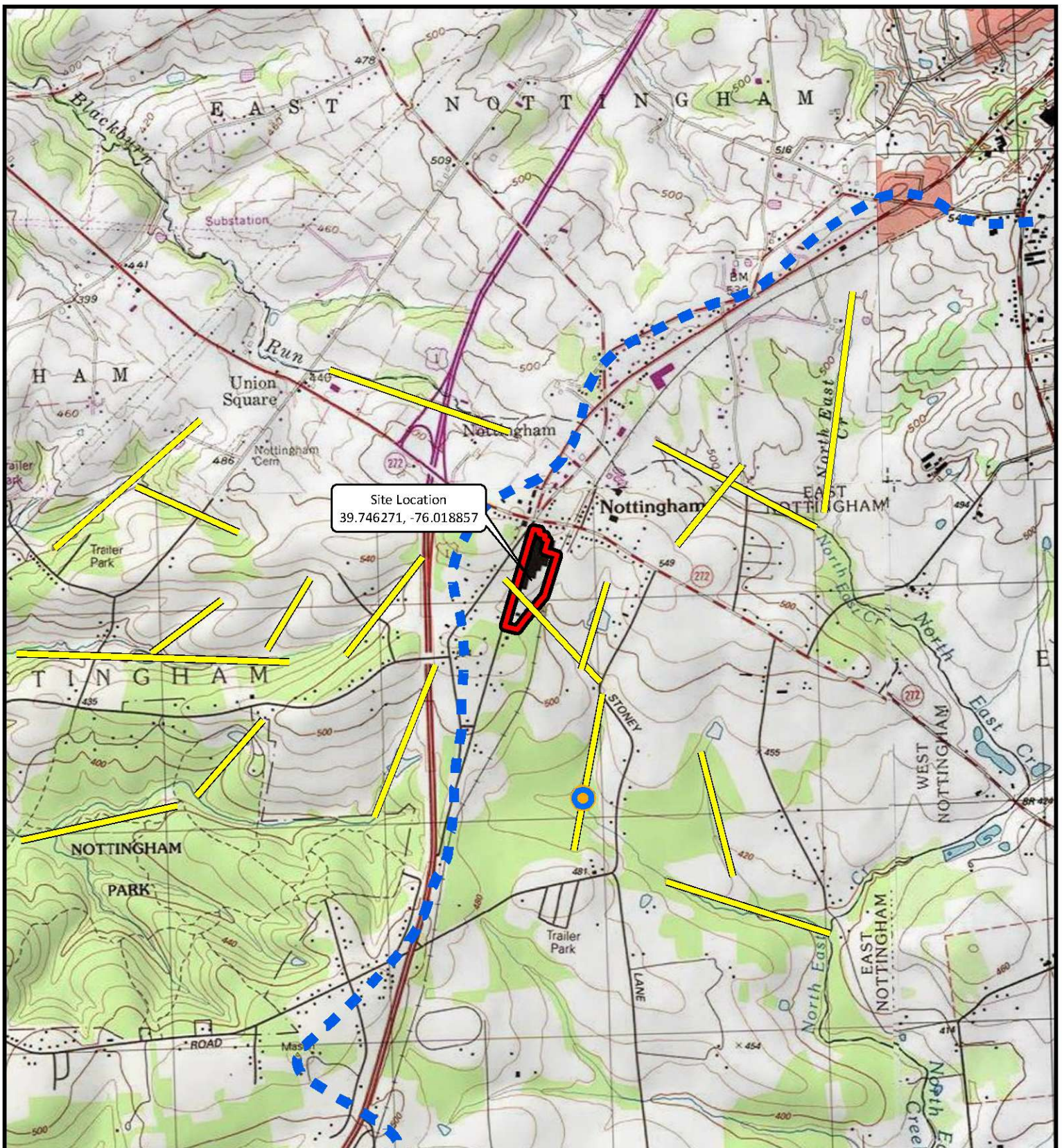
Petroleum impacted soil is present below the seasonally high water table (i.e., soil in the zone of groundwater saturation). Because petroleum impacted soil will continue to leach to groundwater, remediation will focus on groundwater quality; therefore, Herr's proposes to attain the Act 2 Site-Specific Standard for groundwater. The following actions are proposed to demonstrate attainment of the Site-Specific Standard for groundwater.

- Remediation of groundwater at the source to reduce dissolved benzene in groundwater to concentrations below the CRL WLA (185 µg/L) surface water quality criteria prior to discharge to surface water.
- Revised fate and transport analysis to demonstrate that the CRL for benzene in surface water will be met in the future.
- A post-remedial care plan that includes the following:
 - Groundwater monitoring to verify that the CRL will be met;
 - An activity use restriction to prohibit the use of groundwater at the Site and eliminate potential human exposure to the release;
 - A land use restriction to prohibit future residential use; and
 - An activity use restriction requiring worker health and safety provisions and waste handling protocols during future disturbance of the Site to eliminate potential human exposure to the release.

SPL has been detected at the Site at MW-4. Based on the findings of baildown testing, SPL recovery does not appear to be feasible using conventional pumping technology. SPL has not been detected at MW-4 since baildown testing was conducted on July 9, 2015. Continued monitoring of MW-4 for the presence of SPL is recommended.

Remedial alternatives analysis and a selected remedial approach to protect surface water will be presented in a Remedial Action Plan (RAP) and submitted to the PADEP. It is anticipated that the RAP will be submitted within 45 days of PADEP approval of this Revised SCR.

FIGURES



Herra's Water Supply Well



Inferred Fracture Trace



Groundwater Divide



Parcel Boundary - Nottingham Plant 1

West Nottingham Township, Chester County, PA
Rising Sun, MD/PA 7.5' USGS Topographic Quadrangle

6/1/2016

Herr Foods, Inc

Revised Site Characterization Report

Figure 1 - Site Location Map

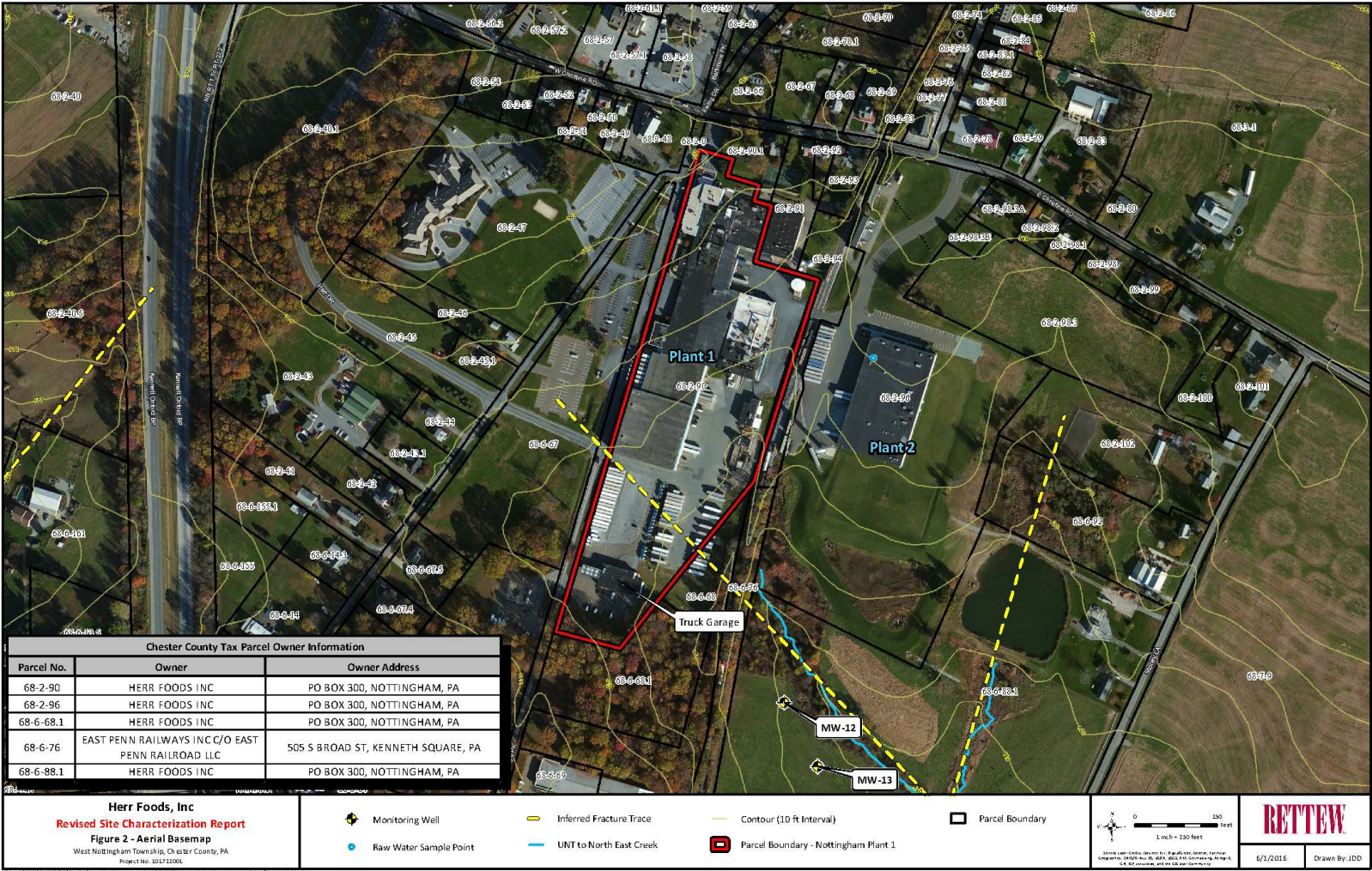
Project No. 101722001



0 1,000 2,000
Feet
1 inch = 2,000 feet

Service Layer Credits: Copyright © 2013 National Geographic
Society, I-cubed

RETTEWSM



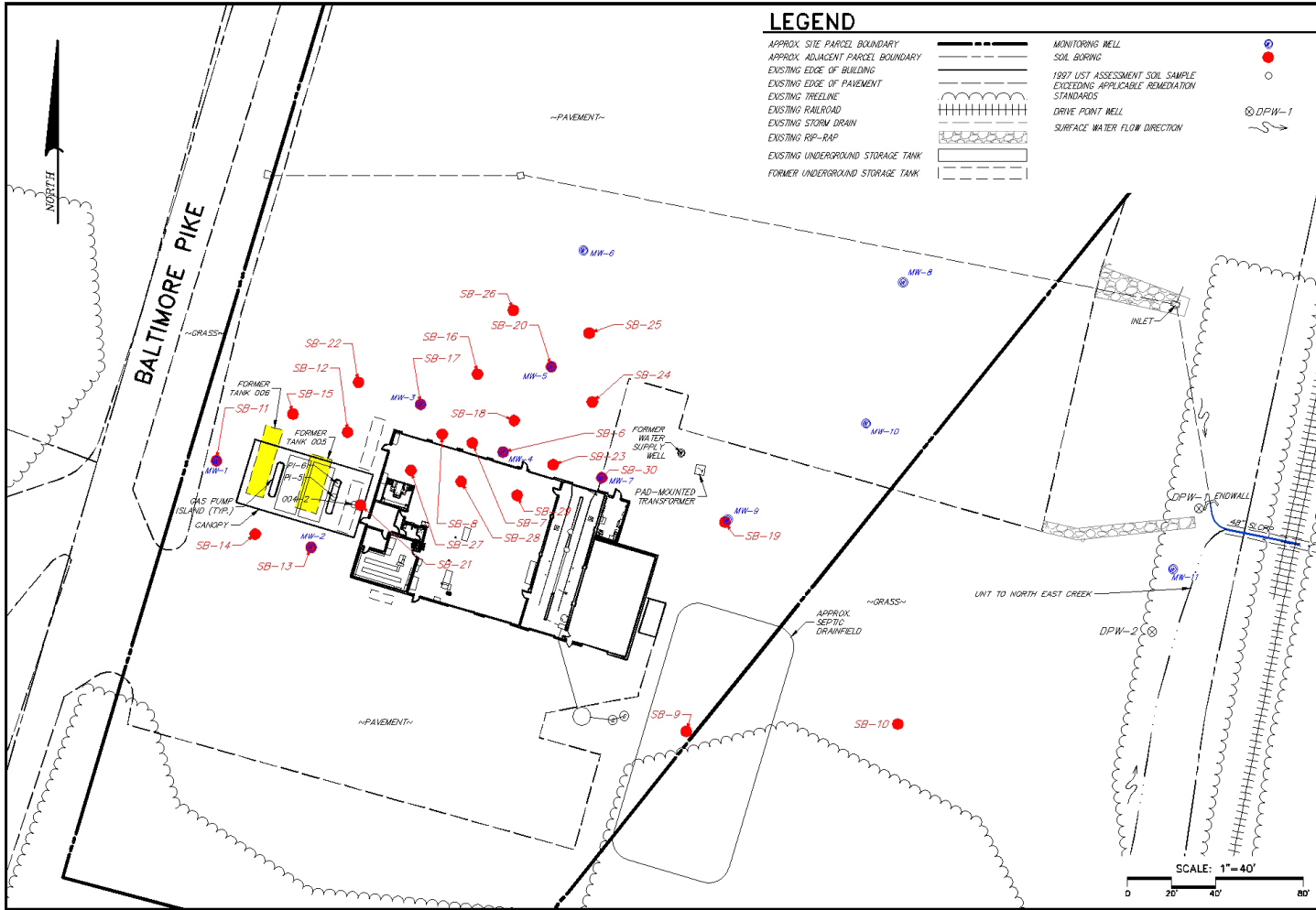


FIGURE 3

273 OLD BALTIMORE PIKE

WEST NOTTINGHAM TOWNSHIP CHESTER COUNTY, PA

REVIEW

REVIEWED BY: JME

DATE: MAY 16, 2016

SCALE: AS NOTED

DWG. NO. 1 OF 1

REVIEWED BY: JME

DATE: MAY 16, 2016

SCALE: AS NOTED

DWG. NO. 1 OF 1

REVIEWED BY: JME

DATE: MAY 16, 2016

SCALE: AS NOTED

DWG. NO. 1 OF 1

REVIEWED BY: JME

DATE: MAY 16, 2016

SCALE: AS NOTED

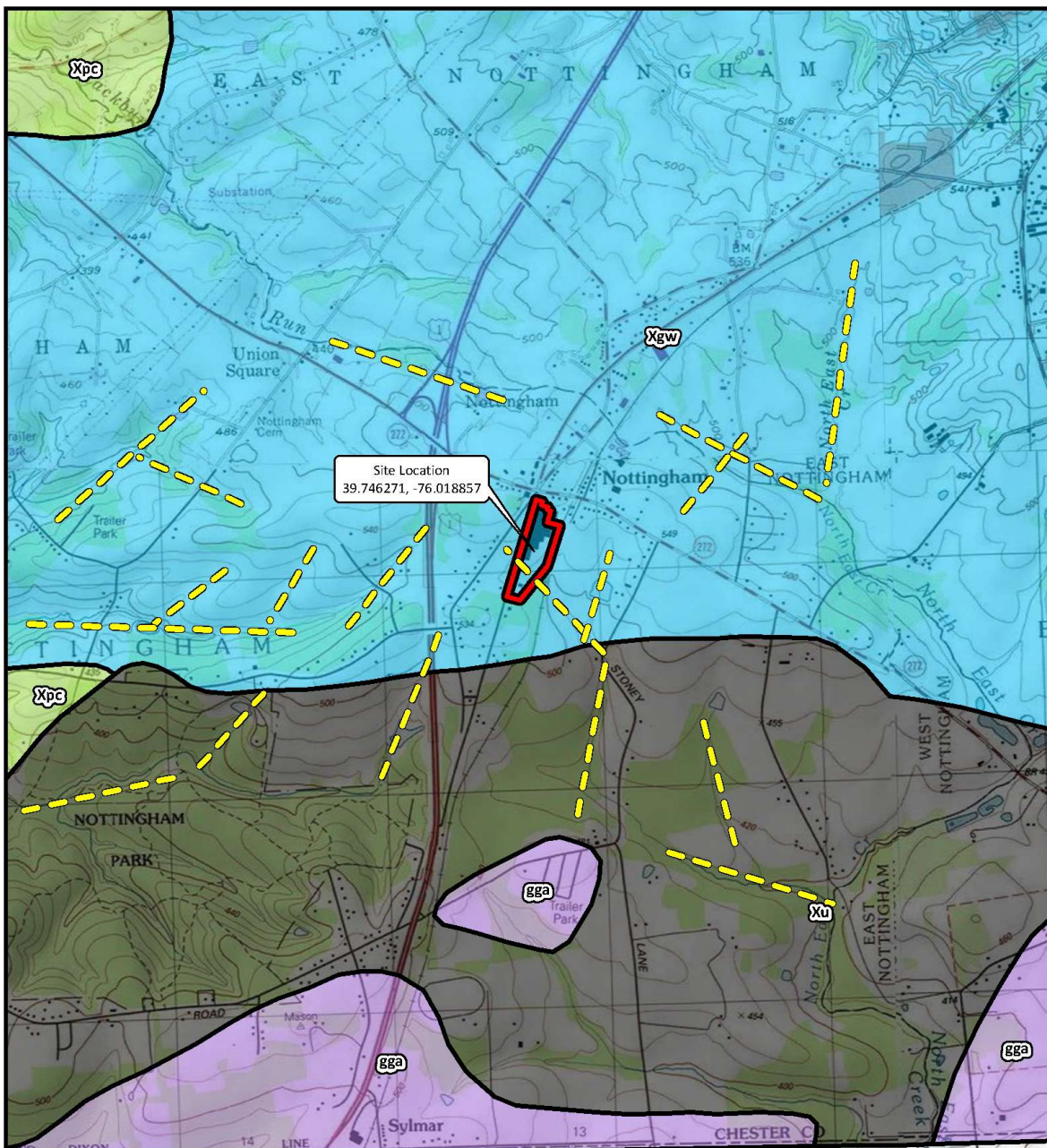
DWG. NO. 1 OF 1

REVIEWED BY: JME

DATE: MAY 16, 2016

SCALE: AS NOTED

DWG. NO. 1 OF 1



- Inferred Fracture Trace
- Parcel Boundary - Nottingham Plant 1
- Geologic Formation**
- Xgw - "Glenarm Wissahickon" formation
- Xpc - Peters Creek Schist
- Xu - Ultramafic rocks
- gga - Banded mafic gneiss

West Nottingham Township, Chester County, PA
 Rising Sun, MD/PA 7.5' USGS Topographic Quadrangle

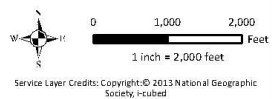
6/1/2016

Herr Foods, Inc

Revised Site Characterization Report

Figure 4 - Geology Map

Project No: 101722001



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RETTEW

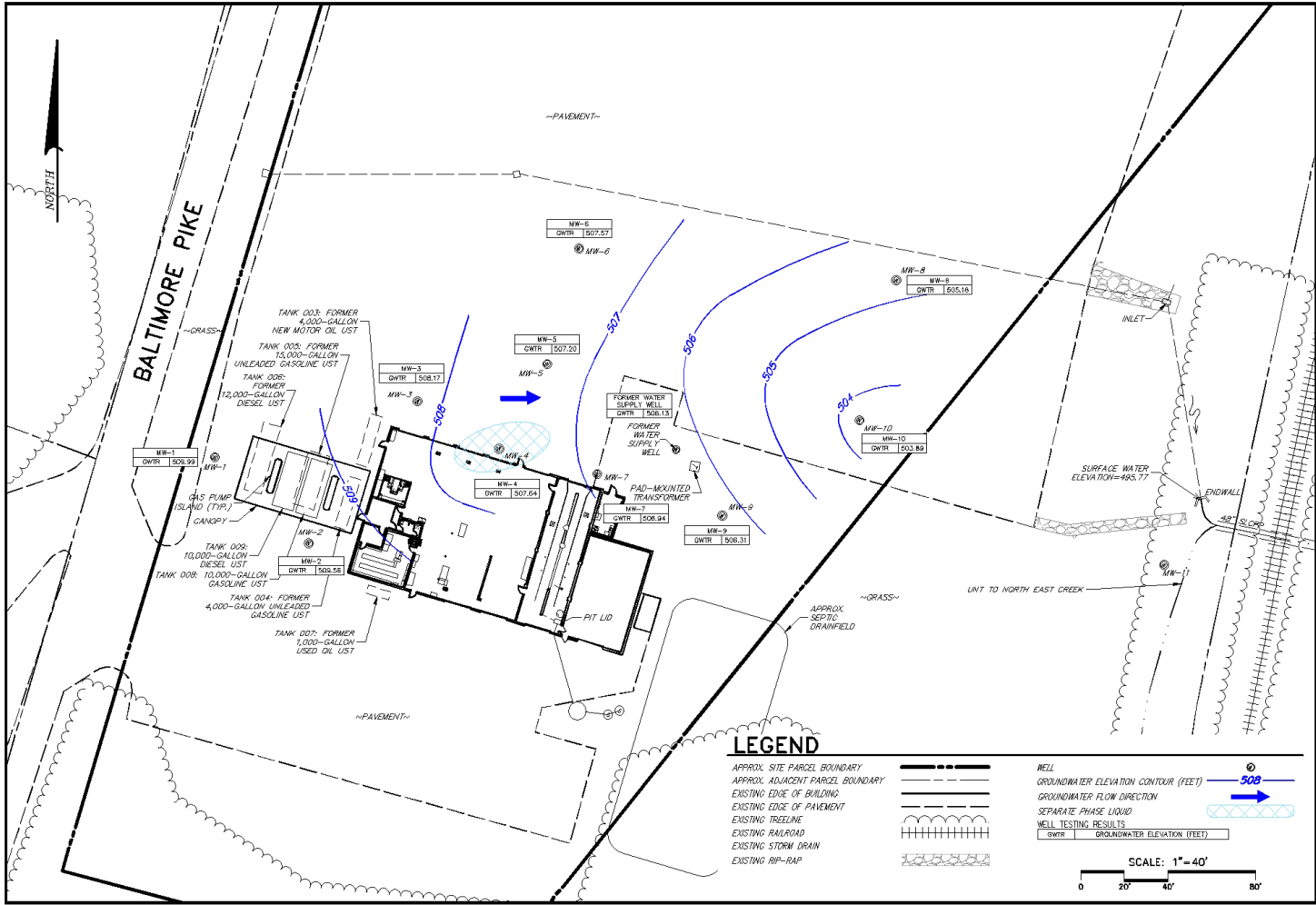


FIGURE 7

GROUNDWATER ELEVATION CONTOUR MAP

JUNE 25, 2015

273 OLD BALTIMORE PIKE

WEST NOTTINGHAM TOWNSHIP CHESTER COUNTY, PA

RETTEW

RETTEW & ASSOCIATES, INC.
 5100 E. Lancaster, PA 17603
 Phone: (717) 394-3721 Fax: (717) 394-1003
 E-mail: info@rettew.com Website: www.rettew.com

DRAWN BY: JME

DATE: MAY 16, 2016

SCALE: AS NOTED

DWG. NO. 1 OF 1

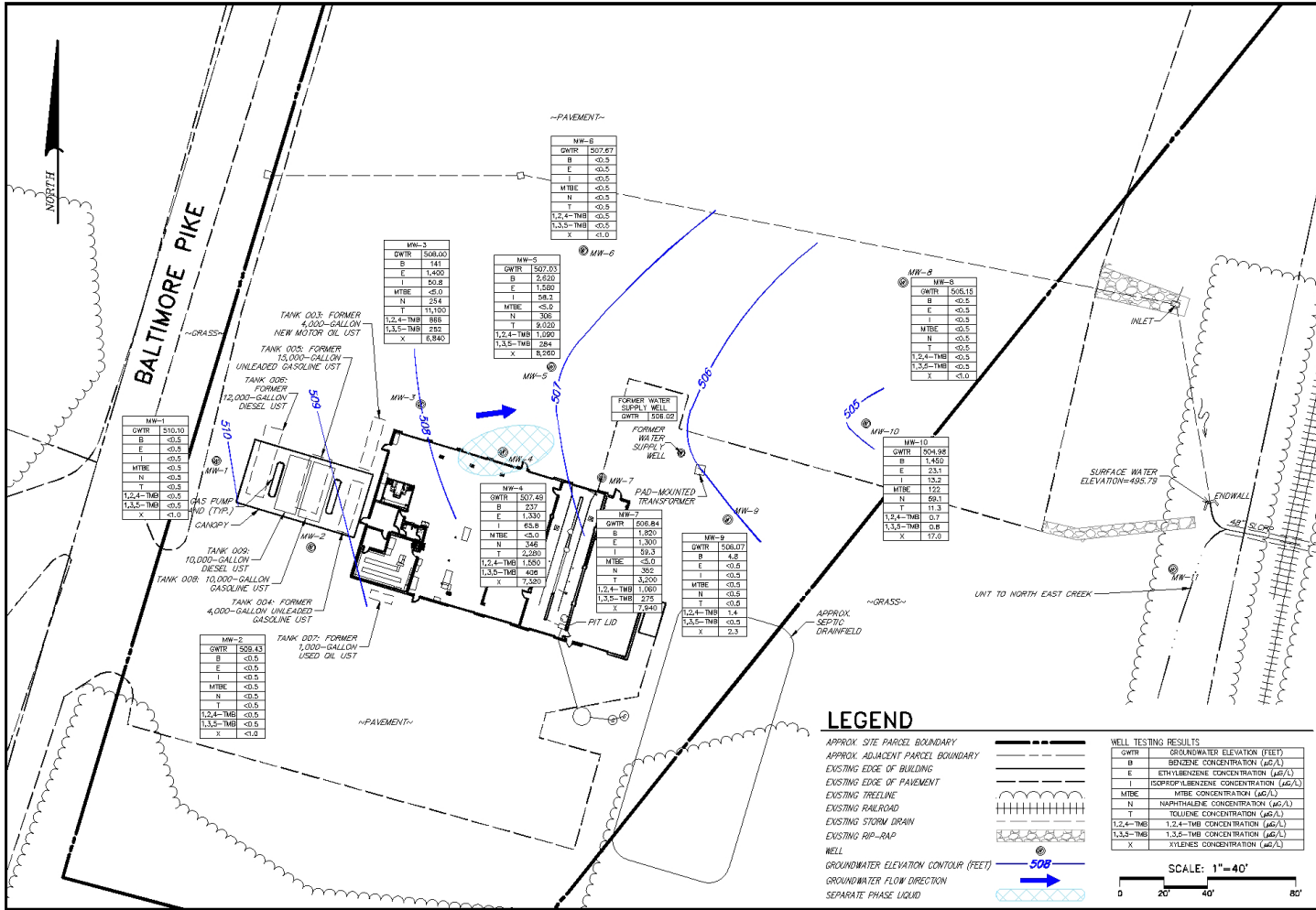


FIGURE 8

GROUNDWATER ELEVATION CONTOUR MAP—

JULY 9, 2015

273 OLD BALTIMORE PIKE

WEST NOTTINGHAM TOWNSHIP CHESTER COUNTY, PA

RETTEW

RETTEW Associates, Inc.
5000 E. Lancaster, PA 17603
Phone (717) 394-3721 Fax (717) 394-1083
E-mail: info@rettew.com Website: www.rettew.com

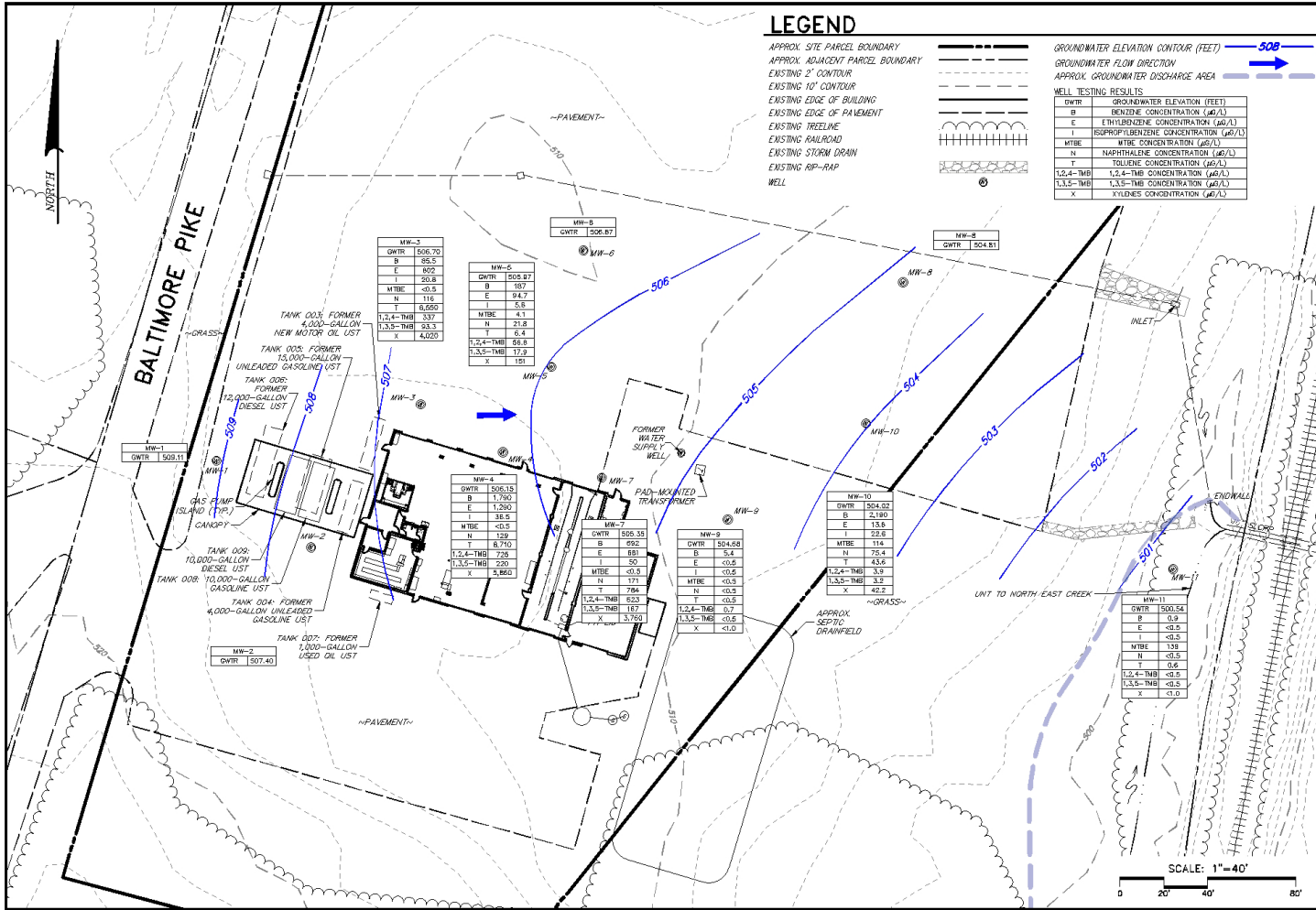
DRAWN BY: JME

DATE: MAY 16, 2016

SCALE: AS NOTED

DWG. NO. 1 OF 1

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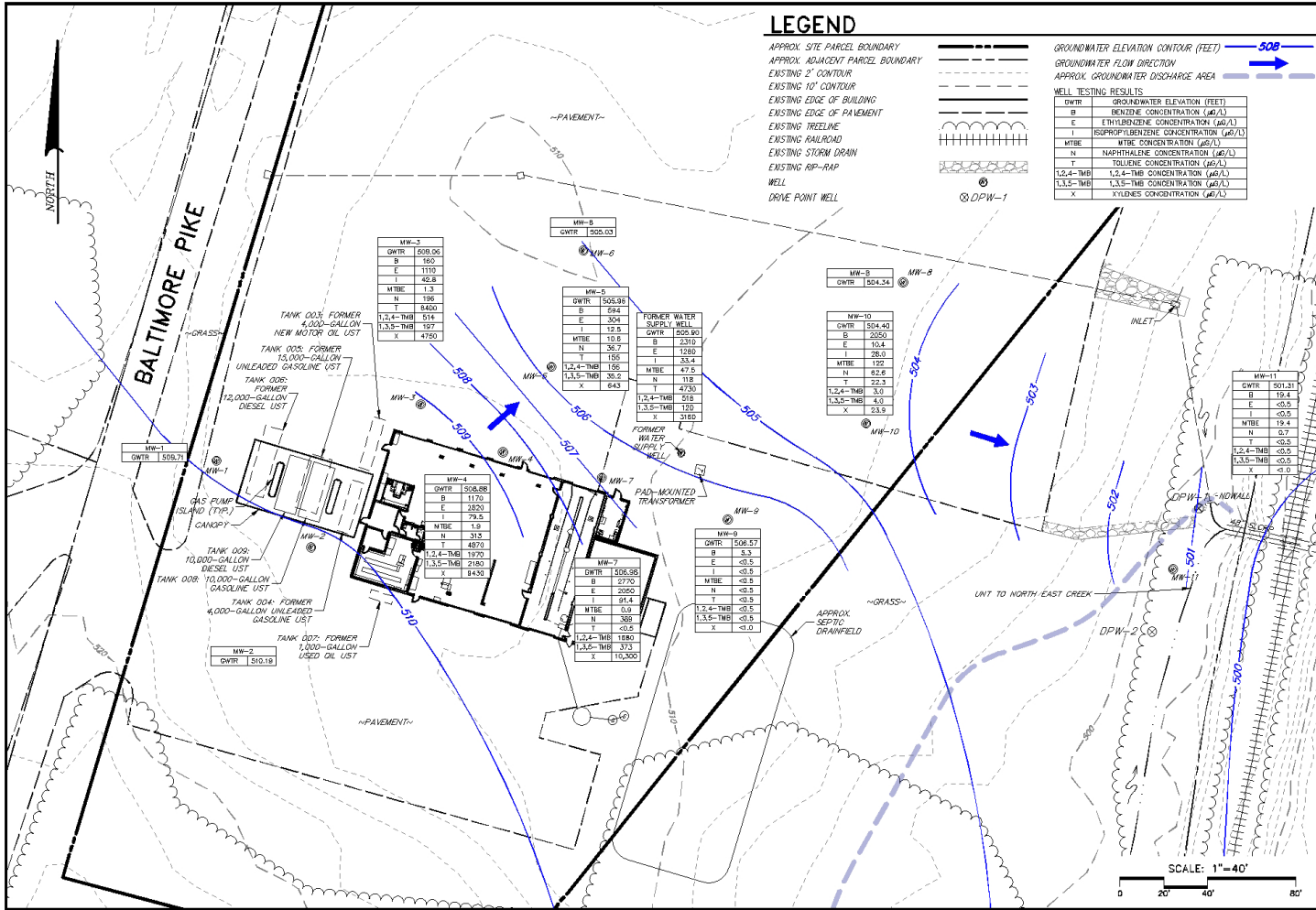


RETEW

RETEW Associates, Inc.
 5000 Luncaster, PA 17603
 Phone (717) 384-3721 Fax (717) 384-1083
 E-mail: info@retew.com Website: www.rete.com

FIGURE 11
 GROUNDWATER ELEVATION CONTOUR MAP-
 JANUARY 14, 2016
 273 OLD BALTIMORE PIKE
 WEST NOTTINGHAM TOWNSHIP CHESTER COUNTY, PA

DRAWN BY: JME
 DATE: MAY 16, 2016
 SCALE: AS NOTED
 DWG. NO. 1 OF 1



RETEW

RETEW Associates, Inc.
 5100 E. Lancaster, PA 17603
 Phone (717) 394-3721 Fax (717) 394-1083
 E-mail: info@retew.com Website: www.rete.com

FIGURE 12
 GROUNDWATER ELEVATION CONTOUR MAP—
 APRIL 6, 2016
 273 OLD BALTIMORE PIKE
 WEST NOTTINGHAM TOWNSHIP CHESTER COUNTY, PA

DRAWN BY: JME
DATE: MAY 16, 2016
SCALE: AS NOTED
DWG. NO.: 1 OF 1

DRAWN BY: JME
DATE: MAY 23, 2016
SCALE: AS NOTED
DWG. NO. 1 OF 1

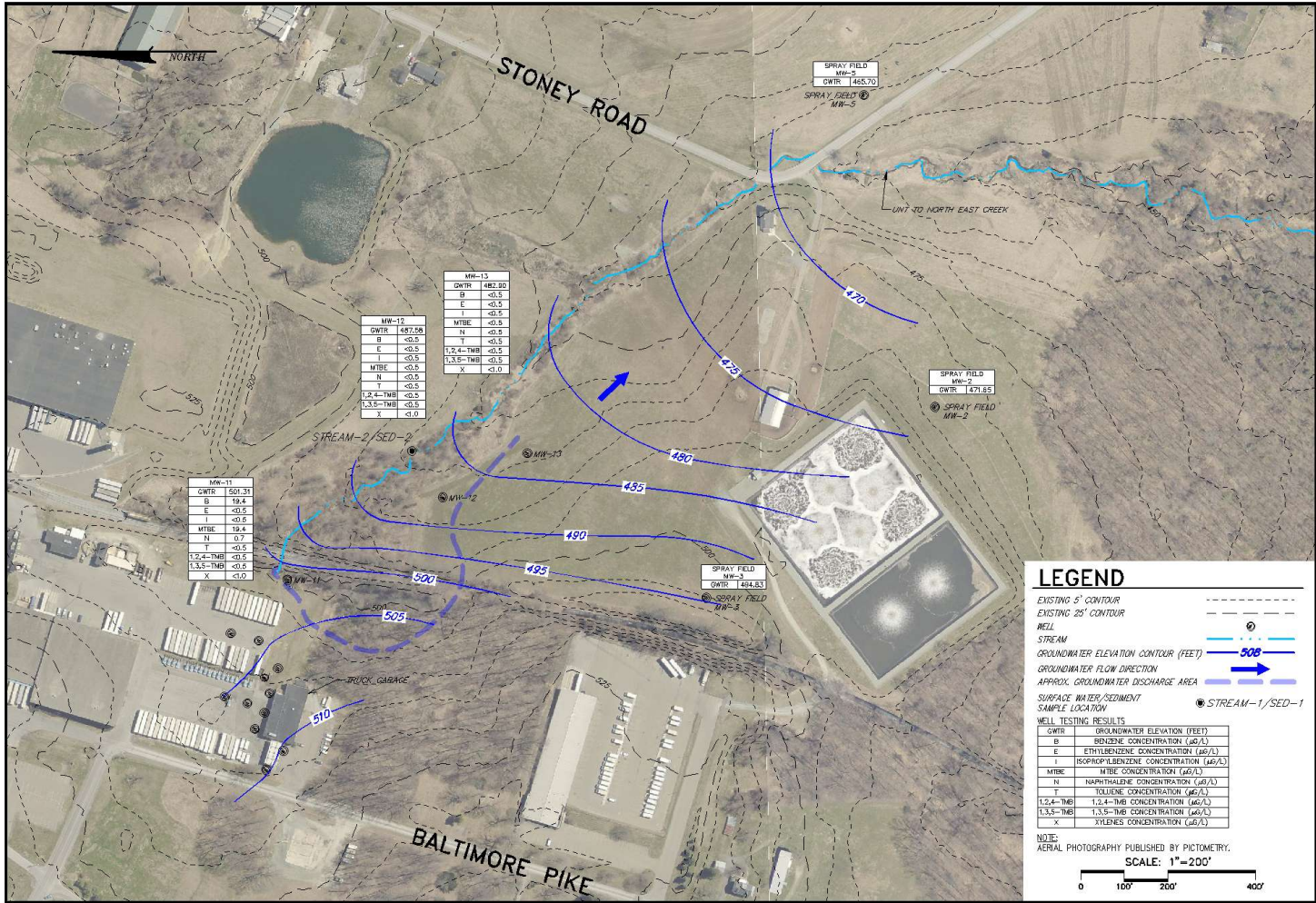


FIGURE 15

REGIONAL GROUNDWATER ELEVATION

CONTOUR MAP - APRIL 6, 2016

273 OLD BALTIMORE PIKE

WEST NOTTINGHAM TOWNSHIP CHESTER COUNTY, PA

RETTEW

RETTEW & ASSOCIATES, INC.

5100 E. LEBANON PIKE, SUITE 100

LEBANON, PA 17042

Phone: (717) 284-3721 Fax: (717) 284-1063

Engineer: T. RETTEW License No. 00000000000000000000000000000000

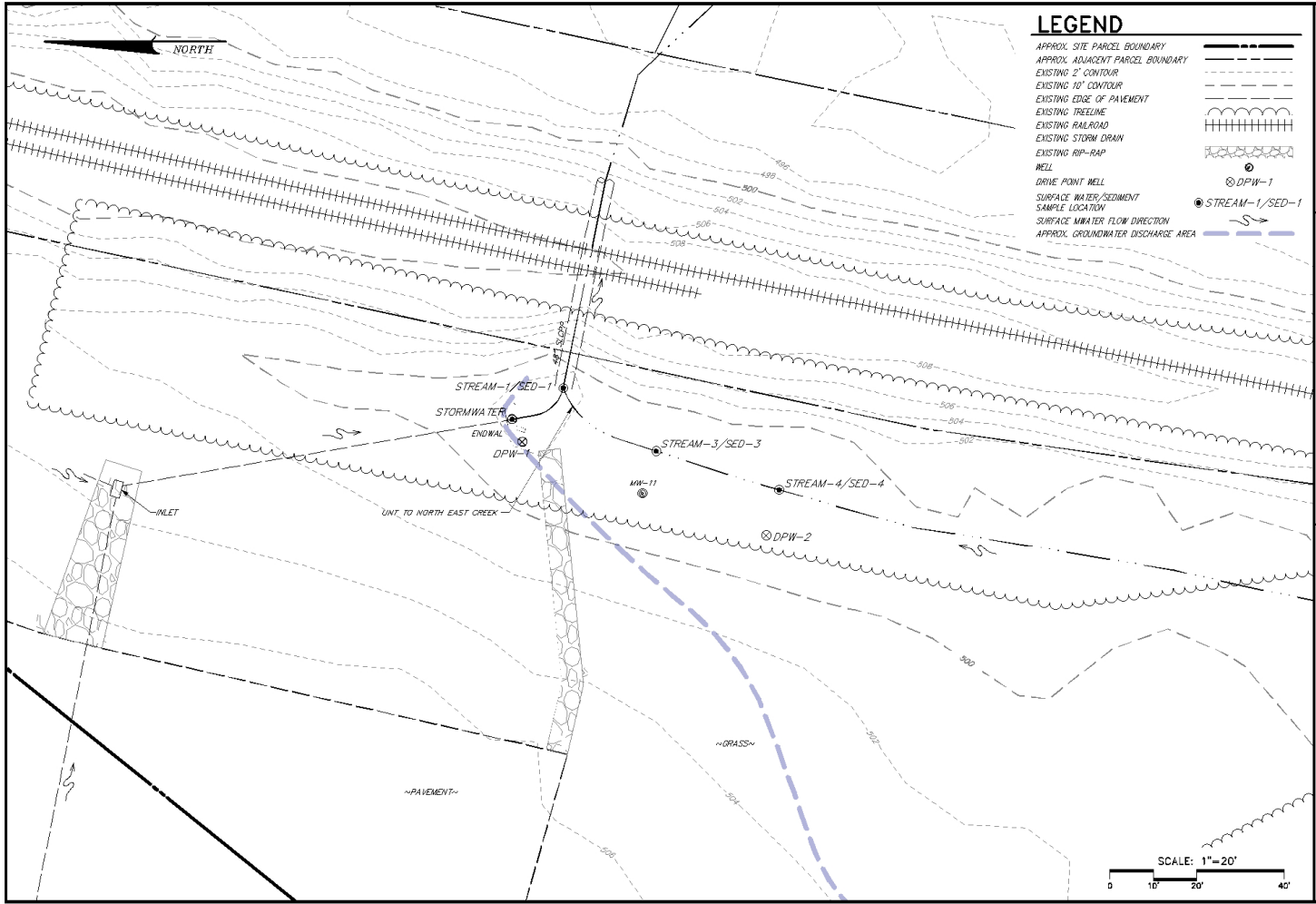
DRAWN BY: JME

DATE: MAY 23, 2016

SCALE: AS NOTED

DWG. NO. OF 1

UNIT TO NORTH EAST CREEK



RETEW.

RETEW. Associates, Inc.
 5010 E. Lancaster, PA 17603
 Phone: (717) 394-3721 Fax: (717) 394-1003
 Engineers • Environmental Consultants

DRAWN BY: JME

DATE: MAY 23, 2016

SCALE: AS NOTED

DWG. NO. 1 OF 1

FIGURE 16

SEDIMENT AND SURFACE WATER

SAMPLE LOCATION MAP

273 OLD BALTIMORE PIKE

WEST NOTTINGHAM TOWNSHIP CHESTER COUNTY, PA

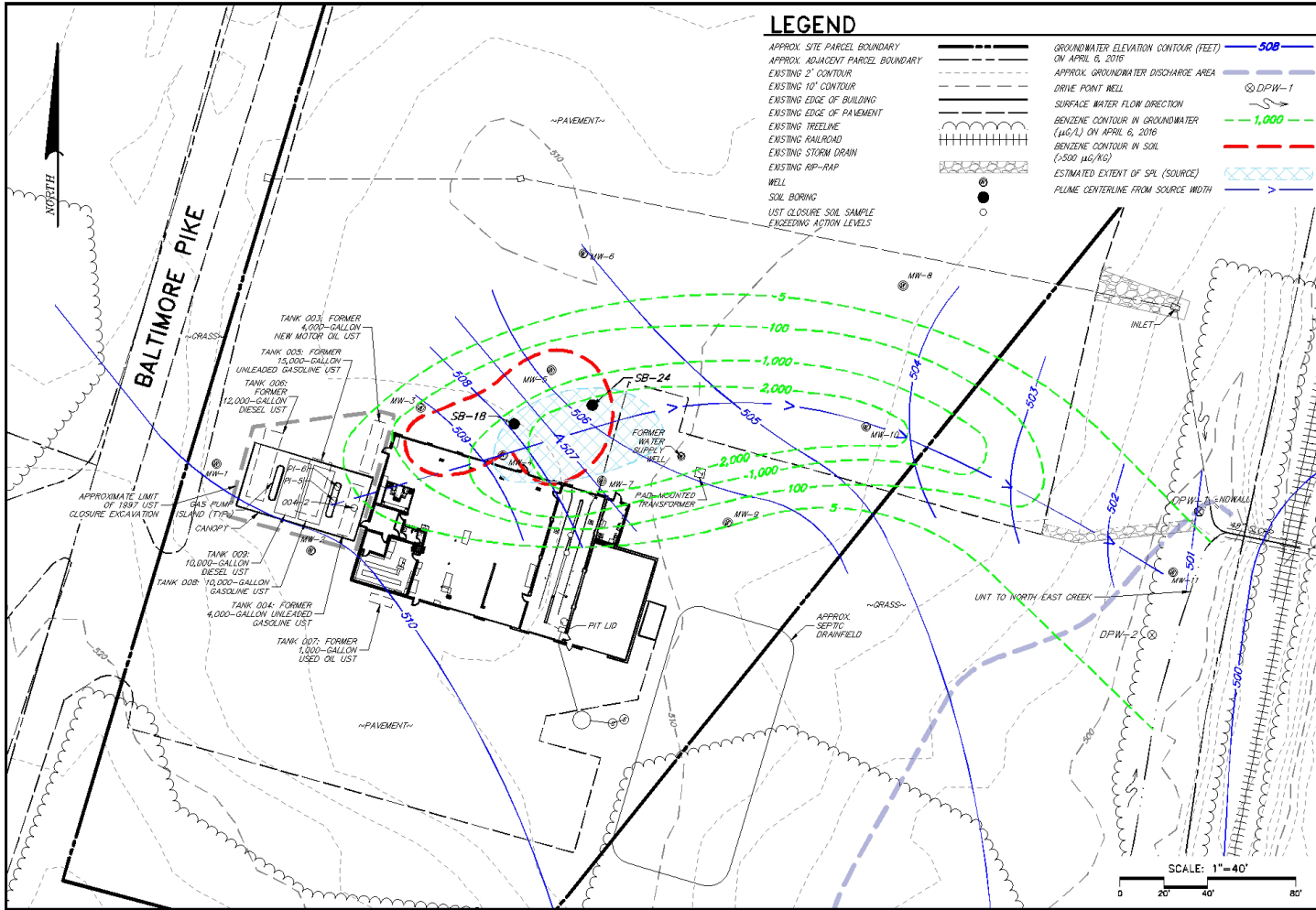


FIGURE 17

QD MODEL MAP

273 OLD BALTIMORE PIKE

WEST NOTTINGHAM TOWNSHIP CHESTER COUNTY, PA

REVIEW

RETEN Associates, Inc.
 5100 W. Lancaster, PA 17603
 Phone (717) 394-3721 Fax (717) 394-1003
 E-mail: info@reten.com Website: www.reten.com

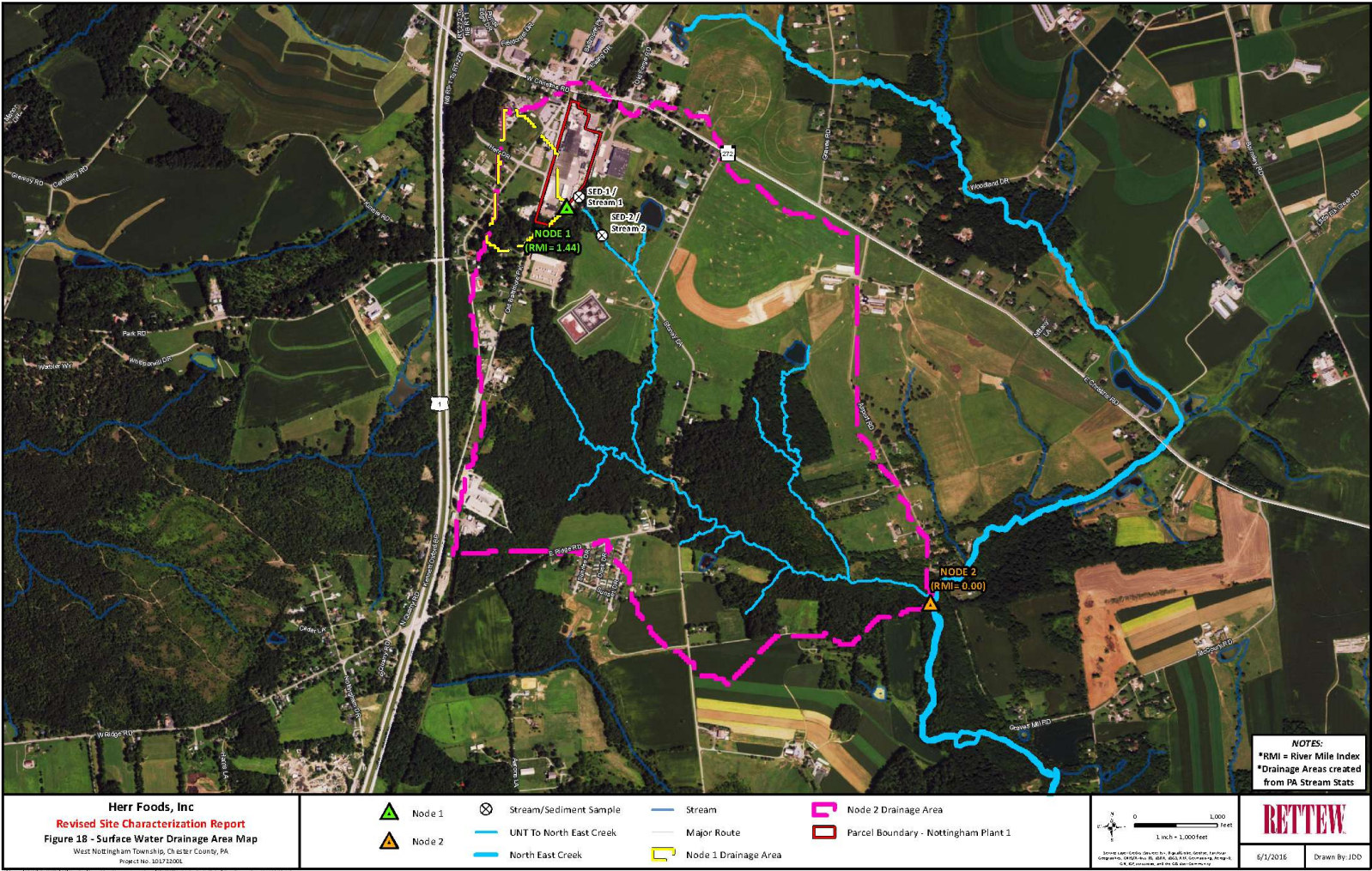
DRAWN BY: JME

DATE: MAY 23, 2016

SCALE: AS NOTED

DWG. NO. 1 OF 1

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TABLES

Table 1
Phase II ESA Soil Sample Analytical Data Summary
Herr Foods, Inc. - 273 Old Baltimore Pike, Nottingham, Pennsylvania
RETTEW Project No. 101722001

PADEP Short List Petroleum Products for Lubricating Oils and Fluids	Act 2 Statewide Health Standard Medium Specific Concentrations (MSCs)											
	Soil to Groundwater (Used Aquifers)				Direct Contact							
	TDS ≤ 2500				Residential	Non-Residential						
	Residential		Non-residential			Surface	Subsurface					
	100 X	1/10 Generic	100 X	1/10 Generic		Soil	Soil					
	GW MSC	Value	GW MSC	Value	0-15 feet	0-2 feet	2-15 feet	SB-6	SB-7	SB-8	SB-9	SB-10
								10 ft.	8 ft.	7 ft.	10 ft.	5 ft.
BENZENE	500	13	500	13	57,000	290,000	330,000	120	22,000	21,000	< 0.6	8
ETHYLBENZENE	70,000	4,600	70,000	4,600	10,000,000	10,000,000	10,000,000	6,500	85,000	120,000	NA	NA
NAPHTHALENE	10,000	2,500	10,000	2,500	4,400,000	56,000,000	190,000,000	1,500	18,000	30,000	< 5	< 45
TOLUENE	100,000	4,400	100,000	4,400	10,000,000	10,000,000	10,000,000	2,600	270,000	450,000	NA	NA
XYLENES	1,000,000	99,000	1,000,000	99,000	1,900,000	8,000,000	9,100,000	28,000	390,000	560,000	NA	NA
ANTHRACENE	6,600	35,000	6,600	35,000	66,000,000	190,000,000	190,000,000	< 4	29	29	< 5	< 45
BENZO(A)ANTHRACENE	29	32,000	360	32,000	5,700	110,000	190,000,000	< 4	10 J	10 J	< 5	< 45
BENZO(A)PYRENE	20	4,600	20	4,600	570	11,000	190,000,000	< 4	6 J	< 4	< 5	< 45
BENZO(B)FLUORANTHENE	29	17,000	120	17,000	5,700	110,000	190,000,000	< 4	< 4	< 4	< 5	< 45
BENZO(G,H,I)PERYLENE	26	18,000	26	18,000	13,000,000	170,000,000	190,000,000	< 4	8 J	< 4	< 5	< 45
CHRYSENE	190	23,000	190	23,000	570,000	11,000,000	190,000,000	< 4	11 J	10 J	< 5	< 45
FLOURENE	150,000	380,000	190,000	380,000	8,800,000	110,000,000	190,000,000	7 J	92	89	< 5	< 45
PHENANTHRENE	110,000	1,000,000	110,000	1,000,000	66,000,000	190,000,000	190,000,000	11 J	150	150	< 5	< 45
PYRENE	13,000	220,000	13,000	220,000	6,600,000	84,000,000	190,000,000	5 J	49	45	< 5	< 45

Notes:

- 1) All units in milligrams per kilogram (ug/kg)
- 2) Bold & shaded MSCs represent the applicable Act 2 non-residential Statewide Health Standard.
- 3) Shaded results represent an exceedence of the applicable non-residential Statewide Health Standard.
- 4) Soil samples were collected on October 6, 2014.
- 5) PADEP Short List petroleum products in *italics* are COPIACs.
- 6) NA = Not analyzed.
- 7) 1/10 of the Soil to Groundwater Generic Value used for soil in the zone of groundwater saturation below a depth of two feet.

Table 2
Soil Sample Analytical Data Summary
Herr Foods, Inc. Nottingham Plant
RETTEW Project No. 101722001

PADEP Short List Petroleum Products for Diesel Fuel and Unleaded Gasoline	Act 2 Statewide Health Standard Medium Specific Concentrations (MSCs)							Soil Sample Identifications (Depth in feet below grade below sample I.D.)										
	Soil to Groundwater (Used Aquifers)				Direct Contact													
	TDS ≤ 2500				Residential	Non-Residential												
	Residential		Non-residential			Surface Soil	Subsurface Soil											
	100 X GW MSC	1/10 Generic Value	100 X GW MSC	1/10 Generic Value														
	0-15 feet	0-2 feet	2-15 feet	SB-11 14 ft.	SB-12 5 ft.	SB-12 8 ft.	SB-12 12 ft.	SB-12 18 ft.	SB-13 10 ft.	SB-14 11 ft.	SB-15 11 ft.	SB-16 12 ft.	SB-17 7 ft.					
BENZENE	500	13	500	13	5,700	290,000	390,000	< 29	< 29	< 58	< 29	< 30	< 30	< 29	< 28	< 28	< 27	
ETHYLBENZENE	70,000	4,600	70,000	4,600	10,000,000	10,000,000	10,000,000	< 57	480	16,000	3,800	< 61	< 60	< 58	< 56	< 56	100	
ISOPROPYLBENZENE	84,000	60,000	350,000	290,000	7,700,000	10,000,000	10,000,000	< 57	250 J	5,200	2,200	< 61	< 60	< 58	< 56	< 56	< 54	
METHYL TERT BUTYL ETHER	2,000	28	2,000	28	620,000	3,200,000	3,700,000	< 29	< 29	< 58	< 29	< 30	< 30	< 29	< 28	< 28	< 27	
NAPHTHALENE	10,000	2,500	10,000	2,500	4,400,000	56,000,000	190,000,000	< 57	880	9,000	2,400	100 J	< 60	< 58	< 56	< 56	350	
TOLUENE	100,000	44,000	100,000	4,400	10,000,000	10,000,000	10,000,000	< 57	< 57	< 120	< 58	< 61	< 60	< 58	< 56	< 56	1,100	
1,2,4-TRIMETHYLBENZENE	1,500	840	6,200	3,500	130,000	560,000	640,000	79 J	6,600	120,000	68,000	500	< 60	< 58	< 56	< 56	450	
1,3,5-TRIMETHYLBENZENE	1,300	230	5,300	930	110,000	480,000	550,000	< 57	2,600	39,000	15,000	190 J	< 60	< 58	< 56	< 56	250 J	
XYLENES	1,000,000	99,000	1,000,000	99,000	1,900,000	8,000,000	9,100,000	< 57	1,100	34,000	8,900	< 61	< 60	< 58	< 56	< 56	1,100	
MOISTURE (%)	No Standard							15.4	18.7	20.0	27.3	16.6	19.4	22.9	28.2	27.9	17.6	

Notes:

- 1) All units in milligrams per kilogram (ug/kg)
- 2) Bold & shaded MSCs represent the applicable Act 2 non-residential Statewide Health Standard.
- 3) Shaded results represent an exceedence of the applicable non-residential Statewide Health Standard.
- 4) Soil samples were collected from SB-11 through SB-21 on February 5, 2015.
- 5) PADEP Short List petroleum products in *italics* are COPVACs.
- 6) 1/10 of the Soil to Groundwater Generic Value used for soil in the zone of groundwater saturation below a depth of two feet.

Table 2
Soil Sample Analytical Data Summary
Herr Foods, Inc. Nottingham Plant
RETTEW Project No. 101722001

PADEP Short List Petroleum Products for Diesel Fuel and Unleaded Gasoline	Act 2 Statewide Health Standard Medium Specific Concentrations (MSCs)							Sample Identifications (Depth in feet below grade below sample I.D.)										
	Soil to Groundwater (Used Aquifers)				Direct Contact													
	TDS ≤ 2500				Residential	Non-Residential												
	Residential		Non-residential			Surface Soil	Subsurface Soil											
	100 X GW MSC	1/10 Generic Value	100 X GW MSC	1/10 Generic Value														
					0-15 feet	0-2 feet	2-15 feet	SB-17 11 ft.	SB-17 15 ft.	SB-18 10 ft.	SB-18 13 ft.	SB-18 15 ft.	SB-19 10 ft.	SB-20 8 ft.	SB-20 11 ft.	SB-20 15 ft.	SB-21 8 ft.	
BENZENE	500	13	500	13	5,700	290,000	390,000	240 J	< 25	1,900	3,200	< 30	< 25	1,300	1,900	< 26	< 33	
ETHYLBENZENE	70,000	4,600	70,000	4,600	10,000,000	10,000,000	10,000,000	130,000	< 51	710	810	< 59	< 49	630	680	< 53	< 66	
ISOPROPYLBENZENE	84,000	60,000	350,000	250,000	7,700,000	10,000,000	10,000,000	7,400	< 51	< 56	< 59	< 59	< 49	< 55	< 61	< 53	< 66	
METHYL TERT BUTYL ETHER	2,000	28	2,000	28	620,000	3,200,000	3,700,000	< 60	< 25	260 J	31 J	< 30	< 25	< 28	< 31	< 26	< 33	
NAPHTHALENE	10,000	2,500	10,000	2,500	4,400,000	56,000,000	190,000,000	120	< 51	160 J	120 J	< 59	< 49	130 J	99 J	< 53	76 J	
TOLUENE	100,000	44,000	100,000	4,400	10,000,000	10,000,000	10,000,000	12,000	< 51	280	9,500	< 59	< 49	4,500	5,000	< 53	< 66	
1,2,4-TRIMETHYLBENZENE	1,500	840	6,200	3,500	130,000	560,000	640,000	1,200	< 51	990	890	< 59	230 J	590	500	< 53	< 66	
1,3,5-TRIMETHYLBENZENE	1,300	230	5,300	930	110,000	480,000	550,000	1,200	< 51	300	290 J	< 59	89 J	180 J	150 J	< 53	< 66	
XYLENES	1,000,000	99,000	1,000,000	99,000	1,900	110,000	580,000	1,200	< 51	3,500	3,800	< 59	< 49	2,500	2,900	< 53	< 66	
MOISTURE (%)	No Standard							26.2	16.0	22.4	25.2	15.7	18.7	21.4	24.2	12.3	22.2	

Notes:

- 1) All units in milligrams per kilogram (ug/kg)
- 2) Bold & shaded MSCs represent the applicable Act 2 non-residential Statewide Health Standard.
- 3) Shaded results represent an exceedence of the applicable non-residential Statewide Health Standard.
- 4) Soil samples were collected from SB-11 through SB-21 on February 5, 2015.
- 5) PADEP Short List petroleum products in *italics* are COPVACs.
- 6) 1/10 of the Soil to Groundwater Generic Value used for soil in the zone of groundwater saturation below a depth of two feet.

Table 2
Soil Sample Analytical Data Summary
Herr Foods, Inc. Nottingham Plant
RETTEW Project No. 101722001

PADEP Short List Petroleum Products for Diesel Fuel and Unleaded Gasoline	Act 2 Statewide Health Standard Medium Specific Concentrations (MSCs)							Sample Identifications (Depth in feet below grade below sample I.D.)									
	Soil to Groundwater (Used Aquifers)				Direct Contact												
	TDS ≤ 2500				Residential	Non-Residential											
	Residential		Non-residential			Surface Soil	Subsurface Soil										
	100 X GW MSC	1/10 Generic Value	100 X GW MSC	1/10 Generic Value													
					0-15 feet	0-2 feet	2-15 feet	SB-21 10 ft.	SB-22 7 ft.	SB-22 19 ft.	SB-23 8 ft.	SB-23 15 ft.	SB-24 10 ft.	SB-24 19 ft.	SB-25 9 ft.	SB-25 15 ft.	SB-26 10 ft.
BENZENE	500	13	500	13	5,700	290,000	390,000	30 J	< 29	< 25	3,400	< 29	1,300	< 21	< 31	< 29	< 31
ETHYLBENZENE	70,000	4,600	70,000	4,600	10,000,000	10,000,000	10,000,000	180 J	< 58	< 50	50,000	< 57	200	< 42	< 62	< 57	< 62
ISOPROPYLBENZENE	84,000	60,000	350,000	290,000	7,700,000	10,000,000	10,000,000	< 51	< 58	< 50	3,400	< 57	< 58	< 42	< 62	< 57	< 62
METHYL TERT BUTYL ETHER	2,000	28	2,000	28	620,000	3,200,000	3,700,000	< 26	< 29	< 25	< 120	< 29	< 29	< 21	< 31	< 29	< 31
NAPHTHALENE	10,000	2,500	10,000	2,500	4,400,000	56,000,000	190,000,000	< 51	< 58	< 50	9,700	< 57	< 58	< 42	< 62	< 57	< 62
TOLUENE	100,000	44,000	100,000	4,400	10,000,000	10,000,000	10,000,000	270	< 58	< 50	100,000	< 57	3,300	< 42	< 62	< 57	< 62
1,2,4-TRIMETHYLBENZENE	1,500	840	6,200	3,500	130,000	560,000	640,000	670	< 58	< 50	90,000	99 J	120 J	< 42	< 62	< 57	< 62
1,3,5-TRIMETHYLBENZENE	1,300	230	5,300	930	110,000	480,000	550,000	240	< 58	< 50	28,000	< 57	< 58	< 42	< 62	< 57	< 62
XYLENES	1,000,000	99,000	1,000,000	99,000	1,900	110,000	580,000	1,100	< 58	< 50	220,000	72 J	1,000	< 42	< 62	< 57	< 62
MOISTURE (%)	No Standard							10.6	22.3	13.7	21.8	18.6	21.8	13.1	27.6	16.6	18.7

Notes:

- 1) All units in milligrams per kilogram (ug/kg)
- 2) Bold & shaded MSCs represent the applicable Act 2 non-residential Statewide Health Standard.
- 3) Shaded results represent an exceedence of the applicable non-residential Statewide Health Standard.
- 4) Soil samples were collected from SB-11 through SB-21 on February 5, 2015.
- 5) PADEP Short List petroleum products in *italics* are COPVACs.
- 6) 1/10 of the Soil to Groundwater Generic Value used for soil in the zone of groundwater saturation below a depth of two feet.

Table 2
Soil Sample Analytical Data Summary
Herr Foods, Inc. Nottingham Plant
RETTEW Project No. 101722001

PADEP Short List Petroleum Products for Diesel Fuel and Unleaded Gasoline	Act 2 Statewide Health Standard Medium Specific Concentrations (MSCs)							Sample Identifications (Depth in feet below grade below sample I.D.)									
	Soil to Groundwater (Used Aquifers)				Direct Contact												
	TDS ≤ 2500				Residential	Non-Residential											
	Residential		Non-residential			Surface Soil	Subsurface Soil										
	100 X GW MSC	1/10 Generic Value	100 X GW MSC	1/10 Generic Value													
					0-15 feet	0-2 feet	2-15 feet										
BENZENE	500	13	500	13	5,700	290,000	330,000	< 28	< 29	< 28	< 29	< 25	34 J	< 24	53 J	< 27	
ETHYLBENZENE	70,000	4,600	70,000	4,600	10,000,000	10,000,000	10,000,000	< 57	2,000	< 57	< 58	< 51	7,700	< 49	< 56	< 55	
ISOPROPYLBENZENE	84,000	60,000	350,000	250,000	7,700,000	10,000,000	10,000,000	< 57	730	< 57	< 58	< 51	1,400	< 49	< 56	< 55	
METHYL TERT BUTYL ETHER	2,000	28	2,000	28	620,000	3,200,000	3,700,000	< 28	< 29	< 28	< 29	< 25	< 29	< 24	< 28	< 27	
NAPHTHALENE	10,000	2,500	10,000	2,500	4,400,000	56,000,000	190,000,000	< 57	1,300	< 57	< 58	< 51	3,700	< 49	< 56	< 55	
TOLUENE	100,000	44,000	100,000	4,400	10,000,000	10,000,000	10,000,000	< 57	< 58	< 57	< 58	< 51	< 57	< 49	< 56	< 55	
1,2,4-TRIMETHYLBENZENE	1,500	840	6,200	3,500	130,000	560,000	640,000	< 57	20,000	< 57	< 58	< 51	49,000	< 49	510	< 55	
1,3,5-TRIMETHYLBENZENE	1,300	230	5,300	930	110,000	480,000	550,000	< 57	6,700	< 57	< 58	< 51	16,000	< 49	200 J	< 55	
XYLENES	1,000,000	99,000	1,000,000	99,000	1,900	110,000	580,000	< 57	6,400	< 57	< 58	< 51	28,000	< 49	440	< 55	
MOISTURE (%)	No Standard							13.7	16.1	16.7	15.2	14.9	22.2	14.4	22.0	14.6	

Notes:

- 1) All units in milligrams per kilogram (ug/kg)
- 2) Bold & shaded MSCs represent the applicable Act 2 non-residential Statewide Health Standard.
- 3) Shaded results represent an exceedence of the applicable non-residential Statewide Health Standard.
- 4) Soil samples were collected from SB-11 through SB-21 on February 5, 2015.
- 5) PADEP Short List petroleum products in *italics* are COPVACs.
- 6) 1/10 of the Soil to Groundwater Generic Value used for soil in the zone of groundwater saturation below a depth of two feet.

Table 3
Groundwater Sample Analytical Data Summary
Herr Foods, Inc. Nottingham Plant
RETTEW Project No. 101722001

Well	TOC Elev. (feet)	Date	Depth to SPL (feet)	Depth to Water (feet)	SPL Thickness (feet)	Water Table Elev. (feet)	Adj. Water Table Elev. (feet)	Benzene	Ethylbenzene	Isopropylbenzene	M TBE	Naphthalene	Toluene	1,2,4-TMB	1,3,5-TMB	Xylenes
MW-1	512.95	3/9/2015	0.00	2.20	0.00	510.75	510.75	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 0.5	< 0.5	< 0.5	< 0.5
		4/1/2015	0.00	1.39	0.00	511.56	511.56	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 0.5	< 0.5	< 0.5	< 0.5
		6/25/2015	0.00	2.96	0.00	509.99	509.99	NS	NS	NS	NS	NS	NS	NS	NS	NS
		7/9/2015	0.00	2.85	0.00	510.10	510.10	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0
		9/10/2015	0.00	4.94	0.00	508.01	508.01	NS	NS	NS	NS	NS	NS	NS	NS	NS
		10/6/2015	0.00	4.79	0.00	508.16	508.16	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0
		1/14/2016	0.00	3.84	0.00	509.11	509.11	NS	NS	NS	NS	NS	NS	NS	NS	NS
		4/6/2016	0.00	3.24	0.00	509.71	509.71	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-2	512.64	3/9/2015	0.00	2.96	0.00	509.68	509.68	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 0.5	< 0.5	< 0.5	< 0.5
		4/1/2015	0.00	2.18	0.00	510.46	510.46	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 0.5	< 0.5	< 0.5	< 0.5
		6/25/2015	0.00	3.08	0.00	509.56	509.56	NS	NS	NS	NS	NS	NS	NS	NS	NS
		7/9/2015	0.00	3.21	0.00	509.43	509.43	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0
		9/10/2015	0.00	5.28	0.00	507.36	507.36	NS	NS	NS	NS	NS	NS	NS	NS	NS
		10/6/2015	0.00	5.62	0.00	507.02	507.02	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0
		1/14/2016	0.00	5.24	0.00	507.40	507.40	NS	NS	NS	NS	NS	NS	NS	NS	NS
		4/6/2016	0.00	2.45	0.00	510.19	510.19	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-3	511.61	3/9/2015	0.00	3.38	0.00	508.23	508.23	180	1,100	33 J	< 25	140 J	14,000	670	180	6,500
		4/1/2015	0.00	2.96	0.00	508.65	508.65	270	1,600	49.0	< 5	240	17,000	1100	310	9,000
		6/25/2015	0.00	3.44	0.00	508.17	508.17	NS	NS	NS	NS	NS	NS	NS	NS	NS
		7/9/2015	0.00	3.61	0.00	508.00	508.00	141	1,400	50.8	< 5.0	254	11,100	866	252	6,840
		9/10/2015	0.00	5.34	0.00	506.27	506.27	NS	NS	NS	NS	NS	NS	NS	NS	NS
		10/6/2015	0.00	5.26	0.00	506.35	506.35	42.7	430	21.5	< 5.0	88.7	3,890	292	111	1,610
		1/14/2016	0.00	4.91	0.00	506.70	506.70	88.5	802	20.8	< 0.5	116	6,550	337	93.3	4,020
		4/6/2016	0.00	2.55	0.00	509.06	509.06	160	1,110	42.8	1.3	196	8,400	514	197	4,750
MW-4	511.96	3/9/2015	0.00	3.94	0.00	508.02	508.02	580	2,500	63.0	< 5.0	310	7,300	1,400	400	9,900
		4/1/2015	0.00	3.37	0.00	508.59	508.59	1,000	2,200	67.0	< 5.0	310	9,000	1,500	440	9,200
		6/25/2015	4.07	4.22	0.15	507.74	507.64	NS	NS	NS	NS	NS	NS	NS	NS	NS
		7/9/2015	4.25	4.37	0.12	507.59	507.51	237	1,330	65.8	< 5.0	346	2,280	1,550	406	7,320
		9/10/2015	0.00	6.27	0.00	505.69	505.69	NS	NS	NS	NS	NS	NS	NS	NS	NS
		10/6/2015	0.00	6.04	0.00	505.92	505.92	1,760	1,600	68.1	< 5.0	199	8,610	857	228	6,180
		1/14/2016	0.00	5.81	0.00	506.15	506.15	1,790	1,290	36.5	< 0.5	129	8,710	725	220	5,860
		4/6/2016	0.00	3.08	0.00	508.88	508.88	1,170	2,820	79.5	1.9	313	4,870	1,970	2,180	9,430
MW-5	510.57	3/9/2015	0.00	3.44	0.00	507.13	507.13	1,100	740	25 J	15 J	100	1,900	280	68	1,600
		4/1/2015	0.00	2.94	0.00	507.63	507.63	1,700	1300	42	21	190	3,500	500	130	3,000
		6/25/2015	0.00	3.37	0.00	507.20	507.20	NS	NS	NS	NS	NS	NS	NS	NS	NS
		7/9/2015	0.00	3.54	0.00	507.03	507.03	2,620	1,580	58.2	< 5.0	306	9,020	1,090	284	8,260
		9/10/2015	0.00	5.09	0.00	505.48	505.48	NS	NS	NS	NS	NS	NS	NS	NS	NS
		10/6/2015	0.00	4.86	0.00	505.71	505.71	1,040	694	21.7	9.0	86.8	1,550	299	77.3	1,650
		1/14/2016	0.00	4.60	0.00	505.97	505.97	187	94.7	5.6	4.1	21.8	6.4	56.8	17.9	151
		4/6/2016	0.00	4.61	0.00	505.96	505.96	594	304	12.5	10.6	36.7	155	156	35.2	643
MW-6	509.57	6/25/2015	0.00	2.00	0.00	507.57	507.57	NS	NS	NS	NS	NS	NS	NS	NS	NS
		7/9/2015	0.00	1.90	0.00	507.67	507.67	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0
		9/10/2015	0.00	3.90	0.00	505.67	505.67	NS	NS	NS	NS	NS	NS	NS	NS	NS
		10/6/2015	0.00	3.42	0.00	506.15	506.15	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0
		1/14/2016	0.00	2.70	0.00	506.87	506.87	NS	NS	NS	NS	NS	NS	NS	NS	NS
		4/6/2016	0.00	4.54	0.00	505.03	505.03	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-7	511.31	6/25/2015	0.00	4.37	0.00	506.94	506.94	NS	NS	NS	NS	NS	NS	NS	NS	NS
		7/9/2015	0.00	4.47	0.00	506.84	506.84	1,820	1,300	59.3	< 0.5	352	3,200	1,060	275	7,940
		9/10/2015	0.00	6.55	0.00	504.76	504.76	NS	NS	NS	NS	NS	NS	NS	NS	NS
		10/6/2015	0.00	6.20	0.00	505.11	505.11	514	728	53.4	< 0.5	240	741	622	169	3,050
		1/14/2016	0.00	5.96	0.00	505.35	505.35	692	681	50.0	< 0.5	171	784	623	167	3,760
		4/6/2016	0.00	4.33	0.00	506.98	506.98	2,770	2,050	91.4	0.9	389	< 0.5	1,680	373	10,300

Table 3
Groundwater Sample Analytical Data Summary
Herr Foods, Inc. Nottingham Plant
RETTEW Project No. 101722001

		TOC Elev. (feet)	Depth to SPL (feet)	Depth to Water (feet)	SPL Thickness (feet)	Water Table Elev. (feet)	Adj. Water Table Elev. (feet)	Benzene	Ethylbenzene	Isopropylbenzene	MTBE	Naphthalene	Toluene	1,2,4-TMB	1,3,5-TMB	Xylenes
Well		Date														
MW-8	508.04	6/25/2015	0.00	2.86	0.00	505.18	505.18	NS	NS	NS	NS	NS	NS	NS	NS	NS
		7/9/2015	0.00	2.89	0.00	505.15	505.15	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0
		9/10/2015	0.00	4.15	0.00	503.89	503.89	NS	NS	NS	NS	NS	NS	NS	NS	NS
		10/6/2015	0.00	3.84	0.00	504.20	504.20	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0
		1/14/2016	0.00	3.23	0.00	504.81	504.81	NS	NS	NS	NS	NS	NS	NS	NS	NS
		4/6/2016	0.00	3.70	0.00	504.34	504.34	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-9	508.62	6/25/2015	0.00	2.31	0.00	506.31	506.31	NS	NS	NS	NS	NS	NS	NS	NS	NS
		7/9/2015	0.00	2.55	0.00	506.07	506.07	4.8	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.4	< 0.5	2
		9/10/2015	0.00	4.49	0.00	504.13	504.13	NS	NS	NS	NS	NS	NS	NS	NS	NS
		10/6/2015	0.00	4.16	0.00	504.46	504.46	2.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0
		1/14/2016	0.00	3.94	0.00	504.68	504.68	5.4	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.7	< 0.5	< 1.0
		4/6/2016	0.00	2.05	0.00	506.57	506.57	5.3	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0
MW-10	508.03	6/25/2015	0.00	4.22	0.00	503.81	503.81	NS	NS	NS	NS	NS	NS	NS	NS	NS
		7/9/2015	0.00	3.05	0.00	504.98	504.98	1,450	23	13.2	122	59.1	11	0.7	0.8	17
		9/10/2015	0.00	5.51	0.00	502.52	502.52	NS	NS	NS	NS	NS	NS	NS	NS	NS
		10/6/2015	0.00	4.88	0.00	503.15	503.15	2,040	< 50	< 50	91	< 50	< 50	< 50	< 50	< 100
		1/14/2016	0.00	4.01	0.00	504.02	504.02	2,190	13.6	22.6	114	75.4	43.6	3.9	3.2	42.2
		4/6/2016	0.00	3.63	0.00	504.40	504.40	2,050	10.4	28.0	122	62.6	22.3	3.0	4.0	23.9
MW-11	500.78	1/14/2016	0.00	0.24	0.00	500.54	500.54	0.9	< 0.5	< 0.5	137	< 0.5	0.6	< 0.5	< 0.5	< 1.0
		4/6/2016	0.00	0.34*	0.00	501.31	501.31	19.4	< 0.5	< 0.5	19.4	0.7	< 0.5	< 0.5	< 0.5	< 1.0
MW-12	489.67	1/14/2016	0.00	2.20	0.00	487.47	487.47	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0
		4/6/2016	0.00	2.09	0.00	487.58	487.58	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0
MW-13	486.88	1/14/2016	0.00	3.41	0.00	483.47	483.47	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0
		4/6/2016	0.00	3.98	0.00	482.90	482.90	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0
Former Supply Well	511.21	6/25/2015	0.00	5.08	0.00	506.13	506.13	NS	NS	NS	NS	NS	NS	NS	NS	NS
		7/9/2015	0.00	5.19	0.00	506.02	506.02	NS	NS	NS	NS	NS	NS	NS	NS	NS
		9/10/2015	0.00	6.61	0.00	504.60	504.60	NS	NS	NS	NS	NS	NS	NS	NS	NS
		10/6/2015	0.00	6.28	0.00	504.93	504.93	NS	NS	NS	NS	NS	NS	NS	NS	NS
		1/14/2016	0.00	5.09	0.00	506.12	506.12	NS	NS	NS	NS	NS	NS	NS	NS	NS
		4/6/2016	0.00	5.31	0.00	505.90	505.90	2,310	1,280	33.4	47.5	118	4,730	518	120	3,160
End Wall (Stream)	499.32	6/25/2015	0.00	3.55	0.00	495.77	495.77	NS	NS	NS	NS	NS	NS	NS	NS	NS
		7/9/2015	0.00	3.53	0.00	495.79	495.79	NS	NS	NS	NS	NS	NS	NS	NS	NS
		9/10/2015	0.00	3.44	0.00	495.88	495.88	NS	NS	NS	NS	NS	NS	NS	NS	NS
		10/6/2015	0.00	3.57	0.00	495.75	495.75	NS	NS	NS	NS	NS	NS	NS	NS	NS
		1/14/2016	0.00	5.39	0.00	493.93	493.93	NS	NS	NS	NS	NS	NS	NS	NS	NS
		4/6/2016	0.00	3.66	0.00	495.66	495.66	NS	NS	NS	NS	NS	NS	NS	NS	NS
Act 2 Statewide Health Standards for Used, Non-Residential Aquifers								5	700	3,500	20	100	1,000	62	53	10,000

Notes:

- 1) TOC = Top of casing.
- 2) SPL = Separate phase liquid.
- 3) All units in milligrams per kilogram (ug/l).
- 4) Shaded results represent an exceedence of the applicable non-residential Statewide Health Standard.
- 5) PADEP Short List petroleum products in italics are COPIACS.
- 6) J = Estimated concentration detected between the method detection limit and the limit of quantitation.
- 7) NS = Not sampled.
- 8) Adjusted water table elevation based on an assumed SPL specific gravity of 0.58.
- * Water level measured from the top of the protective casing (elevation 501.65) due to static water above TOC.

Table 4
Groundwater Trend Analysis
Herr Foods, Inc. Nottingham Plant
RETTEW Project No. 101722001

Parameter	MW-3			MW-4			MW-5			MW-7			MW-10		
	Trend	R ² Value	Variation	Trend	R ² Value	Variation	Trend	R ² Value	Variation	Trend	R ² Value	Variation	Trend	R ² Value	Variation
Benzene	Decreasing	28.55%	High	Increasing	33.67%	Moderate	Decreasing	36.62%	Moderate	Increasing	12.65%	High	Increasing	59.69%	Moderate
Toluene	Decreasing	55.99%	Low	Decreasing	1.74%	High	Decreasing	23.48%	High	Decreasing	77.58%	Low	Insufficient Data		
Ethylbenzene	Decreasing	22.50%	Moderate	Decreasing	0.07%	High	Decreasing	49.44%	Moderate	Increasing	18.20%	High	Insufficient Data		
Naphthalene	Decreasing	7.29%	High	Decreasing	19.47%	High	Decreasing	34.75%	Moderate	Increasing	0.09%	High	Insufficient Data		
1,2,4-TMB	Decreasing	46.39%	Moderate	Decreasing	0.06%	High	Decreasing	21.15%	High	Increasing	21.38%	High	Insufficient Data		
1,3,5-TMB	Decreasing	27.77%	High	Increasing	34.36%	Moderate	Decreasing	20.77%	High	Increasing	13.30%	High	Insufficient Data		
Xylenes	Decreasing	40.24%	Moderate	Decreasing	14.20%	High	Decreasing	17.64%	High	Increasing	7.68%	High	Insufficient Data		
MTBE	Insufficient Data			Insufficient Data			Decreasing	21.15%	High	Insufficient Data			Increasing	4.40%	High

NOTES:

- 1) High variation defined as an R-squared value in the range of 0 to 30%.
- 2) Moderate variation defined as an R-squared value in the range of 30% to 60%.
- 3) Low variation defined as an R-squared value in the range of 60% to 100%.

APPENDIX A
1997 UST Closure Report and Supporting Documentation

ATTACHMENT 4

DEP-RECEIVED
SOUTHEAST REGION
JUL 25 1997COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF LAND RECYCLING AND WASTE MANAGEMENTUNDERGROUND STORAGE TANK SYSTEM
CLOSURE REPORT FORM**15-24418**

Facility I.D.

W. Nottingham**Chester**

Municipality

County

7/2/97

Date Prepared

Michael WilliamsName of Person Submitting Report
(Please Print)**Clayton Services Corporation**Company Name
(If Applicable)**Project Manager**

Title

Closure Method (Check all that apply):

- ☒ Removal
- ☐ Closure-In-Place
- ☐ Change-In-Service

Site Assessment Results (Check all that apply):

- ☐ No Obvious Contamination - Sample Results Meet Standards/Levels
- ☐ No Obvious Contamination - Sample Results Do Not Meet Standards/Levels
- ☒ Obvious, Localized Contamination - Sample Results Meet Standards/Levels
- ☒ Obvious, Localized Contamination - Sample Results Do Not Meet Standards/Levels - SOME
- ☐ Obvious, Extensive Contamination

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF LAND RECYCLING AND WASTE MANAGEMENT

UNDERGROUND STORAGE TANK SYSTEM CLOSURE REPORT FORM

Owners who are permanently closing underground storage tanks may use this form to demonstrate that an underground storage tank closure was performed in accordance with the "Closure Requirements For Underground Storage Tank Systems" document. PLEASE PRINT OR TYPE. COMPLETE ALL QUESTIONS.

SECTION I. Owner/Facility/Tank/Waste Management and Disposal Information

1. Facility ID Number 15-24418
2. Facility Name Herr Foods Inc.
3. Facility County Chester
4. Facility Municipality W. Nottingham
5. Facility Address Route 272 & Herr Drive, PO Box 300, Nottingham, PA 19362
6. Facility Contact Person Steve Moran
7. Facility Telephone Number (610)9326500
8. Owner Name Herr Foods Inc.
9. Owner Mailing Address PO Box 300, Nottingham, PA 19362
10. Description of Underground Storage Tanks (Complete for each tank closed)

DATE OF TANK CLOSURE (Month/Day/Year)		5/28/97	5/28/97	6/4/97	6/4/97
Tank Registration Number		003	004	005	006
Estimated Total Capacity (Gallons)		4000	4000	15000	12000
Substance(s) Stored Throughout Operating Life of Tank (Check All That Apply)	a. Petroleum				
	Unleaded Gasoline	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Leaded Gasoline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Aviation Gasoline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Kerosene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Jet Fuel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Diesel Fuel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Fuel Oil No. 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Fuel Oil No. 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Fuel Oil No. 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Fuel Oil No. 5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Fuel Oil No. 6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	New Motor Oil	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Used Motor Oil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Other, Please Specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NOTE: If Hazardous Substance Block is Checked, Attach Material Safety Data Sheets (MSDS)	b. Hazardous Substance				
	Name of Principal CERCLA Substance				
	AND Chemical Abstract Service (CAS) No.				
	c. Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Closure Method (Check Only One)	a. Removal	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	b. Closure-in-Place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	c. Change-in-Service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Partial System Closure (Yes or No)					

DATE OF TANK CLOSURE (Month/Day/Year)		5/28/97			
Tank Registration Number		007			
Estimated Total Capacity (Gallons)		1000			
Substance(s) Stored Throughout Operating Life of Tank (Check All That Apply)	a. Petroleum				
	Unleaded Gasoline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Leaded Gasoline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Aviation Gasoline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Kerosene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Jet Fuel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Diesel Fuel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Fuel Oil No. 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Fuel Oil No. 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Fuel Oil No. 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Fuel Oil No. 5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Fuel Oil No. 6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	New Motor Oil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Used Motor Oil	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Other, Please Specify				
	b. Hazardous Substance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Name of Principal CERCLA Substance AND Chemical Abstract Service (CAS) No.				
	c. Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Closure Method (Check Only One)	a. Removal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	b. Closure-in-Place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	c. Change-in-Service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Partial System Closure (Yes or No)					

Yes N/A

11. Briefly describe the storage tank facility and the nature of the operations which were conducted at the facility (both historical and present) including use of tanks: **Herr Foods Inc. is a potato chip, pretzel and other snack food manufacturer. The facility was a farm prior to the current use.**

☒ 12. A site location and sampling map of the site, drawn to scale, is attached. See page 11 of 11.

☒ 13. Original, color photographs of the closure process are attached (i.e., inside of excavation/piping runs, pit water, tanks showing condition).

☒ 14. An amended "Registration of Storage Tanks" form was submitted to the DEP, Bureau of Water Quality Management, Division of Storage Tanks, P.O. Box 8762, Harrisburg, PA 17105-8762.

Date: **6/16/97**

☒ ☐ 15. If a reportable release was confirmed, the appropriate regional office of DEP was notified by the owner or operator.

Date: **6/6/97**

Office: **Southeast Regional**

Yes N/A

☒ ☐ 16. If tanks were cleaned on-site:

- a. Briefly describe the disposition of usable product: All usable product was utilized by the owner prior to tank cleaning and removal.
- b. Briefly describe the disposal of unusable product, sludges, sediments, and wastewater generated during cleaning. Provide the name and permit number of the processing, treatment, storage or disposal facility. (Attach documentation of proper disposal): All tank liquids and bottom sediments were transported by Associated Environmental Technologies (MD2000006908) and transported to Internation Petroleum Corporation as Non-hazardous waste (MDD 985389816). Documentation attached.
- c. If tank contents were determined/deemed to be hazardous waste, provide:
 - (1) Generator ID Number: N/A
 - (2) Licensed Hazardous Waste Transporter Name and ID Number: N/A

☐ ☒ 17. If tanks were removed from the site for cleaning:

- a. Provide the name and permit number of the processing, treatment, storage or disposal facility performing the tank cleaning:
- b. If tank contents were determined/deemed to be hazardous waste, provide:
 - (1) Generator ID Number:
 - (2) Licensed Hazardous Waste Transporter Name and ID Number:

18. Briefly describe the disposition of tanks/piping (Attach documentation of proper disposal): All tanks and associated piping were transported by Zadinsky Contractors for ultimate disposal at Luria Brothers located in Modena, PA. Proper docuemntation is attached.

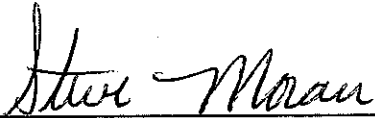
☒ ☐ 19. If contaminated soil is excavated:

- a. Briefly describe the disposition and amount approximately 1200 (tons) of contaminated soil. Provide the name and permit number of the processing, treatment, storage or disposal facility. (Attach documentation of proper disposal): All excavated contaminated soil is properly stockpiled under plastic awaiting disposal at a licensed recycling facility. Proper disposal documentation will be forwarded when completed.
- b. If contaminated soil is determined/deemed to be hazardous waste, provide:
 - (1) Generator ID Number:
 - (2) Licensed Hazardous Waste Transporter Name and ID Number:

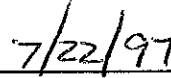
Yes N/A

- ☒ ☐ 20. Briefly describe the disposition of and amount 15 (tons) of uncontaminated soil (attach analyses):
Approximately 15 tons of uncontaminated soil was backfilled into the waste oil UST excavation. Backfilling was completed after excavation and piping samples did not reveal impact from the removed UST. No backfill sample was required as per PADEP Technical Document, Page 17, section C.

I, STEVE MORAN, hereby certify, under penalty of law as provided in 18 Pa. C.S. S4904 (relating to unsworn falsification to authorities) that I am the owner of the above referenced storage tank(s) and that the information provided by me in this closure report (Section I) is true, accurate and complete to the best of my knowledge and belief.



Signature of Tank Owner



Date

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF LAND RECYCLING AND WASTE MANAGEMENT

UNDERGROUND STORAGE TANK SYSTEM
CLOSURE REPORT FORM

SECTION II. Tank Handling Information

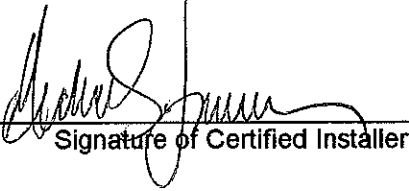
Facility ID Number 15-24418

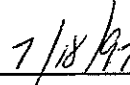
Yes N/A

1. Briefly describe the excavation and initial on-site staging of uncontaminated/contaminated soil:
All excavated soils were placed under 6mil plastic awaiting testing and disposal options.
2. Briefly describe the method of piping system closure and the closure of the piping systems including the quantity and condition of the piping:
All piping systems were drained back to their respective tanks and any residuals were then vacuumed out. Upon removal, all piping exhibited external corrosion with the piping associated with Tanks 005 & 006 being suspect at unions and connections under pumps. No visible holes were observed in any piping.
3. Briefly describe the condition of the tanks and any problems encountered during tank removal:
All tanks exhibited external corrosion and minor pitting upon inspection. Tank 005 (unl gas) exhibited several weep holes along the entire bottom. Tank 006 exhibited several holes along the bottom centerline of the tank.
4. Briefly describe the method used to purge the tanks of and monitor for explosive vapors:
Tanks were vacuumed out, purged with an air eductor (venturi) and monitored with an LEL/O2 meter prior to, during, and after cleaning..
- ☒ ☐ 5. If tanks were cleaned on-site:
 - a. Briefly describe the tank cleaning process: The tanks were vacuumed out, squeegeed clean, and rag wiped dry with absorbent material.
 - b. If subcontracted, name and address of company that performed the tank cleaning:
- ☐ ☒ 6. If tanks were closed-in-place, briefly describe the tank fill material:
- ☒ ☐ 7. If contamination was suspected or observed, the "Notification of Contamination" form was submitted.

SECTION II. (continued)

I, **Michael Donovan**, hereby certify, under penalty of law as provided in 18 PA. C.S. S4904 (relating to unsworn falsification to authorities) that I am the certified installer who performed the tank handling activities associated with the closure of the above referenced storage tank(s) and that the information provided by me in this closure report (Section II) is true, accurate and complete to the best of my knowledge and belief.



Signature of Certified Installer

Date2830

Installer Certification Number36

Company Certification NumberEnercon Services, Inc.

Company NamePO Box 174

StreetBear, DE 19701

City/Town, State, Zip302-834-9402

Phone

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF LAND RECYCLING AND WASTE MANAGEMENT

UNDERGROUND STORAGE TANK SYSTEM CLOSURE REPORT FORM

SECTION III. Site Assessment Information

Tank Registration # 003 (complete one sheet for EACH tank system and attach ALL laboratory sheets pertaining to that system)

Facility ID Number

- A. Provide depth of **BEDROCK** and **WATER** IF encountered during excavation or soil boring (write "N/A" if NOT encountered).

Bedrock N/A feet below land surface

Water N/A feet below land surface

- B. Provide Length of **PIPING** IF piping was closed-in-place (write "N/A" if NOT closed-in-place).
Length of piping N/A feet

C. TANK SYSTEM REMOVED FROM THE GROUND

- 1) Was obvious contamination observed while excavating?

☒ NO ----- Conduct confirmatory sampling ----- See end of this section for options on submission and maintenance of closure records----- Do not complete item C.2. below.

☐ YES ----- Report release to DEP within 2 hours ----- Describe contamination observed and likely source(s) (tank, piping, dispenser, spills, overfills): ----- Complete item C.2. below.

- 2) Was contamination localized (within three feet of the tank system in every direction with no obvious water contamination)?

☐ YES ----- Remove or remediate contaminated soil ----- Conduct confirmatory sampling ----- See end of this section for options on submission and maintenance of closure records----- Call Indemnification Fund (717-787-0763).

☐ NO ----- Continue interim remedial actions ----- See end of this section for options on submission and maintenance of closure records ----- Call Indemnification Fund (717-787-0763).

D. TANK SYSTEM CLOSED-IN-PLACE OR CHANGED-IN-SERVICE

Was obvious contamination observed during sampling, boring or assessing water depths?

☐ NO ----- Conduct confirmatory sampling ----- See end of this section for options on submission and maintenance of closure records.

☐ YES ----- Report release to DEP within 2 hours ----- Describe contamination observed and likely sources (i.e., tank, piping, dispenser, spills, overfills): ----- Continue with corrective action ----- See end of this section for options on submission and maintenance of closure records ----- Call Indemnification Fund (717-787-0763).

- E. If the answer to C.1. is "no", the answer to C.2. is "yes" or the answer to D. is "no", confirmatory samples are required. Use the sample/analysis information sheet on page 10 of 11 to provide the information on confirmatory sampling and complete the diagram on Page 11 of 11.

Options for Submission and Maintenance of Closure Site Assessment Records

Records of the site assessment must be maintained for at least three years after completion of permanent closure or change-in-service in one of the following ways:

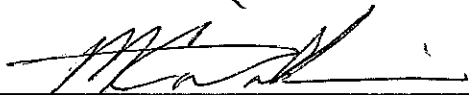
- (a) By the owners and operators who took the UST system out of service;
- (b) By the current owners and operators of the UST system site; or
- (c) By mailing these records to the implementing agency if they cannot be maintained at the closed facility.

At least one option must be chosen. If option (c) is chosen, the closure report form should be sent to the DEP regional office responsible for the county in which the tank was located.

Where the results of the site assessment indicate that obvious, localized soil contamination was encountered and the analytical results of the confirmatory sampling show levels below the statewide standard/action levels, this closure report form (Sections I, II, and III) or some other acceptable site characterization report must be received by the Department within 180 days of verbally reporting the release.

Where the results of the site assessment indicate that no obvious contamination or obvious, localized contamination was encountered, but the analytical results of the confirmatory sampling show levels above the statewide standard/action levels, or where there is obvious, extensive contamination, Section 245.310(a)(8) of the CAP regulation requires that details of removal from service be included in the site characterization report. A copy of the completed closure report form should be submitted as part of the site characterization report to satisfy the requirements of Section 245.310(a)(8) of the CAP regulations.

I, Michael Williams, hereby certify, under penalty of law as provided in 18 Pa. C.S. S4904 (relating to unsworn falsification to authorities) that I am the person who performed the site assessment activities associated with the closure of the above referenced storage tank(s) and that the information provided by me in this closure report (Section III) is true, accurate and complete to the best of my knowledge and belief.



Signature of Person Performing Site Assessment

7/7/97

Date

Project Manager

Title of Person Performing Site Assessment

Clayton Services Corporation

Name of Company Performing Site Assessment

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF LAND RECYCLING AND WASTE MANAGEMENT

UNDERGROUND STORAGE TANK SYSTEM CLOSURE REPORT FORM

SECTION III. Site Assessment Information

Tank Registration # 604 (complete one sheet for EACH tank system and attach ALL laboratory sheets pertaining to that system)

Facility ID Number

- A. Provide depth of **BEDROCK** and **WATER** IF encountered during excavation or soil boring (write "N/A" if NOT encountered).

Bedrock N/A feet below land surface

Water N/A feet below land surface

- B. Provide Length of **PIPING** IF piping was closed-in-place (write "N/A" if NOT closed-in-place).
Length of piping N/A feet

C. TANK SYSTEM REMOVED FROM THE GROUND

- 1) Was obvious contamination observed while excavating?

☐ NO ——— Conduct confirmatory sampling ——— See end of this section for options on submission and maintenance of closure records ——— Do not complete item C.2. below.

☒ YES ——— Report release to DEP within 2 hours ——— Describe contamination observed and likely source(s) (tank, piping, dispenser, spills, overfills): Complete item C.2. below.
Elevated field readings. Appeared to have migrated from TANK GAS Dispenser

- 2) Was contamination localized (within three feet of the tank system in every direction with no obvious water contamination)?

☒ YES ——— Remove or remediate contaminated soil ——— Conduct confirmatory sampling ——— See end of this section for options on submission and maintenance of closure records ——— Call Indemnification Fund (717-787-0763).

☐ NO ——— Continue interim remedial actions ——— See end of this section for options on submission and maintenance of closure records ——— Call Indemnification Fund (717-787-0763).

D. TANK SYSTEM CLOSED-IN-PLACE OR CHANGED-IN-SERVICE

Was obvious contamination observed during sampling, boring or assessing water depths?

☐ NO ——— Conduct confirmatory sampling ——— See end of this section for options on submission and maintenance of closure records.

☐ YES ——— Report release to DEP within 2 hours ——— Describe contamination observed and likely sources (i.e., tank, piping, dispenser, spills, overfills): Continue with corrective action
See end of this section for options on submission and maintenance of closure records ——— Call Indemnification Fund (717-787-0763).

E. If the answer to C.1. is "no", the answer to C.2. is "yes" or the answer to D. is "no", confirmatory samples are required. Use the sample/analysis information sheet on page 10 of 11 to provide the information on confirmatory sampling and complete the diagram on Page 11 of 11.

Options for Submission and Maintenance of Closure Site Assessment Records

Records of the site assessment must be maintained for at least three years after completion of permanent closure or change-in-service in one of the following ways:

- (a) By the owners and operators who took the UST system out of service;
- (b) By the current owners and operators of the UST system site; or
- (c) By mailing these records to the implementing agency if they cannot be maintained at the closed facility.

At least one option must be chosen. If option (c) is chosen, the closure report form should be sent to the DEP regional office responsible for the county in which the tank was located.

Where the results of the site assessment indicate that obvious, localized soil contamination was encountered and the analytical results of the confirmatory sampling show levels below the statewide standard/action levels, this closure report form (Sections I, II, and III) or some other acceptable site characterization report must be received by the Department within 180 days of verbally reporting the release.

Where the results of the site assessment indicate that no obvious contamination or obvious, localized contamination was encountered, but the analytical results of the confirmatory sampling show levels above the statewide standard/action levels, or where there is obvious, extensive contamination, Section 245.310(a)(8) of the CAP regulation requires that details of removal from service be included in the site characterization report. A copy of the completed closure report form should be submitted as part of the site characterization report to satisfy the requirements of Section 245.310(a)(8) of the CAP regulations.

I, Michael Williams, hereby certify, under penalty of law as provided in 18 Pa. C.S. S4904 (relating to unsworn falsification to authorities) that I am the person who performed the site assessment activities associated with the closure of the above referenced storage tank(s) and that the information provided by me in this closure report (Section III) is true, accurate and complete to the best of my knowledge and belief.



Signature of Person Performing Site Assessment

7/7/97

Date

Project Manager

Title of Person Performing Site Assessment

Clayton Services Corporation

Name of Company Performing Site Assessment

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF LAND RECYCLING AND WASTE MANAGEMENT

UNDERGROUND STORAGE TANK SYSTEM CLOSURE REPORT FORM

SECTION III. Site Assessment Information

Tank Registration # 005 (complete one sheet for EACH tank system and attach ALL laboratory sheets pertaining to that system)

Facility ID Number

- A. Provide depth of **BEDROCK** and **WATER** IF encountered during excavation or soil boring (write "N/A" if NOT encountered).

Bedrock N/A feet below land surface

Water N/A feet below land surface

- B. Provide Length of **PIPING** IF piping was closed-in-place (write "N/A" if NOT closed-in-place).
Length of piping N/A feet

C. TANK SYSTEM REMOVED FROM THE GROUND

- 1) Was obvious contamination observed while excavating?

☐ NO ----- Conduct confirmatory sampling ----- See end of this section for options on submission and maintenance of closure records----- Do not complete item C.2. below.

☒ YES ----- Report release to DEP within 2 hours ----- Describe contamination observed and likely source(s) (tank, piping, dispenser, spills, overfills): ----- Complete item C.2. below.

- Weep holes in Tank Seams

- 2) Was contamination localized (within three feet of the tank system in every direction with no obvious water contamination)?

☒ YES ----- Remove or remediate contaminated soil ----- Conduct confirmatory sampling ----- See end of this section for options on submission and maintenance of closure records----- Call Indemnification Fund (717-787-0763).

☐ NO ----- Continue interim remedial actions ----- See end of this section for options on submission and maintenance of closure records ----- Call Indemnification Fund (717-787-0763).

D. TANK SYSTEM CLOSED-IN-PLACE OR CHANGED-IN-SERVICE

Was obvious contamination observed during sampling, boring or assessing water depths?

☐ NO ----- Conduct confirmatory sampling ----- See end of this section for options on submission and maintenance of closure records.

☐ YES ----- Report release to DEP within 2 hours ----- Describe contamination observed and likely sources (i.e., tank, piping, dispenser, spills, overfills): ----- Continue with corrective action ----- See end of this section for options on submission and maintenance of closure records ----- Call Indemnification Fund (717-787-0763).

E. If the answer to C.1. is "no", the answer to C.2. is "yes" or the answer to D. is "no", confirmatory samples are required. Use the sample/analysis information sheet on page 10 of 11 to provide the information on confirmatory sampling and complete the diagram on Page 11 of 11.

Options for Submission and Maintenance of Closure Site Assessment Records

Records of the site assessment must be maintained for at least three years after completion of permanent closure or change-in-service in one of the following ways:

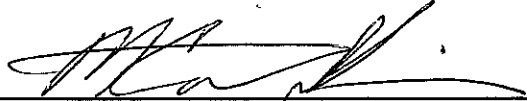
- (a) By the owners and operators who took the UST system out of service;
- (b) By the current owners and operators of the UST system site; or
- (c) By mailing these records to the implementing agency if they cannot be maintained at the closed facility.

At least one option must be chosen. If option (c) is chosen, the closure report form should be sent to the DEP regional office responsible for the county in which the tank was located.

Where the results of the site assessment indicate that obvious, localized soil contamination was encountered and the analytical results of the confirmatory sampling show levels below the statewide standard/action levels, this closure report form (Sections I, II, and III) or some other acceptable site characterization report must be received by the Department within 180 days of verbally reporting the release.

Where the results of the site assessment indicate that no obvious contamination or obvious, localized contamination was encountered, but the analytical results of the confirmatory sampling show levels above the statewide standard/action levels, or where there is obvious, extensive contamination, Section 245.310(a)(8) of the CAP regulation requires that details of removal from service be included in the site characterization report. A copy of the completed closure report form should be submitted as part of the site characterization report to satisfy the requirements of Section 245.310(a)(8) of the CAP regulations.

I, Michael Williams, hereby certify, under penalty of law as provided in 18 Pa. C.S. S4904 (relating to unsworn falsification to authorities) that I am the person who performed the site assessment activities associated with the closure of the above referenced storage tank(s) and that the information provided by me in this closure report (Section III) is true, accurate and complete to the best of my knowledge and belief.



Signature of Person Performing Site Assessment

7/7/97

Date

Project Manager

Title of Person Performing Site Assessment

Clayton Services Corporation

Name of Company Performing Site Assessment

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF LAND RECYCLING AND WASTE MANAGEMENT

UNDERGROUND STORAGE TANK SYSTEM CLOSURE REPORT FORM

SECTION III. Site Assessment Information

Tank Registration # 006 (complete one sheet for EACH tank system and attach ALL laboratory sheets pertaining to that system)

Facility ID Number

- A. Provide depth of **BEDROCK** and **WATER** IF encountered during excavation or soil boring (write "N/A" if NOT encountered).

Bedrock N/A feet below land surface

Water N/A feet below land surface

- B. Provide Length of **PIPING** IF piping was closed-in-place (write "N/A" if NOT closed-in-place).
Length of piping N/A feet

C. TANK SYSTEM REMOVED FROM THE GROUND

- 1) Was obvious contamination observed while excavating?

☐ NO ——— Conduct confirmatory sampling ——— See end of this section for options on submission and maintenance of closure records ——— Do not complete item C.2. below.

☒ YES ——— Report release to DEP within 2 hours ——— Describe contamination observed and likely source(s) (tank, piping, dispenser, spills, overfills): _____ Complete item C.2. below.
- Holes in bottom of tank.

- 2) Was contamination localized (within three feet of the tank system in every direction with no obvious water contamination)?

☒ YES ——— Remove or remediate contaminated soil ——— Conduct confirmatory sampling ——— See end of this section for options on submission and maintenance of closure records ——— Call Indemnification Fund (717-787-0763).

☐ NO ——— Continue interim remedial actions ——— See end of this section for options on submission and maintenance of closure records ——— Call Indemnification Fund (717-787-0763).

D. TANK SYSTEM CLOSED-IN-PLACE OR CHANGED-IN-SERVICE

Was obvious contamination observed during sampling, boring or assessing water depths?

☐ NO ——— Conduct confirmatory sampling ——— See end of this section for options on submission and maintenance of closure records.

☐ YES ——— Report release to DEP within 2 hours ——— Describe contamination observed and likely sources (i.e., tank, piping, dispenser, spills, overfills): _____ Continue with corrective action ——— See end of this section for options on submission and maintenance of closure records ——— Call Indemnification Fund (717-787-0763).

E. If the answer to C.1. is "no", the answer to C.2. is "yes" or the answer to D. is "no", confirmatory samples are required. Use the sample/analysis information sheet on page 10 of 11 to provide the information on confirmatory sampling and complete the diagram on Page 11 of 11.

Options for Submission and Maintenance of Closure Site Assessment Records

Records of the site assessment must be maintained for at least three years after completion of permanent closure or change-in-service in one of the following ways:

- (a) By the owners and operators who took the UST system out of service;
- (b) By the current owners and operators of the UST system site; or
- (c) By mailing these records to the implementing agency if they cannot be maintained at the closed facility.

At least one option must be chosen. If option (c) is chosen, the closure report form should be sent to the DEP regional office responsible for the county in which the tank was located.

Where the results of the site assessment indicate that obvious, localized soil contamination was encountered and the analytical results of the confirmatory sampling show levels below the statewide standard/action levels, this closure report form (Sections I, II, and III) or some other acceptable site characterization report must be received by the Department within 180 days of verbally reporting the release.

Where the results of the site assessment indicate that no obvious contamination or obvious, localized contamination was encountered, but the analytical results of the confirmatory sampling show levels above the statewide standard/action levels, or where there is obvious, extensive contamination, Section 245.310(a)(8) of the CAP regulation requires that details of removal from service be included in the site characterization report. A copy of the completed closure report form should be submitted as part of the site characterization report to satisfy the requirements of Section 245.310(a)(8) of the CAP regulations.

I, Michael Williams, hereby certify, under penalty of law as provided in 18 Pa. C.S. S4904 (relating to unsworn falsification to authorities) that I am the person who performed the site assessment activities associated with the closure of the above referenced storage tank(s) and that the information provided by me in this closure report (Section III) is true, accurate and complete to the best of my knowledge and belief.



Signature of Person Performing Site Assessment

7/7/97

Date

Project Manager

Title of Person Performing Site Assessment

Clayton Services Corporation

Name of Company Performing Site Assessment

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF LAND RECYCLING AND WASTE MANAGEMENT

UNDERGROUND STORAGE TANK SYSTEM CLOSURE REPORT FORM

SECTION III. Site Assessment Information

Tank Registration # 607 (complete one sheet for EACH tank system and attach ALL laboratory sheets pertaining to that system)

Facility ID Number

- A. Provide depth of **BEDROCK** and **WATER** IF encountered during excavation or soil boring (write "N/A" if NOT encountered).

Bedrock N/A feet below land surface

Water N/A feet below land surface

- B. Provide Length of **PIPING** IF piping was closed-in-place (write "N/A" if NOT closed-in-place).
Length of piping N/A feet

C. TANK SYSTEM REMOVED FROM THE GROUND

- 1) Was obvious contamination observed while excavating?

☒ NO ——— Conduct confirmatory sampling ——— See end of this section for options on submission and maintenance of closure records ——— Do not complete item C.2. below.

☐ YES ——— Report release to DEP within 2 hours ——— Describe contamination observed and likely source(s) (tank, piping, dispenser, spills, overfills): _____ Complete item C.2. below.

- 2) Was contamination localized (within three feet of the tank system in every direction with no obvious water contamination)?

☐ YES ——— Remove or remediate contaminated soil ——— Conduct confirmatory sampling ——— See end of this section for options on submission and maintenance of closure records ——— Call Indemnification Fund (717-787-0763).

☐ NO ——— Continue interim remedial actions ——— See end of this section for options on submission and maintenance of closure records ——— Call Indemnification Fund (717-787-0763).

D. TANK SYSTEM CLOSED-IN-PLACE OR CHANGED-IN-SERVICE

Was obvious contamination observed during sampling, boring or assessing water depths?

☐ NO ——— Conduct confirmatory sampling ——— See end of this section for options on submission and maintenance of closure records.

☐ YES ——— Report release to DEP within 2 hours ——— Describe contamination observed and likely sources (i.e., tank, piping, dispenser, spills, overfills): _____ Continue with corrective action ——— See end of this section for options on submission and maintenance of closure records ——— Call Indemnification Fund (717-787-0763).

E. If the answer to C.1. is "no", the answer to C.2. is "yes" or the answer to D. is "no", confirmatory samples are required. Use the sample/analysis information sheet on page 10 of 11 to provide the information on confirmatory sampling and complete the diagram on Page 11 of 11.

Options for Submission and Maintenance of Closure Site Assessment Records

Records of the site assessment must be maintained for at least three years after completion of permanent closure or change-in-service in one of the following ways:

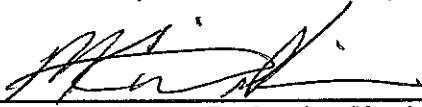
- (a) By the owners and operators who took the UST system out of service;
- (b) By the current owners and operators of the UST system site; or
- (c) By mailing these records to the implementing agency if they cannot be maintained at the closed facility.

At least one option must be chosen. If option (c) is chosen, the closure report form should be sent to the DEP regional office responsible for the county in which the tank was located.

Where the results of the site assessment indicate that obvious, localized soil contamination was encountered and the analytical results of the confirmatory sampling show levels below the statewide standard/action levels, this closure report form (Sections I, II, and III) or some other acceptable site characterization report must be received by the Department within 180 days of verbally reporting the release.

Where the results of the site assessment indicate that no obvious contamination or obvious, localized contamination was encountered, but the analytical results of the confirmatory sampling show levels above the statewide standard/action levels, or where there is obvious, extensive contamination, Section 245.310(a)(8) of the CAP regulation requires that details of removal from service be included in the site characterization report. A copy of the completed closure report form should be submitted as part of the site characterization report to satisfy the requirements of Section 245.310(a)(8) of the CAP regulations.

I, Michael Williams, hereby certify, under penalty of law as provided in 18 Pa. C.S. S4904 (relating to unsworn falsification to authorities) that I am the person who performed the site assessment activities associated with the closure of the above referenced storage tank(s) and that the information provided by me in this closure report (Section III) is true, accurate and complete to the best of my knowledge and belief.



Signature of Person Performing Site Assessment

7/7/97

Date

Project Manager

Title of Person Performing Site Assessment

Clayton Services Corporation

Name of Company Performing Site Assessment

UNDERGROUND STORAGE TANK CLOSURE REPORT FORM

SAMPLE/ANALYSIS INFORMATION (Attachment for Section III)

LOCATION: Herr Foods Inc., Route 272 & Herr Drive, Nottingham, PA

SAMPLE ID	PARAMETER	ANALYTIC METHOD	MEDIA	RESULTS (units)	DETECTION LIMIT (units)	DATE SAMPLE TAKEN	DATE SAMPLE ANALYZE
007-1	BENZENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	5/28/97	5/30/97
007-1	TOLUENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	5/28/97	5/30/97
007-1	XYLENES	EPA 8021A	SOIL	<.005ppm	.005 ppm	5/28/97	5/30/97
007-1	NAPHTHALENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	5/28/97	5/30/97
007-1	PYRENE	EPA 8270B	SOIL	<.03 ppm	.03 ppm	5/28/97	6/12/97
007-1	BENZO- FLUORANTHENE	EPA 8270B	SOIL	<.03 ppm	.03 ppm	5/28/97	6/12/97
007-1	BENZO- ANTHRACENE	EPA 8270B	SOIL	<.03 ppm	.03 ppm	5/28/97	6/12/97
007-1	BENZOPYRENE	EPA 8270B	SOIL	<.03 ppm	.03 ppm	5/28/97	6/12/97
007-1	INDENOPYRENE	EPA 8270B	SOIL	<.03 ppm	.03 ppm	5/28/97	6/12/97
007-1	BENZOPERYLENE	EPA 8270B	SOIL	<.03 ppm	.03 ppm	5/28/97	6/12/97
007-1	LEAD (TOTAL)	7421	SOIL	< 6 ppm	6 ppm	5/28/97	6/5/97

SAMPLE ID	PARAMETER	ANALYTIC METHOD	MEDIA	RESULTS (units)	DETECTION LIMIT (units)	DATE SAMPLE TAKEN	DATE SAMPLE ANALYZE
007-2	BENZENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	5/28/97	5/30/97
007-2	TOLUENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	5/28/97	5/30/97
007-2	XYLENES	EPA 8021A	SOIL	<.005ppm	.005 ppm	5/28/97	5/30/97
007-2	NAPHTHALENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	5/28/97	5/30/97
007-2	PYRENE	EPA 8270B	SOIL	<.03 ppm	.03 ppm	5/28/97	6/12/97
007-2	BENZO-FLUORANTHENE	EPA 8270B	SOIL	<.03 ppm	.03 ppm	5/28/97	6/12/97
007-2	BENZO-ANTHRACENE	EPA 8270B	SOIL	<.03 ppm	.03 ppm	5/28/97	6/12/97
007-2	BENZOPYRENE	EPA 8270B	SOIL	<.03 ppm	.03 ppm	5/28/97	6/12/97
007-2	INDENOPYRENE	EPA 8270B	SOIL	<.03 ppm	.03 ppm	5/28/97	6/12/97
007-2	BENZOPERYLENE	EPA 8270B	SOIL	<.03 ppm	.03 ppm	5/28/97	6/12/97
007-2	LEAD (TOTAL)	7421	SOIL	14 ppm	6 ppm	5/28/97	6/5/97

SAMPLE ID	PARAMETER	ANALYTIC METHOD	MEDIA	RESULTS (units)	DETECTION LIMIT (units)	DATE SAMPLE TAKEN	DATE SAMPLE ANALYZE
007-P	BENZENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	5/28/97	5/30/97
007-P	TOLUENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	5/28/97	5/30/97
007-P	XYLENES	EPA 8021A	SOIL	<.005ppm	.005 ppm	5/28/97	5/30/97
007-P	NAPHTHALENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	5/28/97	5/30/97
007-P	PYRENE	EPA 8270B	SOIL	<.03 ppm	.03 ppm	5/28/97	6/12/97
007-P	BENZO-FLUORANTHENE	EPA 8270B	SOIL	<.03 ppm	.03 ppm	5/28/97	6/12/97
007-P	BENZO-ANTHRACENE	EPA 8270B	SOIL	<.03 ppm	.03 ppm	5/28/97	6/12/97
007-P	BENZOPYRENE	EPA 8270B	SOIL	<.03 ppm	.03 ppm	5/28/97	6/12/97
007-P	INDENOPYRENE	EPA 8270B	SOIL	<.03 ppm	.03 ppm	5/28/97	6/12/97
007-P	BENZOPERYLENE	EPA 8270B	SOIL	<.03 ppm	.03 ppm	5/28/97	6/12/97
007-P	LEAD (TOTAL)	7421	SOIL	7 ppm	6 ppm	5/28/97	6/5/97

SAMPLE ID	PARAMETER	ANALYTIC METHOD	MEDIA	RESULTS (units)	DETECTION LIMIT (units)	DATE SAMPLE TAKEN	DATE SAMPLE ANALYZE
003-1	TPH	EPA 418.1	SOIL	<5 ppm	5 ppm	6/4/97	6/6/97

SAMPLE ID	PARAMETER	ANALYTIC METHOD	MEDIA	RESULTS (units)	DETECTION LIMIT (units)	DATE SAMPLE TAKEN	DATE SAMPLE ANALYZE
003-2	TPH	EPA 418.1	SOIL	<5 ppm	5 ppm	6/4/97	6/6/97

SAMPLE ID	PARAMETER	ANALYTIC METHOD	MEDIA	RESULTS (units)	DETECTION LIMIT (units)	DATE SAMPLE TAKEN	DATE SAMPLE ANALYZE
003-3	TPH	EPA 418.1	SOIL	<5 ppm	5 ppm	6/4/97	6/6/97

SAMPLE ID	PARAMETER	ANALYTIC METHOD	MEDIA	RESULTS (units)	DETECTION LIMIT (units)	DATE SAMPLE TAKEN	DATE SAMPLE ANALYZE
003-P	TPH	EPA 418.1	SOIL	<5 ppm	5 ppm	6/4/97	6/6/97

SAMPLE ID	PARAMETER	ANALYTIC METHOD	MEDIA	RESULTS (units)	DETECTION LIMIT (units)	DATE SAMPLE TAKEN	DATE SAMPLE ANALYZE
004-1	BENZENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
004-1	TOLUENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
004-1	ETHYLBENZENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
004-1	XYLENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
004-1	ISOPROPYLBENZENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
004-1	MTBE	EPA 8021A	SOIL	.014ppm	.005 ppm	6/4/97	6/13/97
004-1	NAPHTHALENE	EPA 8021A	SOIL	.024ppm	.005 ppm	6/4/97	6/13/97
004-1	BENZOANTHRACENE	EPA 8270	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97
004-1	BENZOPYRENE	EPA 8020	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97

SAMPLE ID	PARAMETER	ANALYTIC METHOD	MEDIA	RESULTS (units)	DETECTION LIMIT (units)	DATE SAMPLE TAKEN	DATE SAMPLE ANALYZE
004-2	BENZENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
004-2	TOLUENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
004-2	ETHYLBENZENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
004-2	XYLENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
004-2	ISOPROPYLBENZENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
004-2	MTBE	EPA 8021A	SOIL	2.8 ppm	.005 ppm	6/4/97	6/13/97
004-2	NAPHTHALENE	EPA 8021A	SOIL	.031 ppm	.005 ppm	6/4/97	6/13/97
004-2	BENZOANTHRACENE	EPA 8270	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97
004-2	BENZOPYRENE	EPA 8020	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97

SAMPLE ID	PARAMETER	ANALYTIC METHOD	MEDIA	RESULTS (units)	DETECTION LIMIT (units)	DATE SAMPLE TAKEN	DATE SAMPLE ANALYZE
004-3	BENZENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
004-3	TOLUENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
004-3	ETHYLBENZENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
004-3	XYLENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
004-3	ISOPROPYLBENZENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
004-3	MTBE	EPA 8021A	SOIL	.044 ppm	.005 ppm	6/4/97	6/13/97
004-3	NAPHTHALENE	EPA 8021A	SOIL	.018 ppm	.005 ppm	6/4/97	6/13/97
004-3	BENZOANTHRACENE	EPA 8270	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97
004-3	BENZOPYRENE	EPA 8020	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97

SAMPLE ID	PARAMETER	ANALYTIC METHOD	MEDIA	RESULTS (units)	DETECTION LIMIT (units)	DATE SAMPLE TAKEN	DATE SAMPLE ANALYZE
005-1	BENZENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/9/97
005-1	TOLUENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/9/97
005-1	ETHYLBENZENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/9/97
005-1	XYLENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/9/97
005-1	ISOPROPYLBENZENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/9/97
005-1	MTBE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/9/97
005-1	NAPHTHALENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/9/97
005-1	BENZOANTHRACENE	EPA 8270	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97
005-1	BENZOPYRENE	EPA 8020	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97

SAMPLE ID	PARAMETER	ANALYTIC METHOD	MEDIA	RESULTS (units)	DETECTION LIMIT (units)	DATE SAMPLE TAKEN	DATE SAMPLE ANALYZE
005-2	BENZENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
005-2	TOLUENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
005-2	ETHYLBENZENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
005-2	XYLENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
005-2	ISOPROPYLBENZENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
005-2	MTBE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
005-2	NAPHTHALENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
005-2	BENZOANTHRACENE	EPA 8270	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97
005-2	BENZOPYRENE	EPA 8020	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97

SAMPLE ID	PARAMETER	ANALYTIC METHOD	MEDIA	RESULTS (units)	DETECTION LIMIT (units)	DATE SAMPLE TAKEN	DATE SAMPLE ANALYZE
005-3	BENZENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
005-3	TOLUENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
005-3	ETHYLBENZENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
005-3	XYLENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
005-3	ISOPROPYLBENZENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
005-3	MTBE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
005-3	NAPHTHALENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
005-3	BENZOANTHRACENE	EPA 8270	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97
005-3	BENZOPYRENE	EPA 8020	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97

SAMPLE ID	PARAMETER	ANALYTIC METHOD	MEDIA	RESULTS (units)	DETECTION LIMIT (units)	DATE SAMPLE TAKEN	DATE SAMPLE ANALYZE
PI-1	BENZENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
PI-1	TOLUENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
PI-1	ETHYLBENZENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
PI-1	XYLENE	EPA 8021A	SOIL	.007 ppm	.005 ppm	6/4/97	6/13/97
PI-1	ISOPROPYLBENZENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
PI-1	MTBE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
PI-1	NAPHTHALENE	EPA 8021A	SOIL	.027 ppm	.005 ppm	6/4/97	6/13/97
PI-1	BENZOANTHRACENE	EPA 8270	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97
PI-1	BENZOPYRENE	EPA 8020	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97

SAMPLE ID	PARAMETER	ANALYTIC METHOD	MEDIA	RESULTS (units)	DETECTION LIMIT (units)	DATE SAMPLE TAKEN	DATE SAMPLE ANALYZE
PI-4	BENZENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
PI-4	TOLUENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
PI-4	ETHYLBENZENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
PI-4	XYLENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
PI-4	ISOPROPYLBENZENE	EPA 8021A	SOIL	<.005ppm	.005 ppm	6/4/97	6/13/97
PI-4	MTBE	EPA 8021A	SOIL	.019 ppm	.005 ppm	6/4/97	6/13/97
PI-4	NAPHTHALENE	EPA 8021A	SOIL	.009 ppm	.005 ppm	6/4/97	6/13/97
PI-4	BENZOANTHRACENE	EPA 8270	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97
PI-4	BENZOPYRENE	EPA 8020	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97

SAMPLE ID	PARAMETER	ANALYTIC METHOD	MEDIA	RESULTS (units)	DETECTION LIMIT (units)	DATE SAMPLE TAKEN	DATE SAMPLE ANALYZE
PI-5	BENZENE	EPA 8021A	SOIL	.007 ppm	.005 ppm	6/4/97	6/13/97
PI-5	TOLUENE	EPA 8021A	SOIL	.082 ppm	.005 ppm	6/4/97	6/13/97
PI-5	ETHYLBENZENE	EPA 8021A	SOIL	.540 ppm	.005 ppm	6/4/97	6/13/97
PI-5	XYLENE	EPA 8021A	SOIL	5.70 ppm	.005 ppm	6/4/97	6/13/97
PI-5	ISOPROPYLBENZENE	EPA 8021A	SOIL	.660 ppm	.005 ppm	6/4/97	6/13/97
PI-5	MTBE	EPA 8021A	SOIL	2.30 ppm	.005 ppm	6/4/97	6/13/97
PI-5	NAPHTHALENE	EPA 8021A	SOIL	9.80 ppm	.005 ppm	6/4/97	6/13/97
PI-5	BENZOANTHRACENE	EPA 8270	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97
PI-5	BENZOPYRENE	EPA 8020	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97

SAMPLE ID	PARAMETER	ANALYTIC METHOD	MEDIA	RESULTS (units)	DETECTION LIMIT (units)	DATE SAMPLE TAKEN	DATE SAMPLE ANALYZE
PI-6	BENZENE	EPA 8021A	SOIL	.010 ppm	.005 ppm	6/4/97	6/13/97
PI-6	TOLUENE	EPA 8021A	SOIL	.010 ppm	.005 ppm	6/4/97	6/13/97
PI-6	ETHYLBENZENE	EPA 8021A	SOIL	.049 ppm	.005 ppm	6/4/97	6/13/97
PI-6	XYLENE	EPA 8021A	SOIL	.480 ppm	.005 ppm	6/4/97	6/13/97
PI-6	ISOPROPYLBENZENE	EPA 8021A	SOIL	.021 ppm	.005 ppm	6/4/97	6/13/97
PI-6	MTBE	EPA 8021A	SOIL	4.40 ppm	.005 ppm	6/4/97	6/13/97
PI-6	NAPHTHALENE	EPA 8021A	SOIL	1.20 ppm	.005 ppm	6/4/97	6/13/97
PI-6	BENZOANTHRACENE	EPA 8270	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97
PI-6	BENZOPYRENE	EPA 8020	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97

SAMPLE ID	PARAMETER	ANALYTIC METHOD	MEDIA	RESULTS (units)	DETECTION LIMIT (units)	DATE SAMPLE TAKEN	DATE SAMPLE ANALYZE
PI-2	NAPHTHALENE	EPA 8270	SOIL	<.03 PPM	.03 ppm	6/4/97	6/12/97
PI-2	FLUORENE	EPA 8270	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97
PI-2	PHENANTHRENE	EPA 8270	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97
PI-2	BENZOANTHRACENE	EPA 8270	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97
PI-2	BENZOPYRENE	EPA 8020	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97

SAMPLE ID	PARAMETER	ANALYTIC METHOD	MEDIA	RESULTS (units)	DETECTION LIMIT (units)	DATE SAMPLE TAKEN	DATE SAMPLE ANALYZE
006-1	NAPHTHALENE	EPA 8270	SOIL	<.03 PPM	.03 ppm	6/4/97	6/12/97
006-1	FLUORENE	EPA 8270	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97
006-1	PHENANTHRENE	EPA 8270	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97
006-1	BENZOANTHRACENE	EPA 8270	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97
006-1	BENZOPYRENE	EPA 8020	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97

SAMPLE ID	PARAMETER	ANALYTIC METHOD	MEDIA	RESULTS (units)	DETECTION LIMIT (units)	DATE SAMPLE TAKEN	DATE SAMPLE ANALYZE
006-2	NAPHTHALENE	EPA 8270	SOIL	<.03 PPM	.03 ppm	6/4/97	6/12/97
006-2	FLUORENE	EPA 8270	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97
006-2	PHENANTHRENE	EPA 8270	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97
006-2	BENZOANTHRACENE	EPA 8270	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97
006-2	BENZOPYRENE	EPA 8020	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97

SAMPLE ID	PARAMETER	ANALYTIC METHOD	MEDIA	RESULTS (units)	DETECTION LIMIT (units)	DATE SAMPLE TAKEN	DATE SAMPLE ANALYZE
006-3	NAPHTHALENE	EPA 8270	SOIL	<.03 PPM	.03 ppm	6/4/97	6/12/97
006-3	FLUORENE	EPA 8270	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97
006-3	PHENANTHRENE	EPA 8270	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97
006-3	BENZOANTHRACENE	EPA 8270	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97
006-3	BENZOPYRENE	EPA 8020	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97

SAMPLE ID	PARAMETER	ANALYTIC METHOD	MEDIA	RESULTS (units)	DETECTION LIMIT (units)	DATE SAMPLE TAKEN	DATE SAMPLE ANALYZE
PI-3	NAPHTHALENE	EPA 8270	SOIL	.08 PPM	.03 ppm	6/4/97	6/12/97
PI-3	FLUORENE	EPA 8270	SOIL	.23 ppm	.03 ppm	6/4/97	6/12/97
PI-3	PHENANTHRENE	EPA 8270	SOIL	.33 ppm	.03 ppm	6/4/97	6/12/97
PI-3	BENZOANTHRACENE	EPA 8270	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97
PI-3	BENZOPYRENE	EPA 8020	SOIL	<.03 ppm	.03 ppm	6/4/97	6/12/97



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ILFC Laboratory Report

for

Clayton Services Corp.

1201 Bethlehem Pike, Suite 105
North Wales PA
(215) 362-6400

Project No:	Not Given
Project Location:	Herr Foods Inc. Nottingham, PA
Sampler:	Michael Williams (215) 362-6400
Date Sampled:	5/28/97
Date Received:	5/30/97
Date Reported:	06/16/1997
Report #:	97091

Laboratory Manager

ILFC Laboratory Report

Sample Date: 5/28/97	Clayton Services Corp.	007-1
Registered Date/Time: 05/30/1997 10:57:06 AM	Herr Foods Inc.	
Batch #: 97091	Soil	ILFC # 10419

EPA Method 8270B

Analyte	MDL	Concentration	Date Analyzed	Analyst
Naphthalene	0.03 mg/kg	0.12	6/12/97	Kay Baker
Fluorene	0.03 mg/kg	<0.03		
Phenanthrene	0.03 mg/kg	<0.03		
Benzo(a)anthracene	0.03 mg/kg	<0.03		
Benzo(a)pyrene	0.03 mg/kg	<0.03		
Pyrene	0.03 mg/kg	<0.03		
Benzo(b)fluoranthene	0.03 mg/kg	<0.03		
Indeno(123-cd)pyrene	0.03 mg/kg	<0.03		
Benzo(ghi)perylene	0.03 mg/kg	<0.03		

Total Lead - Method 6010

Analyte	Concentration	MDL	Date Analyzed	Analyst
Lead	<5	6 mg/kg	6/6/97	Robert Furlong

Percent Moisture

% Moisture	Date Analyzed	Analyst
16.4	6/5/97	Cindy Logan

Waste Motor Oil (PA)-Method 8260A

Analyte	Result	MDL	Units	E
Benzene	<5	5	ug/kg (ppb)	
Toluene	<5	5	ug/kg (ppb)	
Xylenes	<5	5	ug/kg (ppb)	
Naphthalene	<5	5	ug/kg (ppb)	
		5	ug/kg (ppb)	
Analyst	Kay Baker	5	ug/kg (ppb)	
Date Analyzed	5/30/97	5	ug/kg (ppb)	

End of Analyses

ILFC Laboratory Report

Sample Date: 5/28/97	Clayton Services Corp.	007-2
Registered Date/Time: 05/30/1997 10:57:23 AM	Herr Foods Inc.	
Batch # 97091	Soil	ILFC # 10420

EPA Method 8270B

Analyte	MDL	Concentration	Date Analyzed	Analyst
Naphthalene	0.03 mg/kg	<0.03	6/12/97	Kay Baker
Fluorene	0.03 mg/kg	<0.03		
Phenanthrene	0.03 mg/kg	<0.03		
Benzo(a)anthracene	0.03 mg/kg	<0.03		
Benzo(a)pyrene	0.03 mg/kg	<0.03		
Pyrene	0.03 mg/kg	<0.03		
Benzo(b)fluoranthene	0.03 mg/kg	<0.03		
Indeno(123-cd)pyrene	0.03 mg/kg	<0.03		
Benzo(ghi)perylene	0.03 mg/kg	<0.03		

Total Lead - Method 6010

Analyte	Concentration	MDL	Date Analyzed	Analyst
Lead	14	6 mg/kg	6/6/97	Robert Furlong

Percent Moisture

% Moisture	Date Analyzed	Analyst
11.8	6/5/97	Cindy Logan

Waste Motor Oil (PA)-Method 8260A

Analyte	Result	MDL	Units	E
Benzene	<5	5	ug/kg (ppb)	
Toluene	<5	5	ug/kg (ppb)	
Xylenes	<5	5	ug/kg (ppb)	
Naphthalene	<5	5	ug/kg (ppb)	
		5	ug/kg (ppb)	
Analyst	Kay Baker	5	ug/kg (ppb)	
Date Analyzed	5/30/97	5	ug/kg (ppb)	

End of Analyses

ILFC Laboratory Report

Sample Date: 5/28/97	Clayton Services Corp.	007-P
Registered Date/Time: 05/30/1997 10:57:31 AM	Herr Foods Inc.	
Batch # 97091	Soil	ILFC # 10421

EPA Method 8270B

Analyte	MDL	Concentration	Date Analyzed	Analyst
Naphthalene	0.03 mg/kg	<0.03	6/12/97	Kay Baker
Fluorene	0.03 mg/kg	<0.03		
Phenanthrene	0.03 mg/kg	0.07		
Benzo(a)anthracene	0.03 mg/kg	<0.03		
Benzo(a)pyrene	0.03 mg/kg	<0.03		
Pyrene	0.03 mg/kg	<0.03		
Benzo(b)fluoranthene	0.03 mg/kg	<0.03		
Indeno(123-cd)pyrene	0.03 mg/kg	<0.03		
Benzo(ghi)perylene	0.03 mg/kg	<0.03		

Total Lead - Method 6010

Analyte	Concentration	MDL	Date Analyzed	Analyst
Lead	7	6 mg/kg	6/6/97	Robert Furlong

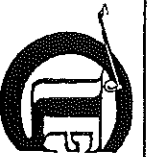
Percent Moisture

% Moisture	Date Analyzed	Analyst
15.8	6/5/97	Cindy Logan

Waste Motor Oil (PA)-Method 8260A

Analyte	Result	MDL	Units	E
Benzene	<5	5	ug/kg (ppb)	
Toluene	<5	5	ug/kg (ppb)	
Xylenes	<5	5	ug/kg (ppb)	
Naphthalene	<5	5	ug/kg (ppb)	
		5	ug/kg (ppb)	
Analyst	Kay Baker	5	ug/kg (ppb)	
Date Analyzed	5/30/97	5	ug/kg (ppb)	

End of Analyses



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ANALYSIS REQUEST AND CHAIN OF CUSTODY FORM

ANALYSIS REQUEST

OTHER

HANDLING

Phone #: 215 362-6460

FAX #: 215 362-6481

Project Name: HERE Foods Inc.

Project Location: HERE Foods Inc.
Nottingham, PA

Sampler Signature: [Signature]

Project PO No.: [Blank]

Project No.: [Blank]

Project Name: HERE Foods Inc.

Project Location: HERE Foods Inc.
Nottingham, PA

Sampler Signature: [Signature]

Project PO No.: [Blank]

Project No.: [Blank]

Project Name: HERE Foods Inc.

Project Location: HERE Foods Inc.
Nottingham, PA

Sampler Signature: [Signature]

Project PO No.: [Blank]

Project No.: [Blank]

Project Name: HERE Foods Inc.

Project Location: HERE Foods Inc.
Nottingham, PA

Sampler Signature: [Signature]

Project PO No.: [Blank]

Project No.: [Blank]

Project Name: HERE Foods Inc.

Project Location: HERE Foods Inc.
Nottingham, PA

Sampler Signature: [Signature]

Project PO No.: [Blank]

Project No.: [Blank]

BIEX (EPA NO.)	()
THH (EPA NO.)	()
BIEX & THH (EPA NOS.)	()
Total Oil & Grease (EPA NO.)	()
Metals Analysis (EPA NO.)	()
TEP	()
Certified OP Plans	()
Forensic	()
XXXX PA WASTE MOTOR OIL PARAMETERS	()
EPA 8021	()
EPA 8276	()
EPA 7420 LEAD	()
Priority One Service (24-48 hrs) No TEP	()
Expedited Service (2-3 working days)	()
Normal Service	()
Verbal/FAX	()
Special Detection Limits (Specify)	PA
Special Reporting Requirements	PA

Relinquished by:

Date

Time

Received by:

Date

Time

Remarks:

[Signature]

5/29/97

10^{AM}

[Signature]

5/29/97

10^{AM}

See results when completed.
2.0°C

PO No. must be included or work may be delayed. Please call 1-2 days in advance to arrange for priority or expedited service, if not sample may be delayed.



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Fax (505) 892-9601

ILFC Laboratory Report

for

Clayton Services Corp.

1201 Bethlehem Pike, Suite 105
North Wales PA
(215) 362-6400

Project No:	Not Given
Project Location:	Herr Foods, Inc. Nottingham, PA
Sampler:	Michael Williams (215) 362-6400
Date Sampled:	6/4/97
Date Received:	6/6/97
Date Reported:	06/16/1997
Report #:	97094

Laboratory Manager

ILFC Laboratory Report

Sample Date: 6/4/97 Clayton Services Corp. 003-1
Registered Date/Time: 06/06/1997 11:18:36 AM Herr Foods, Inc.
Lab # 97094 Soil ILFC # 10434

Method: EPA 418.1

Analysis	MDL	Concentration	Date Analyzed	Analyst
TPH	5 mg/kg	<5	6/6/97	Cindy Logan

End of Analyses

ILFC Laboratory Report

Sample Date: 6/4/97 Clayton Services Corp.

003-2

Registered Date/Time: 06/06/1997 11:18:43 AM Herr Foods, Inc.

ch # 97094 Soil ILFC # 10435

Method: EPA 418.1

Analysis	MDL	Concentration	Date Analyzed	Analyst
TPH	5 mg/kg	<5	6/6/97	Cindy Logan

End of Analyses

ILFC Laboratory Report

Sample Date: 6/4/97 Clayton Services Corp. 003-3
Registered Date/Time: 06/06/1997 11:18:49 AM Herr Foods, Inc.
ch # 97094 Soil ILFC # 10436

Method: EPA 418.1

Analysis	MDL	Concentration	Date Analyzed	Analyst
TPH	5 mg/kg	<5	6/6/97	Cindy Logan

End of Analyses

ILFC Laboratory Report

Sample Date: 6/4/97 Clayton Services Corp. 003-P
Registered Date/Time: 06/06/1997 11:19:12 AM Herr Foods, Inc.
ch # 97094 Soil ILFC # 10437

Method: EPA 418.1

Analysis	MDL	Concentration	Date Analyzed	Analyst
TPH	5 mg/kg	<5	6/6/97	Cindy Logan

End of Analyses

ILFC Laboratory Report

Sample Date: 6/4/97

Clayton Services Corp.

004-1

Registered Date/Time: 06/06/1997 11:29:10 AM

Herr Foods, Inc.

ch # 97094

Soil

ILFC # 10438

Unleaded Gasoline (PA)

Analyte	Result	MDL	Units
Benzene	<5	5	ug/kg (ppb)
Toluene	<5	5	ug/kg (ppb)
Ethylbenzene	<5	5	ug/kg (ppb)
m,p-Xylene	<5	5	ug/kg (ppb)
o-Xylene	<5	5	ug/kg (ppb)
MTBE	14	5	ug/kg (ppb)
Isopropylbenzene	<5	5	ug/kg (ppb)
Naphthalene	24	5	ug/kg (ppb)
Data Analyzed	6/13/97		
Analyst	Kay Baker		

Percent Moisture

% Moisture	Date Analyzed	Analyst
13	6/9/97	Cindy Logan

8270PA (Gasoline)

Analyte	MDL	Concentration	Date Analyzed	Analyst
Benzo(a)anthracene	0.03 mg/kg	<0.03	6/12/97	Kay Baker
Benzo(a)pyrene	0.03 mg/kg	<0.03		

End of Analyses

ILFC Laboratory Report

Sample Date: 6/4/97

Clayton Services Corp.

004-2

Registered Date/Time: 06/06/1997 11:29:29 AM

Herr Foods, Inc.

ch # 97094

Soil

ILFC # 10439

Unleaded Gasoline (PA)

Analyte	Result	MDL	Units
Benzene	<5	5	ug/kg (ppb)
Toluene	<5	5	ug/kg (ppb)
Ethylbenzene	<5	5	ug/kg (ppb)
m,p-Xylene	<5	5	ug/kg (ppb)
o-Xylene	<5	5	ug/kg (ppb)
MTBE	2800	5	ug/kg (ppb)
Isopropylbenzene	<5	5	ug/kg (ppb)
Naphthalene	31	5	ug/kg (ppb)
Data Analyzed	6/13/97		
Analyst	Kay Baker		

Percent Moisture

% Moisture	Date Analyzed	Analyst
21.8	6/9/97	Cindy Logan

8270PA (Gasoline)

Analyte	MDL	Concentration	Date Analyzed	Analyst
Benzo(a)anthracene	0.03 mg/kg	<0.03	6/12/97	Kay Baker
Benzo(a)pyrene	0.03 mg/kg	<0.03		

End of Analyses

ILFC Laboratory Report

Sample Date: 6/4/97

Clayton Services Corp.

004-3

Registered Date/Time: 06/06/1997 11:29:36 AM

Herr Foods, Inc.

ch # 97094

Soil

ILFC # 10440

Unleaded Gasoline (PA)

Analyte	Result	MDL	Units
Benzene	<5	5	ug/kg (ppb)
Toluene	<5	5	ug/kg (ppb)
Ethylbenzene	<5	5	ug/kg (ppb)
m,p-Xylene	<5	5	ug/kg (ppb)
o-Xylene	<5	5	ug/kg (ppb)
MTBE	44	5	ug/kg (ppb)
Isopropylbenzene	<5	5	ug/kg (ppb)
Naphthalene	18	5	ug/kg (ppb)
Data Analyzed	6/13/97		
Analyst	Kay Baker		

Percent Moisture

% Moisture	Date Analyzed	Analyst
14.1	6/9/97	Cindy Logan

8270PA (Gasoline)

Analyte	MDL	Concentration	Date Analyzed	Analyst
Benzo(a)anthracene	0.03 mg/kg	<0.03	6/12/97	Kay Baker
Benzo(a)pyrene	0.03 mg/kg	<0.03		

End of Analyses

ILFC Laboratory Report

Sample Date: 6/4/97

Clayton Services Corp.

005-1

Registered Date/Time: 06/06/1997 11:29:42 AM

Herr Foods, Inc.

ch # 97094

Soil

ILFC # 10441

Unleaded Gasoline (PA)

Analyte	Result	MDL	Units
Benzene	<5	5	ug/kg (ppb)
Toluene	<5	5	ug/kg (ppb)
Ethylbenzene	<5	5	ug/kg (ppb)
m,p-Xylene	<5	5	ug/kg (ppb)
o-Xylene	<5	5	ug/kg (ppb)
MTBE	<5	5	ug/kg (ppb)
Isopropylbenzene	<5	5	ug/kg (ppb)
Naphthalene	<5	5	ug/kg (ppb)
Data Analyzed	6/9/97		
Analyst	Kay Baker		

Percent Moisture

% Moisture	Date Analyzed	Analyst
17.0	6/9/97	Cindy Logan

8270PA (Gasoline)

Analyte	MDL	Concentration	Date Analyzed	Analyst
Benzo(a)anthracene	0.03 mg/kg	<0.03	6/12/97	Kay Baker
Benzo(a)pyrene	0.03 mg/kg	<0.03		

End of Analyses

ILFC Laboratory Report

Sample Date: 6/4/97

Clayton Services Corp.

005-2

Registered Date/Time: 06/06/1997 11:29:48 AM

Herr Foods, Inc.

ch # 97094

Soil

ILFC # 10442

Unleaded Gasoline (PA)

Analyte	Result	MDL	Units
Benzene	<5	5	ug/kg (ppb)
Toluene	<5	5	ug/kg (ppb)
Ethylbenzene	<5	5	ug/kg (ppb)
m,p-Xylene	<5	5	ug/kg (ppb)
o-Xylene	<5	5	ug/kg (ppb)
MTBE	<5	5	ug/kg (ppb)
Isopropylbenzene	<5	5	ug/kg (ppb)
Naphthalene	<5	5	ug/kg (ppb)
Data Analyzed	6/13/97		
Analyst	Kay Baker		

Percent Moisture

% Moisture	Date Analyzed	Analyst
14.6	6/9/97	Cindy Logan

8270PA (Gasoline)

Analyte	MDL	Concentration	Date Analyzed	Analyst
Benzo(a)anthracene	0.03 mg/kg	<0.03	6/12/97	Kay Baker
Benzo(a)pyrene	0.03 mg/kg	<0.03		

End of Analyses

ILFC Laboratory Report

Sample Date: 6/4/97

Clayton Services Corp.

005-3

Registered Date/Time: 06/06/1997 11:29:54 AM

Herr Foods, Inc.

ch # 97094

Soil

ILFC # 10443

Unleaded Gasoline (PA)

Analyte	Result	MDL	Units
Benzene	<5	5	ug/kg (ppb)
Toluene	<5	5	ug/kg (ppb)
Ethylbenzene	<5	5	ug/kg (ppb)
m,p-Xylene	<5	5	ug/kg (ppb)
o-Xylene	<5	5	ug/kg (ppb)
MTBE	<5	5	ug/kg (ppb)
Isopropylbenzene	<5	5	ug/kg (ppb)
Naphthalene	<5	5	ug/kg (ppb)
Data Analyzed	6/13/97		
Analyst	Kay Baker		

Percent Moisture

% Moisture	Date Analyzed	Analyst
15.4	6/9/97	Cindy Logan

8270PA (Gasoline)

Analyte	MDL	Concentration	Date Analyzed	Analyst
Benzo(a)anthracene	0.03 mg/kg	<0.03	6/12/97	Kay Baker
Benzo(a)pyrene	0.03 mg/kg	<0.03		

End of Analyses

ILFC Laboratory Report

Sample Date: 6/4/97

Clayton Services Corp.

PI-1

Registered Date/Time: 06/06/1997 11:30:31 AM

Herr Foods, Inc.

ch # 97094

Soil

ILFC # 10447

Unleaded Gasoline (PA)

Analyte	Result	MDL	Units
Benzene	<5	5	ug/kg (ppb)
Toluene	<5	5	ug/kg (ppb)
Ethylbenzene	<5	5	ug/kg (ppb)
m,p-Xylene	7.0	5	ug/kg (ppb)
o-Xylene	<5	5	ug/kg (ppb)
MTBE	<5	5	ug/kg (ppb)
Isopropylbenzene	<5	5	ug/kg (ppb)
Naphthalene	27	5	ug/kg (ppb)
Data Analyzed	6/13/97		
Analyst	Kay Baker		

Percent Moisture

% Moisture	Date Analyzed	Analyst
19.0	6/10/97	Cindy Logan

8270PA (Gasoline)

Analyte	MDL	Concentration	Date Analyzed	Analyst
Benzo(a)anthracene	0.03 mg/kg	<0.03	6/12/97	Kay Baker
Benzo(a)pyrene	0.03 mg/kg	<0.03		

End of Analyses

ILFC Laboratory Report

Sample Date: 6/4/97

Clayton Services Corp.

PI-4

Registered Date/Time: 06/06/1997 11:30:02 AM

Herr Foods, Inc.

ch #

97094

Soil

ILFC #

10444

Unleaded Gasoline (PA)

Analyte	Result	MDL	Units
Benzene	<5	5	ug/kg (ppb)
Toluene	<5	5	ug/kg (ppb)
Ethylbenzene	<5	5	ug/kg (ppb)
m,p-Xylene	<5	5	ug/kg (ppb)
o-Xylene	<5	5	ug/kg (ppb)
MTBE	19	5	ug/kg (ppb)
Isopropylbenzene	<5	5	ug/kg (ppb)
Naphthalene	9	5	ug/kg (ppb)
Data Analyzed	6/13/97		
Analyst	Kay Baker		

Percent Moisture

% Moisture	Date Analyzed	Analyst
16.0	6/9/97	Cindy Logan

8270PA (Gasoline)

Analyte	MDL	Concentration	Date Analyzed	Analyst
Benzo(a)anthracene	0.03 mg/kg	<0.03	6/12/97	Kay Baker
Benzo(a)pyrene	0.03 mg/kg	<0.03		

End of Analyses

ILFC Laboratory Report

Sample Date: 6/4/97

Clayton Services Corp.

PI-5

Registered Date/Time: 06/06/1997 11:30:08 AM

Herr Foods, Inc.

ch # 97094

Soil

ILFC # 10445

Unleaded Gasoline (PA)

Analyte	Result	MDL	Units
Benzene	7.0	5	ug/kg (ppb)
Toluene	82.0	5	ug/kg (ppb)
Ethylbenzene	540.0	5	ug/kg (ppb)
m,p-Xylene	3200.0	5	ug/kg (ppb)
o-Xylene	2500	5	ug/kg (ppb)
MTBE	2300	5	ug/kg (ppb)
Isopropylbenzene	660	5	ug/kg (ppb)
Naphthalene	9800	5	ug/kg (ppb)
Data Analyzed	6/13/97		
Analyst	Kay Baker		

Percent Moisture

% Moisture	Date Analyzed	Analyst
18.6	6/9/97	Cindy Logan

8270PA (Gasoline)

Analyte	MDL	Concentration	Date Analyzed	Analyst
Benzo(a)anthracene	0.03 mg/kg	<0.03	6/12/97	Kay Baker
Benzo(a)pyrene	0.03 mg/kg	<0.03		

End of Analyses

ILFC Laboratory Report

Sample Date: 6/4/97

Clayton Services Corp.

PI-6

Registered Date/Time: 06/06/1997 11:30:21 AM

Herr Foods, Inc.

ch # 97094

Soil

ILFC # 10446

Unleaded Gasoline (PA)

Analyte	Result	MDL	Units
Benzene	10.0	5	ug/kg (ppb)
Toluene	10.0	5	ug/kg (ppb)
Ethylbenzene	49.0	5	ug/kg (ppb)
m,p-Xylene	270.0	5	ug/kg (ppb)
o-Xylene	210	5	ug/kg (ppb)
MTBE	4400	5	ug/kg (ppb)
Isopropylbenzene	21	5	ug/kg (ppb)
Naphthalene	1200	5	ug/kg (ppb)
Data Analyzed	6/13/97		
Analyst	Kay Baker		

Percent Moisture

% Moisture	Date Analyzed	Analyst
22.4	6/10/97	Cindy Logan

8270PA (Gasoline)

Analyte	MDL	Concentration	Date Analyzed	Analyst
Benzo(a)anthracene	0.03 mg/kg	<0.03	6/12/97	Kay Baker
Benzo(a)pyrene	0.03 mg/kg	<0.03		

End of Analyses

ILFC Laboratory Report

Sample Date: 6/4/97

Clayton Services Corp.

PI-2

Registered Date/Time: 06/06/1997 11:31:11 AM

Herr Foods, Inc.

Batch # 97094

Soil

ILFC # 10448

Percent Moisture

% Moisture	Date Analyzed	Analyst
18.3	6/10/97	Cindy Logan

EPA Method 8270B

Analyte	MDL	Concentration	Date Analyzed	Analyst
Naphthalene	0.03 mg/kg	<0.03	6/12/97	Kay Baker
Fluorene	0.03 mg/kg	<0.03		
Phenanthrene	0.03 mg/kg	<0.03		
Benzo(a)anthracene	0.03 mg/kg	<0.03		
Benzo(a)pyrene	0.03 mg/kg	<0.03		

End of Analyses

ILFC Laboratory Report

Sample Date: 6/4/97

Clayton Services Corp.

006-1

Registered Date/Time: 06/06/1997 11:31:31 AM

Herr Foods, Inc.

ch #

97094

Soil

ILFC #

10450

Percent Moisture

% Moisture	Date Analyzed	Analyst
19.4	6/10/97	Cindy Logan

EPA Method 8270B

Analyte	MDL	Concentration	Date Analyzed	Analyst
Naphthalene	0.03 mg/kg	<0.03	6/12/97	Kay Baker
Fluorene	0.03 mg/kg	<0.03		
Phenanthrene	0.03 mg/kg	<0.03		
Benzo(a)anthracene	0.03 mg/kg	<0.03		
Benzo(a)pyrene	0.03 mg/kg	<0.03		

End of Analyses

ILFC Laboratory Report

Sample Date: 6/4/97

Clayton Services Corp.

006-2

Registered Date/Time: 06/06/1997 11:31:38 AM

Herr Foods, Inc.

ch # 97094

Soil

ILFC # 10451

Percent Moisture

% Moisture	Date Analyzed	Analyst
20.8	6/10/97	Cindy Logan

EPA Method 8270B

Analyte	MDL	Concentration	Date Analyzed	Analyst
Naphthalene	0.03 mg/kg	<0.03	6/12/97	Kay Baker
Fluorene	0.03 mg/kg	<0.03		
Phenanthrene	0.03 mg/kg	<0.03		
Benzo(a)anthracene	0.03 mg/kg	<0.03		
Benzo(a)pyrene	0.03 mg/kg	<0.03		

End of Analyses

ILFC Laboratory Report

Sample Date:	6/4/97	Clayton Services Corp.	006-3
Registered Date/Time:	06/06/1997 11:31:44 AM	Herr Foods, Inc.	
Batch #	97094	Soil	ILFC # 10452

Percent Moisture

% Moisture	Date Analyzed	Analyst
21.1	6/10/97	Cindy Logan

EPA Method 8270B

Analyte	MDL	Concentration	Date Analyzed	Analyst
Naphthalene	0.03 mg/kg	<0.03	6/12/97	Kay Baker
Fluorene	0.03 mg/kg	<0.03		
Phenanthrene	0.03 mg/kg	<0.03		
Benzo(a)anthracene	0.03 mg/kg	<0.03		
Benzo(a)pyrene	0.03 mg/kg	<0.03		

End of Analyses

ILFC Laboratory Report

Sample Date: 6/4/97

Clayton Services Corp.

PI-3

Registered Date/Time: 06/06/1997 11:31:20 AM

Herr Foods, Inc.

Batch # 97094

Soil

ILFC # 10449

Percent Moisture

% Moisture	Date Analyzed	Analyst
22.2	6/10/97	Cindy Logan

EPA Method 8270B

Analyte	MDL	Concentration	Date Analyzed	Analyst
Naphthalene	0.03 mg/kg	0.08	6/12/97	Kay Baker
Fluorene	0.03 mg/kg	0.23		
Phenanthrene	0.03 mg/kg	0.33		
Benzo(a)anthracene	0.03 mg/kg	<0.03		
Benzo(a)pyrene	0.03 mg/kg	<0.03		

End of Analyses



International
Lubrication and
Fuel Consultants Inc.
Creating the standards for industry.

1201 Rio Rancho Blvd.
Suite C
Rio Rancho, NM 87124
(505) 892-1666 (800) 237-4532

Project Manager & Company:

Phone #: 215-362-6480

Michael Williams - *Chlorine Services Corp*

Address:

FAX #: 362-6481

N. Daleo, PA 19454

Project PO No.:

Project No.:

Project Name:

Heer Foods Inc

Project Location:

Heer Foods Inc.

Sampler Signature:

[Signature]

Sample ID	Lab # lab use only	# Containers	Volume/Amount	Matrix					Method Preserved					Sampling	
				Water	Soil	Sludge	Other	Other	Ice	H1	HNO3	None	Other	DATE	TIME
PI-6	10446	1	1	X	X	X			X	X	X	X	6/4/97	3 P	
PI-1	10447	1	1	X	X	X			X	X	X	X	6/4/97		
PI-2	10448	1	1	X	X	X			X	X	X	X			
PI-3	10449	1	1	X	X	X			X	X	X	X			
CO6-1	10450	2	2	X	X	X			X	X	X	X			
CO6-2	10451	2	2	X	X	X			X	X	X	X			
CO6-3	10452	2	2	X	X	X			X	X	X	X			

Relinquished by:

[Signature]

Date

6/4/97

Time

8 P

Received by:

Cooley

Date

6/4/97

Remarks:

Same as Page 1

Cooley

[Signature]

6/6/97 1045

Page 2 of 2

PO No. must be included or work may be delayed. Please call 1-2 days in advance to arrange for priority or expedited service, if not samples may be delayed.

Maintenance Building
(Slab on grade construction)

Fill
vent

Tank 007
(1,000-gal Used Oil - 48"x10'9")

vents
0000

003-P @ 3.5'

003-3 @ 9.5'

003-2 @ 9.5'

003-1 @ 9.5'

004-3 @ 12'

004-2 @ 12'

004-1 @ 12'

Tank 003
4,000-gal New Motor Oil UST
- 64"x24'

Tank 004
4,000-gal Unl Gas UST
- 64"x24'

P1-6 @ 9'

P1-5 @ 9'

P1-4 @ 9'

005-3 @ 10'

005-2 @ 15'

005-1 @ 15'

P1-3 @ 13'

P1-2 @ 13'

P1-1 @ 13'

Tank 005
15,000-gal Unl Gas UST
- 10'x25'6"

006-3 @ 14'

006-2 @ 14'

006-1 @ 14'

Tank 006
12,000-gal Diesel UST
- 96"x32'

Topographic Gradient
(Down)

GRASS

driveway

HERR DRIVE (public R.O.W.)

LEGEND

- - Pump Island
- - Tank Fill
- - Soil Sample Location



CLAYTON

**SERVICES
CORPORATION**

ENVIRONMENTAL COMPLIANCE
CONSULTING & CONTRACTING

1201 Bethlehem Pike
Suite 105
North Wales, PA 19454

DRAWING TITLE

Soil Sample Locations

PROJECT

Underground Tank Removal

CLIENT

Herr Foods Inc.
Nottingham, PA

DATE

6/11/97

SCALE

1" = 15' app

DRAWN BY

MCW

CHECKED BY

MCW

PROJECT NUMBER

DRAWING NUMBER

CSC 97-120

ADDITIONAL COMMENTS

CLAYTON SERVICES CORPORATION

ENVIRONMENTAL COMPLIANCE CONSULTING & CONTRACTING

1201 BETHLEHEM PIKE, SUITE 105, NORTH WALES, PA 19454
(215) 362-6400
(215) 362-6481 FAX

Project: Herr Foods Inc.
Nottingham, PA

- 30 day Closure notification
- Ammended registration
- Notice of Reportable Release/Notice of Contamination

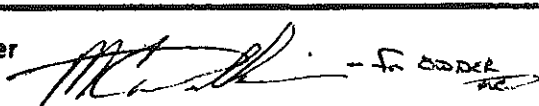
COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF ENVIRONMENTAL RESOURCES
 BUREAU OF WATER QUALITY MANAGEMENT
 DIVISION OF STORAGE TANKS

DATE RECEIVED: _____

ATTACHMENT 2

UNDERGROUND STORAGE TANK CLOSURE NOTIFICATION FORM

NOTE: Notification of permanent closure must be received by the appropriate regional office of the Department at least 30 days prior to initiation of the closure activities.

I. Owner of Tanks			
Owner Name <u>HERR FOODS INC.</u>			
Street Address <u>ROUTE 272 & HERR DRIVE</u>		Phone Number <u>(610) 932-6500</u>	
City <u>NOTTINGHAM</u>	State <u>PA</u>	Zip Code <u>19362</u>	
II. Location of Tanks			
Facility Name <u>HERR FOODS INC</u>		Facility Identification Number <u>15-24418</u>	
Street Address <u>RT 272 & HERR DRIVE</u>	Municipality <u>NOTTINGHAM</u>	County <u>CHESTER</u>	
Contact Person <u>STEVE MORAN</u>	Phone Number <u>(610) 932-6500</u>		
III. Month/Day/Year of Proposed Closure <u>5/12/97</u>			
V. Certified Installer/Company Performing Tank Handling Activities			
Certified Installer Name <u>DAN LENTZ</u>		Installer Certification Number <u>723</u>	
Street Address <u>P.O. Box 174</u>		Phone Number <u>(302) 834-9402</u>	
City <u>BEAR</u>	State <u>DE</u>	Zip Code <u>19701</u>	
Certified Company Name <u>ENERCON SERVICES INC</u>		Company Certification Number <u>36</u>	
V. Contractor/Individual Performing Site Assessment Activities			
Name of Contractor or Individual <u>MICHAEL WILLIAMS % CLAYTON SERVICES CORP.</u>			
Street Address <u>1201 BETHLEHEM PIKE, SUITE 105</u>		Phone Number <u>(215) 362-6400</u>	
City <u>NORTH WALES</u>	State <u>PA</u>	Zip Code <u>19454</u>	
VI. Description of Underground Storage Tanks (See reverse side of form)			
VII. Will this closure involve replacement of at least one old tank with a new tank?			
Yes _____ No <u>X</u>			
Signature of Tank Owner 		Date <u>4/12/97</u>	

Tank Registration Number		003	004	005	006
Date of Tank Installation (Month/Year)		N/A	N/A	N/A	N/A
Estimated Total Capacity (Gallons)		4,000	4,000	15,000	12,000
Tank Material of Construction		STEEL	STEEL	STEEL	DIESEL
Substance(s) Stored Throughout Operating Life of Tank (Check All That Apply)	a. Petroleum				
	Unleaded Gasoline	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Leaded Gasoline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Aviation Gasoline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Kerosene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Jet Fuel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Diesel Fuel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Fuel Oil No. 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Fuel Oil No. 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Fuel Oil No. 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Fuel Oil No. 5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Fuel Oil No. 6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	New Motor Oil	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Used Motor Oil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Other, Please Specify	_____	_____	_____	_____
b. Hazardous Substance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Name of Principal CERCLA Substance	_____	_____	_____	_____	
AND					
Chemical Abstract Service (CAS) No.	_____	_____	_____	_____	
c. Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Proposed Tank Closure Method (Check Only One)	a. Removal	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	b. Closure-in-Place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	c. Change-in-Service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tank Registration Number		007			
Date of Tank Installation (Month/Year)		N/A			
Estimated Total Capacity (Gallons)		1,000			
Tank Material of Construction		STEEL			
Substance(s) Stored Throughout Operating Life of Tank (Check All That Apply)	a. Petroleum				
	Unleaded Gasoline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Leaded Gasoline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Aviation Gasoline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Kerosene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Jet Fuel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Diesel Fuel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Fuel Oil No. 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Fuel Oil No. 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Fuel Oil No. 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Fuel Oil No. 5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Fuel Oil No. 6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	New Motor Oil	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Used Motor Oil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Other, Please Specify	_____	_____	_____	_____
b. Hazardous Substance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Name of Principal CERCLA Substance	_____	_____	_____	_____	
AND					
Chemical Abstract Service (CAS) No.	_____	_____	_____	_____	
c. Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Proposed Tank Closure Method (Check Only One)	a. Removal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	b. Closure-in-Place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	c. Change-in-Service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER QUALITY MANAGEMENT

REGISTRATION OF STORAGE TANKS

In accordance with Sections 303 and 303 of the Storage Tank and Spill Prevention Act of 1982, owners of regulated storage tanks are required to register their tanks with the Department and pay the required fees.

*** INSTRUCTIONS ARE INCLUDED FOR YOUR REFERENCE.

INCOMPLETE FORMS WILL BE RETURNED, DELAYING REGISTRATION. ***

I. PURPOSE OF SUBMITTAL (Check (✓) Those That Apply)

INITIAL REGISTRATION

- ☐ Initial Registration
☐ Registration for Removal of Unregistered Tank(s)
☐ Registration for Un-Registered Tank(s) Closed in Place

AMENDED REGISTRATION

- ☐ Change in Previous Info
☒ Adding Tank(s)
☐ Temporarily Not Using Tank(s)
☒ Removed / Closed Tank(s)
☐ Change from Regulated to Unregulated Substance or Use
☐ Relocated Tank(s)

CHANGE OF OWNERSHIP

- ☐ Sold ☐ Purchased
☐ All Tanks (Will Remain at Same Facility)
☐ Some Tanks (Will Remain at Same Facility)
☐ Some Tanks (Relocated to Another Regulated Facility)
☐ Some Tanks (Relocated to a New Facility and the Tanks are to be Registered)

STATE USE ONLY

II. TANK OWNER / BUSINESS INFORMATION (Type or Print Legibly)

A. DEP CLIENT ID NO. (STATE USE ONLY) _____

Federal Tax ID No. (EIN or SSN) _____

Owner Name HERR FOODS INC.

Address ROUTE 272 + HERR DRIVE

City Nottingham State PA Zip 19362

Phone No. (610) 932-6500

County CHESTER Municipality W. Nottingham Township

Type of Owner/Business (Check Only One)

- ☐ Vol. Fire Co./EMS Org. ☒ Corporate
☐ Federal Government ☐ Private (Business)
☐ State Government ☐ Private (Residential)
☐ Local Government

B. CHANGE OF OWNERSHIP

(This section is to be completed in addition to all sections if some or all tanks have been sold/transferred or purchased.)

Effective Date of Change _____

Sold/Transferred To _____

(New Owner Name) _____

(New Owner Address) _____

Purchased/Transferred From _____

(Previous Owner Name) _____

(Previous Owner Address) _____

(Previous Facility ID No.) _____

(Previous Tank No.(s)) _____

III. FACILITY INFORMATION (Type or Print Legibly)

A. DEP FACILITY ID NO. 15 - 24418

Facility Name HERR FOODS INC.

Location ROUTE 272 + HERR DRIVE
(PO Box NOT acceptable) (RR Box IS acceptable)

City Nottingham State PA Zip 19362

Phone No. (610) 932-6500

County CHESTER Municipality W. Nottingham Twp.

Type of Facility (Check Only One)

- ☐ 00 Unknown ☐ 10 Federal, Military
☐ 01 Gas Station ☒ 11 Commercial
☐ 02 Petroleum Distr ☐ 12 Industrial
☐ 03 Air Taxi ☐ 13 Residential
☐ 04 Aircraft Owner ☐ 14 Contractor
☐ 05 Auto Dealership ☐ 15 Trucking/Transport
☐ 06 Railroad ☐ 16 Utilities
☐ 07 Local Govt ☐ 17 Farm
☐ 08 State Govt ☐ 99 Other
☐ 09 Federal, Non-Military

SPECIFY

B. FIRE MARSHAL PERMIT NO. (IF APPLICABLE)

C. CONTACT (Optional)

- ☐ Send all mail to Facility address noted to the left.
☐ Delete previously submitted Contact address and send all mail to the Owner address noted above.
☐ Send all mail to Contact address noted below:

Name _____

Company Name _____

Mailing Address _____

City _____ State _____ Zip _____

Phone No. () _____

Detach and return this page to the Division of Storage Tanks

DEP Facility ID No. 15-24418Facility Name HERR FOODS INC.**IV. DESCRIPTION OF STORAGE TANKS** (Type or print legibly each regulated storage tank at this facility under your ownership.)**ABOVEGROUND TANKS** List all tanks. If amending information, identify the Amended Tank(s) with an asterisk (*) to the left of the tank number.

Tank Number	STATUS	Install Date (Mo-Day-Yr)	Remove Date (Mo-Day-Yr)	Capacity (Gallons)	Substance Code (Currently or Last Stored)	CERCLA Name (If Hazardous Substance) Substance Name (If Other Petroleum Substance or Petroleum-Based Mixture)	CAS No. (If Hazardous Substance)	Tank Exempt Reference Code (See Instructions)
002A	C			4,500				
A								
A								
A								
A								
A								
A								
A								
A								
A								
A								

Status Codes: C - Currently in Use; T - Temporarily Out of Use; R - Removed or Closed in Place

B. UNDERGROUND TANKS List all tanks. If amending information, identify the Amended Tank(s) with an asterisk (*) to the left of the tank number.

Tank Number	STATUS	Install Date (Mo-Day-Yr)	Remove Date (Mo-Day-Yr)	Capacity (Gallons)	Substance Code (Currently or Last Stored)	CERCLA Name (If Hazardous Substance) Substance Name (If Other Petroleum Substance or Petroleum-Based Mixture)	CAS No. (If Hazardous Substance)	Tank Exempt Reference Code (See Instructions)
002	C			20,000				
003	R		5/28/97	4,000	F	NEW MOTOR OIL		
004	R		5/28/97	4,000	A	GASOLINE		
005	R		6/4/97	15,000	A	GASOLINE		
006	R		6/4/97	12,000	R	DIESEL		
007	R		5/28/97	1,000	G	USED MOTOR OIL		
008	C	6/19/97		10,000	A	GAS		
009	C	6/19/97		10,000	B	DIESEL		

Status Codes: C - Currently in Use; T - Temporarily Out of Use; R - Removed or Closed in Place

V. OWNER CERTIFICATION (Read and Sign After Completing Sections I through IV.)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. This registration is conditioned upon compliance with provisions of the Storage Tank and Spill Prevention Act of 1989, with any regulations and orders issued pursuant to this Act, and with the requirements for obtaining a permit required under this Act.

Please be advised that signature by an individual on this document represents to the Department that the individual owns the storage tank and is aware of those responsibilities and potential liabilities as an "owner" arising under the Storage Tank and Spill Prevention Act of 1989 and its regulations. Please be further advised that this registration is made subject to the penalties of 18 PA. C.S. Section 4904 relating to unsworn falsification to authorities and that Section 107(c) of this Act grants agents and employees of the Department of Environmental Protection specific rights of entry.

Name and Official Title of Owner

HERR FOODS INC.

Signature

[Signature]

Date

6/16/97

Detach and return this page to the Division of Storage Tanks

DEP Facility ID No. 15-24418 Facility Name HERR FOODS INC.**INFORMATION FOR ABOVEGROUND AND UNDERGROUND NEW TANK INSTALLATIONS**

(Write the Tank Number(s) and place a check (✓) in the appropriate box for each component that was installed.)

	Tank Number	Tank Number	Tank Number	Tank Number	Tank Number	Tank Number	Tank Number	Tank Number	Tank Number	Tank Number	Tank Number
TANK CONSTRUCTION AND CORROSION PROTECTION (1)	008	009									
(A) SINGLE WALL UNPROTECTED STEEL											
(B) CATHODICALLY PROTECTED STEEL (GALVANIC)											
(C) CATHODICALLY PROTECTED STEEL (IMPRESSED CURRENT)											
(D) DOUBLE WALL STEEL	✓	✓									
(E) SINGLE WALL FIBERGLASS											
(F) DOUBLE WALL FIBERGLASS											
(G) STEEL WITH PLASTIC OR FIBERGLASS JACKET											
(H) STEEL WITH FRP COATING	✓	✓									
(I) STEEL WITH LINED INTERIOR											
(J) CONCRETE											
(99) OTHER (SPECIFY)											
UNDERGROUND PIPING CONSTRUCTION AND CORROSION PROTECTION (2)											
(A) BARE STEEL											
(B) CATHODICALLY PROTECTED STEEL											
(C) COPPER											
(D) FIBERGLASS											
(E) FLEXIBLE (NON-METALLIC) <u>2x WALL</u>	✓	✓									
(G) NONE											
(99) OTHER (SPECIFY)											
ABOVEGROUND PIPING CONSTRUCTION AND CORROSION PROTECTION (3) <u>N/A</u>											
(A) BARE STEEL											
(B) CATHODICALLY PROTECTED STEEL											
(C) COPPER											
(D) FIBERGLASS											
(E) FLEXIBLE (NON-METALLIC)											
(G) NONE											
(99) OTHER											
PUMP (PIPING) SYSTEM (4) <u>S</u>											
(A) SUCTION: CHECK VALVE AT PUMP											
(B) SUCTION: CHECK VALVE AT TANK											
(C) PRESSURE	✓	✓									
(D) GRAVITY FED											
PIPE RELEASE DETECTION METHOD (5)											
(A) AUTOMATIC LINE LEAK DETECTOR	✓	✓									
(B) ANNUAL LINE TIGHTNESS TESTING (PRESSURE)											
(C) LINE TIGHTNESS TEST - 3 YEARS (SUCTION)											
(D) INTERSTITIAL MONITORING	✓	✓									
(E) GROUNDWATER MONITORING											
(F) VAPOR MONITORING											
(G) VISUAL INSPECTION											
(H) NONE											
(I) EXEMPT											
(J) STATISTICAL INVENTORY RECONCILIATION (SIR)											
SPILL PREVENTION (6)											
(Y) YES	✓	✓									
(N) NO											
OVERFILL PREVENTION PRESENT (7)											
(Y) YES	✓	✓									
(N) NO											

DEP Facility ID No. 15-24418Facility Name HERR FOODS INC**VI. INFORMATION FOR ABOVEGROUND AND UNDERGROUND NEW TANK INSTALLATIONS (cont.)**

(Write the Tank Number(s) and place a check (✓) in the appropriate box for each component that was installed.)

	Tank Number	Tank Number	Tank Number	Tank Number	Tank Number	Tank Number	Tank Number	Tank Number	Tank Number	Tank Number	Tank Number
VAPOR RECOVERY PRESENT (11)	008	009									
(A) STAGE I INSTALLED	✓	✓									
(B) STAGE II INSTALLED <u>PIPED UP</u>	✓	✓									
(C) STAGE I AND II INSTALLED											
(D) NONE											

TANK RELEASE DETECTION METHOD (12)

(A) MONTHLY INVENTORY CONTROL											
(B) ANNUAL TANK TIGHTNESS TESTING											
(C) TANK TIGHTNESS TESTING (EVERY 5 YEARS)											
(D) STATISTICAL INVENTORY RECONCILIATION											
(E) AUTOMATIC TANK GAUGING											
(F) MANUAL TANK GAUGING (36 HRS.)											
(G) MANUAL TANK GAUGING (44 OR 58 HRS.)											
(H) INTERSTITIAL MONITORING (2 WALLS)	✓	✓									
(I) INTERSTITIAL MONITORING (LINER)											
(J) GROUNDWATER MONITORING											
(K) VAPOR MONITORING											
(L) GROOVES MADE IN THE IMPERMEABLE PAD											
(M) SLOTTED PIPE ABOVE THE IMPERMEABLE PAD											
(N) NONE											
(O) EXEMPT											
(99) OTHER											

VII. ABOVEGROUND AND UNDERGROUND TANK INFORMATION FOR REMOVAL FROM SERVICE

(Write the Tank Number(s) and place a check (✓) in the appropriate box for each tank that was removed or closed in place.)

	Tank Number	Tank Number	Tank Number	Tank Number	Tank Number	Tank Number	Tank Number	Tank Number	Tank Number	Tank Number	Tank Number
	003	004	005	006	007						
TANK EMPTIED AND REMOVED											
TANK CLEANED ON SITE AND REMOVED	✓	✓	✓	✓	✓						
TANK CLEANED ON SITE AND CLOSED IN PLACE											
POLLUTANT SUSPECTED OR OBSERVED AND NOTIFICATION OF CONTAMINATION FORM WAS SUBMITTED	✓	✓	✓	✓							
CLOSURE DOCUMENT SUBMITTED (FOR USTs ONLY)											

VIII. OWNER CERTIFICATION (Read and Sign After Completing Sections I through VII.)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. This registration is conditioned upon compliance with provisions of the Storage Tank and Spill Prevention Act of 1989, with any regulations and orders issued pursuant to this Act, and with the requirements for obtaining a permit required under this Act.

Please be advised that signature by an individual on this document represents to the Department that the individual owns the storage tank and is aware of those responsibilities and potential liabilities as an "owner" arising under the Storage Tank and Spill Prevention Act of 1989 and its regulations. Please be further advised that this registration is made subject to the penalties of 18 PA. C.S. Section 4904 relating to unsworn falsification to authorities and that Section 107(c) of this Act grants agents and employees of the Department of Environmental Protection specific rights of entry.

Name and Official Title of Owner

Signature

Date

HERR FOODS INCJohn Moran6/16/97**IX. INSTALLER/REMOVER CERTIFICATION (This section must be completed by the certified installer(s) who are responsible for the installation or removal from service of the aboveground and underground storage tank systems listed in Sections VI and VII.)**

As the certified installer responsible for the tank handling activities in the category or categories I have listed, I certify that all tank handling activities were conducted in compliance with the design, installation and operation standards of the Storage Tank and Spill Prevention Act of 1989 and all applicable regulations. I also certify, under penalty of law as provided in 18 PA C.S.A. 4904 (relating to unsworn falsification to authorities), that the information provided herein is true, accurate and complete to the best of my knowledge and belief.

	Installer/Remover Name	Certification Number	Certification Category	Installer/Remover Signature	Date
307	MICHAEL WILLIAMS	4053	UMR	<u>[Signature]</u>	6/7/97
308	MICHAEL S DOMOVAN	2830	UMR	<u>[Signature]</u>	6/16/97
309	SAME	2830	UMX	<u>[Signature]</u>	6/16/97

Detach and return this page to the Division of Storage Tanks

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

2530-FM-LRW-0008Z Rev. 1/95
BUREAU OF LAND RECYCLING AND WASTE MANAGEMENT

NOTIFICATION OF REPORTABLE RELEASE (Owners and Operators) NOTIFICATION OF CONTAMINATION (Certified Installers and Inspectors)

NOTIFICATION OF REPORTABLE RELEASE (Owners and Operators)

On August 21, 1993, the Storage Tank Cleanup Program's Corrective Action Process (CAP) regulations became effective. These regulations establish release reporting requirements for owners and operators of storage tanks and storage tank facilities.

Subsection 245.305(a) of the regulations requires owners or operators to notify the appropriate regional office of the Department as soon as practicable, but no later than 2 hours, after the confirmation of a reportable release.

Subsection 245.305(d) requires owners or operators to provide written notification to the appropriate regional office and to the local municipality, within 15 days of the notice required by Subsection 245.305(a). This form may be used to comply with Subsection 245.305(d).

OWNERS AND OPERATORS (O/O)

PLEASE COMPLETE SECTIONS I, II, III, IV, V, VII and VIII.

NOTIFICATION OF CONTAMINATION (Certified Installers and Inspectors)

On September 21, 1991, the Storage Tank Program's Certification regulations became effective. These regulations establish standards of performance for certified installers and inspectors of storage tanks and storage tank facilities.

Subsection 245.132(a)(4) of the regulations requires certified installers and inspectors to report to the Department a release of a regulated substance or confirmed or suspected contamination of soil, surface or groundwater from regulated substances observed while performing services as a certified installer or inspector.

This form may be used to comply with Subsection 245.132(a)(4). The Department expects submission of the form within 48 hours of observing suspected or confirmed contamination. Where there is a reportable release, the form may be submitted jointly by the owner, operator, certified installer and certified inspector. In this instance, the form must be received by the appropriate regional office within 15 days of the notice required by Subsection 245.305(a).

CERTIFIED INSTALLERS AND INSPECTORS (I/I)

PLEASE COMPLETE SECTIONS I, II, III, VI, VII and VIII.

INSTRUCTIONS

- I. **FACILITY INFORMATION** - Record the name, I.D. number and physical location (not P.O. Box) of the facility at which a reportable release has been confirmed or at which suspected or confirmed contamination has been observed. Include the name and phone number of a person to contact at the facility.
- II. **OWNER INFORMATION** - Record the name, business address and phone number of the owner of the facility identified in Section I.
- III. **REGULATED SUBSTANCE INFORMATION** - Indicate to the best of your knowledge: A) the type of product or products involved; B) the quantity of product or products released; and C) whether the contamination is suspected or confirmed.
- IV. **REPORTABLE RELEASE INFORMATION** - Record the date of confirmation of the reportable release, e.g., "08/21/93"; the date and regional office notified; and the date the local municipality (provide name of municipality) was sent a copy of this form. Indicate to the best of your knowledge the extent of contamination resulting from the release of the regulated substance.
- V. **INTERIM REMEDIAL ACTIONS** - Indicate the interim remedial actions planned, initiated or completed.
- VI. **SUSPECTED/CONFIRMED CONTAMINATION INFORMATION** - Record the date of observation of the suspected or confirmed contamination, e.g., "01/01/94". Indicate to the best of your knowledge the indications of a suspected release or extent of confirmed contamination resulting from the release of the regulated substance.
- VII. **ADDITIONAL INFORMATION** - Provide any additional, relevant, available information concerning the reportable release or suspected or confirmed contamination. Include in this section a brief description of the activity that was being conducted when the reportable release was confirmed by the owner or operator or when the suspected/confirmed contamination was observed by the certified installer or inspector, e.g., during a(n) installation, repair or upgrade, removal from service or routine inspection.
- VIII. **CERTIFICATION** - Please print your name, and provide your signature and date of signature. If a certified installer/inspector, provide certification number and company certification number.

PLEASE SEND COMPLETED ORIGINAL FORM TO:

PA Department of Environmental Protection
Environmental Cleanup Program
Storage Tank Section
(and the appropriate address below, depending on where the FACILITY is located)

Southeast Region
Lee Park, Suite 6010
535 North Lane
Carpentersville, PA 19428
FAX: 610-832-6143

Counties
Bucks, Chester, Delaware,
Montgomery,
Philadelphia

Northeast Region
2 Public Square
Wilkes-Barre, PA 18711-0790
FAX: 717-829-4907

Counties
Carbon, Lackawanna, Lehigh,
Luzerne, Monroe, Northampton,
Pike, Schuylkill, Susquehanna,
Wayne, Wyoming

Southcentral Region
One Arsenal Boulevard
Harrisburg, PA 17110
FAX: 717-340-3492

Counties
Adams, Bedford, Berks, Blair, Cumberland,
Dauphin, Franklin, Fulton,
Huntingdon, Juniata, Lancaster,
Lebanon, Mifflin, Perry, York

Northcentral Region
200 W. Third Street, Suite 101
Williamsport, PA 17701
FAX: 717-327-3565

Counties
Bradford, Cameron, Centre, Clinton,
Clearfield, Columbia, Lycoming,
Mearns, Northumberland, Potter,
Snyder, Sullivan, Tioga, Union

Southwest Region
400 Waterfront Drive
Pittsburgh, PA 15222
FAX: 412-462-4194

Counties
Allegheny, Armstrong,
Beaver, Cambria, Fayette,
Greene, Indiana, Somerset,
Washington, Westmoreland

Northwest Region
230 Chestnut Street
Meadville, PA 16835
FAX: 814-333-6121

Counties
Butler, Clarion, Crawford,
Erie, Forest, Jefferson,
Lawrence, McKean, Mercer,
Venango, Warren

I. FACILITY INFORMATION (Both O/O and I/I)

Facility Name HERR FOODS, INC. Facility I.D. Number 15-24418
Street Address (P.O. Box not acceptable) Route 272 + HERR DRIVE
City Nottingham State PA Zip Code 19362
County CHESTER Municipality NOTTINGHAM
Phone Number

II. OWNER INFORMATION (Both O/O and I/I)

Owner Name SAME AS I
Address
City
State Zip Code
Phone Number

EPA FORM 101-101-0101 REV. 3/90

III. REGULATED SUBSTANCE INFORMATION

A. Type of Product(s) Involved (Mark All That Apply <input checked="" type="checkbox"/>): Both O/O and I/I	B. Quantity (Gallons) of Product(s) Released: O/O Only	C. Contamination Suspected (S) or Confirmed (C): I/I Only
Leaded Gasoline <input type="checkbox"/>	_____	_____ (S) _____ (C)
Unleaded Gasoline <input checked="" type="checkbox"/>	_____	_____ (S) _____ (C)
Aviation Gasoline <input type="checkbox"/>	_____	_____ (S) _____ (C)
Kerosene <input type="checkbox"/>	_____	_____ (S) _____ (C)
Jet Fuel <input type="checkbox"/>	_____	_____ (S) _____ (C)
Diesel Fuel <input checked="" type="checkbox"/>	_____	_____ (S) _____ (C)
New Motor Oil <input type="checkbox"/>	_____	_____ (S) _____ (C)
Used Motor Oil <input type="checkbox"/>	_____	_____ (S) _____ (C)
Fuel Oil No. 1 <input type="checkbox"/>	_____	_____ (S) _____ (C)
Fuel Oil No. 2 <input type="checkbox"/>	_____	_____ (S) _____ (C)
Fuel Oil No. 4 <input type="checkbox"/>	_____	_____ (S) _____ (C)
Fuel Oil No. 5 <input type="checkbox"/>	_____	_____ (S) _____ (C)
Fuel Oil No. 6 <input type="checkbox"/>	_____	_____ (S) _____ (C)
Other (Specify) _____ <input type="checkbox"/>	_____	_____ (S) _____ (C)
Unknown <input type="checkbox"/>	_____	_____ (S) _____ (C)

IV. REPORTABLE RELEASE INFORMATION (O/O Only)

Date Reportable Release was Confirmed: <u>5/28/97</u> m d y	Environmental Impacts (Mark All That Apply <input checked="" type="checkbox"/>): Soil _____ <input checked="" type="checkbox"/> Sediment _____ <input type="checkbox"/> Surface Water _____ <input type="checkbox"/> Ground Water _____ <input type="checkbox"/> Water Supplies _____ <input type="checkbox"/>
Date Owner/Operator Verbally Notified Appropriate Regional Office of Reportable Release and Office Notified: Date <u>5/28/97</u> Office <u>Southeast Regional</u> m d y	
Date Owner/Operator Sent Copy of this Written Notification to Local Municipality and Name of Municipality Notified: Date <u>6/14/97</u> Municipality <u>West Nottingham</u> m d y	

V. INTERIM REMEDIAL ACTIONS (O/O Only)

(Mark All That Apply <input checked="" type="checkbox"/>):	Planned	Initiated	Completed	Not Applicable
Regulated Substance Removed from Storage Tanks	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fire, Explosion and Safety Hazards Mitigated	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Contaminated Soil Excavated	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Free Product Recovered	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Temporary Water Supplies Provided	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other (Specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

VI. SUSPECTED / CONFIRMED CONTAMINATION INFORMATION (I/I Only)

Date of Observation of Suspected/Confirmed Contamination: <u>5/28/97</u> m d y	
Indication of Suspected Contamination (Mark All That Apply <input checked="" type="checkbox"/>):	Extent of Confirmed Contamination (Mark All That Apply <input checked="" type="checkbox"/>):
Unusual Level of Vapors <input checked="" type="checkbox"/>	Product Stained or Product Saturated Soil or Backfill <input checked="" type="checkbox"/>
Erratic Behavior of Product Dispensing Equipment <input type="checkbox"/>	Ponded Product <input type="checkbox"/>
Release Detection Results Indicate a Release <input type="checkbox"/>	Free Product or Sheen on Ponded Water <input checked="" type="checkbox"/>
Discovery of Holes in the Storage Tank <input type="checkbox"/>	Free Product or Sheen on the Ground Water Surface <input type="checkbox"/>
Other (Specify) _____ <input type="checkbox"/>	Free Product or Sheen on Surface Water <input type="checkbox"/>
	Other (Specify) <u>RAISED FID Field Readings</u> <input checked="" type="checkbox"/>

LRWAD0802 Rev. 5/96

VII. ADDITIONAL INFORMATION (Both O/O and I/I)

include a brief description of the activity that was being conducted when the reportable release was confirmed by the owner or operator or when the suspected/confirmed contamination was observed by the certified installer or inspector, e.g., during a(n) installation, repair or upgrade, removal from service or routine inspection.

On May 28, 1997, Enercon Services Inc. uncovered and removed two underground storage tanks. During the excavation activities, soils exhibiting strong gasoline odors and visual staining were observed. Soils with elevated field readings (FID) were stockpiled on and under plastic for future treatment and/or disposal.

VIII. CERTIFICATION (Both O/O and I/I)

I, STEVE MORAN, hereby certify, under penalty of law as provided in 18 Pa. C.S.A. §4904 (relating to unsworn falsification to authorities) that I am the owner or operator of the above referenced storage tank facility and that the information provided by me in this notification is true, accurate and complete to the best of my knowledge and belief.

Steve Moran
Signature of Owner or Operator6/4/97
Date

I, MICHAEL S. DONOVAN, hereby certify, under penalty of law as provided in 18 Pa. C.S.A. §4904 (relating to unsworn falsification to authorities) that I am the certified installer who performed tank handling activities at the above referenced storage tank facility and that the information provided by me in this notification is true, accurate and complete to the best of my knowledge and belief.

Michael S. Donovan
Signature of Certified Installer7/3/97
Date2830
Installer Certification Number36
Company Certification Number

I, MICHAEL WILLIAMS, hereby certify, under penalty of law as provided in 18 Pa. C.S.A. §4904 (relating to unsworn falsification to authorities) that I am the certified inspector who performed inspection activities at the above referenced storage tank facility and that the information provided by me in this notification is true, accurate and complete to the best of my knowledge and belief.

Michael Williams
Signature of Certified Inspector5/29/97
Date4053
Inspector Certification Number1322
Company Certification Number

CLAYTON SERVICES CORPORATION

ENVIRONMENTAL COMPLIANCE CONSULTING & CONTRACTING

1201 BETHLEHEM PIKE, SUITE 105, NORTH WALES, PA 19454
(215) 362-6400
(215) 362-6481 FAX

Tank Cleaning/Disposal Documentation

Project: Herr Foods Inc.
Nottingham, PA

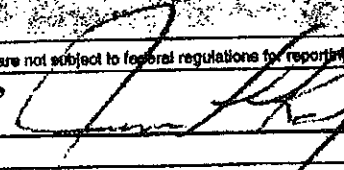
- Non-Hazardous Liquid Manifests
- Tank Cleaning Certificate
- Tank Disposal Documentation

Note:

A 21,000-gallon Frac tank was required on-site to containerize surface stormwater and trapped surface water which accumulated in the excavation during the overexcavation of contaminated soils. Approximately 12,000-gallons of stormwater was containerized and ultimately discharged to the surface after treatment through granular activated carbon. Mr. Keith Dudley, PADEP Southeast Regional Office, granted verbal permission to discharge the water after treatment. Analytical results of the discharged water are available upon request.

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.	Manifest Document No. 00400	2. Page 1 of 1
3. Generator's Name and Mailing Address Herr's Potato Chip Co. RTE 272, Nottingham, PA.			ENERCON SERVICES Inc. Contractor	
4. Generator's Phone ()				
5. Transporter 1 Company Name Associated Environmental Tech		6. US EPA ID Number MDR000004908		
7. Transporter 2 Company Name		8. US EPA ID Number		
9. Designated Facility Name and Site Address I. P. O. BATHO. 6305 E. Lombard St Baltimore, MD		10. US EPA ID Number		A. Transporter's Phone 410-327-7720 B. Transporter's Phone C. Facility's Phone 1-800-228-2511
11. Waste Shipping Name and Description a. Non HAZ, Non RERA, Non DOT Regulated Oil Liquids for Recycling			12. Container No. 100	13. Quantity 100
b.				
c.				
d.				
D. Additional Descriptions for Materials Listed Above The above product was generated by TANK CLEANING Project.			E. Additional Descriptions for Wastes Listed Above	
15. Special Handling Instructions and Additional Information IN CASE of Emergency, call 410-327-1725 800-641-5332				
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste. Printed/Typed Name: Frank Bowman Signature: Frank Bowman Month: 05 Day: 28 Year: 97				
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name: [Signature] Signature: [Signature] Month: Day: Year:				
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name: [Signature] Signature: [Signature] Month: Day: Year:				
19. Discrepancy Indication Space				
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19. Printed/Typed Name: [Signature] Signature: [Signature] Month: Day: Year:				

GENERATOR'S COPY

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.	Manifest Document No. N.Y. 8.0	2. Page 1 of 1								
3. Generator's Name and Mailing Address Heir's Refco Corp 272 North, Nottingham PA.			Enercon Services Inc Contractor									
4. Generator's Phone ()												
5. Transporter 1 Company Name A.E.T. Inc.		6. US EPA ID Number MD2000006908										
7. Transporter 2 Company Name		8. US EPA ID Number										
9. Designated Facility Name and Site Address E.P.C. market st. Wilmington, DE		10. US EPA ID Number		A. Transporter's Phone 410-327-1725 B. Transporter's Phone C. Facility's Phone 800-222-2511								
11. Waste Shipping Name and Description		12. Containers										
a. Non HAZ, Non RCRA, Non DOT Regulated only Liquids		<table border="1"> <thead> <tr> <th>No.</th> <th>Type</th> <th>Quantity</th> <th>Wt/Vol</th> </tr> </thead> <tbody> <tr> <td>001</td> <td>TTB</td> <td>1888</td> <td></td> </tr> </tbody> </table>			No.	Type	Quantity	Wt/Vol	001	TTB	1888	
No.	Type	Quantity	Wt/Vol									
001	TTB	1888										
b. Non HAZ, Non RCRA, Non DOT Regulated only Sludge		<table border="1"> <thead> <tr> <th>No.</th> <th>Type</th> <th>Quantity</th> <th>Wt/Vol</th> </tr> </thead> <tbody> <tr> <td>002</td> <td>DA</td> <td>00300</td> <td></td> </tr> </tbody> </table>			No.	Type	Quantity	Wt/Vol	002	DA	00300	
No.	Type	Quantity	Wt/Vol									
002	DA	00300										
c.												
d.												
D. Additional Descriptions for Materials Listed Above 6 Drums of sludge - (one from the oil TANKS		E. Hazardous Waste Listed Above										
15. Special Handling Instructions and Additional Information IN CASE OF Emergency call 410-327-1725												
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.												
Printed/Typed Name Jim L. Kay		Signature 		Month Day Year 5 27 97								
17. Transporter 1 Acknowledgement of Receipt of Materials		Signature		Month Day Year								
Printed/Typed Name KEVIN FRANKLIN												
18. Transporter 2 Acknowledgement of Receipt of Materials		Signature		Month Day Year								
Printed/Typed Name												
19. Discrepancy Indication Space												
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in item 19.												
Printed/Typed Name		Signature		Month Day Year								

GENERATOR'S COPY

EnerCon Services, Inc.

**P.O. Box 174
Bear, DE 19701
(302) 834-8265
Fax# (302) 834-4699**

Date: June 4, 1997

Clayton Services Corporation
1201 Bethlehem Pike, Suite 105
North Wales, PA 19454
Fax #215-362-6481

Tank Cleaning Certification

This letter will certify that EnerCon Services, Inc. pumped out the contents of a 1,000 gallon waste oil tank, a 4,000 gallon motor oil tank, a 4,000 gallon gasoline tank, a 12,000 gallon gasoline tank and a 15,000 gallon diesel underground storage tank located at Herr's in Nottingham, PA. The tanks were cleaned, wiped, powdered dry and vapor freed. The cleaning was done by a 40-hour OSHA trained employee with Confined Space Certification. All work was done in accordance with API Publication No. 1604 and in compliance with all state and federal regulations.

Sincerely yours,
EnerCon Services, Inc.

A handwritten signature in cursive script that reads "Jim Brown/lw".

**Jim Brown
Vice President**

JB:lw

ZYDINSKY CONTRACTORS
JOSEPH J. ZYDINSKY, OWNER

RD #2, ROUTE 372E
P. O. BOX 451

PARKESBURG, PA 19365

(610) 857-1200

ATTN: MIKE DONOVAN
ENERCON SERVICES
P. O. BOX 174
BEAR, DE 19701

JULY 3, 1997

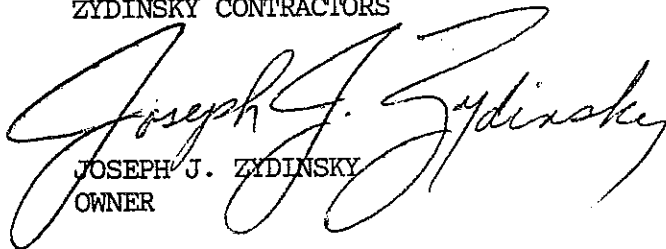
CERTIFICATE OF DESTRUCTION

SERVICE LOCATION: HERRS FOODS
RTE. 272 & RTE. 1
NOTTINGHAM, PA

SERVICE ITEMS: ONE (1) 15,000/GALLON DIESEL STEEL TANK
ONE (1) 12,000/GALLON GASOLINE STEEL TANK
ONE (1) 4,000/GALLON GASOLINE STEEL TANK
ONE (1) 4,000/GALLON MOTOR OIL STEEL TANK
ONE (1) 2,000/GALLON WASTE OIL STEEL TANK

ZYDINSKY CONTRACTORS OPERATIONAL PERSONNEL DID CAUSE AND EFFECT COMPLETE AND/OR IRREPARABLE DESTRUCTION TO THE ABOVE REFERENCED ITEMS SO AS TO RENDER SAID ITEMS PERMANENTLY INOPERABLE AND/OR UNUSABLE FOR ORIGINAL PURPOSE. ITEMS WERE SUBSEQUENTLY SHIPPED OFF-SITE AND SUBMITTED FOR DISPOSAL UNDER ZYDINSKY CONTRACTORS GENERIC SCRAP APPROVAL CODE THROUGH WHICH THERMAL REDUCTION AND/OR ELIMINATION PROVIDED THE FINAL DISPOSITION OF SAID ITEMS.

RESPECTFULLY,
ZYDINSKY CONTRACTORS



JOSEPH J. ZYDINSKY
OWNER

CC: FILE

LURIA BROTHERS

A DIVISION OF CORNELIA LIMITED PARTNERSHIP
20 MORTINVILLE ROAD
MODENA, PA 19358
TELEPHONE: 610-384-2881

WEIGHMASTER CERTIFICATE

TICKET # 108424 GROSS 1215
TARE 5-15-57
NET 5925
TICKET # 5925
TARE 5-15-57
NET 5925
TICKET # 5925
TARE 5-15-57
NET 5925
TICKET # 5925
TARE 5-15-57
NET 5925

I.D. # 107 VEHICLE # 105

ORDER # 107

SUPPLIER/SELLER 107

NAME 107

COMMODITY 107

DESCRIPTION 107

TOTAL 107

GROSS BY 107 DEPUTY 107

TARE BY 107 DEPUTY 107

VEHICLE OWNER ASSUMES RESPONSIBILITY FOR ANY DAMAGE TO VEHICLE BY CRANE.

SIGNED 107

THIS IS TO CERTIFY that the above described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by the applicable Business and Professions Code of this state, and administered by the authorized state department responsible for Measurement Standards of this state.

LURIA BROTHERS

A DIVISION OF CORNELIA LIMITED PARTNERSHIP
20 MORTINVILLE ROAD
MODENA, PA 19358
TELEPHONE: 610-384-2881

WEIGHMASTER CERTIFICATE

TICKET # 108424 GROSS 1215
TARE 5-15-57
NET 5925
TICKET # 5925
TARE 5-15-57
NET 5925
TICKET # 5925
TARE 5-15-57
NET 5925
TICKET # 5925
TARE 5-15-57
NET 5925

I.D. # 103 VEHICLE # 103

ORDER # 103

SUPPLIER/SELLER 103

NAME 103

COMMODITY 103

DESCRIPTION 103

TOTAL 103

GROSS BY 103 DEPUTY 103

TARE BY 103 DEPUTY 103

VEHICLE OWNER ASSUMES RESPONSIBILITY FOR ANY DAMAGE TO VEHICLE BY CRANE.

SIGNED 103

THIS IS TO CERTIFY that the above described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by the applicable Business and Professions Code of this state, and administered by the authorized state department responsible for Measurement Standards of this state.

LURIA BROTHERS

A DIVISION OF CORNELL LIMITED PARTNERSHIP

20 MORTIMVILLE ROAD

MODENA, PA 19058

TELEPHONE: 610-364-2881

WEIGHMASTER**CERTIFICATE**

TIME

WEIGHT

GROSS

TARE

NET

TICKET #

I.D. #

VEHICLE #

ORDER #

SUPPLIER/SELLER

NAME

COMMODITY

DESCRIPTION

TOTAL

GROSS BY

DEPUTY

DATE

TARE BY

DEPUTY

WEIGHMASTER

VEHICLE OWNER ASSUMES RESPONSIBILITY FOR ANY DAMAGE TO VEHICLE BY CRANE.

SIGNED

X [Signature]

THIS IS TO CERTIFY that the above described commodity was weighed, measured, or counted by a weighmaster whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by the applicable Business and Professions Code of this state, and administered by the authorized state department responsible for Measurement Standards of this state.

LURIA BROTHERS

A DIVISION OF CORNELL LIMITED PARTNERSHIP

20 MORTIMVILLE ROAD

MODENA, PA 19058

TELEPHONE: 610-364-2881

WEIGHMASTER**CERTIFICATE**

TIME

WEIGHT

GROSS

TARE

NET

TICKET #

I.D. #

VEHICLE #

ORDER #

SUPPLIER/SELLER

NAME

COMMODITY

DESCRIPTION

TOTAL

GROSS BY

DEPUTY

DATE

TARE BY

DEPUTY

WEIGHMASTER

VEHICLE OWNER ASSUMES RESPONSIBILITY FOR ANY DAMAGE TO VEHICLE BY CRANE.

SIGNED

X [Signature]

THIS IS TO CERTIFY that the above described commodity was weighed, measured, or counted by a weighmaster whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by the applicable Business and Professions Code of this state, and administered by the authorized state department responsible for Measurement Standards of this state.

CLAYTON SERVICES CORPORATION

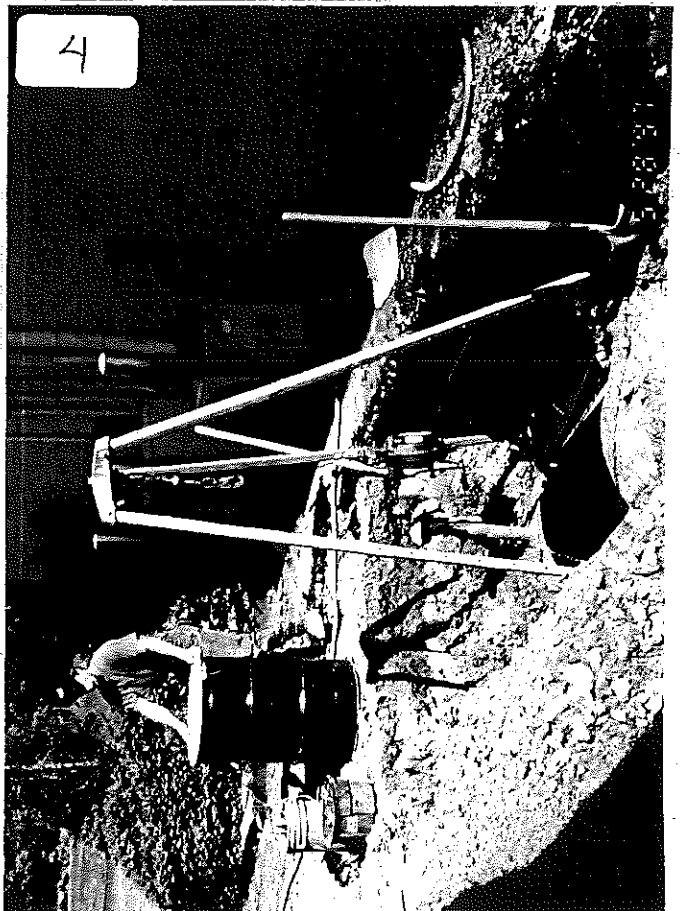
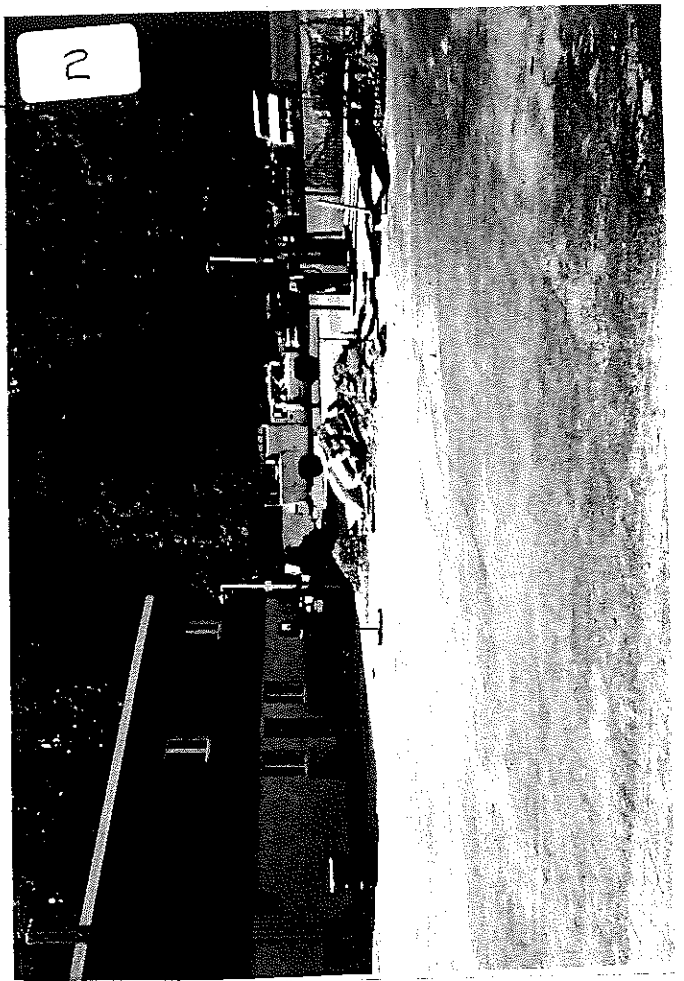
ENVIRONMENTAL COMPLIANCE CONSULTING & CONTRACTING

1201 BETHLEHEM PIKE, SUITE 105, NORTH WALES, PA 19454
(215) 362-6400
(215) 362-6481 FAX

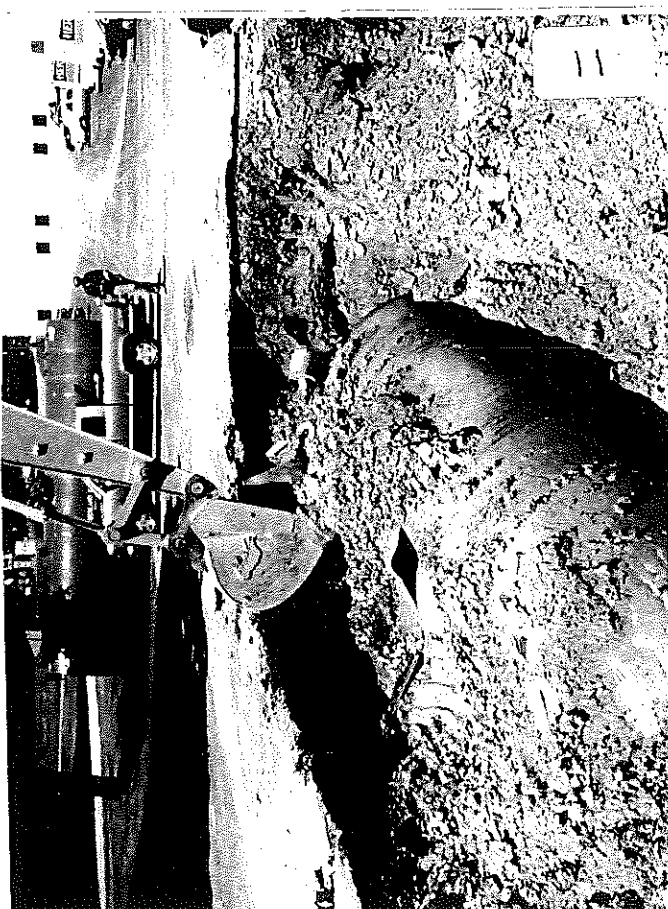
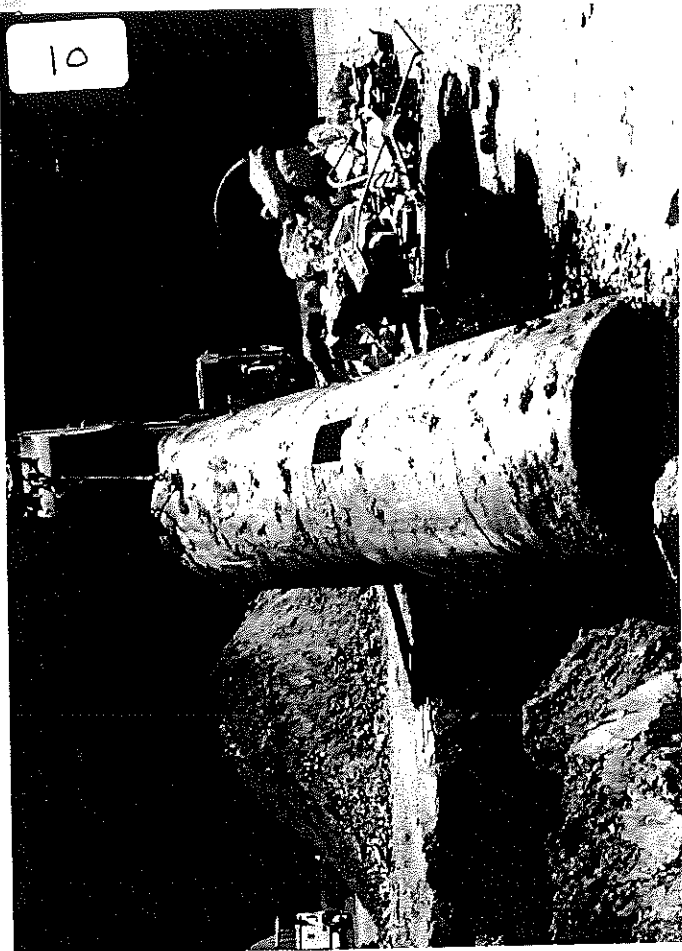
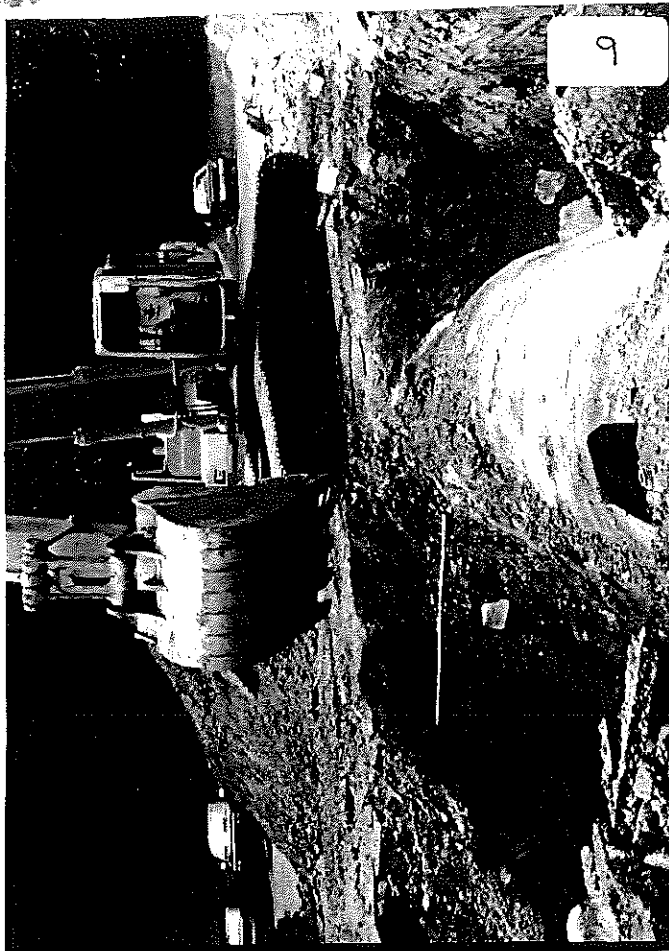
PHOTODOCUMENTATION

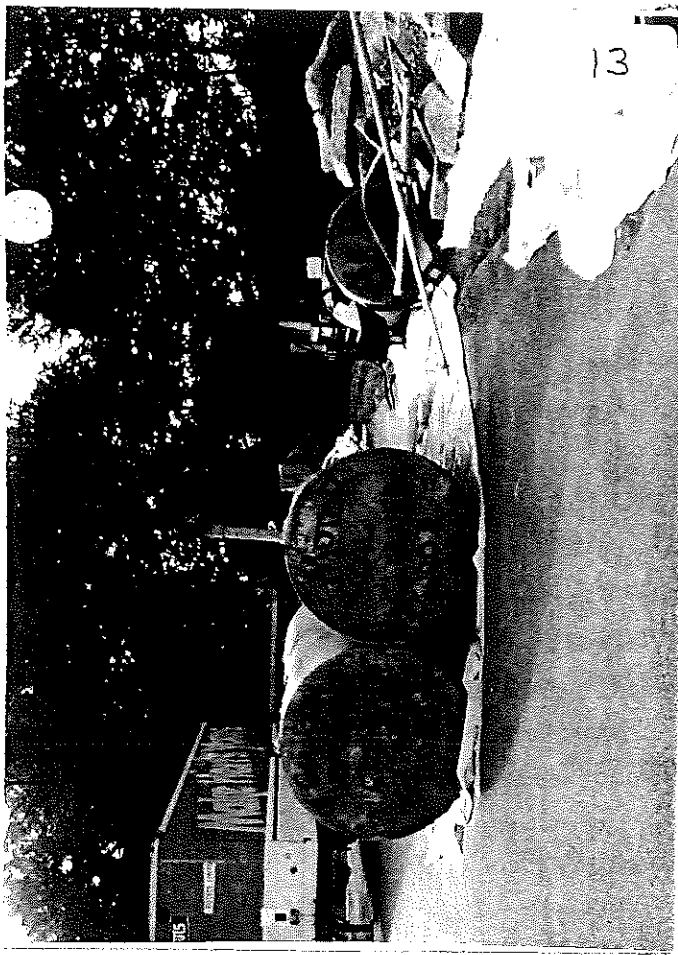
Project: Herr Foods Inc., Nottingham, PA

- 1) Tank location prior to tank removals. Note excavation of diesel UST (Tank 006) for testing and investigation of leak.
- 2) Same as #1
- 3) Draining of product lines back to respective USTs.
- 4) Tripod for internal tank cleaning
- 5) Removed Waste Oil UST (Tank 007)
- 6) Removed new oil UST (Tank 003)
- 7) Excavation after removal of Tank 003
- 8) Removed gasoline UST (Tank 004)
- 9) Excavation of 15,000-gal gasoline prior to removal (Tank 005)
- 10) Removal of 12,000-gal diesel UST (Tank 006)
- 11) Excavation of 12,000-gal diesel UST prior to removal (Tank 006)
- 12) Visible hole in bottom of Tank 006
- 13) Removed and labeled Tanks 003 & 004
- 14) Stockpiles of contaminated soil removed from under Tanks 005 & 006
- 15) Same as #14
- 16) 21,000-gal Frac tank used to contain stormwater runoff into excavation during overexcavation of contaminated soils.









CLAYTON SERVICES CORPORATION

ENVIRONMENTAL COMPLIANCE CONSULTING & CONTRACTING

1201 BETHLEHEM PIKE, SUITE 105, NORTH WALES, PA 19454
(215) 362-6400
(215) 362-6481 FAX

PADEP
10081997

July 3, 1997

Ms. Susan Kishbaugh
PADEP - SE Region
Lee Park, Suite 6010
555 North Lane
Conshohocken, PA 19428

Re: Notice of Contamination
Herr Foods Inc.
Facility ID # 15-24418
West Nottingham Twp.

Dear Susan,

As per our discussion, attached please find one "Installation Contractor" signed Notice of Contamination (NOC) for the above referenced project.

I anticipate this will complete the notification process of your department, as requested.

Please contact our office with any questions.

Sincerely,



Michael Williams
Clayton Services Corporation
PADEP Co. Cert # 1322
PADEP Ind. Cert # 4053

Closure Report Forthcoming.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

2530-PA-1-171400002 Rev. 5/95
BUREAU OF LAND RECYCLING AND WASTE MANAGEMENT

NOTIFICATION OF REPORTABLE RELEASE (Owners and Operators) NOTIFICATION OF CONTAMINATION (Certified Installers and Inspectors)

NOTIFICATION OF REPORTABLE RELEASE (Owners and Operators)

On August 21, 1993, the Storage Tank Cleanup Program's Corrective Action Process (CAP) regulations became effective. These regulations establish release reporting requirements for owners and operators of storage tanks and storage tank facilities.

Subsection 245.303(a) of the regulations requires owners or operators to notify the appropriate regional office of the Department as soon as practicable, but no later than 2 hours, after the confirmation of a reportable release.

Subsection 245.303(d) requires owners or operators to provide written notification to the appropriate regional office and to the local municipality, within 15 days of the notice required by Subsection 245.303(a). This form may be used to comply with Subsection 245.303(d).

OWNERS AND OPERATORS (O/O)

PLEASE COMPLETE SECTIONS I, II, III, IV, V, VII and VIII.

NOTIFICATION OF CONTAMINATION (Certified Installers and Inspectors)

On September 21, 1991, the Storage Tank Program's Certification regulations became effective. These regulations establish standards of performance for certified installers and inspectors of storage tanks and storage tank facilities.

Subsection 245.132(a)(4) of the regulations requires certified installers and inspectors to report to the Department a release of a regulated substance or confirmed or suspected contamination of soil, surface or groundwater from regulated substances observed while performing services as a certified installer or inspector.

This form may be used to comply with Subsection 245.132(a)(4). The Department expects submission of the form within 48 hours of observing suspected or confirmed contamination. Where there is a reportable release, the form may be submitted jointly by the owner, operator, certified installer and certified inspector. In this instance, the form must be received by the appropriate regional office within 15 days of the notice required by Subsection 245.303(a).

CERTIFIED INSTALLERS AND INSPECTORS (I/I)

PLEASE COMPLETE SECTIONS I, II, III, IV, VI, VII and VIII.

INSTRUCTIONS

- I. **FACILITY INFORMATION** - Record the name, I.D. number and physical location (not P.O. Box) of the facility at which a reportable release has been confirmed or at which suspected or confirmed contamination has been observed. Include the name and phone number of a person to contact at the facility.
- II. **OWNER INFORMATION** - Record the name, business address and phone number of the owner of the facility identified in Section I.
- III. **REGULATED SUBSTANCE INFORMATION** - Indicate to the best of your knowledge: A) the type of product or products involved; B) the quantity of product or products released; and C) whether the contamination is suspected or confirmed.
- IV. **REPORTABLE RELEASE INFORMATION** - Record the date of confirmation of the reportable release, e.g., "08/21/93"; the date and regional office notified; and the date the local municipality (provide name of municipality) was sent a copy of this form. Indicate to the best of your knowledge the extent of contamination resulting from the release of the regulated substance.
- V. **INTERIM REMEDIAL ACTIONS** - Indicate the interim remedial actions planned, initiated or completed.
- VI. **SUSPECTED/CONFIRMED CONTAMINATION INFORMATION** - Record the date of observation of the suspected or confirmed contamination, e.g., "01/01/94". Indicate to the best of your knowledge the indications of a suspected release or extent of confirmed contamination resulting from the release of the regulated substance.
- VII. **ADDITIONAL INFORMATION** - Provide any additional, relevant, available information concerning the reportable release or suspected or confirmed contamination. Include in this section a brief description of the activity that was being conducted when the reportable release was confirmed by the owner or operator or when the suspected/confirmed contamination was observed by the certified installer or inspector, e.g., during a(n) installation, repair or upgrade, removal from service or routine inspection.
- VIII. **CERTIFICATION** - Please print your name, and provide your signature and date of signature. If a certified installer/inspector, provide certification number and company certification number.

PLEASE SEND COMPLETED ORIGINAL FORM TO:

PA Department of Environmental Protection
Environmental Cleanup Program
Storage Tank Section
(and the appropriate address below, depending on where the FACILITY is located)

Southeast Region Lee Park, Suite 6610 235 North Lane Catskill, PA 15428 FAX: 610-671-6183 Counties Bucks, Chester, Delaware, Montgomery, Philadelphia	Northwest Region 2 Public Square Whitap, PA 18711-0799 FAX: 717-438-4887 Counties Carbon, Lehigh, Lehigh, Luzerne, Monroe, Northampton, Pike, Schuylkill, Susquehanna, Wayne, Wyoming	Southeast Region One Amstel Boulevard Harrisburg, PA 17110 FAX: 717-640-3482 Counties Adams, Berks, Berks, Blair, Cumberland, Dauphin, Franklin, Fulton, Huntingdon, Juniata, Lancaster, Lebanon, Mifflin, Perry, York	Northcentral Region 288 W. Third Street, Suite 101 Williamsport, PA 17701 FAX: 717-327-3585 Counties Bradford, Cameron, Centre, Clinton, Clearfield, Columbia, Lycoming, Monroe, Northumberland, Potter, Snyder, Sullivan, Tioga, Union	Southwest Region 488 Waterfront Drive Pittsburgh, PA 15222 FAX: 612-462-4194 Counties Allegheny, Armstrong, Beaver, Cambria, Fayette, Greene, Indiana, Somerset, Washington, Westmoreland	Northwest Region 235 Chestnut Street Meadville, PA 16805 FAX: 814-333-6121 Counties Butler, Clarion, Crawford, Elk, Erie, Forest, Jefferson, Lawrence, McKean, Mercer, Venango, Warren
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I. FACILITY INFORMATION (Both O/O and I/I)

Facility Name HERR FOODS INC Facility I.D. Number 15-24418
 Street Address (P.O. Box not acceptable) Route 272 - HERR DRIVE
 City Nottingham State PA Zip Code 19362
 County CHESTER Municipality NOTTINGHAM

II. OWNER INFORMATION (Both O/O and I/I)

Owner Name SAME AS I
 Address _____
 City _____
 State _____ Zip Code _____
 Phone Number _____

III. REGULATED SUBSTANCE INFORMATION

A. Type of Product(s) Involved (Mark All That Apply <input checked="" type="checkbox"/>): Both O/O and I/I	B. Quantity (Gallons) of Product(s) Released: O/O Only	C. Contamination Suspected (S) or Confirmed (C): I/I Only
Leaded Gasoline <input type="checkbox"/>	_____	(S) <input type="checkbox"/> (C) <input type="checkbox"/>
Unleaded Gasoline <input checked="" type="checkbox"/>	_____	X (S) X (C)
Aviation Gasoline <input type="checkbox"/>	_____	(S) <input type="checkbox"/> (C) <input type="checkbox"/>
Kerosene <input type="checkbox"/>	_____	(S) <input type="checkbox"/> (C) <input type="checkbox"/>
Jet Fuel <input type="checkbox"/>	_____	(S) <input type="checkbox"/> (C) <input type="checkbox"/>
Diesel Fuel <input checked="" type="checkbox"/>	_____	X (S) X (C)
New Motor Oil <input type="checkbox"/>	_____	(S) <input type="checkbox"/> (C) <input type="checkbox"/>
Used Motor Oil <input type="checkbox"/>	_____	(S) <input type="checkbox"/> (C) <input type="checkbox"/>
Fuel Oil No. 1 <input type="checkbox"/>	_____	(S) <input type="checkbox"/> (C) <input type="checkbox"/>
Fuel Oil No. 2 <input type="checkbox"/>	_____	(S) <input type="checkbox"/> (C) <input type="checkbox"/>
Fuel Oil No. 4 <input type="checkbox"/>	_____	(S) <input type="checkbox"/> (C) <input type="checkbox"/>
Fuel Oil No. 5 <input type="checkbox"/>	_____	(S) <input type="checkbox"/> (C) <input type="checkbox"/>
Fuel Oil No. 6 <input type="checkbox"/>	_____	(S) <input type="checkbox"/> (C) <input type="checkbox"/>
Other (Specify) _____ <input type="checkbox"/>	_____	(S) <input type="checkbox"/> (C) <input type="checkbox"/>
Unknown <input type="checkbox"/>	_____	(S) <input type="checkbox"/> (C) <input type="checkbox"/>

IV. REPORTABLE RELEASE INFORMATION (O/O Only)

Date Reportable Release was Confirmed: <u>5/23/97</u> m d y	Environmental Impacts (Mark All That Apply <input checked="" type="checkbox"/>): Soil <input checked="" type="checkbox"/> Sediment <input type="checkbox"/> Surface Water <input type="checkbox"/> Ground Water <input type="checkbox"/> Water Supply <input type="checkbox"/>
Date Owner/Operator Verbally Notified Appropriate Regional Office of Reportable Release and Office Notified: Date <u>5/28/97</u> Office <u>SOUTHEAST REGIONAL</u> m d y	
Date Owner/Operator Sent Copy of this Written Notification to Local Municipality and Name of Municipality Notified: Date <u>6/4/97</u> Municipality <u>WEST NOTTINGHAM</u> m d y	

V. INTERIM REMEDIAL ACTIONS (O/O Only)

(Mark All That Apply <input checked="" type="checkbox"/>):	Planned	Initiated	Completed	Not Applicable
Regulated Substance Removed from Storage Tanks	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fire, Explosion and Safety Hazards Mitigated	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Contaminated Soil Excavated	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Free Product Recovered	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Temporary Water Supplies Provided	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other (Specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

VI. SUSPECTED / CONFIRMED CONTAMINATION INFORMATION (I/I Only)

Date of Observation of Suspected/Confirmed Contamination: <u>5/28/97</u> m d y	
Indication of Suspected Contamination (Mark All That Apply <input checked="" type="checkbox"/>): Unusual Level of Vapors <input checked="" type="checkbox"/> Erratic Behavior of Product Dispensing Equipment <input type="checkbox"/> Release Detection Results Indicate a Release <input type="checkbox"/> Discovery of Holes in the Storage Tank <input type="checkbox"/> Other (Specify) _____ <input type="checkbox"/>	Extent of Confirmed Contamination (Mark All That Apply <input checked="" type="checkbox"/>): Product Stained or Product Saturated Soil or Backfill <input checked="" type="checkbox"/> Ponded Product <input type="checkbox"/> Free Product or Sheen on Ponded Water <input checked="" type="checkbox"/> Free Product or Sheen on the Ground Water Surface <input type="checkbox"/> Free Product or Sheen on Surface Water <input type="checkbox"/> Other (Specify) <u>RAISED FLD FIELD READINGS</u> <input checked="" type="checkbox"/>

FPA-LRW/MS002 Rev. 5/96

VII. ADDITIONAL INFORMATION (Both O/O and I/I)

Provide a brief description of the activity that was being conducted when the reportable release was confirmed by the owner or operator or when the suspected/confirmed contamination was observed by the certified installer or inspector, e.g., during a(n) installation, repair or upgrade, removal from site or routine inspection.

On May 28, 1997, Enercon Services Inc. uncovered and removed two underground storage tanks. During the excavation activities, soils exhibiting strong gasoline odors and visual staining were observed. Soils with elevated field readings (FID) were stockpiled on and under plastic for future treatment and/or disposal.

VIII. CERTIFICATION (Both O/O and I/I)

STEVE MORAN

(Print Name)

, hereby certify, under penalty of law as provided in 18 Pa. C.S.A.

§4904 (relating to unsworn falsification to authorities) that I am the owner or operator of the above referenced storage tank facility and that the information provided by me in this notification is true, accurate and complete to the best of my knowledge and belief.

Steve Moran

Signature of Owner or Operator

6/4/97

Date

MICHAEL S. DONOVAN

(Print Name)

, hereby certify, under penalty of law as provided in 18 Pa. C.S.A.

§4904 (relating to unsworn falsification to authorities) that I am the certified installer who performed tank handling activities at the above referenced storage tank facility and that the information provided by me in this notification is true, accurate and complete to the best of my knowledge and belief.

Michael S. Donovan

Signature of Certified Installer

7/3/97

Date

2830

Installer Certification Number

36

Company Certification Number

MICHAEL WILLIAMS

(Print Name)

, hereby certify, under penalty of law as provided in 18 Pa. C.S.A.

§4904 (relating to unsworn falsification to authorities) that I am the certified inspector who performed inspection activities at the above referenced storage tank facility and that the information provided by me in this notification is true, accurate and complete to the best of my knowledge and belief.

Michael Williams

Signature of Certified Inspector

5/29/97

Date

4053

Inspector Certification Number

1322

Company Certification Number



Pennsylvania Department of Environmental Protection

Lee Park, Suite 6010
555 North Lane
Conshohocken, PA 19428
November 17, 1997

Southeast Regional Office

610-832-5949
Fax 610-832-6143

Steve Moran
Herr Foods, Inc.
P.O. Box 300
Nottingham, PA 19362

Re: Storage Tank Program
Herr Foods, Inc.
Facility ID No. 15-24418
Route 272 & Herr Drive
West Nottingham Township
Chester County

Dear Mr. Moran:

The Department has reviewed the closure report submitted by Clayton Services Corporation, dated July 2, 1997, regarding the removal of one steel 15,000-gallon unleaded gasoline, one steel 12,000-gallon diesel, one steel 4,000-gallon new motor oil, one steel 4,000-gallon unleaded gasoline, and one steel 1,000-gallon used motor oil underground storage tanks at the above referenced facility.

The closure report indicates that contamination was encountered during the tank removal process. The contamination of soil and/or water, including groundwater, as the result of a discharge, spill or release of a regulated substance from a storage tank is a violation of Section 1304 and 1310 of the Storage Tank and Spill Prevention Act.

Although analytical results from soil sample Nos. PI-5 and PI-6 exceed the statewide health standard for MTBE, based on our review of the information and conclusions contained in the report, it appears that no further action is required regarding the closure of the tanks listed above. We do not warrant the accuracy or veracity of any closure report. If we subsequently obtain additional information which indicates the existence of contamination caused by the conditions on your premises, we reserve the right to require additional site characterization and/or remediation.

Although the closure report as submitted enables the Department to determine that no further action is needed, please be advised that the case file for this facility will not be complete until the following information is received:

Documentation of proper disposal of the contaminated soil.



CLAYTON SERVICES CORPORATION

ENVIRONMENTAL COMPLIANCE CONSULTING & CONTRACTING

1201 BETHLEHEM PIKE, SUITE 105, NORTH WALES, PA 19454
(215) 362-6400
(215) 362-6481 FAX

October 1, 1997

Mr. Steve Moran
Herr Foods Inc.
PO Box 300
Nottingham, PA 19362

Re: "Narrative Report"
Underground Storage Tank Project
USTIF Claim Number: 97-175(F)
PADEP Facility ID # 15-24418

Dear Steve,

At the request of ICF Kaiser, Clayton Services Corporation is providing the following summary of activities and remedial actions which took place during your underground storage tank removal/replacement project. This summary is in addition to the Tank Closure Report dated 7/2/97, which was prepared by Clayton and submitted to the PADEP and ICF Kaiser.

Overview

Herr Foods, Inc. contracted with Enercon Services (Enercon) of Bear, DE for the removal and replacement of the underground storage tanks located at their Nottingham, PA maintenance garage facility. A total of five (5) underground storage tanks (USTs) were removed and replaced with two (2) new double walled USTs. Clayton Services Corporation (Clayton) was subcontracted by Enercon to perform all of the required PADEP tank closure soil sampling and reporting. The project was conducted between May 28, 1997 and concluded in early August 1997. The following underground storage tanks (USTs) were removed and replaced, as noted:

Removal:	(1) 1,000-gallon Waste Oil (Tank 007)
	(1) 4,000-gallon New Motor Oil (Tank 003)
	(1) 4,000-gallon Unleaded Gasoline (Tank 004)
	(1) 15,000-gallon Unleaded Gasoline (UST 005) "leaking"
	(1) 12,000-gallon Diesel (Tank 006) "leaking"
Install:	(1) 10,000-gallon Diesel
	(1) 10,000-gallon Gasoline

Page 2
October 1, 1997
Mr. Steve Moran
Herr Foods Inc.

Release Incident

In or around February of 1997, Herr Foods Inc. discovered an accumulation of water within their 12,000-gallon diesel UST. Upon further investigation and tank testing, it was determined that the diesel UST was indeed leaking. Herr Foods Inc. immediately removed all the product from the tank and started proceedings to contract for the removal of all five USTs and the installation of a new two tank double walled system.

On May 28, 1997, Enercon Services cleaned and removed the three smaller USTs. During the excavation of backfill material necessary to remove USTs 003 and 004, excessive petroleum vapors were evident in the excavated backfill soil and soils with elevated field readings were stockpiled on and under plastic. Soils were screened by Michael Williams of Clayton with a Foxboro OVA 128 Flameionization Detector (FID). Although neither Tank 003 nor 004 contained any visible holes, backfill material which was also common to other on-site USTs exhibited excessive petroleum odors. The Pennsylvania Department of Environmental Protection (PADEP) was notified on May 28, 1997 of the suspected release and a Notice of Contamination form was subsequently submitted, as required.

Due to the tight confines of the site and the logistics of the large excavation required for the removal of USTs 005 and 006, tank removal operations were continued on June 4, 1997. On June 4, 1997, Enercon removed the two remaining USTs. Several holes were discovered in Tank 006 and only "weep type" holes were discovered in Tank 005. After a discussion with the Owner regarding the release claims process, the Underground Storage Tank Indemnification Fund (USTIF) was contacted on June 6, 1997.

Extent of Contamination

Impacted soils were field screened and stockpiled between June 4 and June 6, 1997. Because the site is underlain by a very tight silty schist material, it appears the contamination was limited to the common backfill material surrounding the four larger removed USTs. The removed 1,000-gallon waste oil UST (Tank 007) was remote from the other four USTs and did not exhibit any soil odors nor elevated field FID readings. All laboratory analytical results indicated soils below any pertinent PADEP cleanup levels for the waste oil excavation.

Soils around Tanks 005 and 006 and their associated pump islands were excavated until diminished field readings were obtained. It was discovered that contamination had reached the backfill material surrounding Tanks 003 and 004

and had also impacted the soils beneath the removed pump islands. Contamination appeared to be a result of the release of product from Tanks 005 and 006 which accumulated in the more permeable backfill material used around the existing USTs. Due to the tight non-permeable nature of the surrounding virgin soils, trapped surface water was accumulated within the large excavation and appeared to contribute to the migration of the released diesel and gasoline compounds to adjoining backfill material. Any accumulated surface water within the excavation was removed, containerized, sampled, and discharged after PADEP approval. Treatment and sampling of the trapped surface water was necessary prior to final discharge due to the documented release. No groundwater was apparently encountered during this project and all horizontal and vertical contaminant migration appeared to diminish at the backfill/virgin soil interface. Post excavation soil samples revealed only several areas which were slightly above the PADEP Action Levels for Methyl Tertiary Butyl Ether (MTBE) and Naphthalene. No other compounds of concern were elevated above the PADEP action levels.

Remedial Options and Choices

The remedial options for the proper treatment of the contaminated soil was limited by the installation of replacement USTs. Soils expected to be utilized in backfilling and restoration of the site were impacted and could not be reused. Also, since the new tanks had to be installed within the impacted area, future treatment would surely be hampered by short circuiting and interference of treatment methodologies. Since the impacted media appeared to be limited to the backfill material of the removed USTs, soil removal was chosen as the most effective and safest option to eliminate the contaminant source.

The risks of leaving impacted soils in place was intensified by the presence of trapped surface water within the excavation. The "bathtub effect" of less permeable tank excavations often leads to surface water infiltration, filtering, and enhanced migration of contaminants. In addition, the immediate area is served by private wells and the risks associated with leaving source contaminant material in-place are greater. All soils which were accessible and which would not impact the structural integrity of the adjacent building were removed and stockpiled.

Since the site is a producer of public food products and any newly installed tanks would limit remedial effectiveness, the choice was made to remove the impacted soils and dispose at an approved disposal facility. The impacted soils appear to have been removed and the amount of stockpiled soil is estimated at 1,100 to 1,300 tons. The soil is currently stockpiled at the site awaiting proper disposal.

Page 4
October 1, 1997
Mr. Steve Moran
Herr Foods Inc.

Estimated Cost of Remediation

Costs incurred to date and which are anticipated are as follows:

1) Loading contaminated soil for staging - \$1,170/day x 2 days	\$ 2,340.00
2) Staging & Stockpiling of Contaminated Soil - labor, hauling, plastic - 750 cu. yd.	\$ 4,500.00
3) Select Fill over base bid 587.75 tons compacted	\$ 9,991.75
4) Pea Gravel over base bid (110.25 tons)	\$ 2,701.13
5) Frac Tank, pump water, carbon filter (lot)	\$ 5,896.00
6) Lab Testing of Stockpiled Soil and Frac Tank Water	\$ 3,100.00
7) Environmental Consultant Oversight and Reporting	\$ 3,500.00
8) Soil Loading, Transport, and Disposal - 1,200 tons @ \$72/ton	<u>\$ 86,400.00</u>
Anticipated Total	\$118,428.88

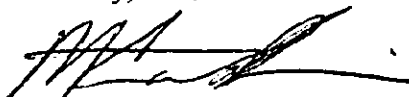
Note: This total is for current remedial measures. Although it appears the PADEP will not require any further action at this site, additional costs may be encountered if the PADEP requires any additional subsurface investigation.

Conclusions

The majority of the impacted soils surrounding the USTs appears to have been removed during overexcavation and stockpiling activities. Post tank removal laboratory results are contained within the Tank Closure Report dated 7/2/97. Michael Williams has had several discussions with Susan Kishbaugh and Kathy Nagle of the PADEP regarding the remedial measures and closure status of this site. After reviewing the post removal soil sample analytical results and the nature of site contamination, the PADEP did not anticipate requiring any further remedial measures. Final review and approval of the remedial measures as outlined in the Tank Closure Report is pending from the PADEP.

I have attached the soil, frac tank water discharge, and the stockpile laboratory results for your inclusion of requested claims material. Please contact our office with any questions regarding this project or your claims process.

Sincerely,



Michael Williams
Project Manager
Clayton Services Corporation



Analytical Results

07/18/97 04:39pm

Regarding:

MICHAEL WILLIAMS
CLAYTON SERVICES CORPORATION
3003 HARVARD DRIVE
NORTH WALES, PA 19454

MICHAEL WILLIAMS
CLAYTON SERVICES CORPORATION
3003 HARVARD DRIVE
NORTH WALES, PA 19454

Account No: B00111. CLAYTON SERVICES CORPORATION
Project No: B00111. CLAYTON SERVICES CORPORATION

P.O. No:
PWSID No:

Inv. No:

Sample Number	Sample Description	Samp. Date/Time/Temp	Sampled by	
L241167-1	HERR FOOD INC SP-3 SOIL	07/15/97 08:00am NA°F	Customer Sampled	
Parameter	Method	Result	PQL	Test Date
BENZENE	EPA Method 8021A	7280 ug/kg DRY	300. ug/kg	07/17/97
TOLUENE	EPA Method 8021A	160000 ug/kg DRY	6010 ug/kg	07/18/97
ETHYL BENZENE	EPA Method 8021A	63100 ug/kg DRY	6010 ug/kg	07/18/97
M/P-XYLENE	EPA Method 8021A	251000 ug/kg DRY	6010 ug/kg	07/18/97
O-XYLENE	EPA Method 8021A	97800 ug/kg DRY	6010 ug/kg	07/18/97
ISOPROPYLBENZENE	EPA Method 8021A	5340 ug/kg DRY	300. ug/kg	07/17/97
NAPHTHALENE	EPA Method 8021A	21600 ug/kg DRY	6010 ug/kg	07/18/97
METHYL TERTIARY BUTYLETHER	EPA Method 8021A	529. ug/kg DRY	300. ug/kg	07/17/97
TOTAL SOLIDS PERCENT	STD Methods 18th Ed. 2540	83.24 %	0.01000 %	07/17/97

Sample Number	Sample Description	Samp. Date/Time/Temp	Sampled by	
L241167-2	SP-4 SOIL	07/15/97 08:00am NA°F	Customer Sampled	
Parameter	Method	Result	PQL	Test Date
BENZENE	EPA Method 8021A	ND ug/kg DRY	305. ug/kg	07/17/97
TOLUENE	EPA Method 8021A	775. ug/kg DRY	305. ug/kg	07/17/97
ETHYL BENZENE	EPA Method 8021A	439. ug/kg DRY	305. ug/kg	07/17/97
M/P-XYLENE	EPA Method 8021A	1660 ug/kg DRY	305. ug/kg	07/17/97
O-XYLENE	EPA Method 8021A	3850 ug/kg DRY	305. ug/kg	07/17/97
ISOPROPYLBENZENE	EPA Method 8021A	ND ug/kg DRY	305. ug/kg	07/17/97
NAPHTHALENE	EPA Method 8021A	5120 ug/kg DRY	305. ug/kg	07/17/97
METHYL TERTIARY BUTYLETHER	EPA Method 8021A	ND ug/kg DRY	305. ug/kg	07/17/97
TOTAL SOLIDS PERCENT	STD Methods 18th Ed. 2540	81.85 %	0.01000 %	07/17/97

A result of "ND" indicates the concentration of the analyte tested was either not detected or below the PQL.

OC INC's laboratory certification numbers are: PADER 09-131; NJDEP 77166; NC 488; NY,CT,DE and MD UPON REQUEST.

Definitions: ND-not detected; NEG-negative; POS-positive; COL-colonies; PQL-practical quantitation level; L/A-laboratory accident; TNTC-too numerous to count

A result marked with "DRY" indicates that the result was calculated and reported on a dry weight basis.

- 1 -

Allen D. Schopbach, President

1/14/2015 3:10:44 PM



1205 INDUSTRIAL HIGHWAY • P.O. BOX 514 • SOUTHAMPTON, PA 18966-0514 • (215) 355-3900

ANALYTICAL DATA REPORT PACKAGE

FOR

CLAYTON SERVICES CORPORATION

Field
Sample ID

Laboratory
Sample ID

Date of
Collection

DISCHARGE-1 H2O

L238723-1

07/03/97

Certification No.

PADEP No. 09-131
NJDEP No. 77166



000001

Analytical Results

07/28/97 03:35pm

Regarding:

MICHAEL WILLIAMS
CLAYTON SERVICES CORPORATION
3003 HARVARD DRIVE
NORTH WALES, PA 19454

MICHAEL WILLIAMS
CLAYTON SERVICES CORPORATION
3003 HARVARD DRIVE
NORTH WALES, PA 19454

Account No: B00111, CLAYTON SERVICES CORPORATION
Project No: B00111, CLAYTON SERVICES CORPORATION

P.O. No:
PWSID No:

Inv. No: 119078

Sample Number L238723-1
Sample Description DISCHARGE-1 H2O
Samp. Date/Time/Temp 07/03/97 11:00am NA°F
Sampled by Customer Sampled

Parameter	Method	Result	PQL	Test Date
DICHLORODIFLUOROMETHANE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
CHLOROMETHANE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
VINYL CHLORIDE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
BROMOMETHANE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
CHLOROETHANE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
TRICHLOROFLUOROMETHANE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
1,1-DICHLOROETHENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
METHYLENE CHLORIDE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
TRANS-1,2-DICHLOROETHENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
1,1-DICHLOROETHANE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
2,2-DICHLOROPROPANE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
CIS-1,2-DICHLOROETHENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
CHLOROFORM	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
BROMOCHLOROMETHANE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
1,1,1-TRICHLOROETHANE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
1,1-DICHLOROPROPENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
CARBON TETRACHLORIDE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
1,2-DICHLOROETHANE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
TRICHLOROETHENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
1,2-DICHLOROPROPANE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
BROMODICHLOROMETHANE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
DIBROMOMETHANE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
CIS-1,3-DICHLOROPROPENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
TRANS-1,3-DICHLOROPROPENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
1,1,2-TRICHLOROETHANE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
1,3-DICHLOROPROPANE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
TETRACHLOROETHENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
DIBROMOCHLOROMETHANE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
1,2-DIBROMOETHANE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
1,1,1,2-TETRACHLOROETHANE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
BROMOFORM	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
1,1,2,2-TETRACHLOROETHANE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
1,2,3-TRICHLOROPROPANE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
1,2-DIBROMO-3-CHLOROPROPANE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
BENZENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
TOLUENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97

A result of "ND" indicates the concentration of the analyte tested was either not detected or below the PQL.

QC Inc's laboratory certification numbers are: PADER 09-131; NJDEP 77166, NC 488, NY,CT,DE, and MD upon request.

Definitions: ND=not detected; NEG=negative; POS=positive; COL=colonies; PQL=practical quantitation level; L/A=laboratory accident; TNTC=too numerous to count.

A result marked with "DRY" indicates that the result was calculated and reported on a dry weight basis.

- 1 -

Allen D. Schanbach, President

QC INC. • 1205 INDUSTRIAL BLVD. • P.O. BOX 514 • SOUTHAMPTON, PA 18966-0514 • (215) 355-3900

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WILDWOOD, NJ (609) 522-9000

RITCHESON DIVISION
PITMAN, NJ (609) 582-1919

AMBLER DIVISION
AMBLER, PA (215) 646-1057

1/14/2015 3:10:47 PM



000002

Analytical Results

07/28/97 03:35pm

Regarding:

MICHAEL WILLIAMS
CLAYTON SERVICES CORPORATION
3003 HARVARD DRIVE
NORTH WALES, PA 19454

MICHAEL WILLIAMS
CLAYTON SERVICES CORPORATION
3003 HARVARD DRIVE
NORTH WALES, PA 19454

Account No: B00111, CLAYTON SERVICES CORPORATION
Project No: B00111, CLAYTON SERVICES CORPORATION

P.O. No:
PWSID No:

Inv. No: 119078

Sample Number L238723-1
Sample Description DISCHARGE-1 H2O
Samp. Date/Time/Temp 07/03/97 11:00am NA°F
Sampled by Customer Sampled

Parameter	Method	Result	PQL	Test Date
CHLOROBENZENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
ETHYL BENZENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
M/P-XYLENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
O-XYLENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
STYRENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
ISOPROPYLBENZENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
N-PROPYLBENZENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
BROMOBENZENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
1,3,5-TRIMETHYLBENZENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
2-CHLOROTOLUENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
4-CHLOROTOLUENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
TERT-BUTYLBENZENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
1,2,4-TRIMETHYLBENZENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
SEC-BUTYLBENZENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
PARA-ISOPROPYLTOLUENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
1,3-DICHLOROBENZENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
1,4-DICHLOROBENZENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
N-BUTYLBENZENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
1,2-DICHLOROBENZENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
1,2,4-TRICHLOROBENZENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
HEXACHLOROBUTADIENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
NAPHTHALENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
1,2,3-TRICHLOROBENZENE	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
METHYL TERTIARY BUTYLETHER	EPA Method 8021A	ND ug/l	0.500 ug/l	07/16/97
TERTIARY BUTYL ALCOHOL	EPA Method 602	ND ug/l	0.500 ug/l	07/17/97

A result of "ND" indicates the concentration of the analyte tested was either not detected or below the PQL.

QC Inc's laboratory certification numbers are: PADER 09-131; NJDEP 77166, NC 488, NY,CT,DE, and MD upon request.

Definitions: ND=not detected; NEG=negative; POS=positive; COL=colonies; PQL=practical quantitation level; L/A=laboratory accident; TNTC=too numerous to count.

A result marked with "DRY" indicates that the result was calculated and reported on a dry weight basis.

- 2 -

John D. Sponsberg, President

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AMBLER, PA (610) 646-1057

11/14/2015 3:10:49 PM

VOLATILE ORGANICS ANALYSIS DATA SHEET
8021A

Lab Name/Code : QC Inc./77166

CONTRACT : Clayton L238723-1

Lab Sample ID : Method Blank
 Matrix : Water
 Sample wt/vol : 5ml.
 Level (low/med) : Low
 Lab File (Primary-Hall) : CG15002
 Lab File (Primary-PID) : DG15002
 Column : 105M x 0.53mm VOCOL

Sample No: Method Blank
 Date Received : _____
 Date Analyzed : 07/15/97
 Dilution Factor : 1.0
 Lab File (Confirm-Hall) : _____
 Lab File (Confirm-PID) : _____

CAS NO.	COMPOUND	PQL (ug/L)	RESULT (ug/L)	Q
75-71-8----	Dichlorodifluoromethane	0.5	0.5	U
74-87-3----	Chloromethane	0.5	0.5	U
75-01-4----	Vinyl Chloride	0.5	0.5	U
74-83-9----	Bromomethane	0.5	0.5	U
75-00-3----	Chloroethane	0.5	0.5	U
75-69-4----	Trichlorofluoromethane	0.5	0.5	U
75-35-4----	1,1-Dichloroethene	0.5	0.5	U
75-09-2----	Methylene Chloride	0.5	0.5	U
156-60-5----	trans-1,2-Dichloroethene	0.5	0.5	U
75-34-3----	1,1-Dichloroethane	0.5	0.5	U
590-20-7----	2,2-Dichloropropane	0.5	0.5	U
156-59-4----	cis-1,2-Dichloroethene	0.5	0.5	U
67-66-3----	Chloroform	0.5	0.5	U
74-97-5----	Bromochloromethane	0.5	0.5	U
71-55-6----	1,1,1-Trichloroethane	0.5	0.5	U
563-58-6----	1,1-Dichloropropene	0.5	0.5	U
56-23-5----	Carbon Tetrachloride	0.5	0.5	U
107-06-2----	1,2-Dichloroethane	0.5	0.5	U
79-01-6----	Trichloroethene	0.5	0.5	U
78-87-5----	1,2-Dichloropropane	0.5	0.5	U
75-27-4----	Bromodichloromethane	0.5	0.5	U
74-95-3----	Dibromomethane	0.5	0.5	U
10061-01-5----	cis-1,3-Dichloropropene	0.5	0.5	U
10061-02-6----	trans-1,3-Dichloropropene	0.5	0.5	U
79-00-5----	1,1,2-Trichloroethane	0.5	0.5	U
142-28-9----	1,3-Dichloropropane	0.5	0.5	U
127-18-4----	Tetrachloroethene	0.5	0.5	U
124-48-1----	Dibromochloromethane	0.5	0.5	U
106-93-4----	1,2-Dibromoethane	0.5	0.5	U
630-20-6----	1,1,1,2-Tetrachloroethane	0.5	0.5	U
75-25-2----	Bromoform	0.5	0.5	U
79-34-5----	1,1,2,2-Tetrachloroethane	0.5	0.5	U

VOLATILE ORGANICS ANALYSIS DATA SHEET
8021A

Lab Name/Code : QC Inc./77166

CONTRACT : Clayton L238723-1

Lab Sample ID : Method Blank

Sample No: Method Blank

Matrix : Water

Date Received :

Sample wt/vol : 5ml.

Date Analyzed : 07/15/97

Level (low/med) : Low

Dilution Factor : 1.0

Lab File (Primary-Hall) : CG15002

Lab File (Confirm-Hall) :

Lab File (Primary-PID) : DG15002

Lab File (Confirm-PID) :

Column : 105M x 0.53mm VOCOL

CAS NO.	COMPOUND	PQL (ug/L)	RESULT (ug/L)	Q
96-18-4----	1,2,3-Trichloropropane	0.5	0.5	U
96-12-8----	1,2-Dibromo-3-Chloropropane	0.5	0.5	U
71-43-2----	Benzene	0.5	0.5	U
108-88-3----	Toluene	0.5	0.5	U
108-90-7----	Chlorobenzene	0.5	0.5	U
100-41-4----	Ethylbenzene	0.5	0.5	U
-----	para/meta-Xylene	0.5	0.5	U
95-47-6----	ortho-Xylene	0.5	0.5	U
100-42-5----	Styrene	0.5	0.5	U
98-82-8----	Isopropylbenzene	0.5	0.5	U
104-51-8----	n-Propylbenzene	0.5	0.5	U
108-86-1----	Bromobenzene	0.5	0.5	U
108-67-8----	1,3,5-Trimethylbenzene	0.5	0.5	U
95-49-8----	2-Chlorotoluene	0.5	0.5	U
106-43-4----	4-Chlorotoluene	0.5	0.5	U
98-06-6----	tert-Butylbenzene	0.5	0.5	U
95-63-6----	1,2,4-Trimethylbenzene	0.5	0.5	U
135-98-8----	sec-Butylbenzene	0.5	0.5	U
98-82-8----	para-Isopropyltoluene	0.5	0.5	U
541-73-1----	1,3-Dichlorobenzene	0.5	0.5	U
106-46-7----	1,4-Dichlorobenzene	0.5	0.5	U
104-51-8----	n-Butylbenzene	0.5	0.5	U
95-50-1----	1,2-Dichlorobenzene	0.5	0.5	U
120-82-1----	1,2,4-Trichlorobenzene	0.5	0.5	U
87-68-3----	Hexachlorobutadiene	0.5	0.5	U
91-20-3----	Naphthalene	0.5	0.5	U
87-61-6----	1,2,3-Trichlorobenzene	0.5	0.5	U
1634-04-4--	MTBE	0.5	0.5	U
SURROGATE RECOVERY DATA		Percent Recovery	QC Limits	
1,4-Dichlorobutane (Hall)-----		103	60-130	
Bromochlorobenzene (Hall)-----		93	60-130	
Bromochlorobenzene (PID)-----		99	60-130	

VOLATILE ORGANICS ANALYSIS DATA SHEET
8021A

Lab Name/Code : QC Inc./77166

CONTRACT : Clayton L238723-1

Lab Sample ID : Method Blank

Sample No: Method Blank

Matrix : Water

Date Received :

Sample wt/vol : 5ml.

Date Analyzed : 07/16/97

Level (low/med) : Low

Dilution Factor : 1.0

Lab File (Primary-Hall) : CG16002

Lab File (Confirm-Hall) :

Lab File (Primary-PID) : DG16002

Lab File (Confirm-PID) :

Column : 105M x 0.53mm VOCOL

CAS NO.	COMPOUND	PQL (ug/L)	RESULT (ug/L)	Q
75-71-8----	Dichlorodifluoromethane	0.5	0.5	U
74-87-3----	Chloromethane	0.5	0.5	U
75-01-4----	Vinyl Chloride	0.5	0.5	U
74-83-9----	Bromomethane	0.5	0.5	U
75-00-3----	Chloroethane	0.5	0.5	U
75-69-4----	Trichlorofluoromethane	0.5	0.5	U
75-35-4----	1,1-Dichloroethene	0.5	0.5	U
75-09-2----	Methylene Chloride	0.5	0.5	U
156-60-5---	trans-1,2-Dichloroethene	0.5	0.5	U
75-34-3----	1,1-Dichloroethane	0.5	0.5	U
590-20-7---	2,2-Dichloropropane	0.5	0.5	U
156-59-4---	cis-1,2-Dichloroethene	0.5	0.5	U
67-66-3----	Chloroform	0.5	0.5	U
74-97-5----	Bromochloromethane	0.5	0.5	U
71-55-6----	1,1,1-Trichloroethane	0.5	0.5	U
563-58-6---	1,1-Dichloropropene	0.5	0.5	U
56-23-5----	Carbon Tetrachloride	0.5	0.5	U
107-06-2---	1,2-Dichloroethane	0.5	0.5	U
79-01-6----	Trichloroethene	0.5	0.5	U
78-87-5----	1,2-Dichloropropane	0.5	0.5	U
75-27-4----	Bromodichloromethane	0.5	0.5	U
74-95-3----	Dibromomethane	0.5	0.5	U
10061-01-5-	cis-1,3-Dichloropropene	0.5	0.5	U
10061-02-6-	trans-1,3-Dichloropropene	0.5	0.5	U
79-00-5----	1,1,2-Trichloroethane	0.5	0.5	U
142-28-9---	1,3-Dichloropropane	0.5	0.5	U
127-18-4---	Tetrachloroethene	0.5	0.5	U
124-48-1---	Dibromochloromethane	0.5	0.5	U
106-93-4---	1,2-Dibromoethane	0.5	0.5	U
630-20-6---	1,1,1,2-Tetrachloroethane	0.5	0.5	U
75-25-2----	Bromoform	0.5	0.5	U
79-34-5----	1,1,2,2-Tetrachloroethane	0.5	0.5	U

VOLATILE ORGANICS ANALYSIS DATA SHEET
8021A

Lab Name/Code : QC Inc./77166

CONTRACT : Clayton L238723-1

Lab Sample ID : Method Blank

Sample No: Method Blank

Matrix : Water

Date Received :

Sample wt/vol : Sml.

Date Analyzed : 07/16/97

Level (low/med) : Low

Dilution Factor : 1.0

Lab File (Primary-Hall) : CG16002

Lab File (Confirm-Hall) :

Lab File (Primary-PID) : DG16002

Lab File (Confirm-PID) :

Column : 105M x 0.53mm VOCOL

CAS NO.	COMPOUND	PQL (ug/L)	RESULT (ug/L)	Q
96-18-4----	1,2,3-Trichloropropane	0.5	0.5	U
96-12-8----	1,2-Dibromo-3-Chloropropane	0.5	0.5	U
71-43-2----	Benzene	0.5	0.5	U
108-88-3---	Toluene	0.5	0.5	U
108-90-7---	Chlorobenzene	0.5	0.5	U
100-41-4---	Ethylbenzene	0.5	0.5	U
-----	para/meta-Xylene	0.5	0.5	U
95-47-6---	ortho-Xylene	0.5	0.5	U
100-42-5---	Styrene	0.5	0.5	U
98-82-8---	Isopropylbenzene	0.5	0.5	U
104-51-8---	n-Propylbenzene	0.5	0.5	U
108-86-1---	Bromobenzene	0.5	0.5	U
108-67-8---	1,3,5-Trimethylbenzene	0.5	0.5	U
95-49-8---	2-Chlorotoluene	0.5	0.5	U
106-43-4---	4-Chlorotoluene	0.5	0.5	U
98-06-6---	tert-Butylbenzene	0.5	0.5	U
95-63-6---	1,2,4-Trimethylbenzene	0.5	0.5	U
135-98-8---	sec-Butylbenzene	0.5	0.5	U
98-82-8---	para-Isopropyltoluene	0.5	0.5	U
541-73-1---	1,3-Dichlorobenzene	0.5	0.5	U
106-46-7---	1,4-Dichlorobenzene	0.5	0.5	U
104-51-8---	n-Butylbenzene	0.5	0.5	U
95-50-1---	1,2-Dichlorobenzene	0.5	0.5	U
120-82-1---	1,2,4-Trichlorobenzene	0.5	0.5	U
87-68-3---	Hexachlorobutadiene	0.5	0.5	U
91-20-3---	Naphthalene	0.5	0.5	U
87-61-6---	1,2,3-Trichlorobenzene	0.5	0.5	U
1634-04-4--	MTBE	0.5	0.5	U
SURROGATE RECOVERY DATA		Percent	QC	
		Recovery	Limits	
1,4-Dichlorobutane (Hall)-----		111	60-130	
Bromochlorobenzene (Hall)-----		102	60-130	
Bromochlorobenzene (PID)-----		100	60-130	

VOLATILE ORGANICS ANALYSIS DATA SHEET

602

Lab Name/Code : QC Inc./77166

CONTRACT : Clayton L238723-1

Lab Sample ID : Method Blank

Sample No: Method Blank

Matrix : Water

Date Received :

Sample wt/vol : 5ml

Date Analyzed : 07/17/97

Level (low/med) : low

Dilution Factor : 1.0

Lab File (Primary) : EG17004

Lab File (Confirm) :

Column : Supelcovax10/60M x 0.53mm

CAS NO.	COMPOUND	PQL (ug/L)	RESULT (ug/L)	Q
75-65-0----	TBA	0.5	0.5	U
SURROGATE RECOVERY DATA		Percent Recovery	QC Limits	
a, a, a-Trifluorotoluene-----		89	70-123	

GAS CHROMATOGRAPHY VOLATILE SURROGATE RECOVERY DATA SHEET

Contract: Clayton L238723-1

Case Number:

Dates of Analysis: From 07 /16/ 97
To 07 /16/ 97

Instrument ID: HP5890-3310A

[illegible]

```
# Column to be used to flag recovery values
* Values outside of Method QC Limits
```

QC Limits

S1:	1,4-Dichlorobutane (Hall)	60-130
S2:	Bromochlorobenzene (Hall)	60-130
S3:	Bromochlorobenzene (PID)	60-130

1/14/2015 3:10:55 PM

VOLATILE LABORATORY MATRIX SPIKE SUMMARY

Lab ID: L238721-9
 Sample ID: Matrix Spike/Spike Duplicate
 Analysis Date: 07/15/97
 Instrument ID: HP5890-3110A

Client: Clayton L238723-1
 Matrix: water
 Lab Files: C/DG15007
 C/DG15008

CAS NO.	COMPOUND	MS CONC	MSD CONC	SAMPLE CONC	MS %REC #	MSD %REC #	RSD #	%REC LIMITS	RSD LIMITS
75-71-8	Dichlorodifluoromethane	8.56	4.84	0.00	86	48 *	39 *	60 - 130	20
74-87-3	Chloromethane	7.95	9.10	0.00	80	91	9.5	60 - 130	20
75-01-4	Vinyl Chloride	11.70	12.60	0.00	117	126	5.2	60 - 130	20
74-83-9	Bromomethane	7.13	7.39	0.00	71	74	2.5	60 - 130	20
75-00-3	Chloroethane	9.73	10.00	0.00	97	100	1.9	60 - 130	20
75-69-4	Trichlorofluoromethane	9.27	10.00	0.00	93	100	5.4	60 - 130	20
75-35-4	1,1-Dichloroethene	9.62	10.10	0.00	96	101	3.4	60 - 130	20
75-09-2	Methylene Chloride	11.20	11.10	0.00	112	111	0.6	60 - 130	20
156-60-5	trans-1,2-Dichloroethene	10.20	10.70	0.00	102	107	3.4	60 - 130	20
75-34-3	1,1-Dichloroethane	9.26	10.20	0.00	93	102	6.8	60 - 130	20
590-20-7	2,2-Dichloropropane	7.02	7.55	0.00	70	76	5.1	60 - 130	20
156-59-4	cis-1,2-Dichloroethene	7.69	8.61	0.00	77	86	8.0	60 - 130	20
67-66-3	Chloroform	8.22	9.25	0.00	82	93	8.3	60 - 130	20
74-97-5	Bromochloromethane	9.86	10.50	0.00	99	105	4.4	60 - 130	20
71-55-6	1,1,1-Trichloroethane	9.85	10.30	0.00	99	103	3.2	60 - 130	20
563-58-6	1,1-Dichloropropene	10.00	10.30	0.00	100	103	2.1	60 - 130	20
56-23-5	Carbon Tetrachloride	11.10	11.60	0.00	111	116	3.1	60 - 130	20
107-06-2	1,2-Dichloroethane	11.60	12.10	0.00	116	121	3.0	60 - 130	20
79-01-6	Trichloroethene	10.90	11.40	0.00	109	114	3.2	60 - 130	20
78-87-5	1,2-Dichloropropane	9.98	9.81	0.00	100	98	1.2	60 - 130	20
75-27-4	Bromodichloromethane	10.90	10.50	0.00	109	105	2.6	60 - 130	20
74-95-3	Dibromoethane	10.40	10.30	0.00	104	103	0.7	60 - 130	20
10061-01-5	cis-1,3-Dichloropropene	10.90	11.00	0.00	109	110	0.6	60 - 130	20
10061-02-6	trans-1,3-Dichloropropene	11.30	11.40	0.00	113	114	0.6	60 - 130	20
79-00-5	1,1,2-Trichloroethane	11.70	12.30	0.00	117	123	3.5	60 - 130	20
142-28-9	1,3-Dichloropropane	10.40	10.60	0.00	104	106	1.3	60 - 130	20
127-18-4	Tetrachloroethene	10.40	10.60	0.00	104	106	1.3	60 - 130	20
124-48-1	Dibromochloromethane	11.20	10.70	0.00	112	107	3.2	60 - 130	20
106-93-4	1,2-Dibromomethane	11.70	11.90	0.00	117	119	1.2	60 - 130	20
630-20-6	1,1,1,2-Tetrachloroethane	10.90	11.60	0.00	109	116	4.4	60 - 130	20
75-25-2	Bromoform	10.80	11.30	0.00	108	113	3.2	60 - 130	20

VOLATILE LABORATORY FORTIFIED BLANK SUMMARY

Lab ID: L238721-9
 Sample ID: Matrix Spike/Spike Duplicate
 Analysis Date: 07/15/97
 Instrument ID: HP5890-3110A

Client: Clayton L238723-1
 Matrix: water
 Lab Files: C/DG15007
 C/DG15008

CAS NO.	COMPOUND	MS CONC	MSD CONC	SAMPLE CONC	MS %REC #	MSD %REC #	RSD #	%REC LIMITS	RSD LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	12.70	13.20	0.00	127	132 *	2.7	60 - 130	20
96-18-4	1,2,3-Trichloropropane	12.10	12.70	0.00	121	127	3.4	60 - 130	20
96-12-8	DBCP	11.50	13.50	0.00	115	135 *	11	60 - 130	20
71-43-2	Benzene	9.04	9.31	0.00	90	93	2.1	60 - 130	20
108-88-3	Toluene	9.69	9.75	2.28	74	75	0.6	60 - 130	20
108-90-7	Chlorobenzene	9.41	9.55	0.00	94	96	1.0	60 - 130	20
100-41-4	Ethylbenzene	9.93	9.70	0.85	91	89	1.8	60 - 130	20
	para/meta-Xylene	21.40	20.20	3.56	89	83	4.9	60 - 130	20
95-47-6	ortho-Xylene	10.50	9.94	1.59	89	84	4.6	60 - 130	20
100-42-5	Styrene	10.20	9.93	0.00	102	99	1.9	60 - 130	20
98-82-8	Isopropylbenzene	9.72	9.74	0.00	97	97	0.1	60 - 130	20
104-51-8	n-Propylbenzene	10.40	10.00	0.00	104	100	2.8	60 - 130	20
108-86-1	Bromobenzene	9.85	9.78	0.00	99	98	0.5	60 - 130	20
108-67-8	1,3,5-Trimethylbenzene	10.20	9.82	0.00	102	98	2.7	60 - 130	20
95-49-8	2-Chlorotoluene	10.60	10.30	0.00	106	103	2.0	60 - 130	20
106-43-4	4-Chlorotoluene	10.70	9.87	0.00	107	99	5.7	60 - 130	20
98-06-6	tert-Butylbenzene	12.80	10.70	0.00	128	107	13	60 - 130	20
95-63-6	1,2,4-Trimethylbenzene	15.30	12.00	6.47	88	55 *	32 *	60 - 130	20
135-98-8	sec-Butylbenzene	10.10	11.50	0.00	101	115	9.2	60 - 130	20
98-82-8	para-Isopropyltoluene	10.00	10.70	0.00	100	107	4.8	60 - 130	20
541-73-1	1,3-Dichlorobenzene	9.72	10.10	0.00	97	101	2.7	60 - 130	20
106-46-7	1,4-Dichlorobenzene	9.75	9.86	0.00	98	99	0.8	60 - 130	20
104-51-8	n-Butylbenzene	12.50	11.40	0.00	125	114	6.5	60 - 130	20
95-50-1	1,2-Dichlorobenzene	11.60	9.72	0.00	116	97	12	60 - 130	20
120-82-1	1,2,4-Trichlorobenzene	12.20	12.10	0.00	122	121	0.6	60 - 130	20
87-68-3	Hexachlorobutadiene	11.10	11.90	0.00	111	119	4.9	60 - 130	20
91-20-3	Naphthalene	22.40	12.70	10.20	122	25 *	93 *	60 - 130	20
1634-04-4	MTBE	10.10	10.50	0.00	101	105	2.7	60 - 130	20
87-61-6	1,2,3-Trichlorobenzene	10.60	11.20	0.00	106	112	3.9	60 - 130	20
SURROGATE RECOVERY DATA		%RECOVERY				QC LIMITS			
1,4-Dichlorobutane (Hall)		MS	116	MSD	118	60 - 130			
Bromochlorobenzene (Hall)		MS	103	MSD	97	60 - 130			
Bromochlorobenzene (PID)		MS	125	MSD	107	60 - 130			

RPD: 3 out of 60 outside limits

Spike Recovery: 5 out of 120 outside limits

Results normalized to a base factor of 1 from a 1:5 dilution.

VOLATILE LABORATORY CHECK STANDARD

Lab ID: 10ppb Check Standard Client: Clayton
 Sample ID: 10ppb Check Standard L238723-1
 Analysis Date: 07/16/97 Matrix: Water
 Instrument ID: HP5890-3310A Lab File: C/DG15016

CAS NO.	COMPOUND	CHECK CONC	CONC ADDED	CHECK %REC	#	%REC LIMITS
75-71-8	Dichlorodifluoromethane	8.92	10.00	89		60 - 130
79-34-5	1,1,2,2-Tetrachloroethane	11.80	10.00	118		60 - 130
96-12-8	DBCP	11.00	10.00	110		60 - 130
95-63-6	1,2,4-Trimethylbenzene	9.44	10.00	94		60 - 130
91-20-3	Naphthalene	9.77	10.00	98		60 - 130
SURROGATE RECOVERY DATA		%RECOVERY				
1,4-Dichlorobutane(Hall)		111				60 - 130
Bromochlorobenzene(Hall)		104				60 - 130
Bromochlorobenzene(PID)		96				60 - 130

Recovery: 0 out of 11 outside limits.

Concentrations are ug/l. &=Result Incalculable. Z=Limits not yet established. #=Column used to flag recoveries.

000014

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY 602

Lab ID: L241038-2 Client: Clayton L238723-1
 Sample ID: Matrix Spike/Spike Duplicate Matrix: Water
 Analysis Date: 07/17/97 Lab Files: EGI7015
 Instrument ID: Varian 3300-5651 EGI7016

Instrument ID: Varian 3300-3631		EPA 8210								
CAS NO.	COMPOUND	MS CONC	MSD CONC	SAMP CONC	MS %REC #	MSD %REC #	RPD #	%REC LIMITS	RPD LIMITS	
75-65-0-----	TBA	38.20	40.70	1.52	92	98	6.6	60 - 140	20	
SURROGATE RECOVERY DATA		%RECOVERY				QC LIMITS				
a,a,a-Trifluorotoluene		MS: 92		MSD: 94		(70 - 123)				
Concentrations are ug/l. &=Result Incalculable. Z=Limits not yet established. #=Column used to flag recoveries.										

RPD: 0 out of 1 outside limits

Spike Recovery: 0 out of 2 outside limits

Concentrations are ug/l. &=Result Incalculable. Z=Limits not yet established. #=Column used to flag recoveries.



1205 Industrial Blvd.
P.O. Box 514
Southampton, PA 18955-0514
VOICE: (215) 355-3900
FAX: (215) 355-7231

ANALYSIS REQUEST / CHAIN OF CUSTODY RECORD

Page 1 of 1

Lab Sample ID

(FOR LAB USE ONLY)

QC Inc. Cust./Acct. No. 600111

Carrier/Waybill No. _____

Project Name/No. HERR FOODS INC

Sample Shipment Date _____

Project Mgr./Phone No. Michael Williams 315 362-6100

Purchase Order No. _____

Sampled By MSJ

Lab Contact/Phone No. _____

Bill to: Clifton Services Corp

Report to: SAME

ALL SHADED AREAS MUST BE COMPLETED

Field Identification	Sample Description / Type	Date/Time Collected	Sample Container No./Type/Volume	Preservative	Analysis Requested	Condition on Receipt	Log In No.
Disch-1	H ₂ O Discharge	7/3/97 Jan	30 ml VOA	HCL	80214 to include NAPK, PCBs, TBA.		
					#3 HCL vials		
					Nitric pH	Nitric	
					Conduct pH	CN	
					HCL pH	DA	
					H2SO4 pH	Nitrogen	
					H2SO4 pH		
					Unpreserved		

Due Dates: Preliminary Report 1/1 Final Deliverables 1/1 Deliverables: Routine Report ☐ Full ☐ NJDEP 1027 ☐ Project Specific Deliverables ☐
Turnaround Time Required (Hours/Days): ASAP/SOP USEPA CLP ☐ Reduced LJ ☐ Tier II ☐ PNIS /PA OA ☒

Possible Hazard Identification: Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison ☐ Unknown ☐ Sample Disposal: Return to Client ☐ Disposal by Lab ☒ Archival by Lab ☐ (months)

1. Relinquished by: <u>ASAP</u> Date: <u>7/3/97</u>	1. Received by: <u>Cooley (4c)</u> Date: <u>7/3/97</u>
2. Relinquished by: <u>Cooley (4c)</u> Date: <u>7/3/97</u>	2. Received by: <u>John Clin HCL</u> Date: <u>7-8-97</u>
3. Relinquished by: <u>John Clin HCL</u> Date: <u>7-8-97</u>	3. Received by: <u>MSJ</u> Date: <u>7-8-97</u>
4. Relinquished by: <u>MSJ</u> Date: <u>7-8-97</u>	4. Received by: <u>MSJ</u> Date: <u>7-8-97</u>
5. Relinquished by: _____ Date: _____	5. Received by: _____ Date: _____

Comments / Special Instructions: Please fax Results 362-6481

COPIES: White (Final Report) Yellow (QA Office) Pink (Sample Custody) Gold (Client/Field Representative)

1/14/2015 3:11:02 PM

000015



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ANALYTICAL DATA REPORT PACKAGE

FOR

CLAYTON SERVICES CORPORATION

Field Sample ID	Laboratory Sample ID	Date of Collection
HERR FOODS INC SP-COMP-1 SOIL	L238722-1	07/03/97
SP-COMP-2 SOIL	L238722-2	07/03/97

Certification No.

PADEP No. 09-131
NJDEP No. 77166



000001

Analytical Results

07/28/97 02:54pm

Regarding:

MICHAEL WILLIAMS
CLAYTON SERVICES CORPORATION
3003 HARVARD DRIVE
NORTH WALES, PA 19454

MICHAEL WILLIAMS
CLAYTON SERVICES CORPORATION
3003 HARVARD DRIVE
NORTH WALES, PA 19454

Account No: B00111, CLAYTON SERVICES CORPORATION
Project No: B00111, CLAYTON SERVICES CORPORATION

P.O. No:
PWSID No:

Inv. No: 119077

Sample Number L238722-1
Sample Description HERR FOODS INC SP-COMP-1 SOIL
Samp. Date/Time/Temp 07/03/97 11:00am NA°F
Sampled by Customer Sampled

Parameter	Method	Result	PQL	Test Date
SILVER-TCLP	SW846 Method 6010	ND mg/l	0.500 mg/l	07/11/97
ARSENIC-TCLP	SW846 Method 6010	ND mg/l	0.500 mg/l	07/11/97
BARIUM-TCLP	SW846 Method 6010	ND mg/l	10.0 mg/l	07/11/97
CADMIUM-TCLP	SW846 Method 6010	ND mg/l	0.100 mg/l	07/11/97
CHROMIUM-TCLP	SW846 Method 6010	ND mg/l	0.500 mg/l	07/11/97
LEAD-TCLP	SW846 Method 6010	ND mg/l	0.100 mg/l	07/11/97
SELENIUM-TCLP	SW846 Method 6010	ND mg/l	0.400 mg/l	07/11/97
MERCURY-TCLP	SW846 Method 7470	ND mg/l	0.0200 mg/l	07/14/97
DIESEL RANGE ORGANICS	API Method Rev 2	45.8 mg/kg DRY	5.94 mg/kg	07/11/97
GASOLINE RANGE ORGANICS	API Method Rev 5	52.6 mg/kg DRY	5.94 mg/kg	07/10/97
AROCLOR-1016	EPA Method 8080	ND mg/kg DRY	0.0357 mg/kg	07/14/97
AROCLOR-1221	EPA Method 8080	ND mg/kg DRY	0.0357 mg/kg	07/14/97
AROCLOR-1232	EPA Method 8080	ND mg/kg DRY	0.0357 mg/kg	07/14/97
AROCLOR-1242	EPA Method 8080	ND mg/kg DRY	0.0357 mg/kg	07/14/97
AROCLOR-1248	EPA Method 8080	ND mg/kg DRY	0.0357 mg/kg	07/14/97
AROCLOR-1254	EPA Method 8080	ND mg/kg DRY	0.0357 mg/kg	07/14/97
AROCLOR-1260	EPA Method 8080	ND mg/kg DRY	0.0357 mg/kg	07/14/97
CHLOROMETHANE	EPA Method 8260	ND ug/kg DRY	11.9 ug/kg	07/09/97
VINYL CHLORIDE	EPA Method 8260	ND ug/kg DRY	5.94 ug/kg	07/09/97
BROMOMETHANE	EPA Method 8260	ND ug/kg DRY	11.9 ug/kg	07/09/97
CHLOROETHANE	EPA Method 8260	ND ug/kg DRY	11.9 ug/kg	07/09/97
1,1-DICHLOROETHENE	EPA Method 8260	ND ug/kg DRY	2.38 ug/kg	07/09/97
ACETONE	EPA Method 8260	ND ug/kg DRY	5.94 ug/kg	07/09/97
CARBON DISULFIDE	EPA Method 8260	ND ug/kg DRY	11.9 ug/kg	07/09/97
METHYLENE CHLORIDE	EPA Method 8260	ND ug/kg DRY	2.38 ug/kg	07/09/97
TRANS-1,2-DICHLOROETHENE	EPA Method 8260	ND ug/kg DRY	2.38 ug/kg	07/09/97
ACROLEIN	EPA Method 8260	ND ug/kg DRY	11.9 ug/kg	07/09/97
ACRYLONITRILE	EPA Method 8260	ND ug/kg DRY	5.94 ug/kg	07/09/97
1,1-DICHLOROETHANE	EPA Method 8260	ND ug/kg DRY	5.94 ug/kg	07/09/97
VINYL ACETATE	EPA Method 8260	ND ug/kg DRY	11.9 ug/kg	07/09/97
CIS-1,2-DICHLOROETHENE	EPA Method 8260	ND ug/kg DRY	2.38 ug/kg	07/09/97
2-BUTANONE	EPA Method 8260	ND ug/kg DRY	11.9 ug/kg	07/09/97
CHLOROFORM	EPA Method 8260	ND ug/kg DRY	1.19 ug/kg	07/09/97
1,1,1-TRICHLOROETHANE	EPA Method 8260	ND ug/kg DRY	1.19 ug/kg	07/09/97
CARBON TETRACHLORIDE	EPA Method 8260	ND ug/kg DRY	2.38 ug/kg	07/09/97
BENZENE	EPA Method 8260	ND ug/kg DRY	1.19 ug/kg	07/09/97

A result of "ND" indicates the concentration of the analyte tested was either not detected or below the PQL.

QC Inc's laboratory certification numbers are: PADER 09-131; NJDEP 77166, NC 488, NY, CT, DE, and MD upon request.

Definitions: ND=not detected; NEG=negative; POS=positive; COL=colonies; PQL=practical quantitation level; L/A=laboratory accident; TNTC=too numerous to count.

A result marked with "DRY" indicates that the result was calculated and reported on a dry weight basis.

- 1 -

Allen D. Schnobloch, President

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WILDWOOD, NJ (609) 522-9000

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PITMAN, NJ (609) 582-1919

AMBLER DIVISION
AMBLER, PA (215) 646-1057

1/14/2015 3:11:04 PM



Analytical Results

000002

07/28/97 02:54pm

Regarding:

MICHAEL WILLIAMS
CLAYTON SERVICES CORPORATION
3003 HARVARD DRIVE
NORTH WALES, PA 19454

MICHAEL WILLIAMS
CLAYTON SERVICES CORPORATION
3003 HARVARD DRIVE
NORTH WALES, PA 19454

Account No: B00111, CLAYTON SERVICES CORPORATION
Project No: B00111, CLAYTON SERVICES CORPORATION

P.O. No:
PWSID No:

Inv. No: 119077

Sample Number L238722-1
Sample Description HERR FOODS INC SP-COMP-1 SOIL
Samp. Date/Time/Temp 07/03/97 11:00am NA°F
Sampled by Customer Sampled

Parameter	Method	Result	PQL	Test Date
1,2-DICHLOROETHANE	EPA Method 8260	ND ug/kg DRY	2.38 ug/kg	07/09/97
TRICHLOROETHENE	EPA Method 8260	ND ug/kg DRY	1.19 ug/kg	07/09/97
1,2-DICHLOROPROPANE	EPA Method 8260	ND ug/kg DRY	1.19 ug/kg	07/09/97
BROMODICHLOROMETHANE	EPA Method 8260	ND ug/kg DRY	1.19 ug/kg	07/09/97
2-CHLOROETHYL VINYL ETHER	EPA Method 8260	ND ug/kg DRY	11.9 ug/kg	07/09/97
CIS-1,3-DICHLOROPROPENE	EPA Method 8260	ND ug/kg DRY	5.94 ug/kg	07/09/97
4-METHYL-2-PENTANONE	EPA Method 8260	ND ug/kg DRY	11.9 ug/kg	07/09/97
TOLUENE	EPA Method 8260	ND ug/kg DRY	5.94 ug/kg	07/09/97
TRANS-1,3-DICHLOROPROPENE	EPA Method 8260	ND ug/kg DRY	5.94 ug/kg	07/09/97
1,1,2-TRICHLOROETHANE	EPA Method 8260	ND ug/kg DRY	2.38 ug/kg	07/09/97
TETRACHLOROETHENE	EPA Method 8260	ND ug/kg DRY	1.19 ug/kg	07/09/97
2-HEXANONE	EPA Method 8260	ND ug/kg DRY	11.9 ug/kg	07/09/97
DIBROMOCHLOROMETHANE	EPA Method 8260	ND ug/kg DRY	1.19 ug/kg	07/09/97
CHLOROBENZENE	EPA Method 8260	ND ug/kg DRY	2.38 ug/kg	07/09/97
ETHYL BENZENE	EPA Method 8260	ND ug/kg DRY	5.94 ug/kg	07/09/97
M&P-XYLENES	EPA Method 8260	ND ug/kg DRY	2.38 ug/kg	07/09/97
O-XYLENE	EPA Method 8260	ND ug/kg DRY	1.19 ug/kg	07/09/97
STYRENE	EPA Method 8260	ND ug/kg DRY	5.94 ug/kg	07/09/97
BROMOFORM	EPA Method 8260	ND ug/kg DRY	1.19 ug/kg	07/09/97
1,1,2,2-TETRACHLOROETHANE	EPA Method 8260	ND ug/kg DRY	1.19 ug/kg	07/09/97
1,3-DICHLOROBENZENE	EPA Method 8260	ND ug/kg DRY	5.94 ug/kg	07/09/97
1,4-DICHLOROBENZENE	EPA Method 8260	ND ug/kg DRY	5.94 ug/kg	07/09/97
1,2-DICHLOROBENZENE	EPA Method 8260	ND ug/kg DRY	5.94 ug/kg	07/09/97
NONE FOUND	EPA 8260 Library Search	ND ug/kg		07/09/97
TCLP EXTRACTION	SW846 Method 1311	COMPLETED		07/08/97
PAINT FILTER TEST	SW846 Method 9095	NEG		07/08/97
CYANIDE REACTIVE	SW846 Method 7.3.3.2	ND mg/kg	5.00 mg/kg	07/09/97
REACTIVE HYDROGEN SULFIDE	SW846 Method 7.3.4.2	ND mg/kg	5.00 mg/kg	07/09/97
FLASH POINT/IGNITABILITY	ASTM D 4982-89	>141 Deg. F		07/09/97
MOISTURE PERCENT	STD Methods 18th Ed. 2540	15.86 %	0.01000 %	07/08/97
TOTAL SOLIDS PERCENT	STD Methods 18th Ed. 2540	84.14 %	0.01000 %	07/08/97

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Definitions: ND=not detected; NEG=negative; POS=positive; COL=colonies; PQL=practical quantitation level; L/A=laboratory accident; TNTC=too numerous to count.

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- 2 -

Allen D. Schonbach, President

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PITMAN, NJ (609) 582-1919

AMBLER DIVISION
AMBLER, PA (215) 646-1057

1/14/2015 3:11:05 PM



000003

Analytical Results

07/28/97 02:54pm

Regarding:

MICHAEL WILLIAMS
CLAYTON SERVICES CORPORATION
3003 HARVARD DRIVE
NORTH WALES, PA 19454

MICHAEL WILLIAMS
CLAYTON SERVICES CORPORATION
3003 HARVARD DRIVE
NORTH WALES, PA 19454

Account No: B00111, CLAYTON SERVICES CORPORATION
Project No: B00111, CLAYTON SERVICES CORPORATION

P.O. No:
PWSID No:

Inv. No: 119077

Sample Number L238722-2
Sample Description SP-COMP-2 SOIL
Samp. Date/Time/Temp 07/03/97 11:00am NA°F
Sampled by Customer Sampled

Parameter	Method	Result	PQL	Test Date
SILVER-TCLP	SW846 Method 6010	ND mg/l	0.500 mg/l	07/11/97
ARSENIC-TCLP	SW846 Method 6010	ND mg/l	0.500 mg/l	07/11/97
BARIUM-TCLP	SW846 Method 6010	ND mg/l	10.0 mg/l	07/11/97
CADMIUM-TCLP	SW846 Method 6010	ND mg/l	0.100 mg/l	07/11/97
CHROMIUM-TCLP	SW846 Method 6010	ND mg/l	0.500 mg/l	07/11/97
LEAD-TCLP	SW846 Method 6010	ND mg/l	0.100 mg/l	07/11/97
SELENIUM-TCLP	SW846 Method 6010	ND mg/l	0.400 mg/l	07/11/97
MERCURY-TCLP	SW846 Method 7470	ND mg/l	0.0200 mg/l	07/14/97
DIESEL RANGE ORGANICS	API Method Rev 2	65.1 mg/kg DRY	6.56 mg/kg	07/11/97
GASOLINE RANGE ORGANICS	API Method Rev 5	107. mg/kg DRY	6.56 mg/kg	07/10/97
AROCLOR-1016	EPA Method 8080	ND mg/kg DRY	0.0393 mg/kg	07/14/97
AROCLOR-1221	EPA Method 8080	ND mg/kg DRY	0.0393 mg/kg	07/14/97
AROCLOR-1232	EPA Method 8080	ND mg/kg DRY	0.0393 mg/kg	07/14/97
AROCLOR-1242	EPA Method 8080	ND mg/kg DRY	0.0393 mg/kg	07/14/97
AROCLOR-1248	EPA Method 8080	ND mg/kg DRY	0.0393 mg/kg	07/14/97
AROCLOR-1254	EPA Method 8080	ND mg/kg DRY	0.0393 mg/kg	07/14/97
AROCLOR-1260	EPA Method 8080	ND mg/kg DRY	0.0393 mg/kg	07/14/97
CHLOROMETHANE	EPA Method 8260	ND ug/kg DRY	13.1 ug/kg	07/09/97
VINYL CHLORIDE	EPA Method 8260	ND ug/kg DRY	6.56 ug/kg	07/09/97
BROMOMETHANE	EPA Method 8260	ND ug/kg DRY	13.1 ug/kg	07/09/97
CHLOROETHANE	EPA Method 8260	ND ug/kg DRY	13.1 ug/kg	07/09/97
1,1-DICHLOROETHENE	EPA Method 8260	ND ug/kg DRY	2.62 ug/kg	07/09/97
ACETONE	EPA Method 8260	ND ug/kg DRY	6.56 ug/kg	07/09/97
CARBON DISULFIDE	EPA Method 8260	ND ug/kg DRY	13.1 ug/kg	07/09/97
METHYLENE CHLORIDE	EPA Method 8260	ND ug/kg DRY	2.62 ug/kg	07/09/97
TRANS-1,2-DICHLOROETHENE	EPA Method 8260	ND ug/kg DRY	2.62 ug/kg	07/09/97
ACROLEIN	EPA Method 8260	ND ug/kg DRY	13.1 ug/kg	07/09/97
ACRYLONITRILE	EPA Method 8260	ND ug/kg DRY	6.56 ug/kg	07/09/97
1,1-DICHLOROETHANE	EPA Method 8260	ND ug/kg DRY	6.56 ug/kg	07/09/97
VINYL ACETATE	EPA Method 8260	ND ug/kg DRY	13.1 ug/kg	07/09/97
CIS-1,2-DICHLOROETHENE	EPA Method 8260	ND ug/kg DRY	2.62 ug/kg	07/09/97
2-BUTANONE	EPA Method 8260	ND ug/kg DRY	13.1 ug/kg	07/09/97
CHLOROFORM	EPA Method 8260	ND ug/kg DRY	1.31 ug/kg	07/09/97
1,1,1-TRICHLOROETHANE	EPA Method 8260	ND ug/kg DRY	1.31 ug/kg	07/09/97
CARBON TETRACHLORIDE	EPA Method 8260	ND ug/kg DRY	2.62 ug/kg	07/09/97
BENZENE	EPA Method 8260	ND ug/kg DRY	1.31 ug/kg	07/09/97

A result of "ND" indicates the concentration of the analyte tested was either not detected or below the PQL.

QC Inc's laboratory certification numbers are: PADER 09-131; NJDEP 77166, NC 488, NY, CT, DE, and MD upon request.

Definitions: ND=not detected; NEG=negative; POS=positive; COL=colonies; PQL=practical quantitation level; L/A=laboratory accident; TNTC=too numerous to count.

A result marked with "DRY" indicates that the result was calculated and reported on a dry weight basis.

- 3 -

Allen D. Schenck, President

QC INC. • 1205 INDUSTRIAL BLVD. • P.O. BOX 514 • SOUTHAMPTON, PA 18966-0514 • (215) 355-3900

VINELAND DIVISION
VINELAND, NJ (609) 563-0101

MAE MALLOY DIVISION
WILDWOOD, NJ (609) 522-9000

RITCHESON DIVISION
PITMAN, NJ (609) 582-1919

AMBLER DIVISION
AMBLER, NJ (609) 261-1066

11/14/2015 3:11:06 PM



000004

Analytical Results

07/28/97 02:54pm

Regarding:

MICHAEL WILLIAMS
CLAYTON SERVICES CORPORATION
3003 HARVARD DRIVE
NORTH WALES, PA 19454

MICHAEL WILLIAMS
CLAYTON SERVICES CORPORATION
3003 HARVARD DRIVE
NORTH WALES, PA 19454

Account No: B00111, CLAYTON SERVICES CORPORATION
Project No: B00111, CLAYTON SERVICES CORPORATION

P.O. No:
PWSID No:

Inv. No: 119077

Sample Number L238722-2
Sample Description SP-COMP-2 SOIL
Samp. Date/Time/Temp 07/03/97 11:00am NA°F
Sampled by Customer Sampled

Parameter	Method	Result	PQL	Test Date
1,2-DICHLOROETHANE	EPA Method 8260	ND ug/kg DRY	2.62 ug/kg	07/09/97
TRICHLOROETHENE..	EPA Method 8260	ND ug/kg DRY	1.31 ug/kg	07/09/97
1,2-DICHLOROPROPANE	EPA Method 8260	ND ug/kg DRY	1.31 ug/kg	07/09/97
BROMODICHLOROMETHANE	EPA Method 8260	ND ug/kg DRY	1.31 ug/kg	07/09/97
2-CHLOROETHYL VINYL ETHER	EPA Method 8260	ND ug/kg DRY	13.1 ug/kg	07/09/97
CIS-1,3-DICHLOROPROPENE	EPA Method 8260	ND ug/kg DRY	6.56 ug/kg	07/09/97
4-METHYL-2-PENTANONE	EPA Method 8260	ND ug/kg DRY	13.1 ug/kg	07/09/97
TOLUENE	EPA Method 8260	ND ug/kg DRY	6.56 ug/kg	07/09/97
TRANS-1,3-DICHLOROPROPENE	EPA Method 8260	ND ug/kg DRY	6.56 ug/kg	07/09/97
1,1,2-TRICHLOROETHANE	EPA Method 8260	ND ug/kg DRY	2.62 ug/kg	07/09/97
TETRACHLOROETHENE	EPA Method 8260	ND ug/kg DRY	1.31 ug/kg	07/09/97
2-HEXANONE	EPA Method 8260	ND ug/kg DRY	13.1 ug/kg	07/09/97
DIBROMOCHLOROMETHANE	EPA Method 8260	ND ug/kg DRY	1.31 ug/kg	07/09/97
CHLOROBENZENE	EPA Method 8260	ND ug/kg DRY	2.62 ug/kg	07/09/97
ETHYL BENZENE	EPA Method 8260	ND ug/kg DRY	6.56 ug/kg	07/09/97
M&P-XYLENES	EPA Method 8260	ND ug/kg DRY	2.62 ug/kg	07/09/97
O-XYLENE	EPA Method 8260	ND ug/kg DRY	1.31 ug/kg	07/09/97
STYRENE	EPA Method 8260	ND ug/kg DRY	6.56 ug/kg	07/09/97
BROMOFORM	EPA Method 8260	ND ug/kg DRY	1.31 ug/kg	07/09/97
1,1,2,2-TETRACHLOROETHANE	EPA Method 8260	ND ug/kg DRY	1.31 ug/kg	07/09/97
1,3-DICHLOROBENZENE	EPA Method 8260	ND ug/kg DRY	6.56 ug/kg	07/09/97
1,4-DICHLOROBENZENE	EPA Method 8260	ND ug/kg DRY	6.56 ug/kg	07/09/97
1,2-DICHLOROBENZENE	EPA Method 8260	ND ug/kg DRY	6.56 ug/kg	07/09/97
UNKNOWN ALKANE-1	EPA 8260 Library Search	109. J ug/kg DRY		07/09/97
HEPTANE	EPA 8260 Library Search	184. NJ ug/kg DRY		07/09/97
UNKNOWN ALKANE-2	EPA 8260 Library Search	116. J ug/kg DRY		07/09/97
PENTANE, 2,3,4-TRIMETHYL-	EPA 8260 Library Search	224. NJ ug/kg DRY		07/09/97
UNKNOWN ALKANE-3	EPA 8260 Library Search	231. J ug/kg DRY		07/09/97
HEPTANE, 2-METHYL-	EPA 8260 Library Search	151. NJ ug/kg DRY		07/09/97
HEPTANE, 3-METHYL-	EPA 8260 Library Search	216. NJ ug/kg DRY		07/09/97
TRIMETHYLHEXANE ISOMER	EPA 8260 Library Search	135. J ug/kg DRY		07/09/97
UNKNOWN ALKANE-4	EPA 8260 Library Search	159. J ug/kg DRY		07/09/97
UNKNOWN ALKANE-5	EPA 8260 Library Search	127. J ug/kg DRY		07/09/97
TRIMETHYLBENZENE ISOMER-1	EPA 8260 Library Search	134. J ug/kg DRY		07/09/97
ETHYLMETHYLBENZENE ISOMER	EPA 8260 Library Search	100. J ug/kg DRY		07/09/97

A result of "ND" indicates the concentration of the analyte tested was either not detected or below the PQL.

QC Inc's Laboratory certification numbers are: PADER 09-131; NJDEP 77166, NC 488, NY,CT,DE, and MD upon request.

Definitions: ND=not detected; NEG=negative; POS=positive; COL=colonies; PQL=practical quantitation level; L/A=laboratory accident; TNTC=too numerous to count.

A result marked with "DRY" indicates that the result was calculated and reported on a dry weight basis.

- 4 -

Allen D. Schoenbach, President

QC INC. • 1205 INDUSTRIAL BLVD. • P.O. BOX 514 • SOUTHAMPTON, PA 18966-0514 • (215) 355-3900

VINELAND DIVISION
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MAE MALLOY DIVISION
WILDWOOD, NJ (609) 522-9000

RITCHESON DIVISION
PITMAN, NJ (609) 582-1919

AMBLER DIVISION
AMBLER, PA (215) 696-1067

1/14/2015 3:11:07 PM



Analytical Results

07/28/97 02:54pm

Regarding:

MICHAEL WILLIAMS
CLAYTON SERVICES CORPORATION
3003 HARVARD DRIVE
NORTH WALES, PA 19454

MICHAEL WILLIAMS
CLAYTON SERVICES CORPORATION
3003 HARVARD DRIVE
NORTH WALES, PA 19454

Account No: 800111, CLAYTON SERVICES CORPORATION
Project No: 800111, CLAYTON SERVICES CORPORATION

P.O. No:
PWSID No:

Inv. No: 119077

Sample Number L238722-2
Sample Description SP-COMP-2 SOIL
Samp. Date/Time/Temp 07/03/97 11:00am NA°F
Sampled by Customer Sampled

Parameter	Method	Result	PQL	Test Date
TRIMETHYLBENZENE ISOMER-2	EPA 8260 Library Search	99.8 J ug/kg DRY		07/09/97
ETHYLDIMETHYLBENZENE ISOMER-1	EPA 8260 Library Search	103. J ug/kg DRY		07/09/97
ETHYLDIMETHYLBENZENE ISOMER-2	EPA 8260 Library Search	112. J ug/kg DRY		07/09/97
TCLP EXTRACTION	SW846 Method 1311	COMPLETED		07/08/97
PAINT FILTER TEST	SW846 Method 9095	NEG		07/08/97
CYANIDE REACTIVE	SW846 Method 7.3.3.2	ND mg/kg	5.00 mg/kg	07/09/97
REACTIVE HYDROGEN SULFIDE	SW846 Method 7.3.4.2	ND mg/kg	5.00 mg/kg	07/09/97
FLASH POINT/IGNITABILITY	ASTM D 4982-89	>141 Deg. F		07/09/97
MOISTURE PERCENT	STD Methods 18th Ed. 2540	23.74 %	0.01000 %	07/08/97
TOTAL SOLIDS PERCENT	STD Methods 18th Ed. 2540	76.26 %	0.01000 %	07/08/97

A result of "ND" indicates the concentration of the analyte tested was either not detected or below the PQL.

QC Inc's Laboratory certification numbers are: PADER 09-131; NJDEP 77166, NC 488, NY, CT, DE, and MD upon request.

Definitions: ND=not detected; NEG=negative; POS=positive; COL=colonies; PQL=practical quantitation level; L/A=laboratory accident; TNTC=too numerous to count.

A result marked with "DRY" indicates that the result was calculated and reported on a dry weight basis.

- 5 -

Allen D. Schonbach, President

QC INC. • 1205 INDUSTRIAL BLVD. • P.O. BOX 514 • SOUTHAMPTON, PA 18966-0514 • (215) 355-3900

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RITCHESON DIVISION
PITMAN, NJ (609) 582-1919

AMBLER DIVISION
AMBLER, PA (412) 481-0057

11/14/2015 3:11:08 PM

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VBLK01

Lab Name: QC INC.

Contract: _____

Matrix: (soil/water) SOIL

Lab Sample ID: SOIL BLK 7/08

Sample wt/vol: 5.00 (g/mL) ML

Lab File ID: L4581.D000006

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. 0

Date Analyzed: 7/8/97

GC Column: RTX-624 ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS No.	Compound	PQL	Concentration Units:		Q
			(ug/L or ug/Kg)	ug/Kg	
74-87-3	Chloromethane	10.0			U
75-01-4	Vinyl Chloride	5.00			U
74-83-9	Bromomethane	10.0			U
75-00-3	Chloroethane	10.0			U
107-13-1	Acrylonitrile	5.00			U
107-02-8	Acrolein	10.0			U
75-15-0	Carbon Disulfide	10.0			U
75-35-4	1,1-Dichloroethene	2.00			U
67-64-1	Acetone	5.00			U
75-09-2	Methylene Chloride	2.00			U
156-60-5	trans-1,2-Dichloroethene	2.00			U
540-59-0	cis-1,2-Dichloroethene	2.00			U
75-34-4	1,1-Dichloroethane	5.00			U
108-05-4	Vinyl Acetate	10.0			U
78-93-3	2-Butanone	10.0			U
67-66-3	Chloroform	1.00			U
75-55-6	1,1,1-Trichloroethane	1.00			U
56-23-5	Carbon Tetrachloride	2.00			U
71-43-2	Benzene	1.00			U
107-06-2	1,2-Dichloroethane	2.00			U
79-01-6	Trichloroethene	1.00			U
78-87-5	1,2-Dichloropropane	1.00			U
75-27-4	Bromodichloromethane	1.00			U
110-75-8	2-Chloroethyl Vinyl Ether	10.0			U
10061-01-5	cis-1,3-Dichloropropene	5.00			U
108-88-3	Toluene	5.00			U
108-10-1	4-Methyl-2-Pentanone	10.0			U
10061-02-6	trans-1,3-Dichloropropene	5.00			U
79-00-5	1,1,2-Trichloroethane	2.00			U
127-18-4	Tetrachloroethene	1.00			U

SAMPLE NO.

VBLK01

Lab Name: QC INC.

Contract: _____

Matrix: (soil/water) SOIL

Lab Sample ID: SOIL BLK 7/08

Sample wt/vol: 5.00 (g/mL) ML

Lab File ID: L4581.D 000007

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. 0

Date Analyzed: 7/8/97

GC Column: RTX-624 ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

(u_g/L or u_g/Kg) u_g/Kg

Q

[illegible]

U - Indicates Compound is not Detected

B - Indicates Compound is Present in the Blank

J - Indicates Compound is Detected Below the PQL

E - Indicates that the Result is Estimated because it is Above Calibration Range

D - Indicates the Result is from Dilution

Quantitation Report

000008

Data File : C:\HPCHEM\1\DATA\INSTL\L4581.D
Acq On : Data Taken: 7/08/97 @ 14:25
Sample : SOIL BLK 7/08
Misc : 5ML SOIL
Quant Time: Jul 8 15:03 1997

Vial: 0
Operator: DATTU
Inst :
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\L8702P.M
Title : Method 8260 VOA Calibration
Last Update : Wed Jul 02 19:25:06 1997
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Pentafluorobenzene	9.30	168	168953	50.00	ug/L	0.00
35) 1,4-Difluorobenzene	10.44	114	285049	50.00	ug/L	0.00
53) Chlorobenzene-d5	15.12	82	145807	50.00	ug/L	-0.01
60) 1,4-Dichlorobenzene-d4	19.31	152	64718	50.00	ug/L	0.00

System Monitoring Compounds						%Recovery
29) Dibromofluoromethane	9.21	111	90810	45.86	ug/L	91.72%
43) Toluene-d8	12.74	98	257598	50.26	ug/L	100.51%
61) Bromofluorobenzene	17.25	95	81814	46.43	ug/L	92.87%

Target Compounds

Qvalue

(#) = qualifier out of range (m) = manual integration
L4581.D L8702P.M Tue Jul 08 15:03:57 1997

DFI4

Page 1

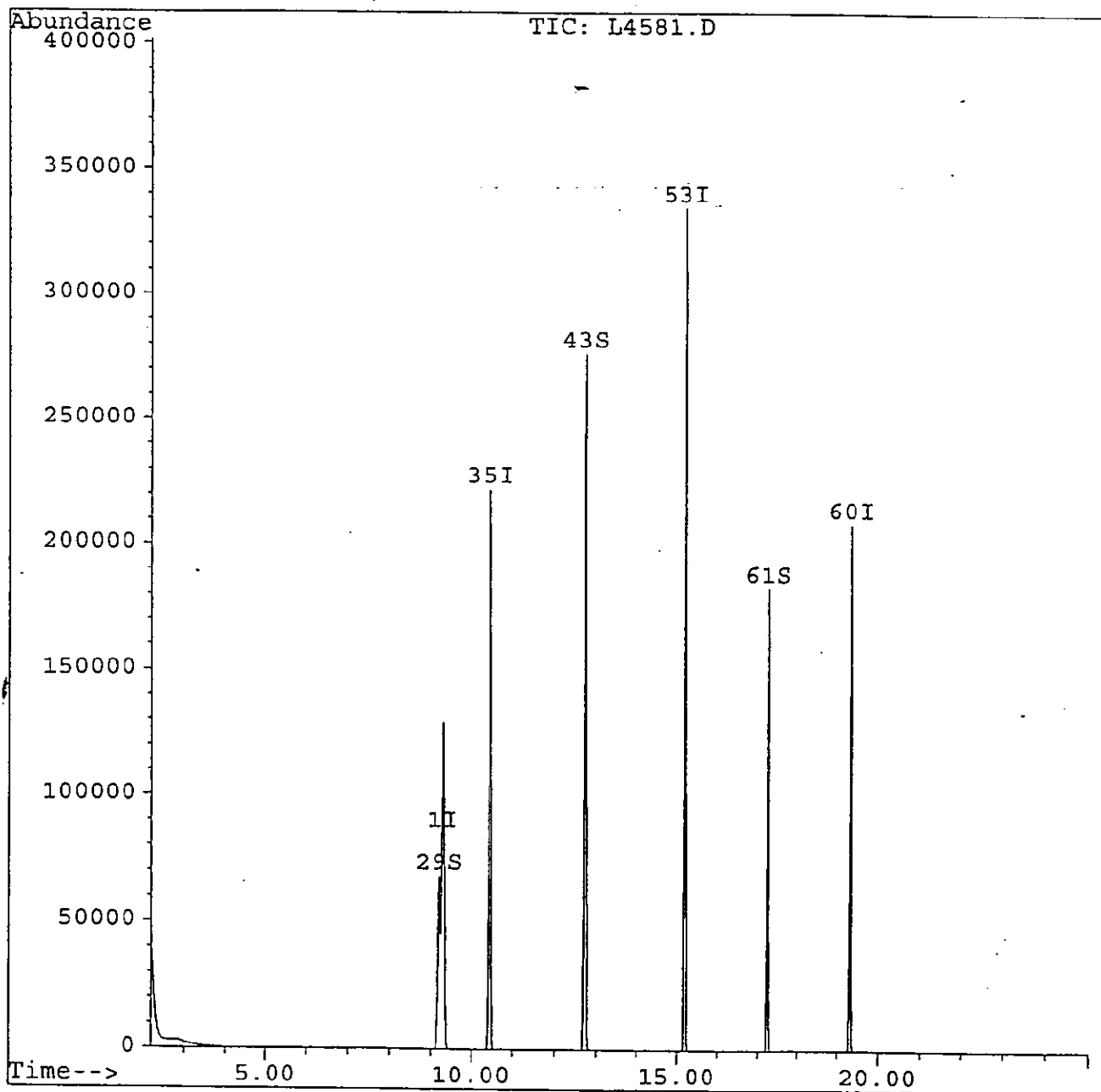
1/14/2015 3:11:11 PM

Quantitation Report

Data File : C:\HPCHEM\1\DATA\INSTL\L4581.D
 Acq On : Data Taken: 7/08/97 @ 14:25
 Sample : SOIL BLK 7/08
 Misc : 5ML SOIL
 Quant Time: Jul 8 15:03 1997

000009
 Vial: 0
 Operator: DATTU
 Inst :
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\L8702P.M
 Title : Method 8260 VOA Calibration
 Last Update : Wed Jul 02 19:25:06 1997
 Response via : Multiple Level Calibration



1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

VBLK01

Lab Name: QC INC.

Contract: _____

000010

Matrix: (soil/water) SOIL

Lab Sample ID: SOIL BLK 7/08

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: L4581.D

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. 0

Date Analyzed: 7/8/97

GC Column: RTX-624 ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

Concentration Units:

(ug/L or ug/Kg)

ug/Kg

CAS Number	Compound Name	RT	Conc.	Q
1.	NONE FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

1/14/2015 3:11:13 PM

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VBLK02

Lab Name: QC INC.

Contract: _____

Matrix: (soil/water) SOIL

Lab Sample ID: SOIL BLK 7/09

Sample wt/vol: 5.00 (g/mL) ML

Lab File ID: L4603.D

000011

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. 0

Date Analyzed: 7/9/97

GC Column: RTX-624 ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS No.	Compound	PQL	Concentration Units:		Q
			(ug/L or ug/Kg)	ug/Kg	
74-87-3	Chloromethane	10.0			U
75-01-4	Vinyl Chloride	5.00			U
74-83-9	Bromomethane	10.0			U
75-00-3	Chloroethane	10.0			U
107-13-1	Acrylonitrile	5.00			U
107-02-8	Acrolein	10.0			U
75-15-0	Carbon Disulfide	10.0			U
75-35-4	1,1-Dichloroethene	2.00			U
67-64-1	Acetone	5.00			U
75-09-2	Methylene Chloride	2.00			U
156-60-5	trans-1,2-Dichloroethene	2.00			U
540-59-0	cis-1,2-Dichloroethene	2.00			U
75-34-4	1,1-Dichloroethane	5.00			U
108-05-4	Vinyl Acetate	10.0			U
78-93-3	2-Butanone	10.0			U
67-66-3	Chloroform	1.00			U
75-55-6	1,1,1-Trichloroethane	1.00			U
56-23-5	Carbon Tetrachloride	2.00			U
71-43-2	Benzene	1.00			U
107-06-2	1,2-Dichloroethane	2.00			U
79-01-6	Trichloroethene	1.00			U
78-87-5	1,2-Dichloropropane	1.00			U
75-27-4	Bromodichloromethane	1.00			U
110-75-8	2-Chloroethyl Vinyl Ether	10.0			U
10061-01-5	cis-1,3-Dichloropropene	5.00			U
108-88-3	Toluene	5.00			U
108-10-1	4-Methyl-2-Pentanone	10.0			U
10061-02-6	trans-1,3-Dichloropropene	5.00			U
79-00-5	1,1,2-Trichloroethane	2.00			U
127-18-4	Tetrachloroethene	1.00			U

SAMPLE NO.

VBLK02

Contract:

Lab Sample ID: SOIL BLK 7/09

Lab File ID: L4603.D 000012

Date Received:

Date Analyzed: 7/9/97

Dilution Factor: 1.0

Soil Aliquot Volume: (uL)

U - Indicates Compound is not Detected
B - Indicates Compound is Present in the Blank
J - Indicates Compound is Detected Below the PQL
E - Indicates that the Result is Estimated because it is Above Calibration Range
D - Indicates the Result is from Dilution

Quantitation Report

000013

Data File : C:\HPCHEM\1\DATA\INSTL\L4603.D
Acq On : Data Taken: 7/09/97 @ 13:38
Sample : SOIL BLK 7/09
Misc : 5ML SOIL
Quant Time: Jul 9 15:14 1997

Vial: 0
Operator: DATTU
Inst :
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\L8702P.M
Title : Method 8260 VOA Calibration
Last Update : Wed Jul 02 19:25:06 1997
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Pentafluorobenzene	9.32	168	154601	50.00	ug/L	0.01
35) 1,4-Difluorobenzene	10.45	114	266823	50.00	ug/L	0.00
53) Chlorobenzene-d5	15.19	82	134605	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	19.31	152	59309	50.00	ug/L	-0.01

System Monitoring Compounds					%Recovery
29) Dibromofluoromethane	9.22	111	86508	47.75	ug/L 95.49%
43) Toluene-d8	12.74	98	235964	49.18	ug/L 98.36%
61) Bromofluorobenzene	17.26	95	73574	45.57	ug/L 91.13%

Target Compounds

Qvalue

(#) = qualifier out of range (m) = manual integration

L4603.D L8702P.M

Wed Jul 09 15:15:07 1997

DFI4

Page 1

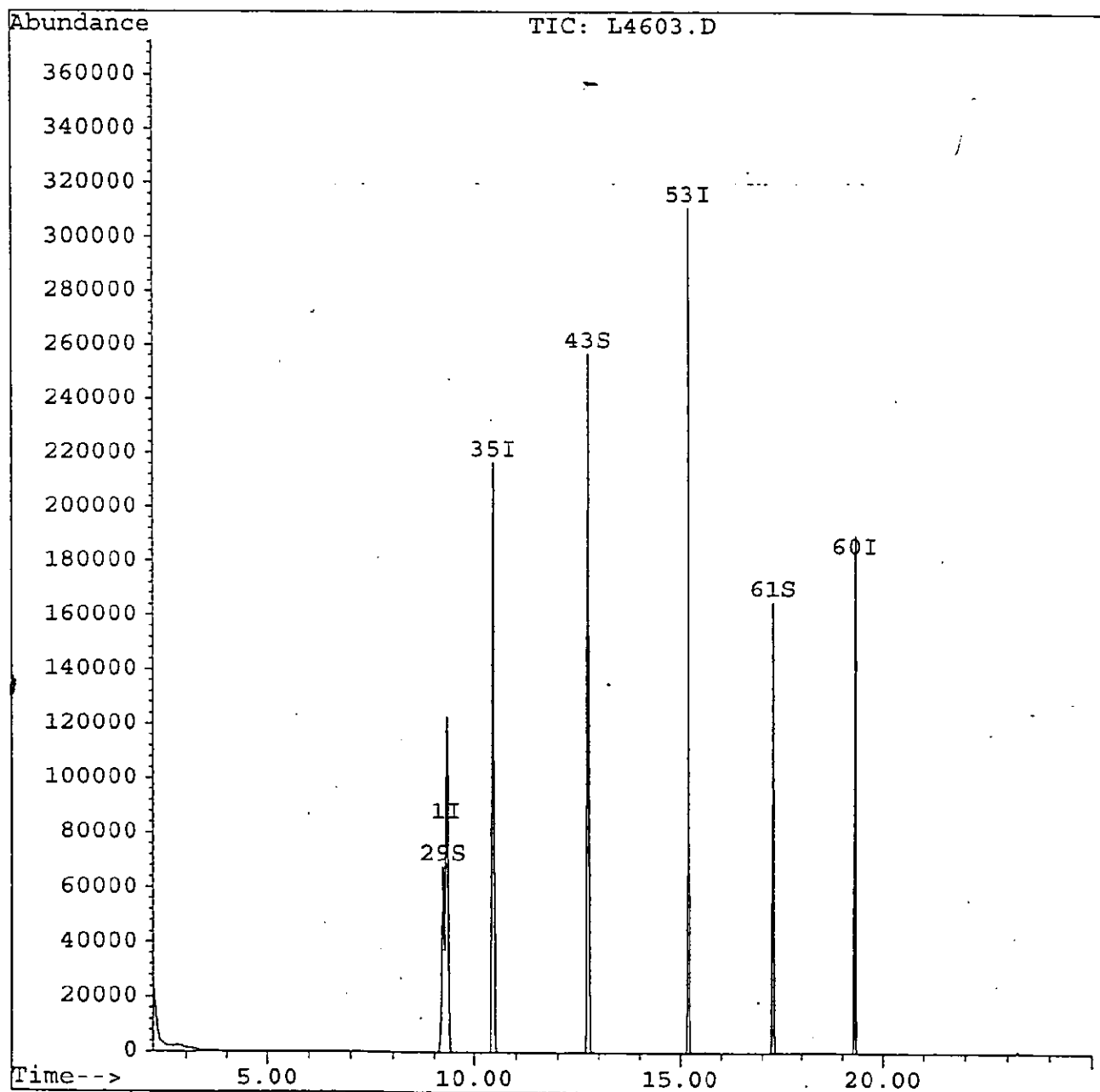
1/14/2015 3:11:16 PM

Quantitation Report

Data File : C:\HPCHEM\1\DATA\INSTL\L4603.D
 Acq On : Data Taken: 7/09/97 @ 13:38
 Sample : SOIL BLK 7/09
 Misc : 5ML SOIL
 Quant Time: Jul 9 15:14 1997

Vial: 000014
 Operator: DATTU
 Inst :
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\L8702P.M
 Title : Method 8260 VOA Calibration
 Last Update : Wed Jul 02 19:25:06 1997
 Response via : Multiple Level Calibration



1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

VBK02

000015

Lab Name: QC INC.

Contract: _____

Matrix: (soil/water) SOIL

Lab Sample ID: SOIL BLK 7/09

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: L4603.D

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. 0

Date Analyzed: 7/9/97

GC Column: RTX-624

ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

Number TICs found: 0

(ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Conc.	Q
1.	NONE FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
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FORM I VOA-TIC

1/14/2015 3:11:18 PM

2B
SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

000016

Lab Name: QC INC.

Contract: _____

Level: (low/med) LOW

	SAMPLE NO.	LAB SAMPLE ID.	SMC1 DFM #	SMC2 TOL #	SMC3 BFB #	OTHER #	TOT OUT
01	VBLK01	SOIL BLK 7/08	92	101	93		
02	S-2MS	L236625-2MS	91	99	91		
03	S-2MSD	L236625-2MSD	93	100	91		
04	VBLK02	SOIL BLK 7/09	96	98	91		
05	SP-COMP-1 SOIL	L238722-1	94	99	93		
06	SP-COMP-2 SOIL	L238722-2	108	92	102		
07							
08							
09							
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SMC1 DFM = Dibromofluoromethane
SMC2 TOL = Toluene-d8
SMC3 BFB = Bromofluorobenzene

QC LIMITS
(80-146)
(81-119)
(76-122)

- # Column to be used to flag recovery values
- * Values outside of contract required QC limits
- D System Monitoring Compound diluted out

3B
SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

000017

Lab Name: QC INC.

Contract: _____

Matrix Spike - Sample No.: S-2

Level: (low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	QC. LIMITS REC.
1,1-Dichloroethene	56	0	54	96	(59-172)
Benzene	56	0	50	89	(59-131)
Trichloroethene	56	0	61	108	(65-131)
Toluene	56	0	59	105	(59-139)
Chlorobenzene	56	0	66	117	(60-133)

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	% RPD	QC RPD	LIMITS REC.
1,1-Dichloroethene	56	54	96	1	22	(59-172)
Benzene	56	48	85	4	20	(59-131)
Trichloroethene	56	57	102	6	18	(65-131)
Toluene	56	55	98	7	21	(59-139)
Chlorobenzene	56	62	110	6	21	(60-133)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

Comments: _____

FORM III VOA-2

1/14/2015 3:11:20 PM

1D
PCB ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

Lab Name: QC Inc. Contract: CLAYTON SERVICES METHOD BLANK

Lab Code: 77166 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: METHOD BLANK

Sample wt/vol: 30.00g (g/ml) 10ml Lab File ID : F25P013

Level: (low/med) LOW Date Received:

% Moisture: not dec. dec. Date Extracted: 06/24/97

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/25/97

GC Column ID: 1.50% SP2250/
1.95% SP2401 Dilution Factor: 1.0

GC Column ID (2): Lab file ID (2):

CONCENTRATION UNITS: (ug/L or
mg/kg) mg/kg

CAS NO.	COMPOUND	PQL	RESULTS	Q
12674-11-2---	Aroclor-1016	0.030	0.030	U
11104-28-2---	Aroclor-1221	0.030	0.030	U
11141-16-5---	Aroclor-1232	0.030	0.030	U
53469-22-9---	Aroclor-1242	0.030	0.030	U
12672-29-6---	Aroclor-1248	0.030	0.030	U
11097-69-1---	Aroclor-1254	0.030	0.030	U
11096-82-5---	Aroclor-1260	0.030	0.030	U

L238722

1D
PCB ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

Lab Name: OC Inc. Contract: CLAYTON SERVICES METHOD BLANK

Lab Code: 77166 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: METHOD BLANK

Sample wt/vol: 30.00g (g/ml) 10ml Lab File ID : G16P008

Level: (low/med) LOW Date Received:

% Moisture: not dec. dec. Date Extracted: 07/11/97

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/16/97

1.50% SP2250/

GC Column ID: 1.95% SP2401 Dilution Factor: 1.0

GC Column ID (2): Lab file ID (2):

CONCENTRATION UNITS: (ug/L or
mg/kg) mg/kg

CAS NO. COMPOUND PQL RESULTS Q

12674-11-2---Aroclor-1016	0.030	0.030	U
11104-28-2---Aroclor-1221	0.030	0.030	U
11141-16-5---Aroclor-1232	0.030	0.030	U
53469-22-9---Aroclor-1242	0.030	0.030	U
12672-29-6---Aroclor-1248	0.030	0.030	U
11097-69-1---Aroclor-1254	0.030	0.030	U
11096-82-5---Aroclor-1260	0.030	0.030	U

FORM I PEST

1/87

1/14/2015 3:11:22 PM

2E
SOIL SURROGATE RECOVERY
Primary

Lab Name: QC Inc. Contract: CLAYTON SERVICES

Lab Code: 77166 Case No: SAS No: SDG No:

	SAMPLE NO.	S1 (DBC) #	OTHER
01	METHOD BLANK	89	
02	PCB SPIKE	101	
03	PCB SPK DUP	98	
04	METHOD BLANK	90	
05	L238722-1	100	
06	L238722-2	109	
07			
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S1 (DBC) = Dibutylchloroendate (100ul/40ppm) ADVISORY
 QC LIMITS
 (30-145)

- Column used to flag recovery values with an asterisk

* - Values outside of QC limits

D - Cannot calculate due to dilution

000021

Lab	Name :	<u>QC Inc.</u>	Contract :	<u>CLAYTON SERVICES</u>
Lab	Code :	<u>77166</u>	Case No:	<u> </u>
			SAS No.:	<u> </u>
			SDG No.:	<u> </u>
Matrix	Spike - Sample	No. :	<u>L234576-1</u>	Level (low/med) :
				<u>Low</u>

COMPOUND	AMOUNT ADDED (mg/kg)	SAMPLE CONC. IN EXTRACT (mg/kg)	MS CONC. IN EXTRACT (mg/kg)	MS % REC #	QC LIMITS %
Arochlor 1260	1.67	0.000	1.42	85.	57-168

COMPOUND	MSD CONC. IN EXTRACT (mg/kg)	MSD % REC #	MS % REC #	RPD%	QC LIMITS	
					RPD	% REC.
Arochlor 1260	1.54	92.	85.	8.	50	57-168

Column to be used to flag recovery and RPD values with an asterisk

* Values outside QC limits

RPD :	0	out of	1	outside limits
Spike Recovery :	0	out of	2	outside limits

Comments: _____

FORM III PEST-2

1/14/2015 3:11:24 PM

ID
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

Lab Name: QC Inc. Contract: CLAYTON SERVICES METHOD BLANK
Lab Code: 77166 Case No.: SAS No.: SDG No.:
Matrix: (soil/water) SOIL Lab Sample ID: METHOD BLANK
Sample wt/vol: 30.00g (g/ml) 4ml Lab File ID : G10H012
Level: (low/med) Low Date Received:
% Moisture: not dec. dec. Date Extracted: 07/10/97
Date Analyzed: 07/11/97
GC Column ID: RTX-5 Dilution Factor: 1.0

CONCENTRATION UNITS: (ug/L or
mg/kg) mg/kg

CAS NO.	COMPOUND	PQL	RESULTS	Q
	Diesel Range Organics	5.00	5.00	U

2E
SOIL SURROGATE RECOVERY
Primary

Lab Name: QC Inc. Contract: CLAYTON SERVICES

Lab Code: 77166 Case No: SAS No: SDG No:

	SAMPLE NO.	S1 (OTP) #	S2 (DBC) #
01	METHOD BLANK	129	
02	DRO SPIKE	*234	110
03	DRO SPK DUP	*226	116
04	L238722-1	105	
05	L238722-2	*160	98
06			
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30			

S1 (OTP) = o-Terphenyl (1ml/20ppm)
S2 (DBC) = Dibutylchloredate (1ml/40ppm)

ADVISORY
QC LIMITS
(50-150)
(50-150)

- # Column used to flag recovery values with an asterisk
* Values outside of QC limits
D Cannot calculate due to dilution
M Matrix interference

1D
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

Lab Name: QC Inc. Contract: CLAYTON SERVICES METHOD BLANK
Lab Code: 77166 Case No.: SAS No.: SDG No.:
Matrix: (soil/water) SOIL Lab Sample ID: METHOD BLANK
Sample wt/vol: 30.00g (g/ml) 4ml Lab File ID : G10H012
Level: (low/med) Low Date Received:
% Moisture: not dec. dec. Date Extracted: 07/10/97
Date Analyzed: 07/11/97
GC Column ID: RTX-5 Dilution Factor: 1.0

CONCENTRATION UNITS: (ug/L or
mg/kg) mg/kg

CAS NO. COMPOUND PQL RESULTS Q

Diesel Range Organics	5.00	5.00	U
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2E
SOIL SURROGATE RECOVERY
Primary

Lab Name: QC Inc. Contract: CLAYTON SERVICES

Lab Code: 77166 Case No: SAS No: SDG No:

	SAMPLE NO.	S1 (OTP)#	S2 (DBC)#
01	METHOD BLANK	129	
02	DRO SPIKE	*234	110
03	DRO SPK DUP	*226	116
04	L238722-1	105	
05	L238722-2	*160	98
06			
07			
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30			

S1 (OTP) = o-Terphenyl (1ml/20ppm)
S2 (DBC) = Dibutylchlorendate (1ml/40ppm)

ADVISORY
QC LIMITS
(50-150)
(50-150)

- # Column used to flag recovery values with an asterisk
- * Values outside of QC limits
- D Cannot calculate due to dilution
- M Matrix interference

SOIL DRO MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: QC Inc. Contract: CLAYTON SERVICES

Lab Code: 77166 Case No.: SAS No.: SDG No.:

Matrix Spike-Sample No.: LAB SAND Level: (low/med) Low

COMPOUND	AMOUNT ADDED (mg/kg)	SAMPLE CONC. IN EXTRACT (mg/kg)	MS CONC IN EXTRACT (mg/kg)	MS% REC #	QC LIMITS
Diesel Range Organics	98.	00.0	127.	130	50-150

COMPOUND	MSD CONC. IN EXTRACT (mg/kg)	MSD% REC #	MS% REC #	% RPD #	QC LIMITS	
					RPD	REC.
Diesel Range Organics	130.	133	130	2.3	20	50-150

Column to be use to flag recovery and RPD values with an asterisk

* Values outside QC limits

RPD: 00 out of 01 outside limits

Spike Recovery: 00 out of 02 outside limits

COMMENTS: _____

1D
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

Lab Name: QC Inc. Contract: CLAYTON SERVICES METHOD BLANK
Lab Code: 77166 Case No.: SAS No.: SDG No.:
Matrix: (soil/water) SOIL Lab Sample ID: METHOD BLANK
Sample wt/vol: 10.00g (g/ml) 10ml Lab File ID : G10K013
(100ul/5ml)
Level: (low/med) Low Date Received:
GC Column ID: Rtx-502.2 Dilution Factor: 1.0
%Moisture: not dec. dec. Date Analyzed: 07/11/97

CONCENTRATION UNITS: (ug/L or
mg/kg) mg/kg

CAS NO. COMPOUND PQL RESULTS Q

Gasoline Range Organics	5.00	5.00	U
-------------------------	------	------	---

2E
SOIL SURROGATE RECOVERY
Primary

Lab Name: QC Inc. Contract: CLAYTON SERVICES

Lab Code: 77166 Case No: SAS No: SDG No:

	SAMPLE NO.	S1 (BFB) #	OTHER
01	METHOD BLANK	117	
02	GAS SAND MS	129	
03	GAS SAND MSD	140	
04	L238722-1	208 M	
05	L238722-2	240 M	
06			
07			
08			
09			
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30			

S1 (BFB) = Bromofluorobenzene (50UL/500PPM)

Column used to flag recovery values with an asterisk

* Values outside of QC limits

M Matrix Interference

ADVISORY
QC LIMITS
(50-150)

3E
SOIL GRO MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: QC Inc. Contract: CLAYTON SERVICES
 Lab Code: 77166 Case No.: SAS No.: SDG No.:
 Matrix Spike-Sample No.: LAB SAND Level: (low/med) Low

COMPOUND	AMOUNT ADDED (mg/kg)	SAMPLE CONC. IN EXTRACT (mg/kg)	MS CONC IN EXTRACT (mg/kg)	MS% REC #	QC LIMITS
Gasoline Range Organics	25.00	0.000	31.9	128	50-150

COMPOUND	MSD CONC. IN EXTRACT (mg/kg)	MSD% REC #	MS% REC #	% RPD #	QC LIMITS	
					RPD	REC.
Gasoline Range Organics	32.8	131	128	2.3	20	50-150

Column to be use to flag recovery and RPD values with an asterisk

* Values outside QC limits

RPD: 00 out of 01 outside limits

Spike Recovery: 00 out of 02 outside limits

COMMENTS: _____

METALS
ANALYTICAL RESULTS AND QUALITY ASSURANCE DATA

CLIENT: Clayton Services Corporation
SAMPLE I L238722-1,2

Analyte	Sample ID	Unspike Sample Results	MS Conc. Added (mg/l)	MSD Conc. Added (mg/l)	MATRIX SPIKE RESULTS				METHOD BLANK RESULTS	
					MS Result	MSD Result	MS Recovery	MSD Recovery	RPD	1
Aluminum										
Antimony										
Arsenic	L238722-1	ND	2.5	2.5	2.19	2.05	88	82	6.6	ND
Barium	L238722-1	0.566	2.5	2.5	2.5	2.33	77	71	9.2	ND
Beryllium										
Cadmium	L238722-1	ND	0.5	0.5	0.371	0.342	74	68	8.1	ND
Calcium										
Chromium	L238722-1	ND	2.5	2.5	1.93	1.79	77	72	7.5	ND
Cobalt										
Copper										
Iron										
Lead	L238722-1	ND	2.5	2.5	1.89	1.73	76	69	8.8	ND
Magnesium										
Manganese										
Mercury	L226822-1	ND	0.002	0.002	0.00225	0.00206	113	103	8.8	ND
Molybdenum										
Nickel										
Potassium										
Selenium	L238722-1	ND	2.5	2.5	2.05	1.9	82	76	7.6	ND
Silver	L238722-1	ND	0.5	0.5	0.411	0.357	82	77	6.0	ND
Sodium										
Thallium										
Titanium										
Tin										
Vanadium										
Zinc										

* MS and / or MSD recoveries were outside control limits, but the lab control sample recoveries met criteria.

QC LABORATORIES

GENERAL CHEMISTRY SAMPLE AND SPIKE DUPLICATE RESULTS

Test Report No.: L238722

Client Name : CLAYTON SERVICES CORPORATION

Parameter	Sample Number	Sample Matrix	Units	Sample Result	Dup Result	RPD %	RPD Limit
CYANIDE REACTIVE	L236792-8	Solid	mg/kg	<5	<5	0.0	20
FLASH POINT/IGNITABILITY	L238722-1	Solid	Deg. F	>141	>141	0.0	20
MOISTURE PERCENT	L230745-1	Solid	%	98.27	98.26	0.01	20
PAINT FILTER TEST	L238722-1			Neg.	Neg.	0.0	20
REACTIVE HYDROGEN SULFIDE	L236792-8	Solid	mg/kg	<5	<5	0.0	20
TOTAL SOLIDS PERCENT	L230745-1	Solid	%	1.73	1.74	0.6	20

Duplicate RPD: 0 out of 6 outside limits

Form No. WC2

000030

QC LABORATORIES
GENERAL CHEMISTRY BLANK RESULTS

Test Report No.: L238722

Client Name : CLAYTON SERVICES CORPORATION

Parameter	Sample Matrix	Units	Concentration Found	Practical Quantitation Limit
CYANIDE REACTIVE	Liquid	mg/l	ND	5
REACTIVE HYDROGEN SULFIDE	Liquid	mg/l	ND	5

Form No. WC3

1/14/2015 3:11:35 PM

000031

QC LABORATORIES
GENERAL CHEMISTRY SPIKE SAMPLE RESULTS

Test Report No.: L238722

Client Name : CLAYTON SERVICES CORPORATION

Parameter	Sample Number	Sample Matrix	Units	Sample Result	Spike Conc.	Spiked Result	Spike Rec. %	QC Limits
CYANIDE REACTIVE	L236792-8	Solid	mg/kg	<5	12.5	12.5	100	41-112
REACTIVE HYDROGEN SULFIDE	L236792-8	Solid	mg/kg	<5	86.4	72	83	45-110

Spike Recovery: 0 out of 2 outside limits

The appearance of an LFB denotes that the MS was outside QC Limits

Form No. WC4

1/14/2015 3:11:37 PM



1205 Industrial Blvd.
P.O. Box 514
Southampton, PA 18966-0514
VOICE: (215) 355-3900
FAX: (215) 355-7231

ANALYSIS REQUEST / CHAIN OF CUSTODY RECORD

Lab Sample ID
(FOR LAB USE ONLY)

Page 1 of 1

QC Inc. Cust./Acct. No.

CLAYTON SERVICES Corp

Carrier/Waybill No.

Project Name/No.

HEAR FOODS INC

Sample Shipment Date

7/7/97

Project Mgr./Phone No.

Michael Williams 312-6400

Purchase Order No.

Sampled By

APL

Lab Contact/Phone No.

Greg Hawk

Bill to: CLAYTON SERVICES

Report to: SAME

ALL SHADED AREAS MUST BE COMPLETED

Field Identification	Sample Description / Type	Date/Time Collected	Sample Container No./Type/Volume	Preservative	Analysis Requested	Condition on Receipt	Log In No.
SP-Comp-1	Stockpile Soil	7/3/97 11 AM	(5) 8oz clear	ICE	TPH (GRO. DEO) PERMITTING REACTIVITY (Sulfide) PERMITTING PCB's PERMITTING METALS (ARCA) PERMITTING PERMITTING PERMITTING PERMITTING EPA 821 Method 9095 chla (PAPER STRIP TEST) MOTESTRUE		
SP-Comp-2	Stockpile Soil	7/3/97 11 AM	(5) 8oz clear	ICE	SAME AS ABOVE		
					Notes: pH _____ Metals _____ Cyanide pH _____ CN _____ HCL pH _____ ORA _____ H2SO4 pH _____ Nitrogen Barite _____ H2SO4 pH _____ Unpreserved _____		
Due Dates: Preliminary Report 7/14/97 Final Deliverables 1-1-1					Deliverables: Routine Report <input type="checkbox"/> Full <input type="checkbox"/> NIDEP ID27 <input type="checkbox"/> Project Specific Deliverables <input type="checkbox"/>		
Turnaround Time Required (Hours/Days):					USEPA CLP <input type="checkbox"/> Reduced <input type="checkbox"/> Tier II <input type="checkbox"/> Phila./PA QA <input checked="" type="checkbox"/>		
Possible Hazard Identification: Non-hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown <input type="checkbox"/>					Sample Disposal: Return to Client <input type="checkbox"/> Disposal by Lab <input checked="" type="checkbox"/> Archival by Lab <input type="checkbox"/> (months)		
1. Relinquished by: (Signature/Affiliation)		Date: 7/3/97 Time: 2:00		1. Received by: (Signature/Affiliation)		Date: 7/3/97 Time: 2:00	
2. Relinquished by: (Signature/Affiliation)		Date: _____ Time: _____		2. Received by: (Signature/Affiliation)		Date: 7-8-97 Time: 8:05 AM	
3. Relinquished by: (Signature/Affiliation)		Date: 7-8-97 Time: 8:45 AM		3. Received by: (Signature/Affiliation)		Date: _____ Time: _____	
4. Relinquished by: (Signature/Affiliation)		Date: 7/8/97 Time: 4:30 PM		4. Received by: (Signature/Affiliation)		Date: 7/8/97 Time: 4:30 PM	
5. Relinquished by: (Signature/Affiliation)		Date: 7/9/97 Time: 7:00		5. Received by: (Signature/Affiliation)		Date: 7/9/97 Time: 7:00	
Comments / Special Instructions: PLEASE FAX RESULTS 312-6481 7/8/97 FOR SOIL DISPOSAL ANALYSIS 7/8/97 1:00 APL (Final Report) Yellow (1st Dil) Pink (Sample Custody) Old Client Field Reps Only 7/9 7:45 cc/ems Prep Work finished 7/9 7:45							

7/14/2015 3:11:37 PM

000032

APPENDIX B
UST System Inspection and Testing Documentation



pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT
STORAGE TANK DIVISION

FOR DEP USE ONLY

Reviewer _____
Date _____
Entered by _____
Date _____

UNDERGROUND STORAGE TANK FACILITY OPERATIONS INSPECTION

FACILITY INFORMATION

ID Number 15 - 24418
Name HERR FOODS INC.
Location 20 HERR DRIVE
Address NOTTINGHAM, PA 19362
Municipality NOTTINGHAM TWP

Representative Present During Inspection

Name DAVE MORAN
Phone 610-632-9330
☐ Owner ☐ Operator ☒ Employee ☐ None

CERTIFIED INSPECTOR

Name TIM ELDRETH
ID No. 548
Phone 610 842 2418
E-mail TELDRETH@ZOOM INTERNET.NET
Date of First Site Visit (month/day/year) 6/6/14

OWNER (must be a person)

Name EO HERR
OPERATOR (if different than owner)
Name SAME

Financial Responsibility discussed with owner

Yes ☒ No ☐

- Provided by USTIF. Owner must have deductibles available as provided in Subchapter H of the regulations.
- Required of all UST owners except state agencies.

Suspected or confirmed contamination observed

Yes ☐ (notify proper region within 48 hours) No ☒

Improperly closed or unregistered tanks present

Yes ☐ (provide comment) No ☒

Written instructions/notification procedures are available/posted

Yes ☒ No ☐

Amended registration form required for (check all that apply):

- | | |
|--|--|
| <input type="checkbox"/> Added tanks | <input type="checkbox"/> Change in substance stored |
| <input type="checkbox"/> Closed tanks | <input type="checkbox"/> Change of operational status (in or out of service) |
| <input type="checkbox"/> Change in tank size | <input type="checkbox"/> Change of owner |

Inspection summary.

Indicate the compliance status of each item below using the following codes: N = Noncompliant C = Compliant

	Tank No. <u>008</u>	Tank No. <u>009</u>	Tank No.	Tank No.	Tank No.
Tank Construction and Corrosion Protection	C	C			
Piping Construction and Corrosion Protection	C	C			
Spill Prevention	C	C			
Overfill Prevention	C	C			
Registration Certificate Display	C	C			
Tank Release Detection	C	C			
Piping Release Detection	C	C			
Monthly sump checks	N	N			

I, the DEP Certified Inspector (IUM), have inspected the entire above referenced facility including examining manways, sumps, monitoring wells and dispensers. Based on my personal observation of the facility and documentation provided by the owner, I certify under penalty of law as provided in 18 PA C.S.A. Section 4904 (relating to unsworn falsification to authorities) that the information provided by me is true, accurate and complete to the best of my knowledge and belief.

Certified Inspector's Signature

Date

As the representative of the owner or operator, I have reviewed the completed inspection report. I certify under penalty of law as provided in 18 PA C.S.A. Section 4904 (relating to unsworn falsification to authorities), that the information provided by me is true, accurate and complete to the best of my knowledge and belief.

Signature

Title

Date

Original: Regional Office - Norristown, Wilkes Barre, Harrisburg, Williamsport, Pittsburgh, or Meadville
Copy: Owner
Copy: DEP, Division of Storage Tanks, P.O. Box 8763, Harrisburg, PA 17105-8763
Copy: Inspector

UNDERGROUND STORAGE TANK FACILITY OPERATIONS INSPECTION

Facility Name HERR Foods

Date 6/6/14

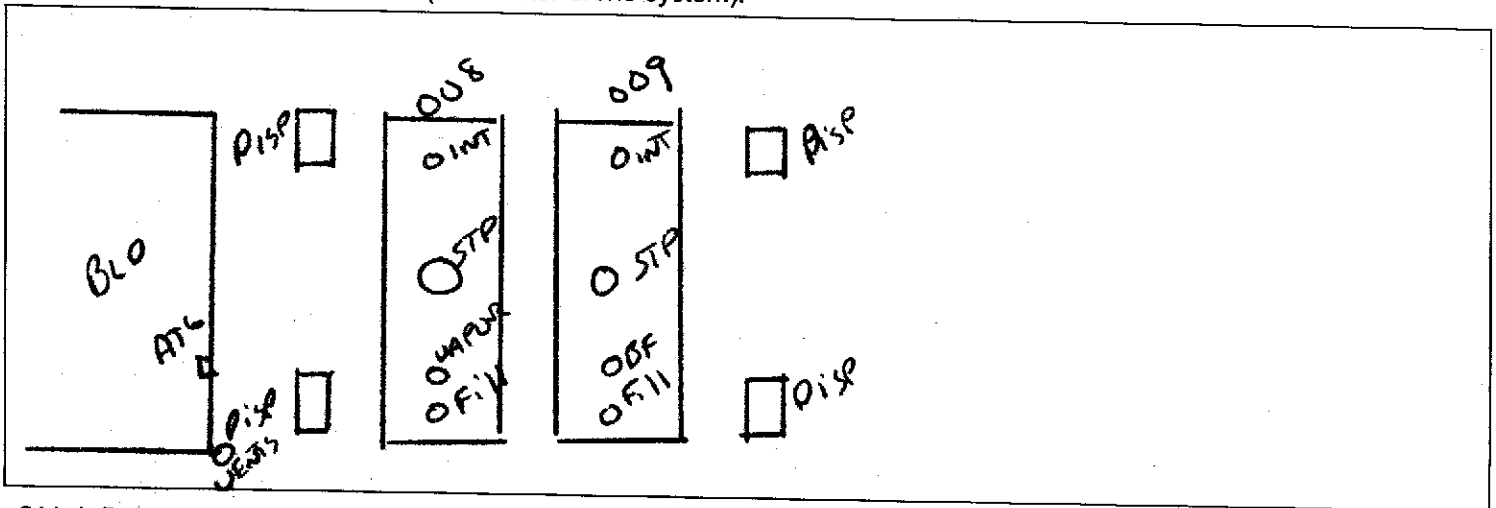
Facility ID 15 - 24418

I. TANK SYSTEM INFORMATION. For each tank, fill in the required information and codes from the following list. Where multiple codes are allowed and used for a specific tank component, describe the arrangement in the COMMENTS section. (See FOI form instructions for details.)

	Tank No. 008	Tank No. 009	Tank No.	Tank No.	Tank No.	DEP Use
1. Tank capacity (name plate gallons)	10,000	10,000				
2. Substance currently stored	GAS	DIESEL				
3. Installation date (mm/yyyy)	6/19/97	6/19/97				
4. This drone tank is manifolded to tank number						
5. Product level, in inches, at time of inspection	45	60				
6. Total secondary containment on this tank system	Y	Y				(18)
7. Tank construction and corrosion protection	G	G				(1)
8. Main piping construction and corrosion protection	K	K				(2)
9a. Number of tank top sumps ±	1	1				
9b. Number of tank top sumps tested tight ±	0	0				(21)
9c. Spill containment tested tight	0	0				(21)
10a. Number of transition sumps	0	0				
10b. Number of transition sumps tested tight	0	0				(21)
11a. Number of connected dispensers	2	2				
11b. Number of connected dispensers with pans	2	2				
11c. Number of dispenser pans tested tight	0	0				(22)
12a. Piping flexible joints/connectors construction at tank	X	X				(PFLX)
12b. Piping flexible joints/connectors construction at dispenser	X	X				(PFLX)
13. Pump (product dispensing) system	C	C				(4)
14. Spill protection	Y	Y				(6)
15. Overfill type	Y	Y				(7)
16. Current registration certificate display	Y	Y				(8)
17. Stage I vapor recovery	B	2				(19)
18. Stage II vapor recovery	A	2				(20)
Evaluate the tank system release detection methods carefully before filling in the following rows.						
19. Tank release detection	H	H				(12)
20. Piping small release detection (0.2 gph monthly or 0.1 gph annually)	D	D				(5)
21. Pressure (line 13 is C or D) piping line leak detector (LLD function)	A	A				(5)
22. LLD function includes a positive turbine pump shutoff	N	N				(23)

‡ at tank penetrations that have pipe that routinely contains or conveys product.

Site drawing / manifold schematic (not master-drone system):



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UNDERGROUND STORAGE TANK FACILITY OPERATIONS INSPECTION

Facility Name HEER FOODSDate 6/6/14Facility ID 15 - 24418**II. Release Detection Reference**

- Records may be located at the facility or a readily available alternate site.
- The records include all of the information listed below for chosen release detection methods.
- The inspector has actually seen the records.
- A test with an inconclusive result or failure is an indication of a (suspected) product release.

Tank Tank Tank Tank Tank
System System System System System

Instructions:

Check the box to indicate that a criterion has been met.

Circle the box to indicate that a criterion has not been met.

Circle with "N/A" when a criterion is not applicable (provide comment).

Automatic Tank Gauging: (Tank only – code E)ATG manufacturer: VEEGEROUTATG model: TLS 350Does the automatic tank gauge perform continuous in-tank release detection? ☒ Yes, ☐ No

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- valid monthly leak test conducted and documented
- manufacturer's certification of ability to detect 0.2 gph release is available
- probes and gauge software certified for manifolded tank systems
 - when not specifically certified, the siphon must be broken to properly test
- maintenance records, for the last year, including calibration, preventative and repair equipment is operational

Manual Tank Gauging: (Tank only – code C, F, G44 or G58)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- tank capacity is 2,000 gallons or less
- tank installed before 11/10/2007
- performed weekly
- 1/8th inch accuracy stick readings
- average 2 stick readings before and after test
- test length appropriate for each tank
 - 36 hours minimum
 - 44 hours, 551-1000 gallons, 64" diameter
 - 58 hours, 551-1000 gallons, 48" diameter
- variation is within standard (both weekly and monthly)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Precision Tightness Test (TTT): (Tank only – code C)

method used (after 10/11/1994): _____

date of last test: _____

result: _____

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- complete documentation of tightness test available
- performed by UTT certified installer (after 9/28/1996)
- manufacturer's certification of ability to detect 0.1 gph release is available

Interstitial Monitoring: (Tank code H; describe monitoring equipment in comments)

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- interstitial area monitored monthly (required for tanks installed after 11/20/2007)
- interstitial sensors properly placed (per manufacturer's instructions)
- monitoring wells (secondary barrier) or ports are clearly marked and secured
- maintenance records, for the last year, including preventative and repair equipment manufacturer's performance claims are available
- secondary barrier is compatible with and impermeable to the stored substance

Statistical Inventory Reconciliation: (Tank code D and/or Piping code J)

test vendor: _____

version: _____

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- manufacturer's certification of ability to detect 0.2 gph release is available
- data is collected according to the test vendor's instructions
- analysis completed monthly and valid results supplied to owner/operator within 20 days
 - valid reports include calculated leak rate, minimum detectable leak rate, leak threshold, probability of detection and probability of false alarm
- suspected releases properly investigated within 7 days of inconclusive or failed report to confirm or deny the occurrence of a release

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

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UNDERGROUND STORAGE TANK FACILITY OPERATIONS INSPECTION

Facility Name HERB FOODSDate 6/6/14Facility ID 15 - 24418

II. RELEASE DETECTION REFERENCE (continued)

Tank Tank Tank Tank Tank
System System System System System

Instructions: Check the box to indicate that a criterion has been met.
Circle the box to indicate that a criterion has not been met.
Circle with "N/A" when a criterion is not applicable (provide comment).

Piping Tightness (Line) Testing: (Piping only – code B or C)

test vendor: ESTASROOKversion: EZY CHECKdate of last test: 3/3/14result: PASS
☒ ☒ ☐ ☐ ☐

test certification of ability to detect 0.1 gph release at 1.5 times operating pressure is available

☒ ☒ ☐ ☐ ☐

performed by UTT certified installer (after 11/10/2008)

☒ ☒ ☐ ☐ ☐

test conducted at proper frequency

☒ ☒ ☐ ☐ ☐

- conducted annually for **pressurized** piping without monthly monitoring

- conducted every 3 years for **suction** piping not meeting code I requirements

if test device permanently installed, maintenance records, for the last year, including calibration, preventative and repair

Mechanical Line Leak Detector: (PRESSURIZED Piping only – code A)

manufacturer: RED JACKETmodel: Fx10, Fx10Udate last tested: 3/3/14result: PASS
☒ ☒ ☐ ☐ ☐

certification of ability to detect a release of 3 gph at 10 psig within 1 hour is available

☒ ☒ ☐ ☐ ☐

operational test of leak detector according to manufacturer's instructions in last 12 months

☒ ☒ ☐ ☐ ☐

maintenance records, in addition to the annual test, for last year, including calibration, preventative and repair

Electronic Line Leak Detector: (PRESSURIZED Piping only – code K)

manufacturer: _____

model: _____

date of last 3gph test: _____

result: _____

☐ ☐ ☐ ☐ ☐

self checking or system tested for operability within the last year

☐ ☐ ☐ ☐ ☐

certification of ability to detect a release of 3 gph at 10 psig within 1 hour is available

☐ ☐ ☐ ☐ ☐

maintenance records, in addition to annual test, for last year, including calibration, preventative and repair

☐ ☐ ☐ ☐ ☐

continuously monitors piping

Is the electronic leak detector performing the "monthly" monitoring function? ☐ Yes, ☐ No If yes:

date of last 0.2gph test: _____

result: _____

☐ ☐ ☐ ☐ ☐

third-party certification of ability to detect 0.2 gph release is available

☐ ☐ ☐ ☐ ☐

documentation of monthly test available for last year

Is the electronic leak detector performing the "annual" monitoring function? ☐ Yes, ☐ No If yes:

date of last 0.1gph test: _____

result: _____

☐ ☐ ☐ ☐ ☐

third-party certification of ability to detect 0.1 gph release is available

IUM Release Detection Record Review: (All release detection codes)

- An empty tank (less than 1" of product/sludge) or a tank supplying an emergency generator only is not required to perform release detection. Indicate date emptied or that it is an emergency generator tank in comments.
- Recently installed tank systems must begin performing release detection immediately after receiving product. Indicate date of first product receipt in comments.

☒ ☒ ☐ ☐ ☐

tank release detection records for the last 12 months the system contained product are available

☒ ☒ ☐ ☐ ☐

tank release detection records are valid and passing

☒ ☒ ☐ ☐ ☐

piping release detection records for the last 12 months the system contained product are available

☒ ☒ ☐ ☐ ☐

piping release detection records are valid and passing

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UNDERGROUND STORAGE TANK FACILITY OPERATIONS INSPECTION

Facility Name HERR FOODSDate 6/6/14Facility ID 15 - 24418

III. CORROSION PROTECTION COMPLIANCE CRITERIA

Tank Tank Tank Tank Tank
System System System System System
056 009 _____

Instructions: Check the box to indicate that a criterion has been met.
Circle the box to indicate that a criterion has not been met.
Circle with "N/A" when a criterion is not applicable (provide comment).

Lined Tanks: (Tank only – code I)

☐ ☐ ☐ ☐ ☐

tank inspected and lined according to national standard

☐ ☐ ☐ ☐ ☐

date lined: _____

tank initially inspected 10 years after lining and every 5 years thereafter

date(s) inspected: _____

Galvanic and Impressed Cathodic Protection: (Tank code B, C, O or P and/or Piping)

☐ ☐ ☐ ☐ ☐
☐ ☐ ☐ ☐ ☐

tank structure to soil potential greater than 0.85 volts, or
meets other nationally recognized protection standard; specify: _____

potential on tank current monitoring

(date) _____

potential on tank previously monitored

(date) _____

☐ ☐ ☐ ☐ ☐
☐ ☐ ☐ ☐ ☐

pipe/flex structure to soil potential greater than 0.85 volts, or
meets other nationally recognized protection standard; specify: _____

potential on pipe/flex current monitoring

(date) _____

potential on pipe/flex previously monitored

(date) _____

Impressed Current Design and Rectifier Output: (Tank code C or P and/or Piping)

☐ ☐ ☐ ☐ ☐
☐ ☐ ☐ ☐ ☐
☐ ☐ ☐ ☐ ☐

system designed by a corrosion expert

system is turned on and functioning within design limits

documentation of last three amp (plus volt and runtime when meters available) readings,

recorded at least once every 60 days:

most recent: volts: _____ amps: _____ runtime: _____ date: _____

60 days prior: volts: _____ amps: _____ runtime: _____ date: _____

120 days prior: volts: _____ amps: _____ runtime: _____ date: _____

If Cathodic Protection or supplemental anodes were added to an existing tank system, fill in the following (Information is Required for Compliance):

Date assessed: _____

Date installed: _____

Tank Shell Assessment Method: _____

IV. Operator Training

- ☒ list of trained operators designates a class A operator; includes their training certification
☒ list of trained operators designates a class B operator; includes their training certification
☒ list of trained operators designates class C operator(s); date of initial training or last refresher is within the previous 12 months
☒ written instructions and notification procedures are readily available for class C operators at retail facilities; are posted in a location visible to dispenser operators at other facilities

DESCRIBE INFORMAL TRAINING PROVIDED FOR OWNER, CLASS A AND/OR CLASS B OPERATORS – see instructions.

DAVE MORAN - TRAINING BY PASS TESTING.COM

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UNDERGROUND STORAGE TANK FACILITY
OPERATIONS INSPECTIONFacility Name HERR FOODS

Date

6/6/14

Facility ID

15 - 24418☒ IUM checked for water in tank(s) and sump(s) – results belowV. COMMENTS INCLUDING ACTIONS TO BRING INTO COMPLIANCE (Attach additional sheets where necessary)
See instructionsNO WATER IN TANKS AT TIME OF INSPECTION.WATER IN STP SUMPS AT TIME OF INSPECTION.
CLEANED SUMPS PRIOR OF INSPECTION.

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03/30/15

**Systems & Training
for the
Petroleum Industry**

DATA SHEET

Test Location Information

Name:	Herr Foods Inc
Address:	20 Herr Drive
City:	Nottingham, PA 19362
Phone:	610-932-9330
Contact:	Dave Moran

#1	DATA	-/+	GPL	Gasoline RES	GPH
9:30	65	0	0.0037	0.0000	0.0000
9:45	65	0	0.0037	0.0000	0.0000
10:00	65	0	0.0037	0.0000	0.0000
10:15	65	0	0.0037	0.0000	0.0000
10:30	65	0	0.0037	0.0000	0.0000
10:45	65	0	0.0037	0.0000	0.0000

PASS

[illegible][illegible]

Testing Company Information

Name	Eldreth Environmental Services
Address	654 Colora Road
City	Colora, MD 21917
Phone	610-842-2418

Technical Information

Name Tim Eldreth

Cert # 6523

Applied Pressure 50psi

#2	Diesel				
TIME	DATA	-/+	GPL	RES	GPH
9:45	40	0	0.0037	0.0000	0.0000
10:00	40	0	0.0037	0.0000	0.0000
10:15	40	0	0.0037	0.0000	0.0000
10:30	40	0	0.0037	0.0000	0.0000
10:45	40	0	0.0037	0.0000	0.0000
11:00	40	0	0.0037	0.0000	0.0000

PASS

[illegible]

EZY CHEK SYSTEMS

03/30/15

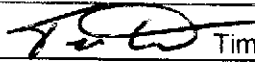
Systems & Training
for the
Petroleum Industry**FINAL REPORT****Test Location Information**

Name	Herr Foods Inc.
Address	20 Herr Drive
City	Nottingham, PA 19362
Phone	610-932-9330
Contact	Dave Moran

Testing Company Information

Name	Eldreth Environmental Services
Address	654 Colora Road
City	Colora, MD 21917
Phone	610-842-2418

Technican Information

Name	 Tim Eldreth
Cert #	6523
Applied Pressure	50psi

PRODUCT LINE TEST

	Product Type	Result
#1	Gasoline	PASS
#2	Diesel	PASS
#3	0	0
#4	0	0
#5	0	0
#6	0	0

Comments/Recommendations:

Systems & Training
for the
Petroleum Industry

DATA SHEET

3/30/2015

Test Location Information

Name : Herr Foods Inc.
Address : 20 Herr Drive
City : Nottingham, PA 19362
Phone : 610-932-9330
Contact : Dave Moran

Testing Company Information

Name : Eldreth Environmental Services
Address : 654 Colora Road
City : Colora, MD 21917
Phone : 610-842-2418

Technician Information

Name : Tim Eldreth 
Cert # : 90-6523

PUMP #	MAKE	MODEL	SERIAL #
1	Red Jacket	Fx1v	311149937
2	Red Jacket	Fx1dv	307070177

PUMP #	Product Type	Metering Pressure	Functional Element Holding PSI	Resiliency	Test Leak Rate ML/MIN	Opening Time	Pass/Fail
1	Regular	26psi	17psi	80mil	189ml	2sec	PASS
2	Diesel	28psi	16psi	75mil	189ml	3sec	PASS
3					189ml		
4					189ml		
5					189ml		
6					189ml		
7					189ml		
8					189ml		

**Systems & Training
for the
Petroleum Industry**

DATA SHEET

Test Location Information

Name:	Herr Foods Inc
Address:	20 Herr Drive
City:	Nottingham, PA 19362
Phone:	610-932-9330
Contact:	Dave Moran

#1	Gasoline				
TIME	DATA	-/+	GPL	RES	GPH
12:30	45	0	0.0037	0.0000	0.0000
12:45	44	-1	0.0037	-0.0037	-0.0148
13:00	44	0	0.0037	0.0000	0.0000
13:15	44	0	0.0037	0.0000	0.0000
13:30	44	0	0.0037	0.0000	0.0000
13:45	44	0	0.0037	0.0000	0.0000

PASS

[illegible][illegible]

Testing Company Information

Name	Eldreth Environmental Services
Address	654 Colora Road
City	Colora, MD 21917
Phone	610-842-2418

Technical Information

Name	Tim Eldreth
Cert #	6523

Applied Pressure

50ps:

#2	Diesel				
TIME	DATA	-/+	GPL	RES	GPH
12:30	84	0	0.0037	0.0000	0.0000
12:45	84	0	0.0037	0.0000	0.0000
13:00	83	-1	0.0037	-0.0037	-0.0148
13:15	83	0	0.0037	0.0000	0.0000
13:30	83	0	0.0037	0.0000	0.0000
13:45	83	0	0.0037	0.0000	0.0000

PASS

[illegible][illegible]

EZY CHEK SYSTEMS

03/03/14

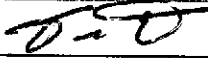
Systems & Training
for the
Petroleum Industry**FINAL REPORT****Test Location Information**

Name	Herr Foods Inc.
Address	20 Herr Drive
City	Nottingham, PA 19362
Phone	610-932-9330
Contact	Dave Moran

Testing Company Information

Name	Eldreth Environmental Services
Address	654 Colora Road
City	Colora, MD 21917
Phone	610-842-2418

Technican Information

Name	 Tim Eldreth
Cert #	6523
Applied Pressure	50psi

PRODUCT LINE TEST

	Product Type	Result
#1	Gasoline	PASS
#2	Diesel	PASS
#3	0	0
#4	0	0
#5	0	0
#6	0	0

Comments/Recommendations:

Systems & Training
for the
Petroleum Industry

DATA SHEET

3/3/2014

Test Location Information

Name	Herr Foods Inc.
Address	20 Herr Drive
City	Nottingham, PA 19362
Phone	610-932-9330
Contact	Dave Moran

Testing Company Information

Name	Eldreth Environmental Services
Address	654 Colora Road
City	Colora, MD 21917
Phone	610-842-2418

Technician Information

Name	Tim Eldreth 
Cert #	90-6523

PUMP #	MAKE	MODEL	SERIAL #
1	Red Jacket	Fx1v	101116612
2	Red Jacket	Fx1dv	307070177
3			
4			
5			
6			
7			
8			

PUMP #	Product Type	Metering Pressure	Functional Element Holding PSI	Resiliency	Test Leak Rate ML/MIN	Opening Time	Pass/Fail
1	Regular	26psi	17psi	75mil	189ml	2sec	PASS
2	Diesel	30psi	16psi	75mil	189ml	2sec	PASS
3					189ml		
4					189ml		
5					189ml		
6					189ml		
7					189ml		
8					189ml		

APPENDIX C
Soil Boring and Monitoring Well Logs

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Project No: 101722001

Date Completed : 10/16/2014
Boring Diameter : 2-inch
Drilling Method : Track Mounted Geoprobe
Sampling Method : Direct Push, 5-Foot Interval
RETTEW Rep. : E. Dziedzic

Surface Elev. : NA
Datum : NA
Groundwater Meas. : 10.0 ft.
Groundwater Elev. : NA
Groundwater Time : NA

Depth in Feet	Surf. Elev.0	DESCRIPTION	USCS	GRAPHIC	Sample Name	Sample Time	PID (ppm)	Recovery (%)
0	0	0.0-1.0'; ASPHALT and BALLAST STONE						
1	-1	1.0-5.0'; No recovery, very soft.					0.0	
2	-2							
3	-3		SM					
4	-4							
5	-5	5.0-10.0'; SILTY SAND, micaceous, grayish-brown, very soft, 30% recovery.					62	
6	-6							
7	-7		SM					
8	-8							
9	-9							
10	-10	10.0-20.0'; Completely decomposed micaceous SCHIST, brown, gray and black, petroleum odor, wet at 10 feet.			SB-6 @ 10 ft.	13:30	234	
11	-11						215	
12	-12						59	
13	-13						154	
14	-14						71	
15	-15						77	
16	-16						28	
17	-17							
18	-18						7.5	
19	-19							
20	-20	20.0'; End of boring.						
21								

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Project No: 101722001

Date Completed : 10/16/2014
Boring Diameter : 2-inch
Drilling Method : Track Mounted Geoprobe
Sampling Method : Direct Push, 5-Foot Interval
RETTEW Rep. : E. Dziedzic

Surface Elev. : NA
Datum : NA
Groundwater Meas. : 11.0 ft.
Groundwater Elev. : NA
Groundwater Time : NA

Depth in Feet	Surf. Elev.0	DESCRIPTION	USCS	GRAPHIC	Sample Name	Sample Time	PID (ppm)	Recovery (%)
0	0	0.0-1.0'; ASPHALT and BALLAST STONE						
1	-1	1.0-7.0'; SILTY CLAY, brown, micaceous, petroleum odor, moist.	CL				0.0	
2	-2						0.4	
3	-3						0.6	
4	-4						4	
5	-5						239	
6	-6						127	
7	-7	7.0-10.0'; SAND, micaceous, light brown, petroleum odor.	SM		SB-7 @ 8 ft.	13:00	205	
8	-8						252	
9	-9						215	
10	-10	10.0-14.0'; Completely decomposed micaceous SCHIST saprolite, light brown, petroleum odor, wet at 11 feet.					205	
11	-11							
12	-12						164	
13	-13							
14	-14	14.0-20.0'; Completely decomposed micaceous SCHIST saprolite, grayish brown, wet at 11 feet..						
15	-15						58	
16	-16						57	
17	-17						45	
18	-18						106	
19	-19						12	
20	-20	20.0'; End of boring.						
21								

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Project No: 101722001

Date Completed : 10/16/2014
Boring Diameter : 2-inch
Drilling Method : Track Mounted Geoprobe
Sampling Method : Direct Push, 5-Foot Interval
RETTEW Rep. : E. Dziedzic





Surface Elev. : NA
Datum : NA
Groundwater Meas. : 15.0 ft.
Groundwater Elev. : NA
Groundwater Time : NA

Depth in Feet	Surf. Elev.0	DESCRIPTION	USCS	GRAPHIC	Sample Name	Sample Time	PID (ppm)	Recovery (%)
0	0	0.0-1.0'; ASPHALT and BALLAST STONE						
1	-1	1.0-5.0'; CLAYEY SILT, grayish brown, micaceous, petroleum odor, dry.	ML				0.0	
2	-2						2.0	
3	-3						11.5	
4	-4						61.7	
5	-5	5.0-7.0'; SANDY SILT, micaceous, light brown, petroleum odors, moist.					154	
6	-6		ML				161	
7	-7	7.0-11.0'; SAND, micaceous, light brown with weathered schist fragments, moist.					214	
8	-8		SM		SB-8 @ 7 ft.	11:55	192	
9	-9						130	
10	-10						164	
11	-11	11.0-20.0'; Completely decomposed micaceous SCHIST, grayish brown, wet at 15 feet.					56	
12	-12						28	
13	-13						19	
14	-14						11	
15	-15						8.8	
16	-16						4.0	
17	-17						4.5	
18	-18						2.1	
19	-19						2.9	
20	-20	20.0'; End of boring.						
21								

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Project No: 101722001

Date Completed : 10/16/2014
Boring Diameter : 2-inch
Drilling Method : Track Mounted Geoprobe
Sampling Method : Direct Push, 5-Foot Interval
RETTEW Rep. : E. Dziedzic



Surface Elev. : NA
Datum : NA
Groundwater Meas. : 10.0 ft.
Groundwater Elev. : NA
Groundwater Time : NA

Depth in Feet	Surf. Elev.0	DESCRIPTION	USCS	GRAPHIC	Sample Name	Sample Time	PID (ppm)	Recovery (%)
0	0	0.0-1.0'; TOPSOIL, dark brown.						
1	-1	1.0-5.0'; SILTY CLAY, light brown, micaceous, moist.	CL				0.2	
2	-2						0.2	
3	-3						0.5	
4	-4						0.5	
5	-5	5.0-13.0'; Completely decomposed micaceous SCHIST saprolite, light brown and gray, wet at 10 feet.					0.6	
6	-6						0.5	
7	-7						0.5	
8	-8						0.5	
9	-9						0.5	
10	-10						0.8	
11	-11				SB-9 @ 10 ft.	14:05	1.0	
12	-12						0.5	
13	-13	13.0-18.0'; Micaceous SCHIST saprolite, greenish-gray, moist.					0.5	
14	-14						0.4	
15	-15						0.7	
16	-16						0.4	
17	-17						0.6	
18	-18	11.0-20.0'; Micaceous SCHIST saprolite, brown, moist.					0.6	
19	-19						0.4	
20	-20	20.0'; End of boring.						
21								

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Project No: 101722001

Date Completed : 10/16/2014
Boring Diameter : 2-inch
Drilling Method : Track Mounted Geoprobe
Sampling Method : Direct Push, 5-Foot Interval
RETTEW Rep. : E. Dziedzic





Surface Elev. : NA
Datum : NA
Groundwater Meas. : 5.0 ft.
Groundwater Elev. : NA
Groundwater Time : NA

Depth in Feet	Surf. Elev.0	DESCRIPTION	USCS	GRAPHIC	Sample Name	Sample Time	PID (ppm)	Recovery (%)
0	0	0.0-1.0'; TOPSOIL, dark brown.						
1	-1	1.0-5.0'; CLAYEY SILT, brown, micaceous, moist, very soft, 20% recovery.	ML					
2	-2						0.4	
3	-3							
4	-4							
5	-5	5.0-10.0'; Completely decomposed micaceous GNEISS saprolite, brown and gray, soft, 50% recovery, wet at 5 feet.			SB-10 @ 5 ft.	14:40	0.4	
6	-6							
7	-7							
8	-8						0.3	
9	-9							
10	-10	10.0-15.0'; Micaceous GNEISS saprolite, gray.					0.3	
11	-11						0.4	
12	-12						0.4	
13	-13						0.4	
14	-14						0.4	
15	-15	15.0'; End of boring.					0.4	
16	-16							
17	-17							
18	-18							
19	-19							
20	-20							
21								

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Project No: 101722001

Date Completed : 02/05/2015
Boring Diameter : 2-inch
Drilling Method : Track Mounted Geoprobe
Sampling Method : Direct Push, 5-Foot Interval
RETTEW Rep. : D. Black

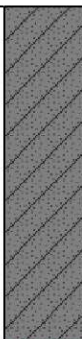



Surface Elev. : NA
Datum : NA
Groundwater Meas. : NA
Groundwater Elev. : Not observed
Groundwater Time : NA

Depth in Feet	Surf. Elev.0	DESCRIPTION	USCS	GRAPHIC	Sample Name	Sample Time	PID (ppm)	Recovery (%)	
0	0	0.0-5.0'; SANDY SILT with clay, red/brown, very low plasticity, reworked fill from airknife, micaceous.	ML						
1	-1						0.4		
2	-2						0.4		
3	-3						0.4		
4	-4						0.4		
5	-5	5.0-15.0'; Completely decomposed micaceous SCHIST saprolite, orange-grey, perched water at 10-11'?					0.4		
6	-6						0.3		
7	-7						0.3		
8	-8						0.3		
9	-9						0.3		
10	-10						0.2		
11	-11						0.3		
12	-12						0.2		
13	-13						0.2		
14	-14						SB-11 @ 14ft.	1000	0.2
15	-15						Bulk Density	14-15ft.	0.2
16	-16	15.0-20.0'; Weathered bedrock, 100% recovery, could not retrieve sample from sampling tube.					-		
17	-17						-		
18	-18						-		
19	-19						-		
20	-20						-		
21	-21	20.0'; End of Boring							

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Project No: 101722001

Date Completed : 02/05/2015
Boring Diameter : 2-inch
Drilling Method : Track Mounted Geoprobe
Sampling Method : Direct Push, 5-Foot Interval
RETTEW Rep. : D. Black




Surface Elev. : NA
Datum : NA
Groundwater Meas. : NA
Groundwater Elev. : 15'
Groundwater Time : NA

Depth in Feet	Surf. Elev.0	DESCRIPTION	USCS	GRAPHIC	Sample Name	Sample Time	PID (ppm)	Recovery (%)				
0	0	0.0-5.0'; SANDY CLAY, grey, medium stiff, moist, micaceous, reworked airknife fill.	SC									
1	-1						1.2					
2	-2						1.2					
3	-3						1.2					
4	-4	5.0-7.0'; SANDY SILT, brown, medium loose, micaceous, ODOR	ML				1.2					
5	-5						53.7					
6	-6						148					
7	-7						108					
8	-8	7.0-17.0'; Completely decomposed micaceous SCHIST saprolite, brown, black, and reddish brown banding, moist to dry, ODOR. Saturated at 15 ft.				SB-8 @ 8 ft.	1215	728				
9	-9										137	
10	-10										10.9	
11	-11										24.1	
12	-12						SB-12 @ 12 ft.	1220		106		
13	-13											50.1
14	-14											15.1
15	-15											1.7
16	-16	17.0-18.5'; Completely decomposed micaceous SCHIST saprolite, grey/brown, very dense, NO ODOR.					15.4					
17	-17						2.4					
18	-18						SB-8 @ 18 ft.		1225	5.6		
19	-19						18.5'; End of boring at geoprobe refusal					
20	-20											

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Project No: 101722001

Date Completed : 02/05/2015
Boring Diameter : 2-inch
Drilling Method : Track Mounted Geoprobe
Sampling Method : Direct Push, 5-Foot Interval
RETTEW Rep. : D. Black




Surface Elev. : NA
Datum : NA
Groundwater Meas. : NA
Groundwater Elev. : ~10'
Groundwater Time : NA

Depth in Feet	Surf. Elev.0	DESCRIPTION	USCS	GRAPHIC	Sample Name	Sample Time	PID (ppm)	Recovery (%)
0	0	0.0-3.0'; SILTY CLAY, grey, moist, trace gravel	CL				0.0	
1	-1						1.8	
2	-2						1.0	
3	-3	3.0-7.0'; SILTY SAND, brown, loose, moist, micaceous.	SP				1.0	
4	-4						1.0	
5	-5						1.8	
6	-6						1.0	
7	-7	7.0-13.0'; Completely decomposed, micaceous, SCHIST saprolite, saturated at 12'.					1.4	
8	-8						1.2	
9	-9						1.0	
10	-10						0.6	
11	-11						1.2	
12	-12	13.0'; End of boring					0.4	
13	-13							
14	-14							
15	-15							
16	-16							
17	-17							
18	-18							
19	-19							
20	-20							

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Project No: 101722001

Date Completed : 02/05/2015
Boring Diameter : 2-inch
Drilling Method : Track Mounted Geoprobe
Sampling Method : Direct Push, 5-Foot Interval
RETTEW Rep. : D. Black

Surface Elev. : NA
Datum : NA
Groundwater Meas. : NA
Groundwater Elev. : Perched @ 10'?
Groundwater Time : NA

Depth in Feet	Surf. Elev.0	DESCRIPTION	USCS	GRAPHIC	Sample Name	Sample Time	PID (ppm)	Recovery (%)
0	0	0.0-5.0'; SILTY SAND with gravel, brown, loose, moist, micaceous, reworked air knife fill.	SP				1.0	
1	-1						1.0	
2	-2						0.6	
3	-3						0.6	
4	-4						0.4	
5	-5	5.0-7.5'; SANDY SILT with gravel, brown, loose, wet, micaceous, perched?	ML				0.6	
6	-6						0.4	
7	-7						0.6	
8	-8	7.5-14.0'; Completely decomposed, micaceous, SCHIST saprolite, grey-brown, dense, moist. Wet @ 10' not sure if perched.					0.5	
9	-9						0.6	
10	-10						0.4	
11	-11						0.4	
12	-12						0.4	
13	-13						0.4	
14	-14						0.4	
15	-15	14.0'; End of boring						
16	-16							
17	-17							
18	-18							
19	-19							
20	-20							

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Project No: 101722001

Date Completed : 02/05/2015
Boring Diameter : 2-inch
Drilling Method : Track Mounted Geoprobe
Sampling Method : Direct Push, 5-Foot Interval
RETTEW Rep. : D. Black




Surface Elev. : NA
Datum : NA
Groundwater Meas. : NA
Groundwater Elev. : 12'
Groundwater Time : NA




Depth in Feet	Surf. Elev.0	DESCRIPTION	USCS	GRAPHIC	Sample Name	Sample Time	PID (ppm)	Recovery (%)
0	0	0.0-7.0'; SILTY SAND with clay, brown, loose, moist, micaceous, reworked air knife fill, perched @ 4.5', very low plasticity.	SP				0.7	
1	-1						0.8	
2	-2						0.4	
3	-3						0.4	
4	-4						0.4	
5	-5						0.4	
6	-6						0.4	
7	-7	7.0-14.5'; Completely decomposed, micaceous, SCHIST saprolite, dense, saturated @ 12'.					0.4	
8	-8						0.5	
9	-9						0.4	
10	-10						0.4	
11	-11						0.3	
12	-12						0.3	
13	-13						0.2	
14	-14						0.2	
15	-15	14.5'; End of boring						
16	-16							
17	-17							
18	-18							
19	-19							
20	-20							

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Project No: 101722001

Date Completed : 02/05/2015
Boring Diameter : 2-inch
Drilling Method : Track Mounted Geoprobe
Sampling Method : Direct Push, 5-Foot Interval
RETTEW Rep. : D. Black

Surface Elev. : NA
Datum : NA
Groundwater Meas. : NA
Groundwater Elev. : 12.5'
Groundwater Time : NA




Depth in Feet	Surf. Elev.	DESCRIPTION	USCS	GRAPHIC	Sample Name	Sample Time	PID (ppm)	Recovery (%)
0	0	0.0-9.0'; SILTY SAND with gravel, dark grey, loose, moist, micaceous, rootlets, reworked air knife fill to 5'.	SP				0.8	
1	-1						1.2	
2	-2						1.5	
3	-3						1.4	
4	-4						0.6	
5	-5						0.4	
6	-6						1.2	
7	-7						0.6	
8	-8						0.8	
9	-9						0.4	
10	-10	9.0-14.5'; Completely decomposed, micaceous, SCHIST saprolite, dense, saturated @ 12.5'.					0.4	
11	-11						0.4	
12	-12						1.7	
13	-13						SB-16 @ 12 ft. 1445 1.2	
14	-14						0.6	
15	-15	Weathered bedrock, SCHIST.					0.4	
16	-16	15.0'; End of boring						
17	-17							
18	-18							
19	-19							
20	-20							

Herr Foods, Inc. 273 Old Baltimore Pike Nottingham, Pennsylvania Project No: 101722001		Date Completed : 02/05/2015 Boring Diameter : 2-inch Drilling Method : Track Mounted Geoprobe Sampling Method : Direct Push, 5-Foot Interval RETTEW Rep. : D. Black		Surface Elev. : NA Datum : NA Groundwater Meas. : NA Groundwater Elev. : 13.5' Groundwater Time : NA						
Depth in Feet	Surf. Elev.0	DESCRIPTION	USCS	GRAPHIC	Sample Name	Sample Time	PID (ppm)	Recovery (%)		
0	0	0.0-5.0'; SANDY SILT with clay, dark grey, loose, moist, micaceous, rootlets, reworked air knife fill.	ML				49.9			
1	-1						147			
2	-2						76.7			
3	-3						101			
4	-4						268			
5	-5	5.0-14.0'; Completely decomposed, micaceous, SCHIST saprolite, dense, saturated @ 13.5'.					1968			
6	-6						SB-17 @ 7 ft.		1250	1579
7	-7									154
8	-8									124
9	-9									27.8
10	-10						SB-17 @ 11 ft.		1255	1758
11	-11									82.0
12	-12									359
13	-13									26.3
14	-14						Weathered bedrock, SCHIST.			
15	-15	15.0'; End of boring								
16	-16									
17	-17									
18	-18									
19	-19									
20	-20									

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Project No: 101722001

Date Completed : 02/05/2015
Boring Diameter : 2-inch
Drilling Method : Track Mounted Geoprobe
Sampling Method : Direct Push, 5-Foot Interval
RETTEW Rep. : D. Black



Surface Elev. : NA
Datum : NA
Groundwater Meas. : NA
Groundwater Elev. : 12'
Groundwater Time : NA

Depth in Feet	Surf. Elev.0	DESCRIPTION	USCS	GRAPHIC	Sample Name	Sample Time	PID (ppm)	Recovery (%)
0	0	0.0-5.0'; SILTY SAND, grey-brown, loose, moist, reworked air knife fill.	SP				47.7	
1	-1						56.4	
2	-2						25.6	
3	-3						185	
4	-4						62.4	
5	-5	5.0-9.0'; SANDY SILT with clay, grey, dense, moist, slight odor, micaceous.					69.5	
6	-6						26.1	
7	-7						34.1	
8	-8						55.4	
9	-9							
10	-10	9.0'-15.0'; Completely decomposed, micaceous, SCHIST saprolite, slight odor, saturated @ 10'-13', slight odor.			SB-18 @ 10 ft.	1320	88.8	
11	-11						9.7	
12	-12						22.1	
13	-13				SB-18 @ 13 ft.	1325	104	
14	-14						84.5	
15	-15	15.0'; End of boring			SB-18 @ 15 ft.	1330	4.0	
16	-16							
17	-17							
18	-18							
19	-19							
20	-20							

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Project No: 101722001

Date Completed : 02/05/2015
Boring Diameter : 2-inch
Drilling Method : Track Mounted Geoprobe
Sampling Method : Direct Push, 5-Foot Interval
RETTEW Rep. : D. Black




Surface Elev. : NA
Datum : NA
Groundwater Meas. : NA
Groundwater Elev. : ~10'
Groundwater Time : NA

Depth in Feet	Surf. Elev.0	DESCRIPTION	USCS	GRAPHIC	Sample Name	Sample Time	PID (ppm)	Recovery (%)
0	0	0.0-8.0'; SILTY SAND with gravel, red-brown, loose, moist, reworked air knife fill, perched @ 7'.	SP				1.3	
1	-1						0.8	
2	-2						0.6	
3	-3						0.5	
4	-4						0.6	
5	-5						1.8	
6	-6						3.6	
7	-7						0.8	
8	-8						1.0	
9	-9	8.0-15.0'; Completely decomposed, micaceous, SCHIST saprolite, saturated 10'-12'.			SB-19 @ 10 ft.	1400	0.9	
10	-10						0.8	
11	-11						0.4	
12	-12						0.6	
13	-13						0.4	
14	-14						0.4	
15	-15						0.4	
16	-16							
17	-17	15.0'; End of boring						
18	-18							
19	-19							
20	-20							

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Project No: 101722001

Date Completed : 02/05/2015
Boring Diameter : 2-inch
Drilling Method : Track Mounted Geoprobe
Sampling Method : Direct Push, 5-Foot Interval
RETTEW Rep. : D. Black

Surface Elev. : NA
Datum : NA
Groundwater Meas. : NA
Groundwater Elev. : 12'
Groundwater Time : NA

Depth in Feet	Surf. Elev.0	DESCRIPTION	USCS	GRAPHIC	Sample Name	Sample Time	PID (ppm)	Recovery (%)
0	0	0.0-8.5'; SILTY SAND with gravel, dark grey, loose, moist, reworked air knife fill to 5'.	SP				0.2	
1	-1						0.2	
2	-2						0.2	
3	-3						0.2	
4	-4						0.2	
5	-5						1.8	
6	-6						47	
7	-7	8.5-14.5'; Completely decomposed, micaceous, SCHIST saprolite, dense, grey-brown, saturated at 12'.			SB-20 @ 8ft.	1520	173	
8	-8						90	
9	-9						11.4	
10	-10				SB-20 @ 11 ft.	1525	75.4	
11	-11						72.9	
12	-12						38.8	
13	-13						5.1	
14	-14	14.50'-15.0'; Weathered bedrock, SCHIST			SB-20 @ 15 ft.	1530	2.3	
15	-15	15.0'; End of boring						
16	-16							
17	-17							
18	-18							
19	-19							
20	-20							

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Project No: 101722001

Date Completed : 02/05/2015
Boring Diameter : 2-inch
Drilling Method : Track Mounted Geoprobe
Sampling Method : Direct Push, 5-Foot Interval
RETTEW Rep. : D. Black

Surface Elev. : NA
Datum : NA
Groundwater Meas. : NA
Groundwater Elev. : Not observed
Groundwater Time : NA

Depth in Feet	Surf. Elev.	DESCRIPTION	USCS	GRAPHIC	Sample Name	Sample Time	PID (ppm)	Recovery (%)
0	0	0.0'-5.0'; SANDY SILT with clay, brown, loose, moist, micaceous, rootlets, reworked air knife fill.	ML				-	20
1	-1						-	
2	-2						-	
3	-3						-	
4	-4						-	
5	-5	5.0'-7.0'; SILTY SAND, brown, medium dense, moist, micaceous, slight odor.					3.0	
6	-6						4.7	
7	-7	7.0'-9.0'; SILTY SAND, black, medium dense, dry, micaceous, ODOR, STAINING.	SP		SB-21 @ 8 ft.	1050	463	
8	-8						417	
9	-9	9.0'-15.0'; Completely decomposed, micaceous, SCHIST saprolite, grey-brown, dense, dry to moist, no odor. No recovery 10'-14' sample stuck in tube.			SB-21 @ 10 ft.	1055	11.8	
10	-10						-	0
11	-11						-	
12	-12						-	
13	-13						5.6	
14	-14						2.7	
15	-15	15.0'; End of boring						
16	-16							
17	-17							
18	-18							
19	-19							
20	-20							

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Project No: 101722001

Date Completed : 06/12/2015
Boring Diameter : 2-inch
Drilling Method : Track Mounted Geoprobe
Sampling Method : Direct Push, 5-Foot Interval
RETTEW Rep. : S. Houser

Surface Elev. : NA
Datum : NA
Groundwater Meas. : 16.0 ft.
Groundwater Elev. : NA
Groundwater Time : NA

Depth in Feet	Surf. Elev. 0	DESCRIPTION	USCS	GRAPHIC	Sample Name	Sample Time	PID (ppm)	Recovery (%)
0	0	0.0-1.0'; ASPHALT and BALLAST STONE					1.0	
1	-1	1.0-5.0'; SANDY SILT, grayish-brown, dry, micaceous, reworked airknife fill	ML				1.3	
2	-2						2.9	
3	-3						3.1	
4	-4						3.4	
5	-5	5.0-9.0'; SILTY SAND, grayish-brown, dry to moist, micaceous	SM		SB-22 @ 7 ft.		3.5	
6	-6						4.7	
7	-7						3.1	
8	-8						1.1	
9	-9	9.0-16.0'; Completely decomposed micaceous SCHIST, brownish-gray, moist	GM				1.0	
10	-10						0.5	
11	-11						0.3	
12	-12							
13	-13							
14	-14							
15	-15							
16	-16	16.0-20.0'; Weathered SCHIST bedrock, brownish-gray, wet at 16 feet.						
17	-17							
18	-18							
19	-19							
20	-20				SB-22 @ 19 ft.			
21	-21	20.0'; End of Boring						

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Project No: 101722001

Date Completed : 06/12/2015
Boring Diameter : 2-inch
Drilling Method : Track Mounted Geoprobe
Sampling Method : Direct Push, 5-Foot Interval
RETTEW Rep. : S. Houser

Surface Elev. : NA
Datum : NA
Groundwater Meas. : NA
Groundwater Elev. : NA
Groundwater Time : NA

Depth in Feet	Surf. Elev. 0	DESCRIPTION	USCS	GRAPHIC	Sample Name	Sample Time	PID (ppm)	Recovery (%)
0	0	0.0-1.0'; ASPHALT and BALLAST STONE						
1	-1	1.0-5.0'; SANDY SILT, grayish-brown, dry, micaceous, reworked airknife fill, minimal recovery	ML				NA	
2	-2							
3	-3							
4	-4							
5	-5	5.0-10.0'; SILTY SAND, brown, dry, micaceous, petroleum odor	SM				610	
6	-6						785	
7	-7						1435	
8	-8				SB-23 @ 8 ft.		1205	
9	-9						910	
10	-10	10.0-15.0'; Completely decomposed micaceous SCHIST, grayish-brown, moist, slight petroleum odor					1035	
11	-11						610	
12	-12						80	
13	-13						42	
14	-14				SB-23 @ 15 ft.		29	
15	-15	15.0'; End of Boring						
16								

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Project No: 101722001

Date Completed : 06/12/2015
Boring Diameter : 2-inch
Drilling Method : Track Mounted Geoprobe
Sampling Method : Direct Push, 5-Foot Interval
RETTEW Rep. : S. Houser

Surface Elev. : NA
Datum : NA
Groundwater Meas. : 16.0 ft.
Groundwater Elev. : NA
Groundwater Time : NA

Depth in Feet	Surf. Elev. 0	DESCRIPTION	USCS	GRAPHIC	Sample Name	Sample Time	PID (ppm)	Recovery (%)
0	0	0.0-1.0'; ASPHALT and BALLAST STONE						
1	-1	1.0-5.0'; SILTY SAND, grayish-brown, dry, loose, micaceous, reworked airknife fill	SM				<2.4	
2	-2							
3	-3							
4	-4							
5	-5	5.0-11.0'; SANDY SILT with clay, grayish-brown, dry, micaceous, petroleum odor	ML				10.1	
6	-6						25.2	
7	-7						35.4	
8	-8						115.3	
9	-9						325.6	
10	-10						287.1	
11	-11	11.0-20.0'; Completely decomposed micaceous SCHIST, brownish-gray, moist to wet (16.0')					114.0	
12	-12						105.1	
13	-13						107.8	
14	-14						91.9	
15	-15						41.2	
16	-16						11.7	
17	-17						8.5	
18	-18						7.1	
19	-19						8.0	
20	-20							
21	-21	20.0'; End of Boring						

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Project No: 101722001

Date Completed : 06/12/2015
Boring Diameter : 2-inch
Drilling Method : Track Mounted Geoprobe
Sampling Method : Direct Push, 5-Foot Interval
RETTEW Rep. : S. Houser

Surface Elev. : NA
Datum : NA
Groundwater Meas. : NA
Groundwater Elev. : NA
Groundwater Time : NA

Depth in Feet	Surf. Elev. 0	DESCRIPTION	USCS	GRAPHIC	Sample Name	Sample Time	PID (ppm)	Recovery (%)
0	0	0.0-1.0'; ASPHALT and BALLAST STONE						
1	-1	1.0-5.0'; SANDY SILT, gray, moist, micaceous, reworked airknife fill					NA	
2	-2						7.5	
3	-3		ML				12.1	
4	-4						13.9	
5	-5	5.0-14.0'; SANDY SILT, grayish-brown, moist, micaceous					11.7	
6	-6						12.5	
7	-7						13.0	
8	-8						12.8	
9	-9				SB-25 @ 9 ft.		13.9	
10	-10		ML				11.8	
11	-11						10.7	
12	-12						9.5	
13	-13						9.4	
14	-14	14.0-15.0'; Completely decomposed micaceous SCHIST, grayish-brown, moist			SB-25 @ 15 ft.		9.5	
15	-15	15.0'; End of Boring						
16								

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Project No: 101722001

Date Completed : 06/12/2015
Boring Diameter : 2-inch
Drilling Method : Track Mounted Geoprobe
Sampling Method : Direct Push, 5-Foot Interval
RETTEW Rep. : S. Houser

Surface Elev. : NA
Datum : NA
Groundwater Meas. : NA
Groundwater Elev. : NA
Groundwater Time : NA

Depth in Feet	Surf. Elev. 0	DESCRIPTION	USCS	GRAPHIC	Sample Name	Sample Time	PID (ppm)	Recovery (%)
0	0	0.0-1.0'; ASPHALT and BALLAST STONE					1.1	
1	-1	1.0-7.0'; SILTY SAND, gray, dry, micaceous, loose					3.7	
2	-2						4.5	
3	-3						3.7	
4	-4		SM				6.7	
5	-5						NA	
6	-6							
7	-7	7.0-15.0'; Completely decomposed micaceous SCHIST, grayish-brown, slightly moist					10.5	
8	-8						11.1	
9	-9							
10	-10				SB-26 @ 10 ft.		13.3	
11	-11						11.7	
12	-12						10.4	
13	-13						10.1	
14	-14						9.5	
15	-15				SB-26 @ 15 ft.		8.9	
16	-16	15.0'; End of Boring						

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Project No: 101722001

Date Completed : 06/12/2015
Boring Diameter : 2-inch
Drilling Method : Track Mounted Geoprobe
Sampling Method : Direct Push, 5-Foot Interval
RETTEW Rep. : S. Houser

Surface Elev. : NA
Datum : NA
Groundwater Meas. : 18.0 ft.
Groundwater Elev. : NA
Groundwater Time : NA

Depth in Feet	Surf. Elev. 0	DESCRIPTION	USCS	GRAPHIC	Sample Name	Sample Time	PID (ppm)	Recovery (%)
0	0	0-0.5'; CONCRETE and BALLAST STONE					3.5	
1	-1	0.5-5.0'; SANDY SILT with clay, orangish-brown, slightly moist, loose, micaceous	ML				6.1	
2	-2						11.4	
3	-3						12.7	
4	-4						14.3	
5	-5	5.0-9.0'; SANDY SILT with clay, brown, slightly moist, loose, micaceous, petroleum odor	ML				24.4	
6	-6						75.3	
7	-7						121.5	
8	-8				SB-27 @ 9 ft.		1103	
9	-9	9.0-18.0'; Completely decomposed micaceous SCHIST, brown, dry, slight petroleum odor					985.4	
10	-10						92.6	
11	-11						41.5	
12	-12						25.4	
13	-13						23.2	
14	-14						19.5	
15	-15						11.9	
16	-16						8.7	
17	-17						7.1	
18	-18	18.0-20.0'; Weathered SCHIST bedrock, grayish-brown, wet					7.5	
19	-19				SB-27 @ 20 ft.		8.1	
20	-20	20.0'; End of Boring						
21								

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Project No: 101722001

Date Completed : 06/12/2015
Boring Diameter : 2-inch
Drilling Method : Track Mounted Geoprobe
Sampling Method : Direct Push, 5-Foot Interval
RETTEW Rep. : S. Houser

Surface Elev. : NA
Datum : NA
Groundwater Meas. : 19.0 ft.
Groundwater Elev. : NA
Groundwater Time : NA

Depth in Feet	Surf. Elev. 0	DESCRIPTION	USCS	GRAPHIC	Sample Name	Sample Time	PID (ppm)	Recovery (%)
0	0	0-0.5'; CONCRETE and BALLAST STONE					2.1	
1	-1	0.5-5.0'; SANDY SILT, orangish-brown, dry, loose, micaceous	ML				4.1	
2	-2						5.2	
3	-3						4.7	
4	-4						4.9	
5	-5	5.0-9.0'; SANDY SILT, brown, dry, loose, micaceous	ML				7.8	
6	-6						10.1	
7	-7						15.2	
8	-8						16.4	
9	-9	9.0-19.0'; Completely decomposed micaceous SCHIST, brown, slightly moist					17.1	
10	-10				SB-28 @ 11 ft.		19.2	
11	-11						14.3	
12	-12						11.9	
13	-13						9.8	
14	-14						8.5	
15	-15						8.8	
16	-16						8.1	
17	-17						7.4	
18	-18						7.2	
19	-19	19.0-20.0'; Weathered SCHIST bedrock, grayish-brown, wet			SB-28 @ 20 ft.		7.0	
20	-20	20.0'; End of Boring						
21								

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Project No: 101722001

Date Completed : 06/12/2015
Boring Diameter : 2-inch
Drilling Method : Track Mounted Geoprobe
Sampling Method : Direct Push, 5-Foot Interval
RETTEW Rep. : S. Houser




Surface Elev. : NA
Datum : NA
Groundwater Meas. : 19.0 ft.
Groundwater Elev. : NA
Groundwater Time : NA

Depth in Feet	Surf. Elev. 0	DESCRIPTION	USCS	GRAPHIC	Sample Name	Sample Time	PID (ppm)	Recovery (%)
0	0	0-0.5'; CONCRETE and BALLAST STONE					38.5	
1	-1	0.5-5.0'; SILTY SAND, brown, slightly moist, loose, micaceous, petroleum odor					105.3	
2	-2							
3	-3		SM		SB-29 @ 3 ft.		385.2	
4	-4						298.4	
5	-5						187.4	
6	-6	5.0-11.0'; SANDY SILT with clay, gray, slightly moist, loose, micaceous, slight petroleum odor					92.1	
7	-7						77.4	
8	-8		ML				61.3	
9	-9						31.5	
10	-10						24.9	
11	-11						15.4	
12	-12	11.0-19.0'; Completely decomposed micaceous SCHIST, grayish-brown, dry, slight petroleum odor					12.3	
13	-13						13.5	
14	-14						14.1	
15	-15						12.7	
16	-16						13.9	
17	-17						13.6	
18	-18				SB-29 @ 18 ft.		13.7	
19	-19						12.8	
20	-20	19.0-20.0'; Weathered SCHIST bedrock, grayish-brown, wet					13.1	
21	-21	20.0'; End of Boring						

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Project No: 101722001

Date Completed : 06/12/2015
Boring Diameter : 2-inch
Drilling Method : Track Mounted Geoprobe
Sampling Method : Direct Push, 5-Foot Interval
RETTEW Rep. : S. Houser

Surface Elev. : NA
Datum : NA
Groundwater Meas. : 18.0 ft.
Groundwater Elev. : NA
Groundwater Time : NA

Depth in Feet	Surf. Elev. 0	DESCRIPTION	USCS	GRAPHIC	Sample Name	Sample Time	PID (ppm)	Recovery (%)					
0	0	0-8.0'; SILTY SAND with gravel, brown, slightly moist, loose, micaceous, reworked airknife fill	SM		SB-30 @ 8 ft.		NA						
1	-1						13.7						
2	-2						16.1						
3	-3						17.5						
4	-4						19.3						
5	-5						85.5						
6	-6						94.1						
7	-7	8.0-18.0'; Completely decomposed micaceous SCHIST, grayish-brown, dry					61.0						
8	-8						43.5						
9	-9						30.5						
10	-10						25.7						
11	-11						23.9						
12	-12						21.4						
13	-13						20.0						
14	-14	18.0-20.0'; Weathered SCHIST bedrock, grayish-brown, wet			SB-30 @ 20 ft.		18.5						
15	-15						11.3						
16	-16						9.5						
17	-17	20.0'; End of Boring					8.0						
18	-18						3.7						
19	-19												
20	-20												
21	-21												

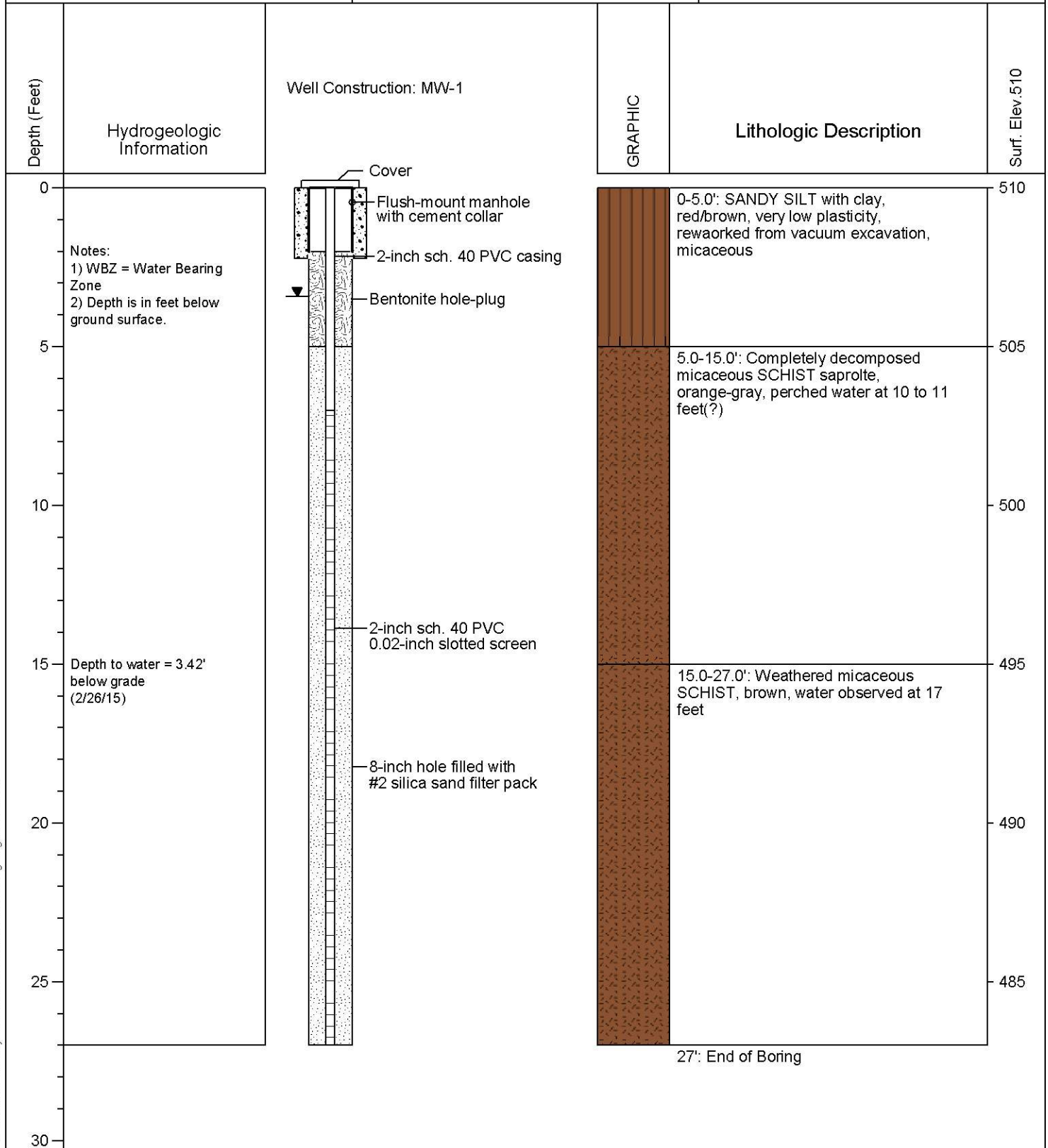
MONITORING WELL LOG: MW-1

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania

RETTEW Project No. 101722001

Date Drilled : 2/24/15
Equipment : IR T4, Air Rotary
Driller : Eichelbergers, Inc./T. Dockey
Logged By : E. Dziedzic
Surface Elevation : 510 ft. MSL (Approx.)

Latitude/Longitude :
Township/County : Lower Oxford / Chester
Total Depth : 27 ft. bg
Diameter : 2-inch PVC Screen
Blown Yield :



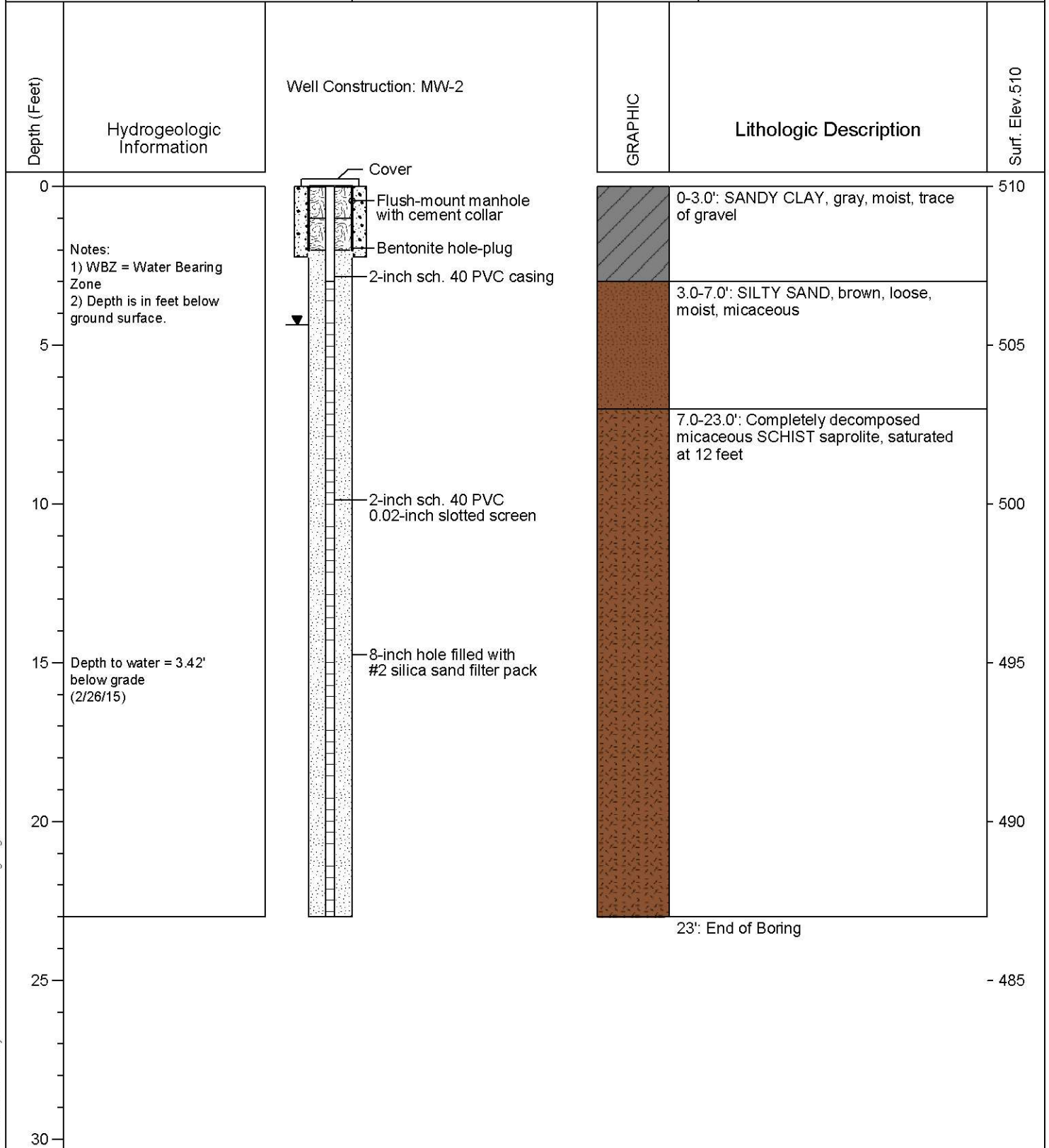
MONITORING WELL LOG: MW-2

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania

RETTEW Project No. 101722001

Date Drilled : 2/25/15
Equipment : IR T4, Air Rotary
Driller : Eichelbergers, Inc./T. Dockey
Logged By : E. Dziedzic
Surface Elevation : 510 ft. MSL (Approx.)

Latitude/Longitude :
Township/County : Lower Oxford / Chester
Total Depth : 23 ft. bg
Diameter : 2-inch PVC Screen
Blown Yield :



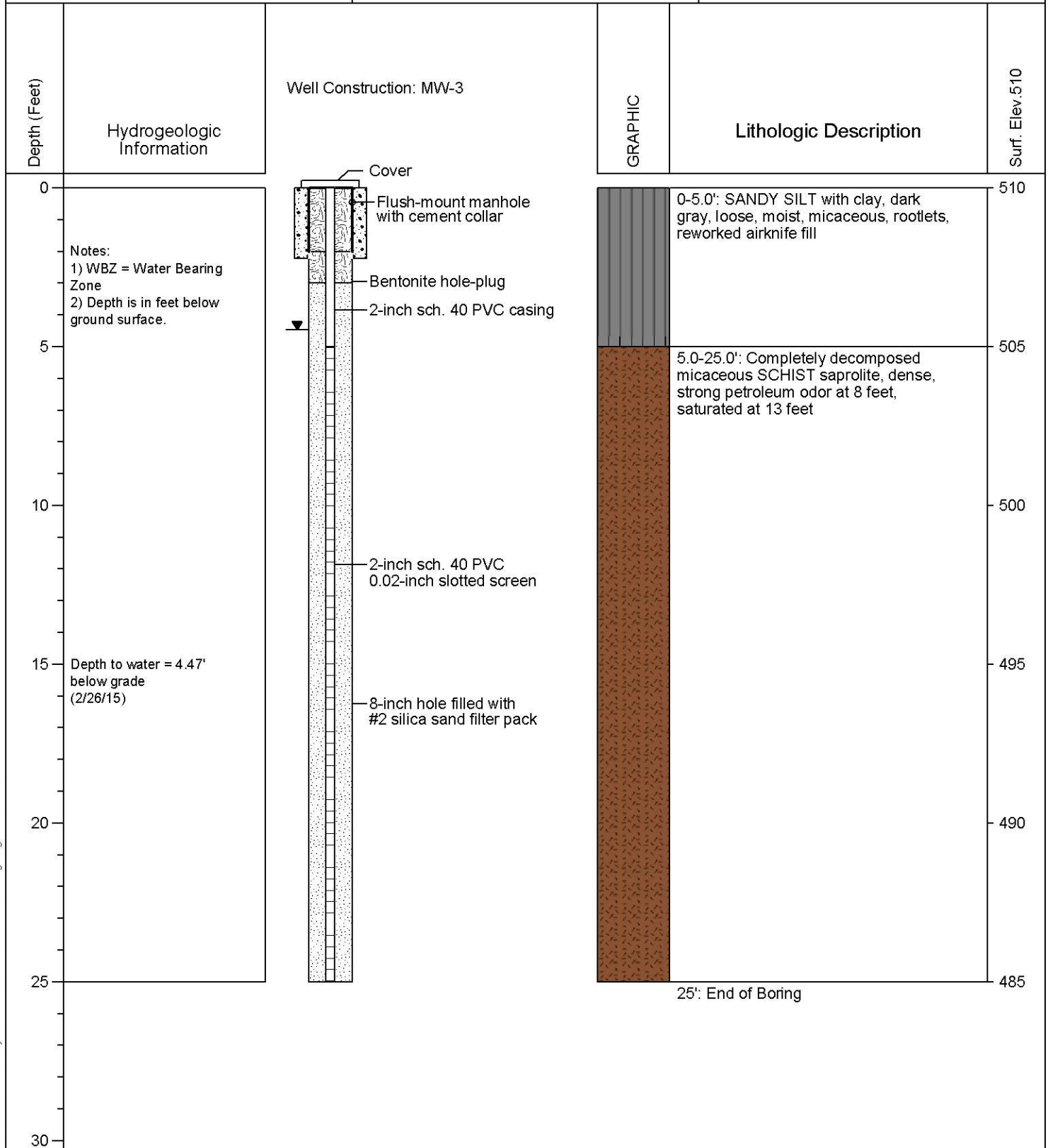
MONITORING WELL LOG: MW-3

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania

RETTEW Project No. 101722001

Date Drilled : 2/25/15
Equipment : IR T4, Air Rotary
Driller : Eichelbergers, Inc./T. Dockey
Logged By : E. Dziedzic
Surface Elevation : 510 ft. MSL (Approx.)

Latitude/Longitude :
Township/County : Lower Oxford / Chester
Total Depth : 25 ft. bg
Diameter : 2-inch PVC Screen
Blown Yield :



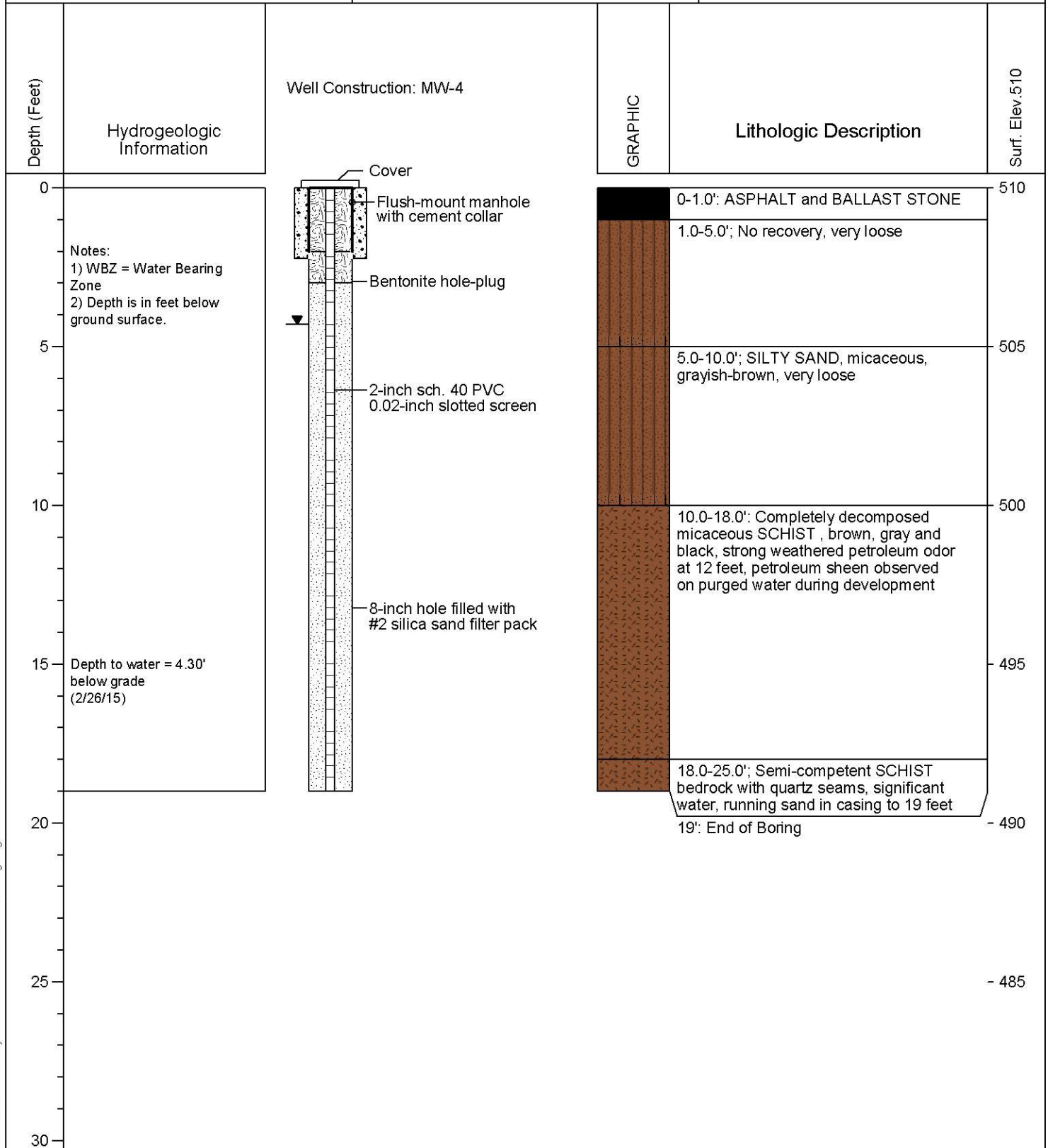
MONITORING WELL LOG: MW-4

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania

RETTEW Project No. 101722001

Date Drilled : 2/26/15
Equipment : IR T4, Air Rotary
Driller : Eichelbergers, Inc./T. Dockey
Logged By : E. Dziedzic
Surface Elevation : 510 ft. MSL (Approx.)

Latitude/Longitude :
Township/County : Lower Oxford / Chester
Total Depth : 19 ft. bg
Diameter : 2-inch PVC Screen
Blown Yield :



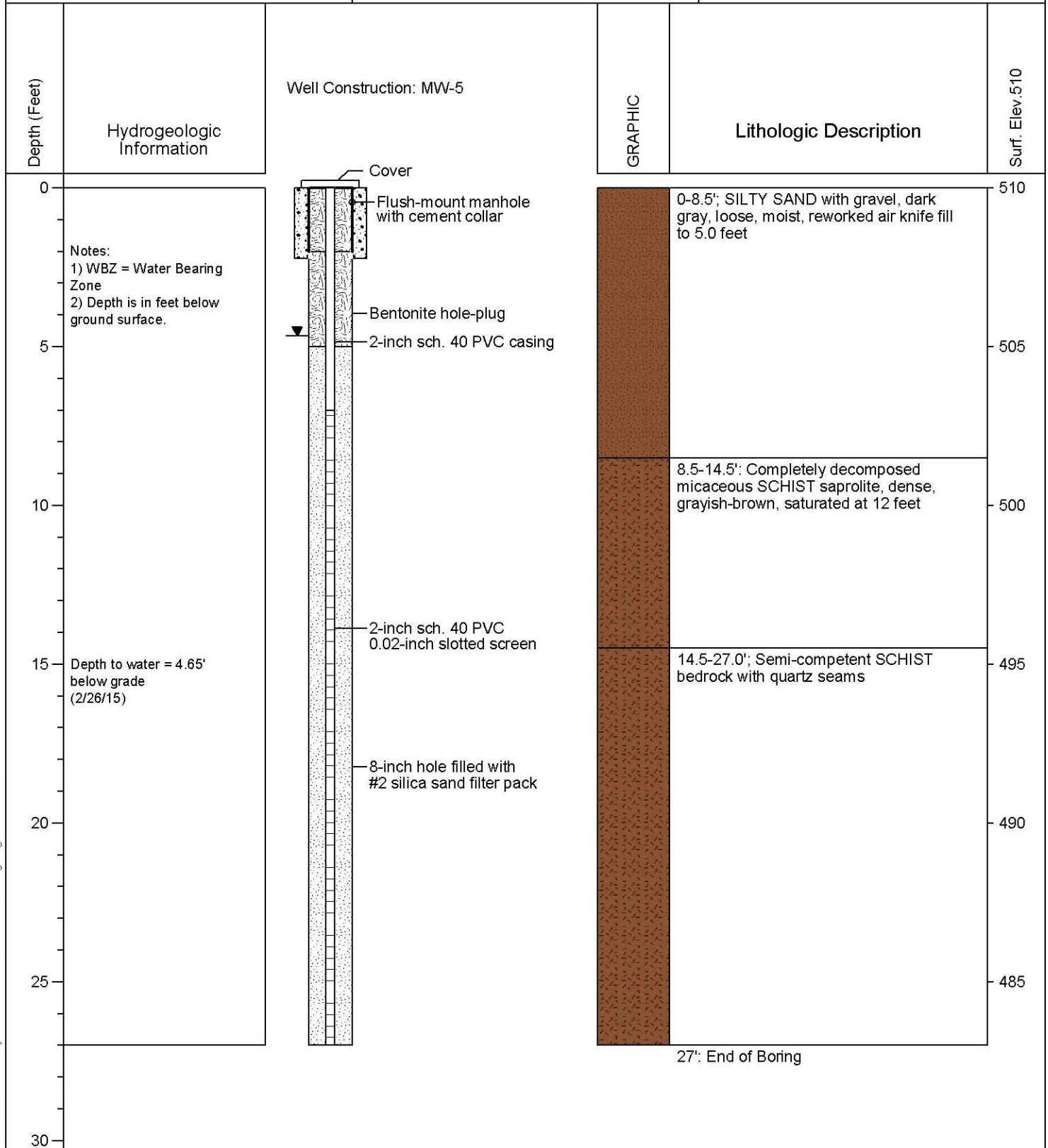
MONITORING WELL LOG: MW-5

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania

RETTEW Project No. 101722001

Date Drilled : 2/26/15
Equipment : IR T4, Air Rotary
Driller : Eichelbergers, Inc./T. Dockey
Logged By : E. Dziedzic
Surface Elevation : 510 ft. MSL (Approx.)

Latitude/Longitude :
Township/County : Lower Oxford / Chester
Total Depth : 27 ft. bg
Diameter : 2-inch PVC Screen
Blown Yield :



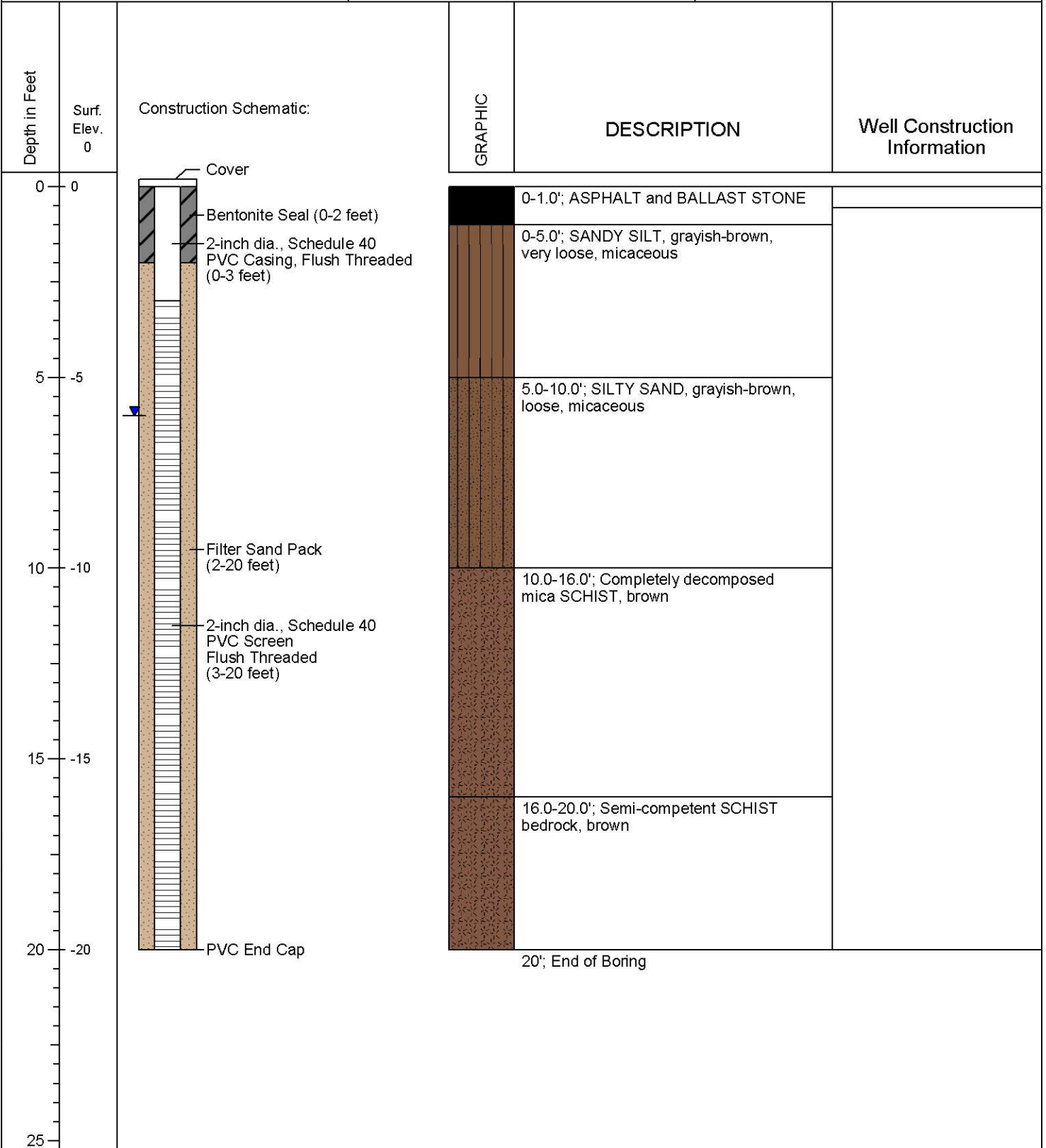
Monitoring Well Log: MW-6

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Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Rettew Project #: 101722001

Dates Drilled/Installed : 06/18/2015
Drilling Methods : Air Rotary
Driller : Eichelbergers, Inc.
Surface Elevation : ' MSL (Approx.)
Logged By : S. Houser

Latitude/Longitude :
Township/County : W. Nottingham Twp./Chester
Total Depth : 20 ft. bg
Diameter : 2-Inch PVC
Water Level : 6 ft. bg at completion



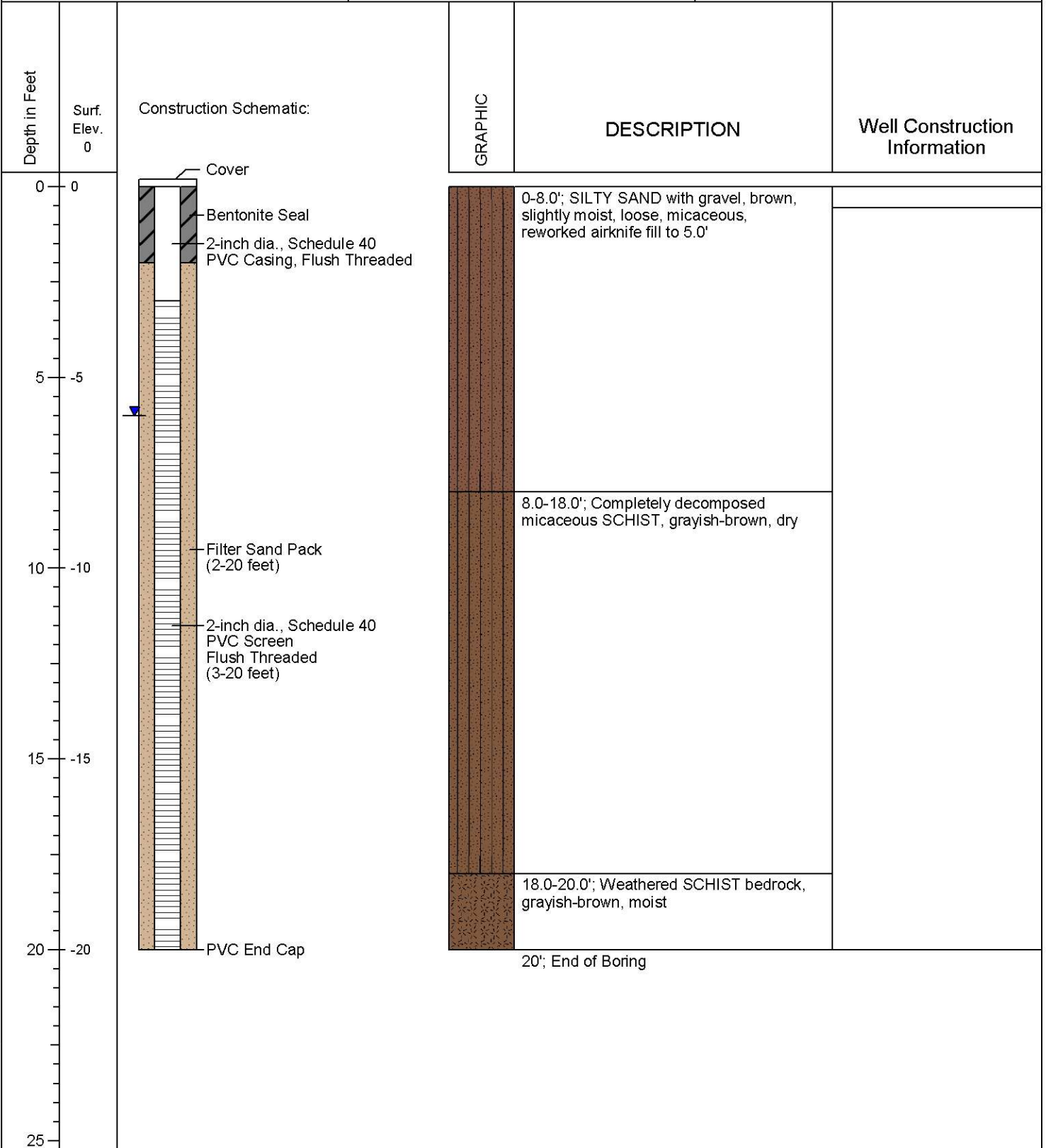
Monitoring Well Log: MW-7

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Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Rettew Project #: 101722001

Dates Drilled/Installed : 06/18/2015
Drilling Methods : Air Rotary
Driller : Eichelbergers, Inc.
Surface Elevation : ' MSL (Approx.)
Logged By : S. Houser

Latitude/Longitude :
Township/County : W. NottinghamTwp./Chester
Total Depth : 20 ft. bg
Diameter : 2-Inch PVC
Water Level : 6 ft. bg at completion



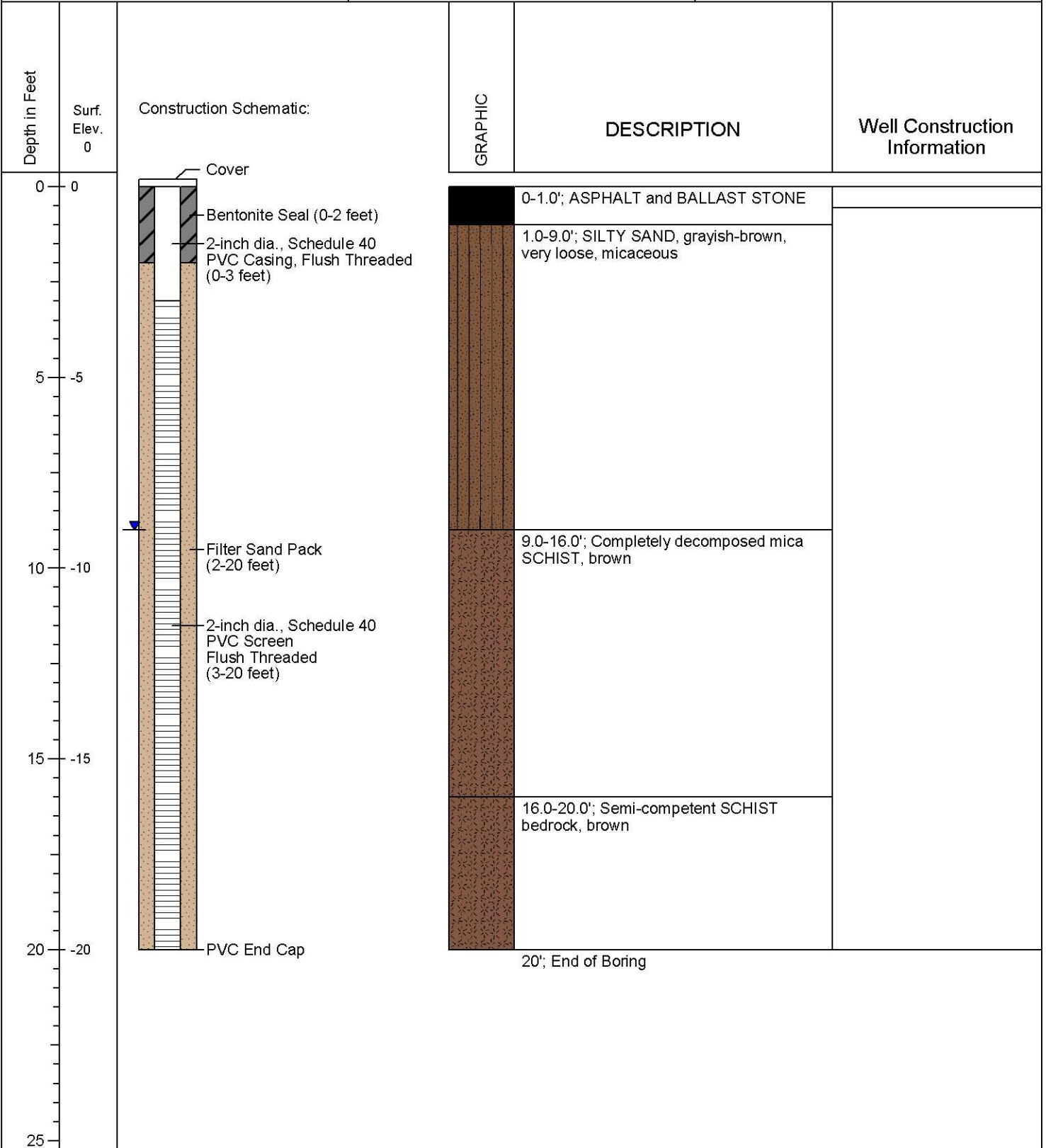
Monitoring Well Log: MW-8

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Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Rettew Project #: 101722001

Dates Drilled/Installed : 06/18/2015
Drilling Methods : Air Rotary
Driller : Eichelbergers, Inc.
Surface Elevation : ' MSL (Approx.)
Logged By : S. Houser

Latitude/Longitude :
Township/County : W. Nottingham Twp./Chester
Total Depth : 20 ft. bg
Diameter : 2-Inch PVC
Water Level : 9 ft. bg at completion



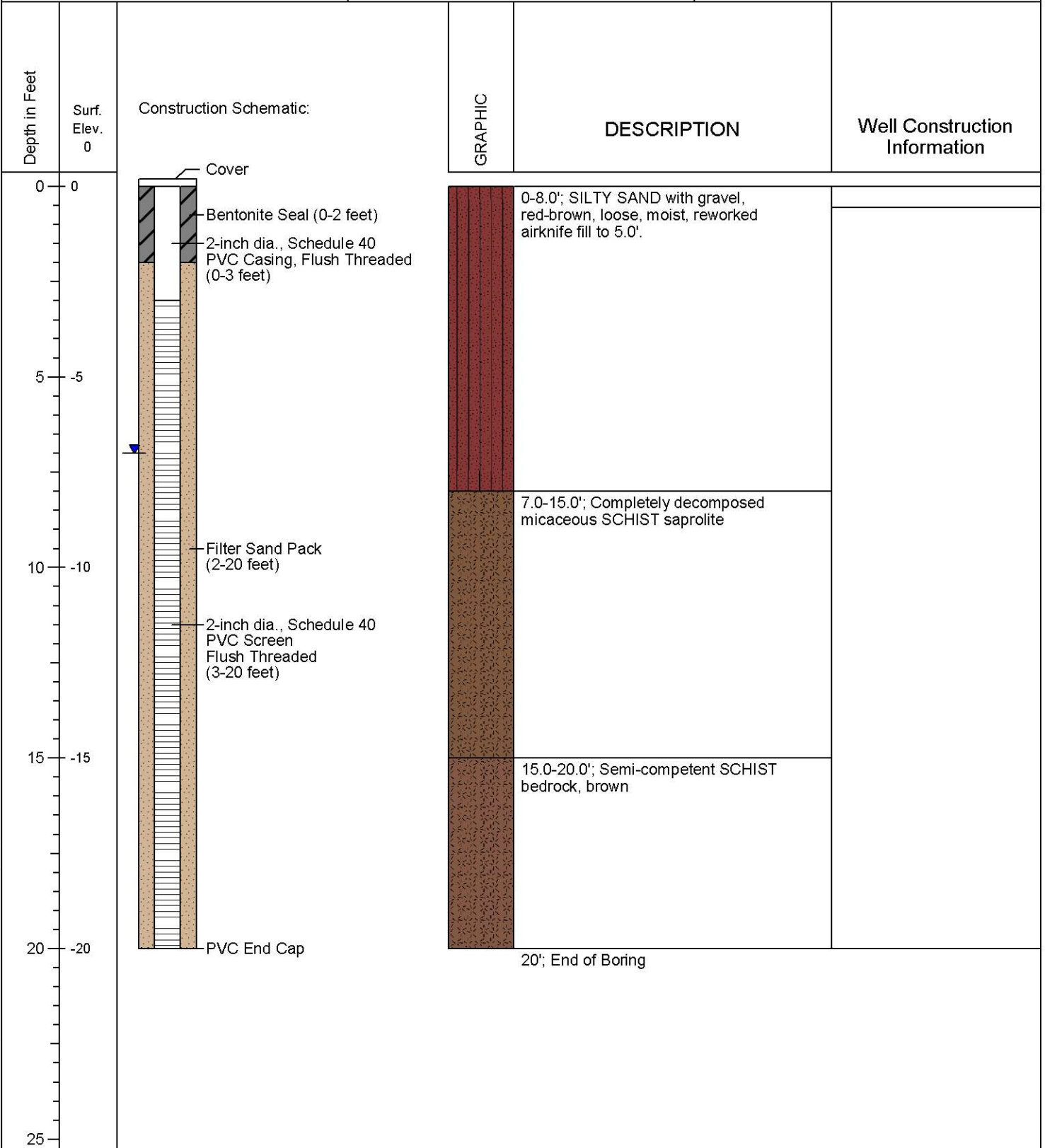
Monitoring Well Log: MW-9

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Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Rettew Project #: 101722001

Dates Drilled/Installed : 06/18/2015
Drilling Methods : Air Rotary
Driller : Eichelbergers, Inc.
Surface Elevation : ' MSL (Approx.)
Logged By : S. Houser

Latitude/Longitude :
Township/County : W. NottinghamTwp./Chester
Total Depth : 20 ft. bg
Diameter : 2-Inch PVC
Water Level : 7 ft. bg at completion



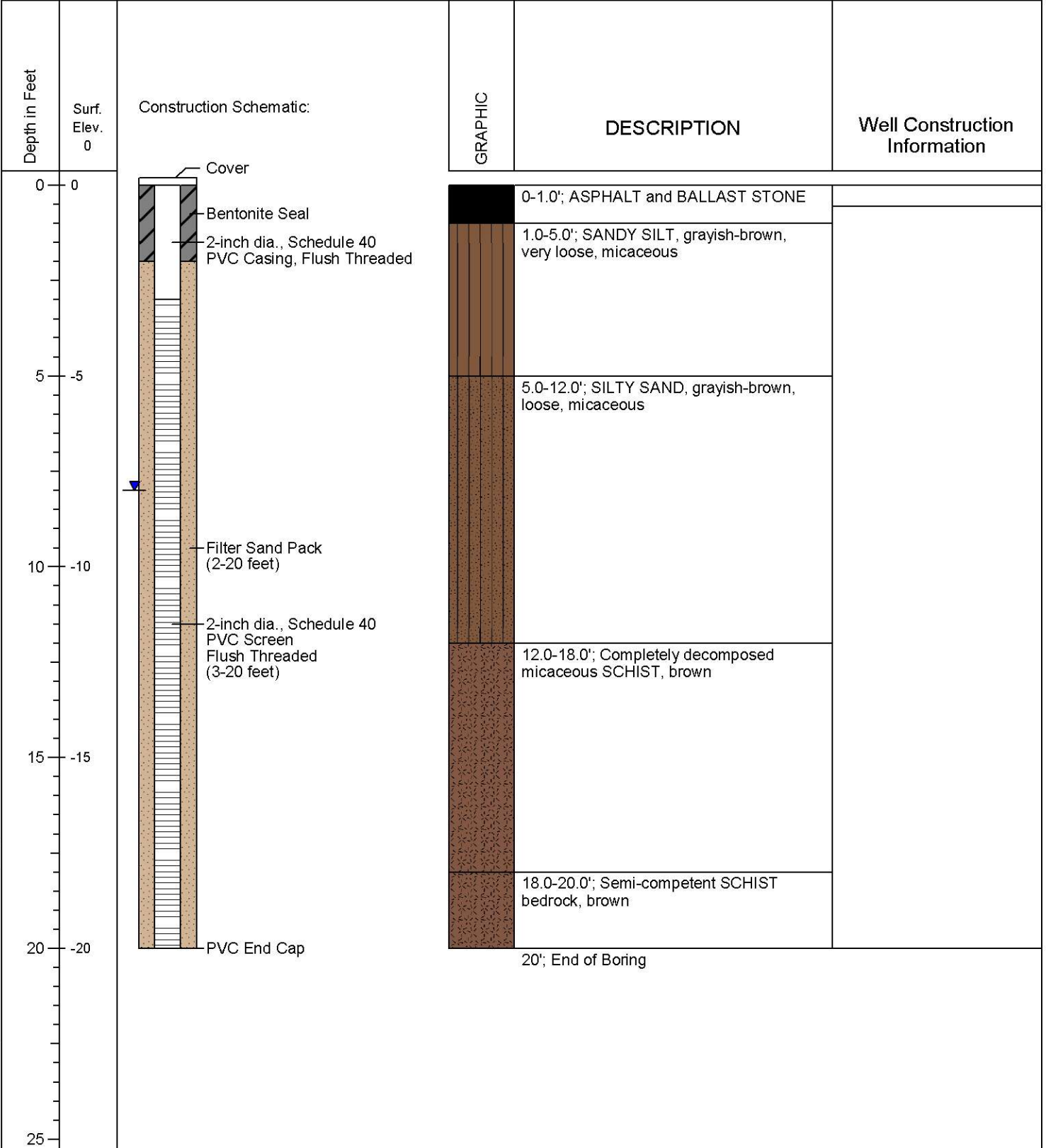
Monitoring Well Log: MW-10

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Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Rettew Project #: 101722001

Dates Drilled/Installed : 06/18/2015
Drilling Methods : Air Rotary
Driller : Eichelbergers, Inc.
Surface Elevation : ' MSL (Approx.)
Logged By : S. Houser

Latitude/Longitude :
Township/County : W. NottinghamTwp./Chester
Total Depth : 20 ft. bg
Diameter : 2-Inch PVC
Water Level : 8 ft. at completion



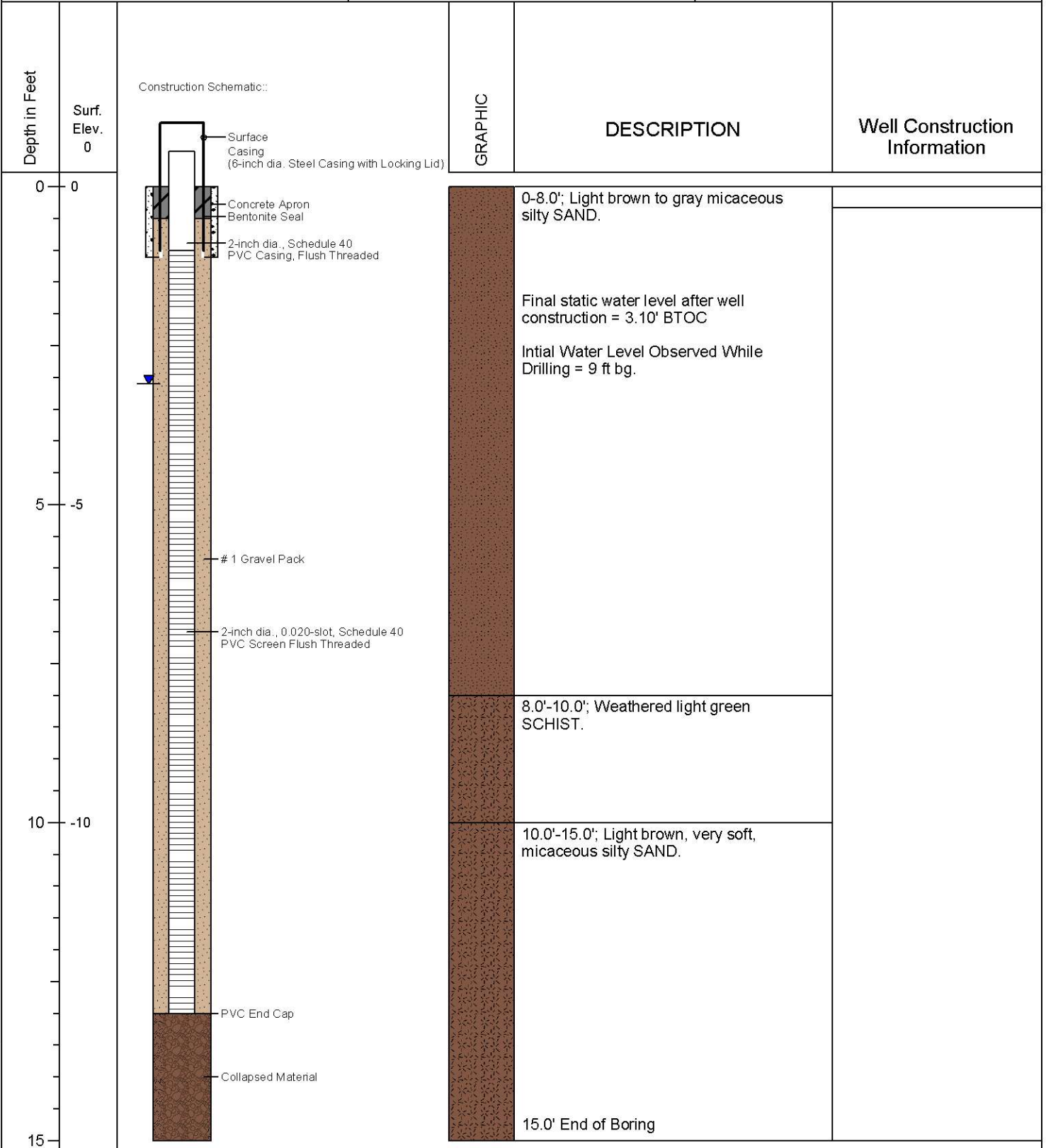
Monitoring Well Log: MW-11

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Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Rettew Project #: 101722001

Dates Drilled/Installed : 12/16/15
Drilling Methods : Air Rotary; 6-inch roller-bit
Driller : Eichelbergers, Inc.
Surface Elevation : 498.65' MSL
Logged By : E. Dziedzic

Latitude/Longitude :
Township/County : W. Nottingham Twp./Chester
Total Depth : 15 ft. bg
Diameter : 2-Inch PVC in 6-inch borehole
Water Level : 3.10 ft. at completion



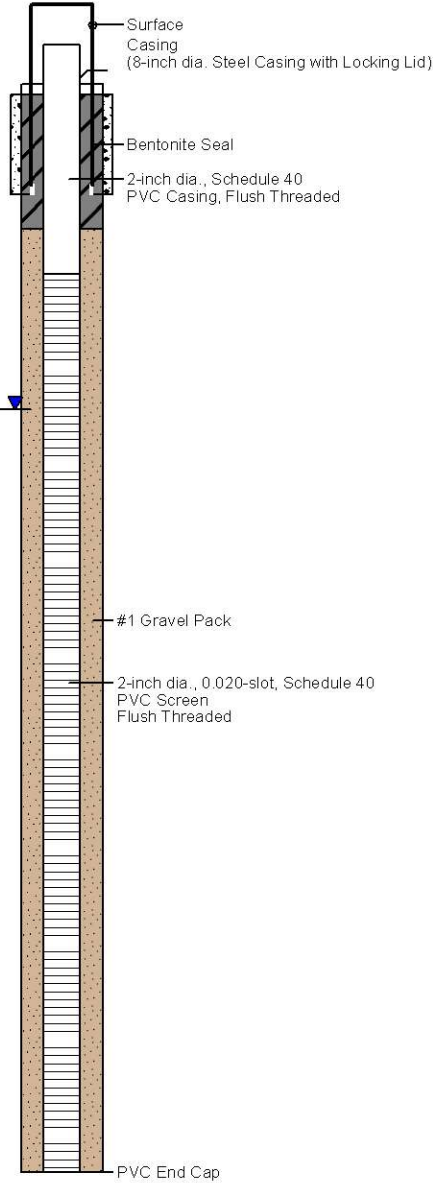
Monitoring Well Log: MW-12

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Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Rettew Project #: 101722001

Dates Drilled/Installed : 12/16/15
Drilling Methods : Air Rotary; 6-inch roller-bit
Driller : Eichelbergers, Inc.
Surface Elevation : 487.11' MSL
Logged By : E. Dziedzic

Latitude/Longitude :
Township/County : W. Nottingham Twp./Chester
Total Depth : 12 ft. bg
Diameter : 2-Inch PVC in 6-inch borehole
Water Level : 3.52 ft. at completion

Depth in Feet	Surf. Elev. 0	Construction Schematic:	GRAPHIC	DESCRIPTION	Well Construction Information
0	0	 <p>Surface Casing (8-inch dia. Steel Casing with Locking Lid)</p> <p>Bentonite Seal</p> <p>2-inch dia., Schedule 40 PVC Casing, Flush Threaded</p> <p>#1 Gravel Pack</p> <p>2-inch dia., 0.020-slot, Schedule 40 PVC Screen, Flush Threaded</p> <p>PVC End Cap</p>		<p>0-6.0'; Light brown to gray micaceous sandy SILT.</p> <p>Final static water level after well construction = 3.52' BTOC</p> <p>Initial Water level Observed During Drilling = 6 ft bg.</p>	
5	-5			6.0'-9.0'; Light gray micaceous silty SAND.	
10	-10			9.0'-10.0'; Weathered brown SCHIST.	
15				10.0' - 12.0'; Dark brown micaceous silty SAND, very soft at 10'.	
				12.0'; End of Boring	

Monitoring Well Log: MW-13

(Page 1 of 1)

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Rettew Project #: 101722001

Dates Drilled/Installed : 12/16/15
Drilling Methods : Air Rotary; 6-inch roller-bit
Driller : Eichelbergers, Inc.
Surface Elevation : 484.28' MSL
Logged By : E. Dziedzic

Latitude/Longitude :
Township/County : W. Nottingham Twp./Chester
Total Depth : 12 ft. bg
Diameter : 2-Inch PVC in 6-inch borehole
Water Level : 5.13 ft. at completion

Depth in Feet	Surf. Elev. 0	Construction Schematic:	GRAPHIC	DESCRIPTION	Well Construction Information
0	0			<p>0-7.0'; Light brown micaceous silty SAND.</p> <p>Final static water level after well construction = 5.13' BTOC</p> <p>Initial Water level Observed During Drilling = 8 ft bg.</p>	
5	-5			7.0'-8.0'; Weathered brown SCHIST.	
10	-10			8.0'-10.0'; Light brown micaceous silty SAND.	
				10.0' - 11.0'; Weathered brown SCHIST.	
				11.0'-12'; Light brown micaceous silty SAND.	
15				12.0'; End of Boring	

MONITORING WELL LOG: SG-1

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Project #: 101722001

Date Drilled : 2/29/16
Equipment : Geoprobe
Driller : Odyssey
Logged By : E. Dziedzic
Surface Elevation : 513 ft. MSL (Approx.)

Latitude/Longitude :
Township/County : W. Nottingham Twp /Chester
Total Depth : 3.5 ft. bgs
Diameter : 2-inch boring

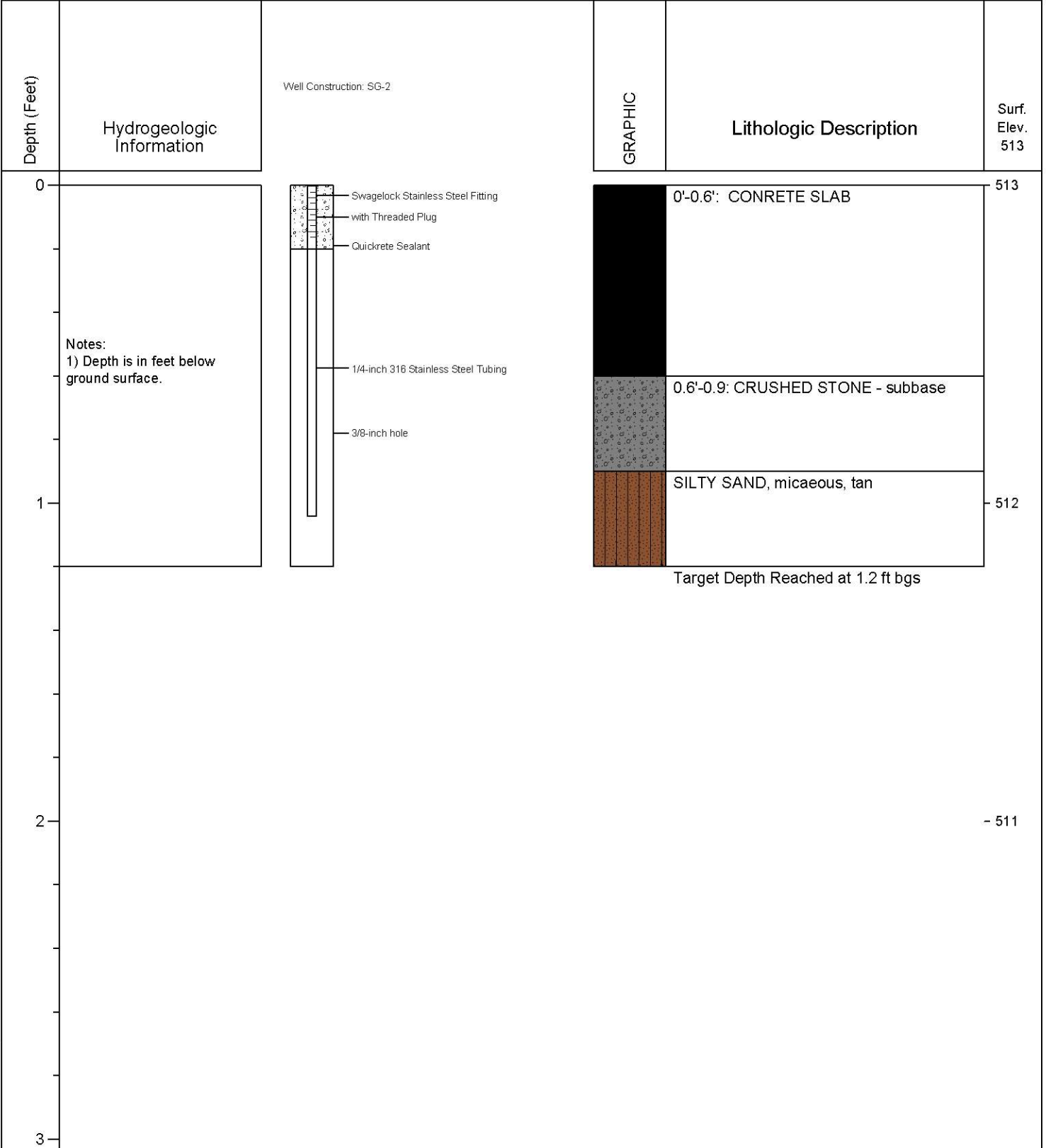
Depth (Feet)	Hydrogeologic Information	Well Construction: SG-1	GRAPHIC	Lithologic Description	Surf. Elev. 513
0	Notes: 1) Depth is in feet below ground surface.			0'-0.7': CONCRETE SLAB	513
				0.7'-1.0': CRUSHED STONE - subbase SILTY SAND, micaceous, tan	
5				Target Depth Reached at 3.5 ft bgs	

MONITORING WELL LOG: SG-2

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Project #: 101722001

Date Drilled : 3/25/16
Equipment : 3/4-inch Drive Hammer Drill
Driller : Odyssey
Logged By : E. Dziedzic
Surface Elevation : 513 ft. MSL (Approx.)

Latitude/Longitude :
Township/County : W. Nottingham Twp /Chester
Total Depth : 1.2 ft. bgs
Diameter : 2-inch boring

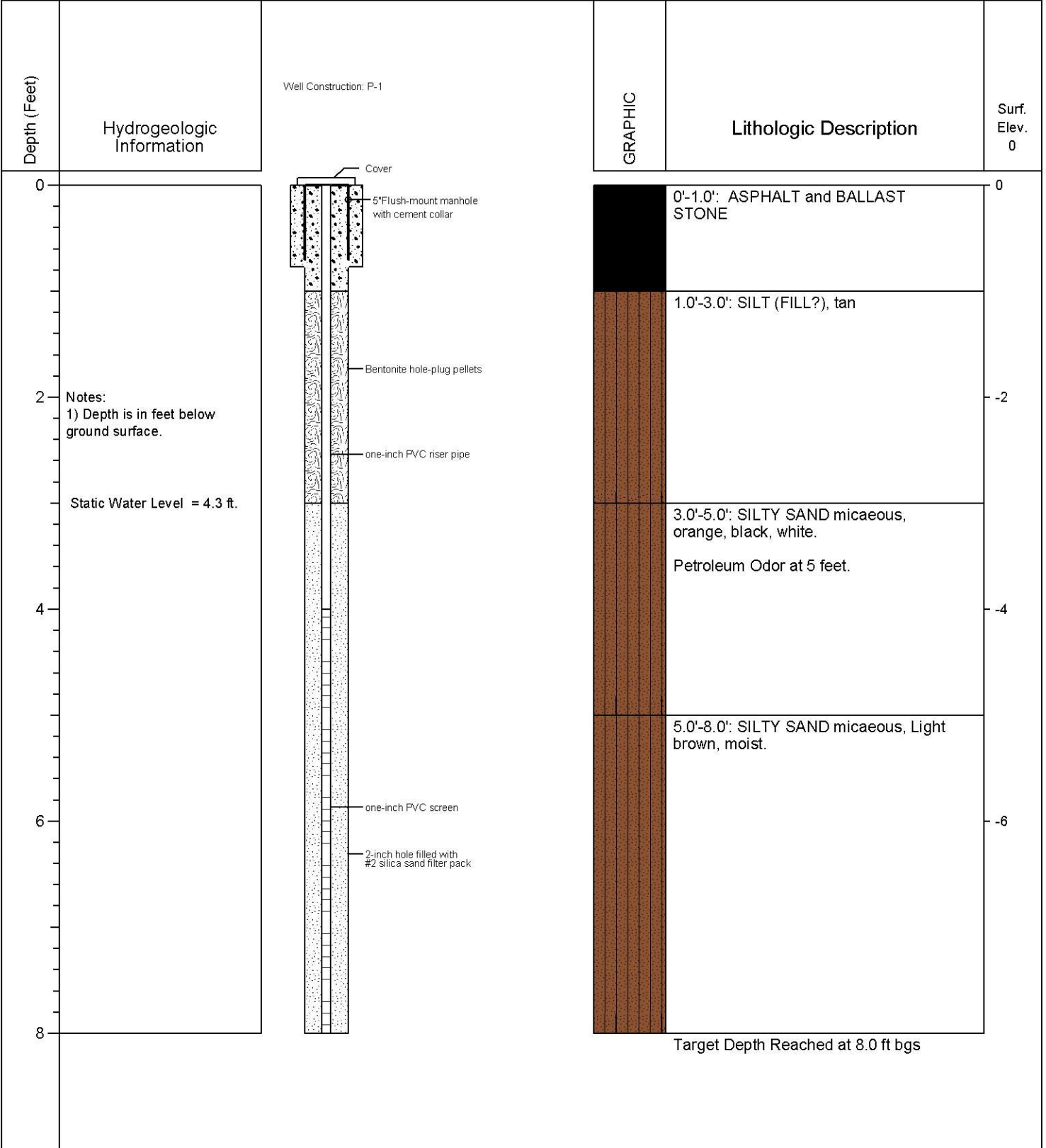


MONITORING WELL LOG: P-1

Herr Foods, Inc.
273 Old Baltimore Pike
Nottingham, Pennsylvania
Project #: 101722001

Date Drilled : 3/25/16
Equipment : Geoprobe
Driller : Odyssey
Logged By : E. Dziedzic
Surface Elevation : ft. MSL (Approx.)

Latitude/Longitude :
Township/County : W. Nottingham Twp /Chester
Total Depth : 8.0 ft. bgs
Diameter : 2-inch boring



APPENDIX D
Soil Sample Laboratory Analytical Reports

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

October 27, 2014

Project: Project 101722001

Submittal Date: 10/16/2014

Group Number: 1511613

PO Number: 101722001

State of Sample Origin: PA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
SB-5 @ 18 Ft Soil	7640183
SB-6 @ 10 Ft Soil	7640184
SB-7 @ 8 Ft Soil	7640185
SB-8 @ 7 Ft Soil	7640186
SB-2 @ 16 Ft Soil	7640187
SB-3 @ 12 Ft Soil	7640188
SB-4 @ 11 Ft Soil	7640189
SB-9 @ 10 Ft Soil	7640190
SB-10 @ 5 Ft Soil	7640191
SB-1 Soil	7640192
Supply Well Water	7640193
Trip Blank Water	7640194

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC Rettew Associates
COPY TO

Attn: Ed Dziedzic

Respectfully Submitted,


Luz I. Garcia
Specialist

(717) 556-7262

Sample Description: SB-5 @ 18 Ft Soil
101722001

LL Sample # SW 7640183
LL Group # 1511613
Account # 00721

Project Name: Project 101722001

Collected: 10/16/2014 09:30 by ED

Rettew Associates

3020 Columbia Avenue

Submitted: 10/16/2014 18:05

Lancaster PA 17603-4011

Reported: 10/27/2014 12:36

20015

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	26	46.9
10237	Naphthalene	91-20-3	N.D.	51	46.9
GC/MS	Semivolatiles	SW-846 8270C	ug/kg	ug/kg	
10724	Anthracene	120-12-7	N.D.	4	1
10724	Benzo(a)anthracene	56-55-3	N.D.	4	1
10724	Benzo(a)pyrene	50-32-8	N.D.	4	1
10724	Benzo(b)fluoranthene	205-99-2	N.D.	4	1
10724	Benzo(g,h,i)perylene	191-24-2	N.D.	4	1
10724	Chrysene	218-01-9	N.D.	4	1
10724	Fluorene	86-73-7	N.D.	4	1
10724	Phenanthrene	85-01-8	N.D.	4	1
10724	Pyrene	129-00-0	N.D.	4	1
Wet Chemistry	SM 2540 G-1997	%	%		
00111	Moisture	n.a.	8.2	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/15.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Benzene, Naphthalene	SW-846 8260B	1	Q142941AA	10/21/2014 19:31	Sarah A Guill	46.9
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201428935895	10/16/2014 09:30	Client Supplied	1
10724	PAH 8270 (microwave)	SW-846 8270C	1	14293SLF026	10/22/2014 11:52	Joseph M Gambler	1
10814	BNA Soil Microwave PAH	SW-846 3546	1	14293SLF026	10/21/2014 09:30	David S Schrum	1
00111	Moisture	SM 2540 G-1997	1	14294820005A	10/21/2014 20:12	Scott W Freisher	1

Sample Description: SB-6 @ 10 Ft Soil
101722001

LL Sample # SW 7640184
LL Group # 1511613
Account # 00721

Project Name: Project 101722001

Collected: 10/16/2014 13:30 by ED

Rettew Associates

3020 Columbia Avenue

Submitted: 10/16/2014 18:05

Lancaster PA 17603-4011

Reported: 10/27/2014 12:36

20016

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10237	Benzene	71-43-2	120 J	25	41.88
10237	Naphthalene	91-20-3	1,500	51	41.88
GC/MS Semivolatiles SW-846 8270C					
10724	Anthracene	120-12-7	N.D.	4	1
10724	Benzo(a)anthracene	56-55-3	N.D.	4	1
10724	Benzo(a)pyrene	50-32-8	N.D.	4	1
10724	Benzo(b)fluoranthene	205-99-2	N.D.	4	1
10724	Benzo(g,h,i)perylene	191-24-2	N.D.	4	1
10724	Chrysene	218-01-9	N.D.	4	1
10724	Fluorene	86-73-7	7 J	4	1
10724	Phenanthrene	85-01-8	11 J	4	1
10724	Pyrene	129-00-0	5 J	4	1
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	17.1	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/15.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Benzene, Naphthalene	SW-846 8260B	1	Q142941AA	10/21/2014 19:54	Sarah A Guill	41.88
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201428935895	10/16/2014 13:30	Client Supplied	1
10724	PAH 8270 (microwave)	SW-846 8270C	1	14293SLF026	10/22/2014 13:11	Joseph M Gambler	1
10814	BNA Soil Microwave PAH	SW-846 3546	1	14293SLF026	10/21/2014 09:30	David S Schrum	1
00111	Moisture	SM 2540 G-1997	1	14294820005A	10/21/2014 20:12	Scott W Freisher	1

Sample Description: SB-7 @ 8 Ft Soil
101722001

LL Sample # SW 7640185
LL Group # 1511613
Account # 00721

Project Name: Project 101722001

Collected: 10/16/2014 13:00 by ED

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 10/16/2014 18:05

Reported: 10/27/2014 12:36

20017

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10237	Benzene	71-43-2	22,000	110	168.92
10237	Naphthalene	91-20-3	18,000	210	168.92
GC/MS Semivolatiles SW-846 8270C					
10724	Anthracene	120-12-7	29	4	1
10724	Benzo(a)anthracene	56-55-3	10 J	4	1
10724	Benzo(a)pyrene	50-32-8	6 J	4	1
10724	Benzo(b)fluoranthene	205-99-2	N.D.	4	1
10724	Benzo(g,h,i)perylene	191-24-2	8 J	4	1
10724	Chrysene	218-01-9	11 J	4	1
10724	Fluorene	86-73-7	92	4	1
10724	Phenanthrene	85-01-8	150	4	1
10724	Pyrene	129-00-0	49	4	1
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	20.7	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/15.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Benzene, Naphthalene	SW-846 8260B	1	Q142951AA	10/22/2014 17:25	Sarah A Guill	168.92
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201428935895	10/16/2014 13:00	Client Supplied	1
10724	PAH 8270 (microwave)	SW-846 8270C	1	14293SLF026	10/22/2014 13:37	Joseph M Gambler	1
10814	BNA Soil Microwave PAH	SW-846 3546	1	14293SLF026	10/21/2014 09:30	David S Schrum	1
00111	Moisture	SM 2540 G-1997	1	14294820005A	10/21/2014 20:12	Scott W Freisher	1

Sample Description: SB-8 @ 7 Ft Soil
101722001

LL Sample # SW 7640186
LL Group # 1511613
Account # 00721

Project Name: Project 101722001

Collected: 10/16/2014 11:55 by ED

Rettew Associates

3020 Columbia Avenue

Submitted: 10/16/2014 18:05

Lancaster PA 17603-4011

Reported: 10/27/2014 12:36

20018

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10237	Benzene	71-43-2	21,000	290	460.41
10237	Naphthalene	91-20-3	30,000	570	460.41
GC/MS Semivolatiles SW-846 8270C					
10724	Anthracene	120-12-7	29	4	1
10724	Benzo(a)anthracene	56-55-3	10 J	4	1
10724	Benzo(a)pyrene	50-32-8	N.D.	4	1
10724	Benzo(b)fluoranthene	205-99-2	N.D.	4	1
10724	Benzo(g,h,i)perylene	191-24-2	N.D.	4	1
10724	Chrysene	218-01-9	10 J	4	1
10724	Fluorene	86-73-7	89	4	1
10724	Phenanthrene	85-01-8	150	4	1
10724	Pyrene	129-00-0	45	4	1
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	19.5	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/15.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Benzene, Naphthalene	SW-846 8260B	1	Q142951AA	10/22/2014 17:48	Sarah A Guill	460.41
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201428935895	10/16/2014 11:55	Client Supplied	1
10724	PAH 8270 (microwave)	SW-846 8270C	1	14293SLF026	10/22/2014 14:03	Joseph M Gambler	1
10814	BNA Soil Microwave PAH	SW-846 3546	1	14293SLF026	10/21/2014 09:30	David S Schrum	1
00111	Moisture	SM 2540 G-1997	1	14294820005A	10/21/2014 20:12	Scott W Freisher	1

Sample Description: SB-2 @ 16 Ft Soil
101722001

LL Sample # SW 7640187
LL Group # 1511613
Account # 00721

Project Name: Project 101722001

Collected: 10/16/2014 11:00 by ED

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 10/16/2014 18:05

Reported: 10/27/2014 12:36

22001

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	31	44.8
10237	Ethylbenzene	100-41-4	N.D.	62	44.8
10237	Isopropylbenzene	98-82-8	N.D.	62	44.8
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	31	44.8
10237	Naphthalene	91-20-3	N.D.	62	44.8
10237	Toluene	108-88-3	N.D.	62	44.8
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	62	44.8
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	62	44.8

Wet Chemistry	SM 2540 G-1997	%	%	
00111	Moisture	n.a.	27.8	0.50
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/15.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	BTE/MTBE/Cumene/Naph/TMBs	SW-846 8260B	1	Q142941AA	10/21/2014 15:35	Sarah A Guill	44.8
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201428935895	10/16/2014 11:00	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	14294820005A	10/21/2014 20:12	Scott W Freisher	1

Sample Description: SB-3 @ 12 Ft Soil
101722001

LL Sample # SW 7640188
LL Group # 1511613
Account # 00721

Project Name: Project 101722001

Collected: 10/16/2014 10:15 by ED

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 10/16/2014 18:05

Reported: 10/27/2014 12:36

32001

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	24	39
10237	Ethylbenzene	100-41-4	N.D.	48	39
10237	Isopropylbenzene	98-82-8	N.D.	48	39
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	24	39
10237	Naphthalene	91-20-3	N.D.	48	39
10237	Toluene	108-88-3	N.D.	48	39
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	48	39
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	48	39

Wet Chemistry	SM 2540 G-1997	%	%	
00111	Moisture	n.a.	19.0	0.50
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/15.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	BTE/MTBE/Cumene/Naph/TMBs	SW-846 8260B	1	Q142941AA	10/21/2014 15:58	Sarah A Guill	39
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201428935895	10/16/2014 10:15	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	14294820005A	10/21/2014 20:12	Scott W Freisher	1

Sample Description: SB-4 @ 11 Ft Soil
101722001

LL Sample # SW 7640189
LL Group # 1511613
Account # 00721

Project Name: Project 101722001

Collected: 10/16/2014 10:40 by ED

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 10/16/2014 18:05

Reported: 10/27/2014 12:36

42001

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	25	42.16
10237	Ethylbenzene	100-41-4	N.D.	50	42.16
10237	Isopropylbenzene	98-82-8	N.D.	50	42.16
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	25	42.16
10237	Naphthalene	91-20-3	N.D.	50	42.16
10237	Toluene	108-88-3	N.D.	50	42.16
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	50	42.16
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	50	42.16

Wet Chemistry	SM 2540 G-1997	%	%	
00111	Moisture	n.a.	15.2	0.50
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/15.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	BTE/MTBE/Cumene/Naph/TMBs	SW-846 8260B	1	Q142941AA	10/21/2014 16:21	Sarah A Guill	42.16
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201428935895	10/16/2014 10:40	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	14294820005A	10/21/2014 20:12	Scott W Freisher	1

Sample Description: SB-9 @ 10 Ft Soil
101722001

LL Sample # SW 7640190
LL Group # 1511613
Account # 00721

Project Name: Project 101722001

Collected: 10/16/2014 14:05 by ED

Rettew Associates

Submitted: 10/16/2014 18:05

3020 Columbia Avenue

Reported: 10/27/2014 12:36

Lancaster PA 17603-4011

92001

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Acrolein	107-02-8	N.D.	25	0.88
10237	Acrylonitrile	107-13-1	N.D.	5	0.88
10237	Benzene	71-43-2	N.D.	0.6	0.88
10237	Bromodichloromethane	75-27-4	N.D.	1	0.88
10237	Bromoform	75-25-2	N.D.	1	0.88
10237	Bromomethane	74-83-9	N.D.	2	0.88
10237	Carbon Tetrachloride	56-23-5	N.D.	1	0.88
10237	Chlorobenzene	108-90-7	N.D.	1	0.88
10237	Chloroethane	75-00-3	N.D.	2	0.88
10237	Chloroform	67-66-3	N.D.	1	0.88
10237	Chloromethane	74-87-3	N.D.	2	0.88
10237	Dibromochloromethane	124-48-1	N.D.	1	0.88
10237	1,1-Dichloroethane	75-34-3	N.D.	1	0.88
10237	1,2-Dichloroethane	107-06-2	N.D.	1	0.88
10237	1,1-Dichloroethene	75-35-4	N.D.	1	0.88
10237	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.88
10237	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.88
10237	1,2-Dichloropropane	78-87-5	N.D.	1	0.88
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.88
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.88
10237	Ethylbenzene	100-41-4	N.D.	1	0.88
10237	Methylene Chloride	75-09-2	N.D.	2	0.88
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.88
10237	Tetrachloroethene	127-18-4	N.D.	1	0.88
10237	Toluene	108-88-3	N.D.	1	0.88
10237	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.88
10237	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.88
10237	Trichloroethene	79-01-6	N.D.	1	0.88
10237	Trichlorofluoromethane	75-69-4	N.D.	2	0.88
10237	Vinyl Chloride	75-01-4	N.D.	1	0.88
10237	Xylene (Total)	1330-20-7	N.D.	1	0.88
2-Chloroethyl vinyl ether is an acid labile compound and cannot be reported due to acid preservation of the samples and standards in this method.					

GC/MS	Semivolatiles	SW-846 8270C	ug/kg	ug/kg	
10727	Acenaphthene	83-32-9	N.D.	5	1
10727	Acenaphthylene	208-96-8	N.D.	5	1
10727	Anthracene	120-12-7	N.D.	5	1
10727	Benzidine	92-87-5	N.D.	950	1
10727	Benzo(a)anthracene	56-55-3	N.D.	5	1
10727	Benzo(a)pyrene	50-32-8	N.D.	5	1
10727	Benzo(b)fluoranthene	205-99-2	N.D.	5	1
10727	Benzo(g,h,i)perylene	191-24-2	N.D.	5	1
10727	Benzo(k)fluoranthene	207-08-9	N.D.	5	1
10727	4-Bromophenyl-phenylether	101-55-3	N.D.	23	1
10727	Butylbenzylphthalate	85-68-7	N.D.	91	1
10727	Di-n-butylphthalate	84-74-2	N.D.	91	1
10727	4-Chloro-3-methylphenol	59-50-7	N.D.	23	1
10727	bis(2-Chloroethoxy)methane	111-91-1	N.D.	23	1
10727	bis(2-Chloroethyl)ether	111-44-4	N.D.	23	1

Sample Description: SB-9 @ 10 Ft Soil
101722001

LL Sample # SW 7640190
LL Group # 1511613
Account # 00721

Project Name: Project 101722001

Collected: 10/16/2014 14:05 by ED

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 10/16/2014 18:05

Reported: 10/27/2014 12:36

92001

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Semivolatiles	SW-846 8270C	ug/kg	ug/kg	
10727	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	23	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.				
10727	2-Chloronaphthalene	91-58-7	N.D.	10	1
10727	2-Chlorophenol	95-57-8	N.D.	23	1
10727	4-Chlorophenyl-phenylether	7005-72-3	N.D.	23	1
10727	Chrysene	218-01-9	N.D.	5	1
10727	Dibenz(a,h)anthracene	53-70-3	N.D.	5	1
10727	1,2-Dichlorobenzene	95-50-1	N.D.	23	1
10727	1,3-Dichlorobenzene	541-73-1	N.D.	23	1
10727	1,4-Dichlorobenzene	106-46-7	N.D.	23	1
10727	3,3'-Dichlorobenzidine	91-94-1	N.D.	140	1
10727	2,4-Dichlorophenol	120-83-2	N.D.	23	1
10727	Diethylphthalate	84-66-2	N.D.	91	1
10727	2,4-Dimethylphenol	105-67-9	N.D.	23	1
10727	Dimethylphthalate	131-11-3	N.D.	91	1
10727	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	230	1
10727	2,4-Dinitrophenol	51-28-5	N.D.	410	1
10727	2,4-Dinitrotoluene	121-14-2	N.D.	91	1
10727	2,6-Dinitrotoluene	606-20-2	N.D.	23	1
10727	1,2-Diphenylhydrazine	122-66-7	N.D.	23	1
10727	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	91	1
10727	Fluoranthene	206-44-0	N.D.	5	1
10727	Fluorene	86-73-7	N.D.	5	1
10727	Hexachlorobenzene	118-74-1	N.D.	5	1
10727	Hexachlorobutadiene	87-68-3	N.D.	23	1
10727	Hexachlorocyclopentadiene	77-47-4	N.D.	230	1
10727	Hexachloroethane	67-72-1	N.D.	45	1
10727	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	5	1
10727	Isophorone	78-59-1	N.D.	23	1
10727	Naphthalene	91-20-3	N.D.	5	1
10727	Nitrobenzene	98-95-3	N.D.	23	1
10727	2-Nitrophenol	88-75-5	N.D.	23	1
10727	4-Nitrophenol	100-02-7	N.D.	230	1
10727	N-Nitrosodimethylamine	62-75-9	N.D.	91	1
10727	N-Nitroso-di-n-propylamine	621-64-7	N.D.	23	1
10727	N-Nitrosodiphenylamine	86-30-6	N.D.	23	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.				
10727	Di-n-octylphthalate	117-84-0	N.D.	91	1
10727	Pentachlorophenol	87-86-5	N.D.	45	1
10727	Phenanthrene	85-01-8	N.D.	5	1
10727	Phenol	108-95-2	N.D.	23	1
10727	Pyrene	129-00-0	N.D.	5	1
10727	1,2,4-Trichlorobenzene	120-82-1	N.D.	23	1
10727	2,4,6-Trichlorophenol	88-06-2	N.D.	23	1

Metals **SW-846 6010B** **mg/kg** **mg/kg**

Sample Description: SB-9 @ 10 Ft Soil
101722001

LL Sample # SW 7640190
LL Group # 1511613
Account # 00721

Project Name: Project 101722001

Collected: 10/16/2014 14:05 by ED

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 10/16/2014 18:05

Reported: 10/27/2014 12:36

92001

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Metals					
		SW-846 6010B	mg/kg	mg/kg	
06944	Antimony	7440-36-0	2.02 J	0.444	1
06935	Arsenic	7440-38-2	N.D.	0.861	1
06947	Beryllium	7440-41-7	1.46	0.0901	1
06949	Cadmium	7440-43-9	N.D.	0.0444	1
06951	Chromium	7440-47-3	23.5	0.148	1
06953	Copper	7440-50-8	7.75	0.444	1
06955	Lead	7439-92-1	7.51	0.672	1
06961	Nickel	7440-02-0	16.4	0.202	1
06936	Selenium	7782-49-2	N.D.	0.592	1
06966	Silver	7440-22-4	N.D.	0.255	1
06925	Thallium	7440-28-0	1.37 J	1.08	1
06972	Zinc	7440-66-6	57.5	0.350	1
SW-846 7471A					
			mg/kg	mg/kg	
00159	Mercury	7439-97-6	N.D.	0.0130	1
Wet Chemistry					
		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	27.8	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/15.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL Volatiles in Soil	SW-846 8260B	1	X142941AA	10/21/2014 16:40	Chelsea B Stong	0.88
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201428935895	10/16/2014 14:05	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201428935895	10/16/2014 14:05	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201428935895	10/16/2014 14:05	Client Supplied	1
10727	PPL/TCL SVOCs in Soil	SW-846 8270C	1	14290SLB026	10/20/2014 15:53	Joseph M Gambler	1
10809	BNA Soil Microwave	SW-846 3546	1	14290SLB026	10/17/2014 07:30	Olivia Arosemena	1
06944	Antimony	SW-846 6010B	1	142905708001	10/21/2014 23:49	Elaine F Stoltzfus	1
06935	Arsenic	SW-846 6010B	1	142905708001	10/21/2014 23:49	Elaine F Stoltzfus	1
06947	Beryllium	SW-846 6010B	1	142905708001	10/21/2014 23:49	Elaine F Stoltzfus	1

Sample Description: SB-9 @ 10 Ft Soil
101722001

LL Sample # SW 7640190
LL Group # 1511613
Account # 00721

Project Name: Project 101722001

Collected: 10/16/2014 14:05 by ED

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 10/16/2014 18:05

Reported: 10/27/2014 12:36

92001

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06949	Cadmium	SW-846 6010B	1	142905708001	10/21/2014 23:49	Elaine F Stoltzfus	1
06951	Chromium	SW-846 6010B	1	142905708001	10/21/2014 23:49	Elaine F Stoltzfus	1
06953	Copper	SW-846 6010B	1	142905708001	10/21/2014 23:49	Elaine F Stoltzfus	1
06955	Lead	SW-846 6010B	1	142905708001	10/21/2014 23:49	Elaine F Stoltzfus	1
06961	Nickel	SW-846 6010B	1	142905708001	10/21/2014 23:49	Elaine F Stoltzfus	1
06936	Selenium	SW-846 6010B	1	142905708001	10/21/2014 23:49	Elaine F Stoltzfus	1
06966	Silver	SW-846 6010B	1	142905708001	10/21/2014 23:49	Elaine F Stoltzfus	1
06925	Thallium	SW-846 6010B	1	142905708001	10/21/2014 23:49	Elaine F Stoltzfus	1
06972	Zinc	SW-846 6010B	1	142905708001	10/21/2014 23:49	Elaine F Stoltzfus	1
00159	Mercury	SW-846 7471A	1	142905711001	10/20/2014 11:20	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	142905708001	10/20/2014 08:45	Christopher M Klumpp	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	142905711001	10/20/2014 08:36	Christopher M Klumpp	1
00111	Moisture	SM 2540 G-1997	1	14294820005A	10/21/2014 20:12	Scott W Freisher	1

Sample Description: SB-10 @ 5 Ft Soil
101722001

LL Sample # SW 7640191

LL Group # 1511613

Account # 00721

Project Name: Project 101722001

Collected: 10/16/2014 14:40 by ED

Rettew Associates

3020 Columbia Avenue

Lancaster PA 17603-4011

Submitted: 10/16/2014 18:05

Reported: 10/27/2014 12:36

10001

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Acrolein	107-02-8	N.D.	28	1.02
10237	Acrylonitrile	107-13-1	N.D.	6	1.02
10237	Benzene	71-43-2	0.8 J	0.7	1.02
10237	Bromodichloromethane	75-27-4	N.D.	1	1.02
10237	Bromoform	75-25-2	N.D.	1	1.02
10237	Bromomethane	74-83-9	N.D.	3	1.02
10237	Carbon Tetrachloride	56-23-5	N.D.	1	1.02
10237	Chlorobenzene	108-90-7	N.D.	1	1.02
10237	Chloroethane	75-00-3	N.D.	3	1.02
10237	Chloroform	67-66-3	N.D.	1	1.02
10237	Chloromethane	74-87-3	N.D.	3	1.02
10237	Dibromochloromethane	124-48-1	N.D.	1	1.02
10237	1,1-Dichloroethane	75-34-3	N.D.	1	1.02
10237	1,2-Dichloroethane	107-06-2	N.D.	1	1.02
10237	1,1-Dichloroethene	75-35-4	N.D.	1	1.02
10237	cis-1,2-Dichloroethene	156-59-2	N.D.	1	1.02
10237	trans-1,2-Dichloroethene	156-60-5	N.D.	1	1.02
10237	1,2-Dichloropropane	78-87-5	N.D.	1	1.02
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	1.02
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	1.02
10237	Ethylbenzene	100-41-4	N.D.	1	1.02
10237	Methylene Chloride	75-09-2	N.D.	3	1.02
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	1.02
10237	Tetrachloroethene	127-18-4	N.D.	1	1.02
10237	Toluene	108-88-3	N.D.	1	1.02
10237	1,1,1-Trichloroethane	71-55-6	N.D.	1	1.02
10237	1,1,2-Trichloroethane	79-00-5	N.D.	1	1.02
10237	Trichloroethene	79-01-6	N.D.	1	1.02
10237	Trichlorofluoromethane	75-69-4	N.D.	3	1.02
10237	Vinyl Chloride	75-01-4	N.D.	1	1.02
10237	Xylene (Total)	1330-20-7	N.D.	1	1.02

2-Chloroethyl vinyl ether is an acid labile compound and cannot be reported due to acid preservation of the samples and standards in this method.

The recovery for the sample internal standard is outside the QC acceptance limits. The following corrective action was taken: The sample was re-analyzed and the QC is again outside of the acceptance limits, indicating a matrix effect. The data is reported from the initial trial.

GC/MS	Semivolatiles	SW-846 8270C	ug/kg	ug/kg	
10727	Acenaphthene	83-32-9	N.D.	45	10
10727	Acenaphthylene	208-96-8	N.D.	45	10
10727	Anthracene	120-12-7	N.D.	45	10
10727	Benzidine	92-87-5	N.D.	9,400	10
10727	Benzo(a)anthracene	56-55-3	N.D.	45	10
10727	Benzo(a)pyrene	50-32-8	46 J	45	10
10727	Benzo(b)fluoranthene	205-99-2	54 J	45	10
10727	Benzo(g,h,i)perylene	191-24-2	N.D.	45	10
10727	Benzo(k)fluoranthene	207-08-9	N.D.	45	10

Sample Description: SB-10 @ 5 Ft Soil
101722001

LL Sample # SW 7640191
LL Group # 1511613
Account # 00721

Project Name: Project 101722001

Collected: 10/16/2014 14:40 by ED

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 10/16/2014 18:05

Reported: 10/27/2014 12:36

10001

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Semivolatiles	SW-846 8270C	ug/kg	ug/kg	
10727	4-Bromophenyl-phenylether	101-55-3	N.D.	220	10
10727	Butylbenzylphthalate	85-68-7	N.D.	900	10
10727	Di-n-butylphthalate	84-74-2	N.D.	900	10
10727	4-Chloro-3-methylphenol	59-50-7	N.D.	220	10
10727	bis(2-Chloroethoxy)methane	111-91-1	N.D.	220	10
10727	bis(2-Chloroethyl)ether	111-44-4	N.D.	220	10
10727	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	220	10
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.				
10727	2-Chloronaphthalene	91-58-7	N.D.	94	10
10727	2-Chlorophenol	95-57-8	N.D.	220	10
10727	4-Chlorophenyl-phenylether	7005-72-3	N.D.	220	10
10727	Chrysene	218-01-9	N.D.	45	10
10727	Dibenz(a,h)anthracene	53-70-3	N.D.	45	10
10727	1,2-Dichlorobenzene	95-50-1	N.D.	220	10
10727	1,3-Dichlorobenzene	541-73-1	N.D.	220	10
10727	1,4-Dichlorobenzene	106-46-7	N.D.	220	10
10727	3,3'-Dichlorobenzidine	91-94-1	N.D.	1,300	10
10727	2,4-Dichlorophenol	120-83-2	N.D.	220	10
10727	Diethylphthalate	84-66-2	N.D.	900	10
10727	2,4-Dimethylphenol	105-67-9	N.D.	220	10
10727	Dimethylphthalate	131-11-3	N.D.	900	10
10727	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	2,200	10
10727	2,4-Dinitrophenol	51-28-5	N.D.	4,000	10
10727	2,4-Dinitrotoluene	121-14-2	N.D.	900	10
10727	2,6-Dinitrotoluene	606-20-2	N.D.	220	10
10727	1,2-Diphenylhydrazine	122-66-7	N.D.	220	10
10727	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	900	10
10727	Fluoranthene	206-44-0	N.D.	45	10
10727	Fluorene	86-73-7	N.D.	45	10
10727	Hexachlorobenzene	118-74-1	N.D.	45	10
10727	Hexachlorobutadiene	87-68-3	N.D.	220	10
10727	Hexachlorocyclopentadiene	77-47-4	N.D.	2,200	10
10727	Hexachloroethane	67-72-1	N.D.	450	10
10727	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	45	10
10727	Isophorone	78-59-1	N.D.	220	10
10727	Naphthalene	91-20-3	N.D.	45	10
10727	Nitrobenzene	98-95-3	N.D.	220	10
10727	2-Nitrophenol	88-75-5	N.D.	220	10
10727	4-Nitrophenol	100-02-7	N.D.	2,200	10
10727	N-Nitrosodimethylamine	62-75-9	N.D.	900	10
10727	N-Nitroso-di-n-propylamine	621-64-7	N.D.	220	10
10727	N-Nitrosodiphenylamine	86-30-6	N.D.	220	10
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.				
10727	Di-n-octylphthalate	117-84-0	N.D.	900	10
10727	Pentachlorophenol	87-86-5	N.D.	450	10
10727	Phenanthrene	85-01-8	N.D.	45	10

Sample Description: SB-10 @ 5 Ft Soil
101722001

LL Sample # SW 7640191
LL Group # 1511613
Account # 00721

Project Name: Project 101722001

Collected: 10/16/2014 14:40 by ED

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 10/16/2014 18:05

Reported: 10/27/2014 12:36

10001

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C					
10727	Phenol	108-95-2	N.D.	220	10
10727	Pyrene	129-00-0	N.D.	45	10
10727	1,2,4-Trichlorobenzene	120-82-1	N.D.	220	10
10727	2,4,6-Trichlorophenol	88-06-2	N.D.	220	10
Reporting limits were raised due to interference from the sample matrix.					
Metals SW-846 6010B					
06944	Antimony	7440-36-0	3.26	0.435	1
06935	Arsenic	7440-38-2	2.45 J	0.844	1
06947	Beryllium	7440-41-7	1.40	0.0884	1
06949	Cadmium	7440-43-9	N.D.	0.0435	1
06951	Chromium	7440-47-3	30.1	0.145	1
06953	Copper	7440-50-8	25.7	0.435	1
06955	Lead	7439-92-1	11.6	0.659	1
06961	Nickel	7440-02-0	31.8	0.198	1
06936	Selenium	7782-49-2	N.D.	0.580	1
06966	Silver	7440-22-4	N.D.	0.251	1
06925	Thallium	7440-28-0	1.77 J	1.06	1
06972	Zinc	7440-66-6	72.6	0.343	1
SW-846 7471A					
00159	Mercury	7439-97-6	N.D.	0.0135	1
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	27.1	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/15.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL Volatiles in Soil	SW-846 8260B	1	X142941AA	10/21/2014 17:04	Chelsea B Stong	1.02
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201428935895	10/16/2014 14:40	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201428935895	10/16/2014 14:40	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201428935895	10/16/2014 14:40	Client Supplied	1
10727	PPL/TCL SVOCs in Soil	SW-846 8270C	1	14290SLB026	10/20/2014 16:16	Joseph M Gambler	10

Sample Description: SB-10 @ 5 Ft Soil
101722001

LL Sample # SW 7640191
LL Group # 1511613
Account # 00721

Project Name: Project 101722001

Collected: 10/16/2014 14:40 by ED

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 10/16/2014 18:05

Reported: 10/27/2014 12:36

10001

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10809	BNA Soil Microwave	SW-846 3546	1	14290SLB026	10/17/2014 07:30	Olivia Arosemena	1
06944	Antimony	SW-846 6010B	1	142905708001	10/21/2014 23:53	Elaine F Stoltzfus	1
06935	Arsenic	SW-846 6010B	1	142905708001	10/21/2014 23:53	Elaine F Stoltzfus	1
06947	Beryllium	SW-846 6010B	1	142905708001	10/21/2014 23:53	Elaine F Stoltzfus	1
06949	Cadmium	SW-846 6010B	1	142905708001	10/21/2014 23:53	Elaine F Stoltzfus	1
06951	Chromium	SW-846 6010B	1	142905708001	10/21/2014 23:53	Elaine F Stoltzfus	1
06953	Copper	SW-846 6010B	1	142905708001	10/21/2014 23:53	Elaine F Stoltzfus	1
06955	Lead	SW-846 6010B	1	142905708001	10/21/2014 23:53	Elaine F Stoltzfus	1
06961	Nickel	SW-846 6010B	1	142905708001	10/21/2014 23:53	Elaine F Stoltzfus	1
06936	Selenium	SW-846 6010B	1	142905708001	10/21/2014 23:53	Elaine F Stoltzfus	1
06966	Silver	SW-846 6010B	1	142905708001	10/21/2014 23:53	Elaine F Stoltzfus	1
06925	Thallium	SW-846 6010B	1	142905708001	10/21/2014 23:53	Elaine F Stoltzfus	1
06972	Zinc	SW-846 6010B	1	142905708001	10/21/2014 23:53	Elaine F Stoltzfus	1
00159	Mercury	SW-846 7471A	1	142935711002	10/22/2014 07:05	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	142905708001	10/20/2014 08:45	Christopher M Klumpp	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	142905711001	10/20/2014 08:36	Christopher M Klumpp	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	2	142935711002	10/21/2014 11:08	Christopher M Klumpp	1
00111	Moisture	SM 2540 G-1997	1	14294820005A	10/21/2014 20:12	Scott W Freisher	1

Sample Description: SB-1 Soil
101722001

LL Sample # SW 7640192
LL Group # 1511613
Account # 00721

Project Name: Project 101722001

Collected: 10/16/2014 15:55 by ED

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 10/16/2014 18:05

Reported: 10/27/2014 12:36

12001

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Acrolein	107-02-8	N.D.	23	1.08
10237	Acrylonitrile	107-13-1	N.D.	5	1.08
10237	Benzene	71-43-2	N.D.	0.6	1.08
10237	Bromodichloromethane	75-27-4	N.D.	1	1.08
10237	Bromoform	75-25-2	N.D.	1	1.08
10237	Bromomethane	74-83-9	N.D.	2	1.08
10237	Carbon Tetrachloride	56-23-5	N.D.	1	1.08
10237	Chlorobenzene	108-90-7	N.D.	1	1.08
10237	Chloroethane	75-00-3	N.D.	2	1.08
10237	Chloroform	67-66-3	N.D.	1	1.08
10237	Chloromethane	74-87-3	N.D.	2	1.08
10237	Dibromochloromethane	124-48-1	N.D.	1	1.08
10237	1,1-Dichloroethane	75-34-3	N.D.	1	1.08
10237	1,2-Dichloroethane	107-06-2	N.D.	1	1.08
10237	1,1-Dichloroethene	75-35-4	N.D.	1	1.08
10237	cis-1,2-Dichloroethene	156-59-2	N.D.	1	1.08
10237	trans-1,2-Dichloroethene	156-60-5	N.D.	1	1.08
10237	1,2-Dichloropropane	78-87-5	N.D.	1	1.08
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	1.08
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	1.08
10237	Ethylbenzene	100-41-4	N.D.	1	1.08
10237	Methylene Chloride	75-09-2	N.D.	2	1.08
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	1.08
10237	Tetrachloroethene	127-18-4	N.D.	1	1.08
10237	Toluene	108-88-3	N.D.	1	1.08
10237	1,1,1-Trichloroethane	71-55-6	N.D.	1	1.08
10237	1,1,2-Trichloroethane	79-00-5	N.D.	1	1.08
10237	Trichloroethene	79-01-6	N.D.	1	1.08
10237	Trichlorofluoromethane	75-69-4	N.D.	2	1.08
10237	Vinyl Chloride	75-01-4	N.D.	1	1.08
10237	Xylene (Total)	1330-20-7	N.D.	1	1.08
2-Chloroethyl vinyl ether is an acid labile compound and cannot be reported due to acid preservation of the samples and standards in this method.					
GC/MS	Semivolatiles	SW-846 8270C	ug/kg	ug/kg	
10727	Acenaphthene	83-32-9	N.D.	4	1
10727	Acenaphthylene	208-96-8	N.D.	4	1
10727	Anthracene	120-12-7	N.D.	4	1
10727	Benzidine	92-87-5	N.D.	750	1
10727	Benzo(a)anthracene	56-55-3	N.D.	4	1
10727	Benzo(a)pyrene	50-32-8	N.D.	4	1
10727	Benzo(b)fluoranthene	205-99-2	N.D.	4	1
10727	Benzo(g,h,i)perylene	191-24-2	N.D.	4	1
10727	Benzo(k)fluoranthene	207-08-9	N.D.	4	1
10727	4-Bromophenyl-phenylether	101-55-3	N.D.	18	1
10727	Butylbenzylphthalate	85-68-7	N.D.	72	1
10727	Di-n-butylphthalate	84-74-2	N.D.	72	1
10727	4-Chloro-3-methylphenol	59-50-7	N.D.	18	1
10727	bis(2-Chloroethoxy)methane	111-91-1	N.D.	18	1
10727	bis(2-Chloroethyl)ether	111-44-4	N.D.	18	1

Sample Description: SB-1 Soil
101722001

LL Sample # SW 7640192
LL Group # 1511613
Account # 00721

Project Name: Project 101722001

Collected: 10/16/2014 15:55 by ED

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 10/16/2014 18:05

Reported: 10/27/2014 12:36

12001

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Semivolatiles	SW-846 8270C	ug/kg	ug/kg	
10727	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	18	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.				
10727	2-Chloronaphthalene	91-58-7	N.D.	8	1
10727	2-Chlorophenol	95-57-8	N.D.	18	1
10727	4-Chlorophenyl-phenylether	7005-72-3	N.D.	18	1
10727	Chrysene	218-01-9	N.D.	4	1
10727	Dibenz(a,h)anthracene	53-70-3	N.D.	4	1
10727	1,2-Dichlorobenzene	95-50-1	N.D.	18	1
10727	1,3-Dichlorobenzene	541-73-1	N.D.	18	1
10727	1,4-Dichlorobenzene	106-46-7	N.D.	18	1
10727	3,3'-Dichlorobenzidine	91-94-1	N.D.	110	1
10727	2,4-Dichlorophenol	120-83-2	N.D.	18	1
10727	Diethylphthalate	84-66-2	N.D.	72	1
10727	2,4-Dimethylphenol	105-67-9	N.D.	18	1
10727	Dimethylphthalate	131-11-3	N.D.	72	1
10727	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	180	1
10727	2,4-Dinitrophenol	51-28-5	N.D.	320	1
10727	2,4-Dinitrotoluene	121-14-2	N.D.	72	1
10727	2,6-Dinitrotoluene	606-20-2	N.D.	18	1
10727	1,2-Diphenylhydrazine	122-66-7	N.D.	18	1
10727	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	72	1
10727	Fluoranthene	206-44-0	N.D.	4	1
10727	Fluorene	86-73-7	N.D.	4	1
10727	Hexachlorobenzene	118-74-1	N.D.	4	1
10727	Hexachlorobutadiene	87-68-3	N.D.	18	1
10727	Hexachlorocyclopentadiene	77-47-4	N.D.	180	1
10727	Hexachloroethane	67-72-1	N.D.	36	1
10727	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	4	1
10727	Isophorone	78-59-1	N.D.	18	1
10727	Naphthalene	91-20-3	N.D.	4	1
10727	Nitrobenzene	98-95-3	N.D.	18	1
10727	2-Nitrophenol	88-75-5	N.D.	18	1
10727	4-Nitrophenol	100-02-7	N.D.	180	1
10727	N-Nitrosodimethylamine	62-75-9	N.D.	72	1
10727	N-Nitroso-di-n-propylamine	621-64-7	N.D.	18	1
10727	N-Nitrosodiphenylamine	86-30-6	N.D.	18	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.				
10727	Di-n-octylphthalate	117-84-0	N.D.	72	1
10727	Pentachlorophenol	87-86-5	N.D.	36	1
10727	Phenanthrene	85-01-8	N.D.	4	1
10727	Phenol	108-95-2	N.D.	18	1
10727	Pyrene	129-00-0	N.D.	4	1
10727	1,2,4-Trichlorobenzene	120-82-1	N.D.	18	1
10727	2,4,6-Trichlorophenol	88-06-2	N.D.	18	1

Metals SW-846 6010B mg/kg mg/kg

Sample Description: SB-1 Soil
101722001

LL Sample # SW 7640192
LL Group # 1511613
Account # 00721

Project Name: Project 101722001

Collected: 10/16/2014 15:55 by ED

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 10/16/2014 18:05

Reported: 10/27/2014 12:36

12001

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Metals					
	SW-846 6010B		mg/kg	mg/kg	
06944	Antimony	7440-36-0	1.62 J	0.348	1
06935	Arsenic	7440-38-2	N.D.	0.675	1
06947	Beryllium	7440-41-7	0.891	0.0706	1
06949	Cadmium	7440-43-9	N.D.	0.0348	1
06951	Chromium	7440-47-3	14.4	0.116	1
06953	Copper	7440-50-8	20.2	0.348	1
06955	Lead	7439-92-1	1.60	0.527	1
06961	Nickel	7440-02-0	6.01	0.158	1
06936	Selenium	7782-49-2	N.D.	0.464	1
06966	Silver	7440-22-4	N.D.	0.200	1
06925	Thallium	7440-28-0	N.D.	0.843	1
06972	Zinc	7440-66-6	14.9	0.274	1
SW-846 7471A					
			mg/kg	mg/kg	
00159	Mercury	7439-97-6	N.D.	0.0101	1
Wet Chemistry					
	SM 2540 G-1997		%	%	
00111	Moisture	n.a.	7.0	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/15.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL Volatiles in Soil	SW-846 8260B	1	X142941AA	10/21/2014 17:27	Chelsea B Stong	1.08
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201428935895	10/16/2014 15:55	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201428935895	10/16/2014 15:55	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201428935895	10/16/2014 15:55	Client Supplied	1
10727	PPL/TCL SVOCs in Soil	SW-846 8270C	1	14294SLC026	10/22/2014 10:33	Joseph M Gambler	1
10809	BNA Soil Microwave	SW-846 3546	2	14294SLC026	10/21/2014 18:40	Sally L Appleyard	1
06944	Antimony	SW-846 6010B	1	142905708001	10/21/2014 23:57	Elaine F Stoltzfus	1
06935	Arsenic	SW-846 6010B	1	142905708001	10/21/2014 23:57	Elaine F Stoltzfus	1
06947	Beryllium	SW-846 6010B	1	142905708001	10/21/2014 23:57	Elaine F Stoltzfus	1

Sample Description: SB-1 Soil
101722001

LL Sample # SW 7640192
LL Group # 1511613
Account # 00721

Project Name: Project 101722001

Collected: 10/16/2014 15:55 by ED

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 10/16/2014 18:05

Reported: 10/27/2014 12:36

12001

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06949	Cadmium	SW-846 6010B	1	142905708001	10/21/2014 23:57	Elaine F Stoltzfus	1
06951	Chromium	SW-846 6010B	1	142905708001	10/21/2014 23:57	Elaine F Stoltzfus	1
06953	Copper	SW-846 6010B	1	142905708001	10/21/2014 23:57	Elaine F Stoltzfus	1
06955	Lead	SW-846 6010B	1	142905708001	10/21/2014 23:57	Elaine F Stoltzfus	1
06961	Nickel	SW-846 6010B	1	142905708001	10/21/2014 23:57	Elaine F Stoltzfus	1
06936	Selenium	SW-846 6010B	1	142905708001	10/21/2014 23:57	Elaine F Stoltzfus	1
06966	Silver	SW-846 6010B	1	142905708001	10/21/2014 23:57	Elaine F Stoltzfus	1
06925	Thallium	SW-846 6010B	1	142905708001	10/21/2014 23:57	Elaine F Stoltzfus	1
06972	Zinc	SW-846 6010B	1	142905708001	10/21/2014 23:57	Elaine F Stoltzfus	1
00159	Mercury	SW-846 7471A	1	142905711001	10/20/2014 11:24	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	142905708001	10/20/2014 08:45	Christopher M Klumpp	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	142905711001	10/20/2014 08:36	Christopher M Klumpp	1
00111	Moisture	SM 2540 G-1997	1	14294820005A	10/21/2014 20:12	Scott W Freisher	1

Sample Description: Supply Well Water
101722001

LL Sample # WW 7640193
LL Group # 1511613
Account # 00721

Project Name: Project 101722001

Collected: 10/16/2014 11:30 by ED

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 10/16/2014 18:05

Reported: 10/27/2014 12:36

2001W

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10335	Acrolein	107-02-8	N.D.	40	1
10335	Acrylonitrile	107-13-1	N.D.	4	1
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromodichloromethane	75-27-4	N.D.	0.5	1
10335	Bromoform	75-25-2	N.D.	0.5	1
10335	Bromomethane	74-83-9	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chlorobenzene	108-90-7	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	2-Chloroethyl Vinyl Ether	110-75-8	N.D.	2	1
2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample.					
10335	Chloroform	67-66-3	N.D.	0.5	1
10335	Chloromethane	74-87-3	N.D.	0.5	1
10335	Dibromochloromethane	124-48-1	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.5	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.5	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.5	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.5	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.5	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
10335	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC/MS Semivolatiles SW-846 8270C ug/l					
04678	Acenaphthene	83-32-9	N.D.	0.1	1
04678	Acenaphthylene	208-96-8	N.D.	0.1	1
04678	Anthracene	120-12-7	N.D.	0.1	1
04678	Benzidine	92-87-5	N.D.	21	1
04678	Benzo(a)anthracene	56-55-3	N.D.	0.1	1
04678	Benzo(a)pyrene	50-32-8	N.D.	0.1	1
04678	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	1
04678	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.	0.5	1
04678	Butylbenzylphthalate	85-68-7	N.D.	2	1
04678	Di-n-butylphthalate	84-74-2	N.D.	2	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.	0.5	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.5	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.5	1

Sample Description: Supply Well Water
101722001

LL Sample # WW 7640193

LL Group # 1511613

Account # 00721

Project Name: Project 101722001

Collected: 10/16/2014 11:30 by ED

Rettew Associates

3020 Columbia Avenue

Lancaster PA 17603-4011

Submitted: 10/16/2014 18:05

Reported: 10/27/2014 12:36

2001W

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Semivolatiles	SW-846 8270C	ug/l	ug/l	
04678	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	0.5	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.				
04678	2-Chloronaphthalene	91-58-7	N.D.	0.4	1
04678	2-Chlorophenol	95-57-8	N.D.	0.5	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.5	1
04678	Chrysene	218-01-9	N.D.	0.1	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	1
04678	1,2-Dichlorobenzene	95-50-1	N.D.	0.5	1
04678	1,3-Dichlorobenzene	541-73-1	N.D.	0.5	1
04678	1,4-Dichlorobenzene	106-46-7	N.D.	0.5	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.	2	1
04678	2,4-Dichlorophenol	120-83-2	N.D.	0.5	1
04678	Diethylphthalate	84-66-2	N.D.	2	1
04678	2,4-Dimethylphenol	105-67-9	N.D.	0.5	1
04678	Dimethylphthalate	131-11-3	N.D.	2	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5	1
04678	2,4-Dinitrophenol	51-28-5	N.D.	11	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.	1	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.	0.5	1
04678	1,2-Diphenylhydrazine	122-66-7	N.D.	0.5	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2	1
04678	Fluoranthene	206-44-0	N.D.	0.1	1
04678	Fluorene	86-73-7	N.D.	0.1	1
04678	Hexachlorobenzene	118-74-1	N.D.	0.1	1
04678	Hexachlorobutadiene	87-68-3	N.D.	0.5	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.	5	1
04678	Hexachloroethane	67-72-1	N.D.	1	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	1
04678	Isophorone	78-59-1	N.D.	0.5	1
04678	Naphthalene	91-20-3	N.D.	0.1	1
04678	Nitrobenzene	98-95-3	N.D.	0.5	1
04678	2-Nitrophenol	88-75-5	N.D.	0.5	1
04678	4-Nitrophenol	100-02-7	N.D.	11	1
04678	N-Nitrosodimethylamine	62-75-9	N.D.	2	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.5	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.	0.5	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.				
04678	Di-n-octylphthalate	117-84-0	N.D.	2	1
04678	Pentachlorophenol	87-86-5	N.D.	1	1
04678	Phenanthrene	85-01-8	N.D.	0.1	1
04678	Phenol	108-95-2	N.D.	0.5	1
04678	Pyrene	129-00-0	N.D.	0.1	1
04678	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.5	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	1

Metals**SW-846 6010B****mg/l****mg/l**

Sample Description: Supply Well Water
101722001

LL Sample # WW 7640193
LL Group # 1511613
Account # 00721

Project Name: Project 101722001

Collected: 10/16/2014 11:30 by ED

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 10/16/2014 18:05

Reported: 10/27/2014 12:36

2001W

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals			mg/l	mg/l	
07044	Antimony	7440-36-0	N.D.	0.0051	1
07035	Arsenic	7440-38-2	N.D.	0.0072	1
07047	Beryllium	7440-41-7	N.D.	0.00067	1
07049	Cadmium	7440-43-9	N.D.	0.00033	1
07051	Chromium	7440-47-3	N.D.	0.0013	1
07053	Copper	7440-50-8	0.0053 J	0.0028	1
07055	Lead	7439-92-1	N.D.	0.0047	1
07061	Nickel	7440-02-0	N.D.	0.0016	1
07036	Selenium	7782-49-2	N.D.	0.0048	1
07066	Silver	7440-22-4	N.D.	0.0018	1
07022	Thallium	7440-28-0	N.D.	0.0051	1
07072	Zinc	7440-66-6	0.0244	0.0020	1
SW-846 6010B			mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	1
SW-846 7470A			mg/l	mg/l	

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/15.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	PPL/TCL Volatiles in Water	SW-846 8260B	1	Y142941AA	10/21/2014 15:42	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y142941AA	10/21/2014 15:42	Angela D Sneeringer	1
04678	TCL SW846 Semivolatiles/Waters	SW-846 8270C	1	14294WAG026	10/24/2014 01:32	William H Saadeh	1
00813	BNA Water Extraction	SW-846 3510C	1	14294WAG026	10/21/2014 22:10	Karen L Beyer	1
07044	Antimony	SW-846 6010B	1	142901848005	10/22/2014 19:00	Katlin N Cataldi	1
07035	Arsenic	SW-846 6010B	1	142901848005	10/22/2014 19:00	Katlin N Cataldi	1
07047	Beryllium	SW-846 6010B	1	142901848005	10/22/2014 19:00	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	142901848005	10/22/2014 19:00	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	142901848005	10/22/2014 19:00	Katlin N Cataldi	1
07053	Copper	SW-846 6010B	1	142901848005	10/22/2014 19:00	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	142901848005	10/22/2014 19:00	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	142901848005	10/22/2014 19:00	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	142901848005	10/22/2014 19:00	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	142901848005	10/22/2014 19:00	Katlin N Cataldi	1
07022	Thallium	SW-846 6010B	1	142901848005	10/24/2014 05:23	Tara L Snyder	1
07072	Zinc	SW-846 6010B	1	142901848005	10/22/2014 19:00	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	142905713006	10/21/2014 11:48	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	142901848005	10/20/2014 11:20	Micaela L Dishong	1

Sample Description: Supply Well Water
101722001

LL Sample # WW 7640193
LL Group # 1511613
Account # 00721

Project Name: Project 101722001

Collected: 10/16/2014 11:30 by ED

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 10/16/2014 18:05

Reported: 10/27/2014 12:36

2001W

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05713	WW SW846 Hg Digest	SW-846 7470A	1	142905713006	10/20/2014 11:51	Micaela L Dishong	1
05713	WW SW846 Hg Digest	SW-846 7470A	2	142945713004	10/22/2014 00:30	Annamaria Kuhns	1

Sample Description: Trip Blank Water
101722001

LL Sample # WW 7640194
LL Group # 1511613
Account # 00721

Project Name: Project 101722001

Collected: 10/16/2014

Rettew Associates

Submitted: 10/16/2014 18:05

3020 Columbia Avenue

Reported: 10/27/2014 12:36

Lancaster PA 17603-4011

2001T

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10335	Acrolein	107-02-8	N.D.	40	1
10335	Acrylonitrile	107-13-1	N.D.	4	1
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromodichloromethane	75-27-4	N.D.	0.5	1
10335	Bromoform	75-25-2	N.D.	0.5	1
10335	Bromomethane	74-83-9	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chlorobenzene	108-90-7	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	2-Chloroethyl Vinyl Ether	110-75-8	N.D.	2	1
2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample.					
10335	Chloroform	67-66-3	N.D.	0.5	1
10335	Chloromethane	74-87-3	N.D.	0.5	1
10335	Dibromochloromethane	124-48-1	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.5	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.5	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.5	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.5	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.5	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
10335	Xylene (Total)	1330-20-7	N.D.	0.5	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/15.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	PPL/TCL Volatiles in Water	SW-846 8260B	1	Y142941AA	10/21/2014 15:21	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y142941AA	10/21/2014 15:21	Angela D Sneeringer	1

Quality Control Summary

Client Name: Rettew Associates
Reported: 10/27/14 at 12:36 PM

Group Number: 1511613

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: Q142941AA	Sample number(s): 7640183-7640184, 7640187-7640189							
Benzene	N.D.	25.	ug/kg	91	87	80-120	4	30
Ethylbenzene	N.D.	50.	ug/kg	89	87	80-120	2	30
Isopropylbenzene	N.D.	50.	ug/kg	87	85	76-120	2	30
Methyl Tertiary Butyl Ether	N.D.	25.	ug/kg	92	89	76-122	4	30
Naphthalene	N.D.	50.	ug/kg	82	80	64-120	3	30
Toluene	N.D.	50.	ug/kg	92	88	80-120	4	30
1,2,4-Trimethylbenzene	N.D.	50.	ug/kg	91	87	79-120	4	30
1,3,5-Trimethylbenzene	N.D.	50.	ug/kg	91	85	78-120	6	30
Batch number: Q142951AA	Sample number(s): 7640185-7640186							
Benzene	N.D.	25.	ug/kg	82	82	80-120	1	30
Naphthalene	N.D.	50.	ug/kg	74	75	64-120	1	30
Batch number: X142941AA	Sample number(s): 7640190-7640192							
Acrolein	N.D.	20.	ug/kg	128*	116	58-122	9	30
Acrylonitrile	N.D.	4.	ug/kg	101	99	58-123	2	30
Benzene	N.D.	0.5	ug/kg	105	100	80-120	5	30
Bromodichloromethane	N.D.	1.	ug/kg	96	93	75-120	3	30
Bromoform	N.D.	1.	ug/kg	90	87	70-126	4	30
Bromomethane	N.D.	2.	ug/kg	85	78	32-162	9	30
Carbon Tetrachloride	N.D.	1.	ug/kg	103	96	69-130	7	30
Chlorobenzene	N.D.	1.	ug/kg	97	92	80-120	6	30
Chloroethane	N.D.	2.	ug/kg	92	85	17-171	8	30
Chloroform	N.D.	1.	ug/kg	105	100	80-125	5	30
Chloromethane	N.D.	2.	ug/kg	95	88	56-120	8	30
Dibromochloromethane	N.D.	1.	ug/kg	93	89	77-120	4	30
1,1-Dichloroethane	N.D.	1.	ug/kg	104	101	80-122	3	30
1,2-Dichloroethane	N.D.	1.	ug/kg	104	101	77-130	3	30
1,1-Dichloroethene	N.D.	1.	ug/kg	103	98	73-129	5	30
cis-1,2-Dichloroethene	N.D.	1.	ug/kg	99	96	80-120	3	30
trans-1,2-Dichloroethene	N.D.	1.	ug/kg	103	98	80-129	4	30
1,2-Dichloropropane	N.D.	1.	ug/kg	104	99	80-120	5	30
cis-1,3-Dichloropropene	N.D.	1.	ug/kg	95	92	74-120	3	30
trans-1,3-Dichloropropene	N.D.	1.	ug/kg	99	95	76-120	3	30
Ethylbenzene	N.D.	1.	ug/kg	98	92	80-120	7	30
Methylene Chloride	N.D.	2.	ug/kg	105	101	80-124	4	30
1,1,2,2-Tetrachloroethane	N.D.	1.	ug/kg	99	93	71-123	6	30
Tetrachloroethene	N.D.	1.	ug/kg	96	89	78-120	7	30
Toluene	N.D.	1.	ug/kg	99	94	80-120	5	30
1,1,1-Trichloroethane	N.D.	1.	ug/kg	95	89	63-135	7	30
1,1,2-Trichloroethane	N.D.	1.	ug/kg	97	92	80-120	5	30
Trichloroethene	N.D.	1.	ug/kg	102	97	80-125	4	30
Trichlorofluoromethane	N.D.	2.	ug/kg	93	86	58-133	8	30

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rettew Associates
Reported: 10/27/14 at 12:36 PM

Group Number: 1511613

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Vinyl Chloride	N.D.	1.	ug/kg	93	86	59-120	8	30
Xylene (Total)	N.D.	1.	ug/kg	93	88	80-120	5	30

Batch number: Y142941AA	Sample number(s): 7640193-7640194							
Acrolein	N.D.	40.	ug/l	82	81	59-120	1	30
Acrylonitrile	N.D.	4.	ug/l	83	83	62-120	0	30
Benzene	N.D.	0.5	ug/l	106	108	78-120	2	30
Bromodichloromethane	N.D.	0.5	ug/l	97	98	73-120	1	30
Bromoform	N.D.	0.5	ug/l	90	88	61-120	2	30
Bromomethane	N.D.	0.5	ug/l	59	62	53-130	6	30
Carbon Tetrachloride	N.D.	0.5	ug/l	103	104	74-130	1	30
Chlorobenzene	N.D.	0.5	ug/l	100	102	80-120	1	30
Chloroethane	N.D.	0.5	ug/l	59	62	56-120	5	30
2-Chloroethyl Vinyl Ether	N.D.	2.	ug/l	82	83	62-128	2	30
Chloroform	N.D.	0.5	ug/l	103	105	80-122	2	30
Chloromethane	N.D.	0.5	ug/l	91	94	63-120	3	30
Dibromochloromethane	N.D.	0.5	ug/l	99	100	72-120	1	30
1,1-Dichloroethane	N.D.	0.5	ug/l	103	113	80-120	9	30
1,2-Dichloroethane	N.D.	0.5	ug/l	103	105	65-135	2	30
1,1-Dichloroethene	N.D.	0.5	ug/l	103	100	76-124	3	30
cis-1,2-Dichloroethene	N.D.	0.5	ug/l	105	108	80-120	3	30
trans-1,2-Dichloroethene	N.D.	0.5	ug/l	104	106	80-120	2	30
1,2-Dichloropropane	N.D.	0.5	ug/l	105	108	80-120	3	30
cis-1,3-Dichloropropene	N.D.	0.5	ug/l	99	101	80-120	2	30
trans-1,3-Dichloropropene	N.D.	0.5	ug/l	99	101	76-120	2	30
Ethylbenzene	N.D.	0.5	ug/l	98	101	79-120	2	30
Methylene Chloride	N.D.	2.	ug/l	103	103	80-120	0	30
1,1,2,2-Tetrachloroethane	N.D.	0.5	ug/l	89	91	70-120	3	30
Tetrachloroethene	N.D.	0.5	ug/l	103	104	80-120	1	30
Toluene	N.D.	0.5	ug/l	103	106	80-120	3	30
1,1,1-Trichloroethane	N.D.	0.5	ug/l	82	85	66-126	4	30
1,1,2-Trichloroethane	N.D.	0.5	ug/l	97	99	80-120	2	30
Trichloroethene	N.D.	0.5	ug/l	103	105	80-120	2	30
Trichlorofluoromethane	N.D.	0.5	ug/l	81	77	58-135	4	30
Vinyl Chloride	N.D.	0.5	ug/l	87	87	63-120	0	30
Xylene (Total)	N.D.	0.5	ug/l	99	101	80-120	2	30

Batch number: 14290SLB026	Sample number(s): 7640190-7640191							
Acenaphthene	N.D.	3.	ug/kg	97		83-111		
Acenaphthylene	N.D.	3.	ug/kg	109		83-127		
Anthracene	N.D.	3.	ug/kg	100		82-118		
Benzidine	N.D.	700.	ug/kg	47		21-78		
Benzo(a)anthracene	N.D.	3.	ug/kg	98		76-119		
Benzo(a)pyrene	N.D.	3.	ug/kg	101		84-122		
Benzo(b)fluoranthene	N.D.	3.	ug/kg	101		78-129		
Benzo(g,h,i)perylene	N.D.	3.	ug/kg	98		77-121		
Benzo(k)fluoranthene	N.D.	3.	ug/kg	106		79-120		
4-Bromophenyl-phenylether	N.D.	17.	ug/kg	98		84-120		
Butylbenzylphthalate	N.D.	67.	ug/kg	95		80-118		
Di-n-butylphthalate	N.D.	67.	ug/kg	97		84-120		
4-Chloro-3-methylphenol	N.D.	17.	ug/kg	99		79-127		
bis(2-Chloroethoxy)methane	N.D.	17.	ug/kg	102		65-123		
bis(2-Chloroethyl)ether	N.D.	17.	ug/kg	94		77-115		
bis(2-Chloroisopropyl)ether	N.D.	17.	ug/kg	96		73-114		
2-Chloronaphthalene	N.D.	7.	ug/kg	87		63-146		
2-Chlorophenol	N.D.	17.	ug/kg	94		80-122		

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rettew Associates
Reported: 10/27/14 at 12:36 PM

Group Number: 1511613

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
4-Chlorophenyl-phenylether	N.D.	17.	ug/kg	98		83-115		
Chrysene	N.D.	3.	ug/kg	100		77-116		
Dibenz(a,h)anthracene	N.D.	3.	ug/kg	96		81-123		
1,2-Dichlorobenzene	N.D.	17.	ug/kg	94		79-112		
1,3-Dichlorobenzene	N.D.	17.	ug/kg	91		79-113		
1,4-Dichlorobenzene	N.D.	17.	ug/kg	90		79-112		
3,3'-Dichlorobenzidine	N.D.	100.	ug/kg	62		10-125		
2,4-Dichlorophenol	N.D.	17.	ug/kg	101		81-123		
Diethylphthalate	N.D.	67.	ug/kg	96		81-118		
2,4-Dimethylphenol	N.D.	17.	ug/kg	95		83-120		
Dimethylphthalate	N.D.	67.	ug/kg	96		82-113		
4,6-Dinitro-2-methylphenol	N.D.	170.	ug/kg	93		67-131		
2,4-Dinitrophenol	N.D.	300.	ug/kg	91		42-131		
2,4-Dinitrotoluene	N.D.	67.	ug/kg	98		81-122		
2,6-Dinitrotoluene	N.D.	17.	ug/kg	100		83-120		
1,2-Diphenylhydrazine	N.D.	17.	ug/kg	99		78-122		
bis(2-Ethylhexyl)phthalate	N.D.	67.	ug/kg	96		81-121		
Fluoranthene	N.D.	3.	ug/kg	98		75-118		
Fluorene	N.D.	3.	ug/kg	103		86-118		
Hexachlorobenzene	N.D.	3.	ug/kg	89		80-121		
Hexachlorobutadiene	N.D.	17.	ug/kg	93		78-121		
Hexachlorocyclopentadiene	N.D.	170.	ug/kg	117		60-157		
Hexachloroethane	N.D.	33.	ug/kg	89		78-114		
Indeno(1,2,3-cd)pyrene	N.D.	3.	ug/kg	93		76-122		
Isophorone	N.D.	17.	ug/kg	109		83-119		
Naphthalene	N.D.	3.	ug/kg	98		83-112		
Nitrobenzene	N.D.	17.	ug/kg	99		80-115		
2-Nitrophenol	N.D.	17.	ug/kg	98		83-120		
4-Nitrophenol	N.D.	170.	ug/kg	75		64-121		
N-Nitroso-di-n-propylamine	N.D.	17.	ug/kg	90		70-119		
N-Nitrosodimethylamine	N.D.	67.	ug/kg	99		72-110		
N-Nitrosodiphenylamine	N.D.	17.	ug/kg	96		83-118		
Di-n-octylphthalate	N.D.	67.	ug/kg	107		82-134		
Pentachlorophenol	N.D.	33.	ug/kg	85		46-133		
Phenanthrene	N.D.	3.	ug/kg	97		80-114		
Phenol	N.D.	17.	ug/kg	101		75-117		
Pyrene	N.D.	3.	ug/kg	101		81-114		
1,2,4-Trichlorobenzene	N.D.	17.	ug/kg	98		83-113		
2,4,6-Trichlorophenol	N.D.	17.	ug/kg	99		81-123		
Batch number: 14293SLF026 Sample number(s): 7640183-7640186								
Anthracene	N.D.	3.	ug/kg	99		82-118		
Benzo(a)anthracene	N.D.	3.	ug/kg	97		76-119		
Benzo(a)pyrene	N.D.	3.	ug/kg	100		84-122		
Benzo(b)fluoranthene	N.D.	3.	ug/kg	103		78-129		
Benzo(g,h,i)perylene	N.D.	3.	ug/kg	98		77-121		
Chrysene	N.D.	3.	ug/kg	102		77-116		
Fluorene	N.D.	3.	ug/kg	97		86-118		
Phenanthrene	N.D.	3.	ug/kg	95		80-114		
Pyrene	N.D.	3.	ug/kg	94		81-114		
Batch number: 14294SLC026 Sample number(s): 7640192								
Acenaphthene	N.D.	3.	ug/kg	98		83-111		
Acenaphthylene	N.D.	3.	ug/kg	114		83-127		
Anthracene	N.D.	3.	ug/kg	102		82-118		
Benzidine	N.D.	700.	ug/kg	45		21-78		

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rettew Associates
Reported: 10/27/14 at 12:36 PM

Group Number: 1511613

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Benzo(a)anthracene	N.D.	3.	ug/kg	104		76-119		
Benzo(a)pyrene	N.D.	3.	ug/kg	105		84-122		
Benzo(b)fluoranthene	N.D.	3.	ug/kg	111		78-129		
Benzo(g,h,i)perylene	N.D.	3.	ug/kg	103		77-121		
Benzo(k)fluoranthene	N.D.	3.	ug/kg	105		79-120		
4-Bromophenyl-phenylether	N.D.	17.	ug/kg	102		84-120		
Butylbenzylphthalate	N.D.	67.	ug/kg	105		80-118		
Di-n-butylphthalate	N.D.	67.	ug/kg	101		84-120		
4-Chloro-3-methylphenol	N.D.	17.	ug/kg	104		79-127		
bis(2-Chloroethoxy)methane	N.D.	17.	ug/kg	101		65-123		
bis(2-Chloroethyl)ether	N.D.	17.	ug/kg	93		77-115		
bis(2-Chloroisopropyl)ether	N.D.	17.	ug/kg	94		73-114		
2-Chloronaphthalene	N.D.	7.	ug/kg	93		63-146		
2-Chlorophenol	N.D.	17.	ug/kg	96		80-122		
4-Chlorophenyl-phenylether	N.D.	17.	ug/kg	102		83-115		
Chrysene	N.D.	3.	ug/kg	108		77-116		
Dibenz(a,h)anthracene	N.D.	3.	ug/kg	105		81-123		
1,2-Dichlorobenzene	N.D.	17.	ug/kg	94		79-112		
1,3-Dichlorobenzene	N.D.	17.	ug/kg	90		79-113		
1,4-Dichlorobenzene	N.D.	17.	ug/kg	92		79-112		
3,3'-Dichlorobenzidine	N.D.	100.	ug/kg	64		10-125		
2,4-Dichlorophenol	N.D.	17.	ug/kg	106		81-123		
Diethylphthalate	N.D.	67.	ug/kg	102		81-118		
2,4-Dimethylphenol	N.D.	17.	ug/kg	100		83-120		
Dimethylphthalate	N.D.	67.	ug/kg	99		82-113		
4,6-Dinitro-2-methylphenol	N.D.	170.	ug/kg	99		67-131		
2,4-Dinitrophenol	N.D.	300.	ug/kg	82		42-131		
2,4-Dinitrotoluene	N.D.	67.	ug/kg	102		81-122		
2,6-Dinitrotoluene	N.D.	17.	ug/kg	107		83-120		
1,2-Diphenylhydrazine	N.D.	17.	ug/kg	103		78-122		
bis(2-Ethylhexyl)phthalate	N.D.	67.	ug/kg	105		81-121		
Fluoranthene	N.D.	3.	ug/kg	99		75-118		
Fluorene	N.D.	3.	ug/kg	103		86-118		
Hexachlorobenzene	N.D.	3.	ug/kg	96		80-121		
Hexachlorobutadiene	N.D.	17.	ug/kg	103		78-121		
Hexachlorocyclopentadiene	N.D.	170.	ug/kg	134		60-157		
Hexachloroethane	N.D.	33.	ug/kg	93		78-114		
Indeno(1,2,3-cd)pyrene	N.D.	3.	ug/kg	102		76-122		
Isophorone	N.D.	17.	ug/kg	110		83-119		
Naphthalene	N.D.	3.	ug/kg	101		83-112		
Nitrobenzene	N.D.	17.	ug/kg	105		80-115		
2-Nitrophenol	N.D.	17.	ug/kg	102		83-120		
4-Nitrophenol	N.D.	170.	ug/kg	96		64-121		
N-Nitroso-di-n-propylamine	N.D.	17.	ug/kg	89		70-119		
N-Nitrosodimethylamine	N.D.	67.	ug/kg	90		72-110		
N-Nitrosodiphenylamine	N.D.	17.	ug/kg	101		83-118		
Di-n-octylphthalate	N.D.	67.	ug/kg	114		82-134		
Pentachlorophenol	N.D.	33.	ug/kg	92		46-133		
Phenanthrene	N.D.	3.	ug/kg	98		80-114		
Phenol	N.D.	17.	ug/kg	93		75-117		
Pyrene	N.D.	3.	ug/kg	99		81-114		
1,2,4-Trichlorobenzene	N.D.	17.	ug/kg	105		83-113		
2,4,6-Trichlorophenol	N.D.	17.	ug/kg	101		81-123		
Batch number: 14294WAG026 Sample number(s): 7640193								
Acenaphthene	N.D.	0.1	ug/l	104	103	80-112	1	30

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rettew Associates
Reported: 10/27/14 at 12:36 PM

Group Number: 1511613

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Acenaphthylene	N.D.	0.1	ug/l	111	109	84-125	2	30
Anthracene	N.D.	0.1	ug/l	109	106	82-116	3	30
Benzidine	N.D.	20.	ug/l	63	59	20-94	6	30
Benzo (a) anthracene	N.D.	0.1	ug/l	113	111	81-126	1	30
Benzo (a) pyrene	N.D.	0.1	ug/l	115	113	82-116	2	30
Benzo (b) fluoranthene	N.D.	0.1	ug/l	110	108	82-121	1	30
Benzo (g,h,i) perylene	N.D.	0.1	ug/l	104	101	76-128	3	30
Benzo (k) fluoranthene	N.D.	0.1	ug/l	114	112	81-122	2	30
4-Bromophenyl-phenylether	N.D.	0.5	ug/l	101	98	82-118	3	30
Butylbenzylphthalate	N.D.	2.	ug/l	110	110	73-122	0	30
Di-n-butylphthalate	N.D.	2.	ug/l	102	100	80-119	2	30
4-Chloro-3-methylphenol	N.D.	0.5	ug/l	108	108	78-118	0	30
bis(2-Chloroethoxy)methane	N.D.	0.5	ug/l	105	103	77-115	2	30
bis(2-Chloroethyl)ether	N.D.	0.5	ug/l	105	103	78-112	2	30
bis(2-Chloroisopropyl)ether	N.D.	0.5	ug/l	128	127	54-128	1	30
2-Chloronaphthalene	N.D.	0.4	ug/l	102	100	66-125	1	30
2-Chlorophenol	N.D.	0.5	ug/l	104	103	76-111	1	30
4-Chlorophenyl-phenylether	N.D.	0.5	ug/l	100	98	78-119	2	30
Chrysene	N.D.	0.1	ug/l	117	117	81-120	0	30
Dibenz (a,h) anthracene	N.D.	0.1	ug/l	105	103	80-130	2	30
1,2-Dichlorobenzene	N.D.	0.5	ug/l	99	98	62-116	2	30
1,3-Dichlorobenzene	N.D.	0.5	ug/l	94	93	57-115	1	30
1,4-Dichlorobenzene	N.D.	0.5	ug/l	95	95	60-115	0	30
3,3'-Dichlorobenzidine	N.D.	2.	ug/l	78	74	39-111	5	30
2,4-Dichlorophenol	N.D.	0.5	ug/l	104	104	84-119	0	30
Diethylphthalate	N.D.	2.	ug/l	93	91	70-118	2	30
2,4-Dimethylphenol	N.D.	0.5	ug/l	104	102	75-110	1	30
Dimethylphthalate	N.D.	2.	ug/l	79	77	43-128	2	30
4,6-Dinitro-2-methylphenol	N.D.	5.	ug/l	90	92	63-131	3	30
2,4-Dinitrophenol	N.D.	10.	ug/l	54	60	39-130	11	30
2,4-Dinitrotoluene	N.D.	1.	ug/l	111	110	84-126	1	30
2,6-Dinitrotoluene	N.D.	0.5	ug/l	111	111	81-124	0	30
1,2-Diphenylhydrazine	N.D.	0.5	ug/l	107	105	74-124	2	30
bis(2-Ethylhexyl)phthalate	N.D.	2.	ug/l	115	115	78-124	0	30
Fluoranthene	N.D.	0.1	ug/l	108	106	82-121	2	30
Fluorene	N.D.	0.1	ug/l	104	104	80-117	0	30
Hexachlorobenzene	N.D.	0.1	ug/l	94	92	80-119	2	30
Hexachlorobutadiene	N.D.	0.5	ug/l	83	82	55-124	1	30
Hexachlorocyclopentadiene	N.D.	5.	ug/l	77	85	18-130	10	30
Hexachloroethane	N.D.	1.	ug/l	84	84	55-109	1	30
Indeno(1,2,3-cd)pyrene	N.D.	0.1	ug/l	100	98	80-126	2	30
Isophorone	N.D.	0.5	ug/l	116	116	81-124	1	30
Naphthalene	N.D.	0.1	ug/l	100	99	75-108	1	30
Nitrobenzene	N.D.	0.5	ug/l	115	115	77-119	1	30
2-Nitrophenol	N.D.	0.5	ug/l	112	111	82-121	1	30
4-Nitrophenol	N.D.	10.	ug/l	53	52	20-89	2	30
N-Nitroso-di-n-propylamine	N.D.	0.5	ug/l	108	106	71-117	2	30
N-Nitrosodimethylamine	N.D.	2.	ug/l	85	84	38-98	2	30
N-Nitrosodiphenylamine	N.D.	0.5	ug/l	100	98	80-115	2	30
Di-n-octylphthalate	N.D.	2.	ug/l	113	112	78-129	1	30
Pentachlorophenol	N.D.	1.	ug/l	76	75	60-130	1	30
Phenanthrene	N.D.	0.1	ug/l	105	103	81-114	2	30
Phenol	N.D.	0.5	ug/l	63	62	25-80	2	30
Pyrene	N.D.	0.1	ug/l	106	105	81-112	1	30
1,2,4-Trichlorobenzene	N.D.	0.5	ug/l	100	99	68-116	1	30
2,4,6-Trichlorophenol	N.D.	0.5	ug/l	103	103	84-119	0	30

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rettew Associates
Reported: 10/27/14 at 12:36 PM

Group Number: 1511613

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 142901848005	Sample number(s): 7640193							
Antimony	N.D.	0.0051	mg/l	101		88-111		
Arsenic	N.D.	0.0072	mg/l	105		90-116		
Beryllium	N.D.	0.00067	mg/l	102		90-111		
Cadmium	N.D.	0.00033	mg/l	100		90-112		
Chromium	N.D.	0.0013	mg/l	99		90-110		
Copper	N.D.	0.0028	mg/l	102		90-112		
Lead	N.D.	0.0047	mg/l	98		88-116		
Nickel	N.D.	0.0016	mg/l	103		90-117		
Selenium	N.D.	0.0048	mg/l	99		89-113		
Silver	N.D.	0.0018	mg/l	96		80-120		
Thallium	N.D.	0.0051	mg/l	106		85-120		
Zinc	0.0041 J	0.0020	mg/l	101		90-110		
Batch number: 142905708001	Sample number(s): 7640190-7640192							
Antimony	N.D.	0.330	mg/kg	108		80-120		
Arsenic	N.D.	0.640	mg/kg	107		80-120		
Beryllium	N.D.	0.0670	mg/kg	102		80-120		
Cadmium	0.0370 J	0.0330	mg/kg	105		80-120		
Chromium	N.D.	0.110	mg/kg	102		80-120		
Copper	N.D.	0.330	mg/kg	105		80-120		
Lead	N.D.	0.500	mg/kg	107		80-120		
Nickel	N.D.	0.150	mg/kg	107		80-120		
Selenium	0.448 J	0.440	mg/kg	109		80-120		
Silver	N.D.	0.190	mg/kg	89		80-120		
Thallium	N.D.	0.800	mg/kg	111		80-120		
Zinc	1.35 J	0.260	mg/kg	108		80-120		
Batch number: 142905711001	Sample number(s): 7640190,7640192							
Mercury	0.0622 J	0.0100	mg/kg	98		80-120		
Batch number: 142905713006	Sample number(s): 7640193							
Mercury	N.D.	0.00006	mg/l	82		80-120		
		0						
Batch number: 142935711002	Sample number(s): 7640191							
Mercury	N.D.	0.0100	mg/kg	92		80-120		
Batch number: 14294820005A	Sample number(s): 7640183-7640192							
Moisture				100		99-101		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 14290SLB026	Sample number(s): 7640190-7640191 UNSPK: P637266								
Acenaphthene	74	71	55-132	3	30				
Acenaphthylene	109	110	53-143	1	30				
Anthracene	98	95	42-147	3	30				

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rettew Associates
Reported: 10/27/14 at 12:36 PM

Group Number: 1511613

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Benzidine	49	50	21-64	3	30				
Benzo(a)anthracene	97	86	32-150	10	30				
Benzo(a)pyrene	100	98	36-151	2	30				
Benzo(b)fluoranthene	97	85	29-150	12	30				
Benzo(g,h,i)perylene	99	92	41-147	8	30				
Benzo(k)fluoranthene	107	104	35-146	3	30				
4-Bromophenyl-phenylether	95	95	58-142	0	30				
Butylbenzylphthalate	93	95	50-137	1	30				
Di-n-butylphthalate	95	95	57-130	0	30				
4-Chloro-3-methylphenol	99	100	39-150	1	30				
bis(2-Chloroethoxy)methane	101	101	54-128	0	30				
bis(2-Chloroethyl)ether	100	92	69-114	9	30				
bis(2-Chloroisopropyl)ether	101	93	62-120	9	30				
2-Chloronaphthalene	84	88	40-156	4	30				
2-Chlorophenol	100	91	35-152	10	30				
4-Chlorophenyl-phenylether	97	97	56-130	0	30				
Chrysene	97	88	28-146	9	30				
Dibenz(a,h)anthracene	93	91	54-142	2	30				
1,2-Dichlorobenzene	-927 (2)	-1012 (2)	45-133	64*	30				
1,3-Dichlorobenzene	99	87	45-129	12	30				
1,4-Dichlorobenzene	89	77	44-132	13	30				
3,3'-Dichlorobenzidine	54	53	10-143	2	30				
2,4-Dichlorophenol	105	102	39-153	3	30				
Diethylphthalate	94	96	54-127	3	30				
2,4-Dimethylphenol	93	92	38-140	1	30				
Dimethylphthalate	93	97	45-135	4	30				
4,6-Dinitro-2-methylphenol	83	76	10-148	9	30				
2,4-Dinitrophenol	72	58	20-143	22	30				
2,4-Dinitrotoluene	96	98	39-144	2	30				
2,6-Dinitrotoluene	99	103	54-134	4	30				
1,2-Diphenylhydrazine	97	97	67-128	0	30				
bis(2-Ethylhexyl)phthalate	95	94	52-138	1	30				
Fluoranthene	74	45	41-135	26	30				
Fluorene	81	76	55-128	5	30				
Hexachlorobenzene	89	88	46-132	1	30				
Hexachlorobutadiene	95	93	65-125	2	30				
Hexachlorocyclopentadiene	75	92	10-153	20	30				
Hexachloroethane	94	84	24-138	11	30				
Indeno(1,2,3-cd)pyrene	93	85	44-147	9	30				
Isophorone	110	107	68-119	3	30				
Naphthalene	27*	20*	44-142	7	30				
Nitrobenzene	100	96	41-141	4	30				
2-Nitrophenol	96	96	45-146	0	30				
4-Nitrophenol	71	73	25-142	2	30				
N-Nitroso-di-n-propylamine	93	87	58-126	8	30				
N-Nitrosodimethylamine	102	84	61-110	19	30				
N-Nitrosodiphenylamine	97	97	59-135	1	30				
Di-n-octylphthalate	107	104	54-151	3	30				
Pentachlorophenol	82	80	23-145	3	30				
Phenanthrene	32*	4*	42-141	25	30				
Phenol	108	99	61-130	9	30				

*- Outside of specification

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rettew Associates
Reported: 10/27/14 at 12:36 PM

Group Number: 1511613

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Pyrene	85	65	37-140	18	30				
1,2,4-Trichlorobenzene	102	99	50-139	2	30				
2,4,6-Trichlorophenol	97	95	60-136	2	30				
Batch number: 14293SLF026 Sample number(s): 7640183-7640186 UNSPK: 7640183									
Anthracene	94	99	42-147	5	30				
Benzo(a)anthracene	94	95	32-150	1	30				
Benzo(a)pyrene	97	97	36-151	0	30				
Benzo(b)fluoranthene	102	99	29-150	3	30				
Benzo(g,h,i)perylene	95	96	41-147	2	30				
Chrysene	98	101	28-146	3	30				
Fluorene	94	97	55-128	2	30				
Phenanthrene	91	96	42-141	5	30				
Pyrene	91	93	37-140	2	30				
Batch number: 14294SLC026 Sample number(s): 7640192 UNSPK: 7640192									
Acenaphthene	92	99	55-132	7	30				
Acenaphthylene	104	115	53-143	10	30				
Anthracene	96	104	42-147	8	30				
Benzidine	0*	0*	21-64	0	30				
Benzo(a)anthracene	95	100	32-150	6	30				
Benzo(a)pyrene	100	103	36-151	4	30				
Benzo(b)fluoranthene	106	108	29-150	1	30				
Benzo(g,h,i)perylene	97	100	41-147	2	30				
Benzo(k)fluoranthene	100	105	35-146	5	30				
4-Bromophenyl-phenylether	96	101	58-142	6	30				
Butylbenzylphthalate	99	103	50-137	5	30				
Di-n-butylphthalate	94	102	57-130	7	30				
4-Chloro-3-methylphenol	96	103	39-150	7	30				
bis(2-Chloroethoxy)methane	94	97	54-128	4	30				
bis(2-Chloroethyl)ether	87	97	69-114	11	30				
bis(2-Chloroisopropyl)ether	89	96	62-120	7	30				
2-Chloronaphthalene	88	93	40-156	5	30				
2-Chlorophenol	93	100	35-152	7	30				
4-Chlorophenyl-phenylether	92	102	56-130	10	30				
Chrysene	100	106	28-146	6	30				
Dibenz(a,h)anthracene	97	102	54-142	5	30				
1,2-Dichlorobenzene	91	96	45-133	6	30				
1,3-Dichlorobenzene	88	97	45-129	10	30				
1,4-Dichlorobenzene	88	96	44-132	9	30				
3,3'-Dichlorobenzidine	56	67	10-143	17	30				
2,4-Dichlorophenol	96	104	39-153	8	30				
Diethylphthalate	94	102	54-127	8	30				
2,4-Dimethylphenol	75	88	38-140	16	30				
Dimethylphthalate	94	100	45-135	7	30				
4,6-Dinitro-2-methylphenol	93	105	10-148	13	30				
2,4-Dinitrophenol	80	87	20-143	8	30				
2,4-Dinitrotoluene	94	104	39-144	10	30				
2,6-Dinitrotoluene	99	109	54-134	10	30				
1,2-Diphenylhydrazine	98	106	67-128	8	30				
bis(2-Ethylhexyl)phthalate	97	103	52-138	7	30				
Fluoranthene	92	99	41-135	7	30				

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rettew Associates
Reported: 10/27/14 at 12:36 PM

Group Number: 1511613

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Fluorene	94	104	55-128	9	30				
Hexachlorobenzene	91	96	46-132	5	30				
Hexachlorobutadiene	94	100	65-125	6	30				
Hexachlorocyclopentadiene	117	132	10-153	12	30				
Hexachloroethane	91	99	24-138	8	30				
Indeno(1,2,3-cd)pyrene	97	99	44-147	2	30				
Isophorone	103	107	68-119	4	30				
Naphthalene	94	98	44-142	4	30				
Nitrobenzene	95	101	41-141	6	30				
2-Nitrophenol	94	100	45-146	6	30				
4-Nitrophenol	89	97	25-142	8	30				
N-Nitroso-di-n-propylamine	85	94	58-126	10	30				
N-Nitrosodimethylamine	89	95	61-110	7	30				
N-Nitrosodiphenylamine	89	100	59-135	12	30				
Di-n-octylphthalate	106	112	54-151	6	30				
Pentachlorophenol	38	49	23-145	26	30				
Phenanthrene	93	101	42-141	8	30				
Phenol	89	95	61-130	7	30				
Pyrene	94	98	37-140	5	30				
1,2,4-Trichlorobenzene	96	101	50-139	5	30				
2,4,6-Trichlorophenol	80	93	60-136	15	30				

Batch number: 142901848005	Sample number(s): 7640193 UNSPK: P639712 BKG: P639712								
Antimony	104	103	81-122	0	20	N.D.	N.D.	0 (1)	20
Arsenic	105	106	81-123	1	20	N.D.	N.D.	0 (1)	20
Beryllium	104	103	87-114	1	20	N.D.	N.D.	0 (1)	20
Cadmium	102	102	75-122	0	20	N.D.	N.D.	0 (1)	20
Chromium	102	100	76-120	1	20	N.D.	N.D.	0 (1)	20
Copper	104	103	86-122	1	20	N.D.	N.D.	0 (1)	20
Lead	101	99	75-125	2	20	N.D.	N.D.	0 (1)	20
Nickel	104	104	79-123	0	20	N.D.	N.D.	0 (1)	20
Selenium	99	96	75-125	3	20	0.0054 J	N.D.	200* (1)	20
Silver	98	97	75-125	0	20	N.D.	N.D.	0 (1)	20
Thallium	106	106	75-125	0	20	N.D.	N.D.	0 (1)	20
Zinc	107	100	80-125	6	20	0.0062 J	0.0046 J	31* (1)	20

Batch number: 142905708001	Sample number(s): 7640190-7640192 UNSPK: P640361 BKG: P640361								
Antimony	68*	84	75-125	15	20	9.91	5.55	56* (1)	20
Arsenic	99	103	75-125	1	20	8.70	7.10	20 (1)	20
Beryllium	104	105	83-119	1	20	0.312 J	0.264 J	16 (1)	20
Cadmium	129*	95	75-120	32*	20	N.D.	0.241 J	200* (1)	20
Chromium	58*	102	75-125	16	20	34.9	47.4	30*	20
Copper	934 (2)	-9 (2)	75-125	93*	20	136	80.8	51*	20
Lead	-2386	-4241	75-125	14	20	2,410	1,620	39*	20
	(2)	(2)							
Nickel	96	109	75-125	8	20	22.3	16.3	31*	20
Selenium	78	50*	75-125	46*	20	N.D.	N.D.	0 (1)	20
Silver	95	91	75-125	6	20	0.194 J	0.216 J	11 (1)	20
Thallium	90	91	78-125	1	20	2.11 J	1.45 J	37* (1)	20
Zinc	233*	61*	75-125	41*	20	137	115	18	20

Batch number: 142905711001 Sample number(s): 7640190,7640192 UNSPK: P641098 BKG: P641098

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rettew Associates
Reported: 10/27/14 at 12:36 PM

Group Number: 1511613

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Mercury	202021 (2)	845884 (2)	80-120	54*	20	1,040	1,190	14	20
Batch number: 142905713006 Mercury	Sample number(s): 7640193 UNSPK: P639702 BKG: P639702 79* 82 80-120 4 20 N.D. N.D. 0 (1) 20								
Batch number: 142935711002 Mercury	Sample number(s): 7640191 UNSPK: P640361 BKG: P640361 183* 120 80-120 17 20 0.354 0.502 35* (1) 20								
Batch number: 14294820005A Moisture	Sample number(s): 7640183-7640192 BKG: 7640187 27.8 29.0 4 5								

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTE/MTBE/Cumene/Naph/TMBs
Batch number: Q142941AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7640183	66	73	72	70
7640184	73	82	82	82
7640187	56	61	63	69
7640188	61	68	69	66
7640189	74	82	83	80
Blank	85	97	93	88
LCS	92	95	97	92
LCSD	87	92	92	89
Limits:	50-141	54-135	52-141	50-131

Analysis Name: Benzene, Naphthalene
Batch number: Q142951AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7640185	72	79	85	94
7640186	60	70	69	86
Blank	79	86	84	81
LCS	83	87	87	83
LCSD	84	88	87	83
Limits:	50-141	54-135	52-141	50-131

Analysis Name: PPL/TCL Volatiles in Soil
Batch number: X142941AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7640190	100	99	100	98
7640191	103	104	109	84
7640192	104	106	99	98
Blank	102	101	100	98
LCS	100	97	102	104

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rettew Associates
Reported: 10/27/14 at 12:36 PM

Group Number: 1511613

Surrogate Quality Control

LCS	100	97	101	103
Limits:	50-141	54-135	52-141	50-131

Analysis Name: PPL/TCL Volatiles in Water
Batch number: Y142941AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7640193	99	100	99	91
7640194	98	100	99	91
Blank	98	99	99	91
LCS	97	101	102	97
LCS	96	101	101	106
Limits:	80-116	77-113	80-113	78-113

Analysis Name: PPL/TCL SVOCs in Soil
Batch number: 14290SLB026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
7640190	88	90	82	87	88	101
7640191	88	87	67	85	86	94
Blank	90	96	89	94	96	108
LCS	93	95	88	94	93	106
MS	97	100	81	93	91	104
MSD	88	91	78	91	93	104
Limits:	44-129	40-141	36-142	54-123	63-124	61-142

Analysis Name: PAH 8270 (microwave)
Batch number: 14293SLF026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
7640183	89	88	99
7640184	90	92	101
7640185	90	92	99
7640186	84	88	93
Blank	91	93	105
LCS	91	90	100
MS	88	87	96
MSD	89	89	98
Limits:	54-123	63-124	61-142

Analysis Name: PPL/TCL SVOCs in Soil
Batch number: 14294SLC026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
7640192	92	97	92	96	99	110
Blank	91	98	95	96	99	109
LCS	89	94	94	97	95	105
MS	87	88	71	90	87	101
MSD	93	96	81	93	94	106
Limits:	44-129	40-141	36-142	54-123	63-124	61-142

Analysis Name: TCL SW846 Semivolatiles/Waters
Batch number: 14294WAG026

	2-Fluorophenol	Phenol-d6	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
7640193	68	47	82	104	96	110
Blank	61	41	69	90	81	82
LCS	79	54	87	107	96	106
LCS	79	54	86	108	96	105
Limits:	10-107	10-83	22-150	60-123	67-116	40-147

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rettew Associates
Reported: 10/27/14 at 12:36 PM

Group Number: 1511613

Surrogate Quality Control

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

362914

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m³	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Data Qualifiers:

C – result confirmed by reanalysis.

J - estimated value – The result is \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns $>25\%$
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is $<$ CRDL, but \geq IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

February 17, 2015

Project: Project 101722001

Submittal Date: 02/05/2015

Group Number: 1536371

PO Number: 101722001

State of Sample Origin: PA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
SB-12 @ 5 Ft Grab Soil	7762626
SB-11 @ 14 Ft Grab Soil	7762627
SB-21 @ 8 Ft Grab Soil	7762628
SB-21 @ 10 Ft Grab Soil	7762629
SB-13 @ 10 Ft Grab Soil	7762630
SB-14 @ 11 Ft Grab Soil	7762631
SB-15 @ 11 Ft Grab Soil	7762632
SB-12 @ 8 Ft Grab Soil	7762633
SB-12 @ 12 Ft Grab Soil	7762634
SB-12 @ 18 Ft Grab Soil	7762635
SB-18 @ 10 Ft Grab Soil	7762636
SB-18 @ 13 Ft Grab Soil	7762637
SB-18 @ 15 Ft Grab Soil	7762638
SB-19 @ 10 Ft Grab Soil	7762639
SB-16 @ 12 Ft Grab Soil	7762640
SB-20 @ 8 Ft Grab Soil	7762641
SB-20 @ 11 Ft Grab Soil	7762642
SB-20 @ 15 Ft Grab Soil	7762643
SB-17 @ 7 Ft Grab Soil	7762644
SB-17 @ 11 Ft Grab Soil	7762645
SB-17 @ 15 Ft Grab Soil	7762646

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>.

ELECTRONIC
COPY TO

Rettew Associates

Attn: Ed Dzedzic

Respectfully Submitted,



Stacy L. Butt
Specialist

(717) 556-7236

Sample Description: SB-12 @ 5 Ft Grab Soil
101722001

LL Sample # SW 7762626
LL Group # 1536371
Account # 00721

Project Name: Project 101722001

Collected: 02/04/2015 14:00 by DB

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 02/05/2015 18:19

Reported: 02/17/2015 10:18

S12-5

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	29	46.38
10237	Ethylbenzene	100-41-4	480	57	46.38
10237	Isopropylbenzene	98-82-8	250 J	57	46.38
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	29	46.38
10237	Naphthalene	91-20-3	880	57	46.38
10237	Toluene	108-88-3	N.D.	57	46.38
10237	1,2,4-Trimethylbenzene	95-63-6	6,600	57	46.38
10237	1,3,5-Trimethylbenzene	108-67-8	2,600	57	46.38
10237	Xylene (Total)	1330-20-7	1,100	57	46.38

Wet Chemistry	SM 2540 G-1997	%	%	
00111	Moisture	n.a.	18.7	0.50
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.			

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q150391AA	02/08/2015 12:52	Sarah A Guill	46.38
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201503636746	02/04/2015 14:00	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15042820006A	02/11/2015 20:49	Scott W Freisher	1

Sample Description: SB-11 @ 14 Ft Grab Soil
101722001

LL Sample # SW 7762627
LL Group # 1536371
Account # 00721

Project Name: Project 101722001

Collected: 02/05/2015 10:00 by DB

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 02/05/2015 18:19

Reported: 02/17/2015 10:18

S1114

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	29	48.45
10237	Ethylbenzene	100-41-4	N.D.	57	48.45
10237	Isopropylbenzene	98-82-8	N.D.	57	48.45
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	29	48.45
10237	Naphthalene	91-20-3	N.D.	57	48.45
10237	Toluene	108-88-3	N.D.	57	48.45
10237	1,2,4-Trimethylbenzene	95-63-6	79 J	57	48.45
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	57	48.45
10237	Xylene (Total)	1330-20-7	N.D.	57	48.45

Wet Chemistry	SM 5310 B	% by wt.	% by wt.
	modified-2000		
02079	TOC Solids/Sludges Combustion	n.a.	N.D.
			0.0118
			1

Wet Chemistry	SM 2540 G-1997	%	%
00111	Moisture	n.a.	15.4
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.		
			0.50
			1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q150391AA	02/08/2015 13:15	Sarah A Guill	48.45
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201503636746	02/05/2015 10:00	Client Supplied	1
02079	TOC Solids/Sludges Combustion	SM 5310 B modified-2000	1	15046049531A	02/15/2015 23:23	James S Mathiot	1
00111	Moisture	SM 2540 G-1997	1	15042820006A	02/11/2015 20:49	Scott W Freisher	1

Sample Description: SB-21 @ 8 Ft Grab Soil
101722001

LL Sample # SW 7762628
LL Group # 1536371
Account # 00721

Project Name: Project 101722001

Collected: 02/05/2015 10:50 by DB

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 02/05/2015 18:19

Reported: 02/17/2015 10:18

S21-8

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	33	51.02
10237	Ethylbenzene	100-41-4	N.D.	66	51.02
10237	Isopropylbenzene	98-82-8	N.D.	66	51.02
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	33	51.02
10237	Naphthalene	91-20-3	76 J	66	51.02
10237	Toluene	108-88-3	N.D.	66	51.02
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	66	51.02
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	66	51.02
10237	Xylene (Total)	1330-20-7	N.D.	66	51.02

Wet Chemistry	SM 2540 G-1997	%	%	
00111	Moisture	n.a.	22.2	0.50
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.			

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q150391AA	02/08/2015 13:38	Sarah A Guill	51.02
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201503636746	02/05/2015 10:50	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15042820006A	02/11/2015 20:49	Scott W Freisher	1

Sample Description: SB-21 @ 10 Ft Grab Soil
101722001

LL Sample # SW 7762629
LL Group # 1536371
Account # 00721

Project Name: Project 101722001

Collected: 02/05/2015 10:55 by DB

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 02/05/2015 18:19

Reported: 02/17/2015 10:18

S2110

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10237	Benzene	71-43-2	30 J	26	45.79
10237	Ethylbenzene	100-41-4	180 J	51	45.79
10237	Isopropylbenzene	98-82-8	N.D.	51	45.79
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	26	45.79
10237	Naphthalene	91-20-3	N.D.	51	45.79
10237	Toluene	108-88-3	270	51	45.79
10237	1,2,4-Trimethylbenzene	95-63-6	670	51	45.79
10237	1,3,5-Trimethylbenzene	108-67-8	240 J	51	45.79
10237	Xylene (Total)	1330-20-7	1,100	51	45.79
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	10.6	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q150391AA	02/08/2015 14:01	Sarah A Guill	45.79
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201503636746	02/05/2015 10:55	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15042820006A	02/11/2015 20:49	Scott W Freisher	1

Sample Description: SB-13 @ 10 Ft Grab Soil
101722001

LL Sample # SW 7762630
LL Group # 1536371
Account # 00721

Project Name: Project 101722001

Collected: 02/05/2015 11:20 by DB

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 02/05/2015 18:19

Reported: 02/17/2015 10:18

S1310

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	30	48.26
10237	Ethylbenzene	100-41-4	N.D.	60	48.26
10237	Isopropylbenzene	98-82-8	N.D.	60	48.26
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	30	48.26
10237	Naphthalene	91-20-3	N.D.	60	48.26
10237	Toluene	108-88-3	N.D.	60	48.26
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	60	48.26
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	60	48.26
10237	Xylene (Total)	1330-20-7	N.D.	60	48.26

Wet Chemistry	SM 2540 G-1997	%	%	
00111	Moisture	n.a.	19.4	0.50
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.			

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q150391AA	02/08/2015 14:24	Sarah A Guill	48.26
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201503636746	02/05/2015 11:20	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15042820006A	02/11/2015 20:49	Scott W Freisher	1

Sample Description: SB-14 @ 11 Ft Grab Soil
101722001

LL Sample # SW 7762631
LL Group # 1536371
Account # 00721

Project Name: Project 101722001

Collected: 02/05/2015 11:35 by DB

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 02/05/2015 18:19

Reported: 02/17/2015 10:18

S1411

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10237	Benzene	71-43-2	N.D.	29 ug/kg	44.4
10237	Ethylbenzene	100-41-4	N.D.	58	44.4
10237	Isopropylbenzene	98-82-8	N.D.	58	44.4
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	29	44.4
10237	Naphthalene	91-20-3	N.D.	58	44.4
10237	Toluene	108-88-3	N.D.	58	44.4
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	58	44.4
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	58	44.4
10237	Xylene (Total)	1330-20-7	N.D.	58	44.4
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	22.9 %	0.50 %	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q150391AA	02/08/2015 14:47	Sarah A Guill	44.4
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201503636746	02/05/2015 11:35	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15042820006A	02/11/2015 20:49	Scott W Freisher	1

Sample Description: SB-15 @ 11 Ft Grab Soil
101722001

LL Sample # SW 7762632
LL Group # 1536371
Account # 00721

Project Name: Project 101722001

Collected: 02/05/2015 11:55 by DB

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 02/05/2015 18:19

Reported: 02/17/2015 10:18

S1511

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/kg					
10237	Benzene	71-43-2	N.D.	28	40.19
10237	Ethylbenzene	100-41-4	N.D.	56	40.19
10237	Isopropylbenzene	98-82-8	N.D.	56	40.19
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	28	40.19
10237	Naphthalene	91-20-3	N.D.	56	40.19
10237	Toluene	108-88-3	N.D.	56	40.19
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	56	40.19
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	56	40.19
10237	Xylene (Total)	1330-20-7	N.D.	56	40.19
Wet Chemistry SM 2540 G-1997 %					
00111	Moisture	n.a.	28.2	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q150391AA	02/08/2015 15:10	Sarah A Guill	40.19
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201503636746	02/05/2015 11:55	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15042820006A	02/11/2015 20:49	Scott W Freisher	1

Sample Description: SB-12 @ 8 Ft Grab Soil
101722001

LL Sample # SW 7762633
LL Group # 1536371
Account # 00721

Project Name: Project 101722001

Collected: 02/05/2015 12:15 by DB

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 02/05/2015 18:19

Reported: 02/17/2015 10:18

S12-8

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10237	Benzene	71-43-2	N.D.	58	92.08
10237	Ethylbenzene	100-41-4	16,000	120	92.08
10237	Isopropylbenzene	98-82-8	5,200	120	92.08
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	58	92.08
10237	Naphthalene	91-20-3	9,000	120	92.08
10237	Toluene	108-88-3	N.D.	120	92.08
10237	1,2,4-Trimethylbenzene	95-63-6	120,000	1,200	920.81
10237	1,3,5-Trimethylbenzene	108-67-8	39,000	1,200	920.81
10237	Xylene (Total)	1330-20-7	34,000	120	92.08
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	20.0	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q150391AA	02/08/2015 15:33	Sarah A Guill	92.08
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q150391AA	02/08/2015 15:57	Sarah A Guill	920.81
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201503636746	02/05/2015 12:15	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15042820006A	02/11/2015 20:49	Scott W Freisher	1

Sample Description: SB-12 @ 12 Ft Grab Soil
101722001

LL Sample # SW 7762634
LL Group # 1536371
Account # 00721

Project Name: Project 101722001

Collected: 02/05/2015 12:20 by DB

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 02/05/2015 18:19

Reported: 02/17/2015 10:18

S1212

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10237	Benzene	71-43-2	N.D.	29	42.3
10237	Ethylbenzene	100-41-4	3,800	58	42.3
10237	Isopropylbenzene	98-82-8	2,200	58	42.3
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	29	42.3
10237	Naphthalene	91-20-3	2,400	58	42.3
10237	Toluene	108-88-3	N.D.	58	42.3
10237	1,2,4-Trimethylbenzene	95-63-6	68,000	580	423.01
10237	1,3,5-Trimethylbenzene	108-67-8	15,000	58	42.3
10237	Xylene (Total)	1330-20-7	8,900	58	42.3
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	27.3	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q150391AA	02/08/2015 16:20	Sarah A Guill	42.3
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q150411AA	02/10/2015 18:22	Sarah A Guill	423.01
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201503636746	02/05/2015 12:20	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15042820006A	02/11/2015 20:49	Scott W Freisher	1

Sample Description: SB-12 @ 18 Ft Grab Soil
101722001

LL Sample # SW 7762635
LL Group # 1536371
Account # 00721

Project Name: Project 101722001

Collected: 02/05/2015 12:25 by DB

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 02/05/2015 18:19

Reported: 02/17/2015 10:18

S1218

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10237	Benzene	71-43-2	N.D.	30 ug/kg	50.81
10237	Ethylbenzene	100-41-4	N.D.	61	50.81
10237	Isopropylbenzene	98-82-8	N.D.	61	50.81
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	30	50.81
10237	Naphthalene	91-20-3	100 J	61	50.81
10237	Toluene	108-88-3	N.D.	61	50.81
10237	1,2,4-Trimethylbenzene	95-63-6	500	61	50.81
10237	1,3,5-Trimethylbenzene	108-67-8	190 J	61	50.81
10237	Xylene (Total)	1330-20-7	N.D.	61	50.81
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	16.6 %	0.50 %	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q150391AA	02/08/2015 16:43	Sarah A Guill	50.81
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201503636746	02/05/2015 12:25	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15042820006A	02/11/2015 20:49	Scott W Freisher	1

Sample Description: SB-18 @ 10 Ft Grab Soil
101722001

LL Sample # SW 7762636
LL Group # 1536371
Account # 00721

Project Name: Project 101722001

Collected: 02/05/2015 13:20 by DB

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 02/05/2015 18:19

Reported: 02/17/2015 10:18

S1810

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10237	Benzene	71-43-2	1,900	28	43.4
10237	Ethylbenzene	100-41-4	710	56	43.4
10237	Isopropylbenzene	98-82-8	N.D.	56	43.4
10237	Methyl Tertiary Butyl Ether	1634-04-4	260 J	28	43.4
10237	Naphthalene	91-20-3	160 J	56	43.4
10237	Toluene	108-88-3	280	56	43.4
10237	1,2,4-Trimethylbenzene	95-63-6	990	56	43.4
10237	1,3,5-Trimethylbenzene	108-67-8	300	56	43.4
10237	Xylene (Total)	1330-20-7	3,500	56	43.4
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	22.4	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q150391AA	02/08/2015 17:06	Sarah A Guill	43.4
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201503636746	02/05/2015 13:20	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15042820006B	02/11/2015 20:49	Scott W Freisher	1

Sample Description: SB-18 @ 13 Ft Grab Soil
101722001

LL Sample # SW 7762637
LL Group # 1536371
Account # 00721

Project Name: Project 101722001

Collected: 02/05/2015 13:25 by DB

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 02/05/2015 18:19

Reported: 02/17/2015 10:18

S1813

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	3,200	30	44.4
10237	Ethylbenzene	100-41-4	810	59	44.4
10237	Isopropylbenzene	98-82-8	N.D.	59	44.4
10237	Methyl Tertiary Butyl Ether	1634-04-4	31 J	30	44.4
10237	Naphthalene	91-20-3	120 J	59	44.4
10237	Toluene	108-88-3	9,500	59	44.4
10237	1,2,4-Trimethylbenzene	95-63-6	890	59	44.4
10237	1,3,5-Trimethylbenzene	108-67-8	290 J	59	44.4
10237	Xylene (Total)	1330-20-7	3,800	59	44.4

Wet Chemistry	SM 2540 G-1997	%	%	
00111	Moisture	n.a.	25.2	0.50
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q150391AA	02/08/2015 17:29	Sarah A Guill	44.4
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201503636746	02/05/2015 13:25	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15042820006B	02/11/2015 20:49	Scott W Freisher	1

Sample Description: SB-18 @ 15 Ft Grab Soil
101722001

LL Sample # SW 7762638
LL Group # 1536371
Account # 00721

Project Name: Project 101722001

Collected: 02/05/2015 13:30 by DB

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 02/05/2015 18:19

Reported: 02/17/2015 10:18

S1815

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	30	50
10237	Ethylbenzene	100-41-4	N.D.	59	50
10237	Isopropylbenzene	98-82-8	N.D.	59	50
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	30	50
10237	Naphthalene	91-20-3	N.D.	59	50
10237	Toluene	108-88-3	N.D.	59	50
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	59	50
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	59	50
10237	Xylene (Total)	1330-20-7	N.D.	59	50

Wet Chemistry	SM 2540 G-1997	%	%	
00111	Moisture	n.a.	15.7	0.50
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.			

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q150391AA	02/08/2015 17:53	Sarah A Guill	50
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201503636746	02/05/2015 13:30	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15042820006B	02/11/2015 20:49	Scott W Freisher	1

Sample Description: SB-19 @ 10 Ft Grab Soil
101722001

LL Sample # SW 7762639
LL Group # 1536371
Account # 00721

Project Name: Project 101722001

Collected: 02/05/2015 14:00 by DB

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 02/05/2015 18:19

Reported: 02/17/2015 10:18

S1910

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10237	Benzene	71-43-2	N.D.	25 ug/kg	40.06
10237	Ethylbenzene	100-41-4	N.D.	49	40.06
10237	Isopropylbenzene	98-82-8	N.D.	49	40.06
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	25	40.06
10237	Naphthalene	91-20-3	N.D.	49	40.06
10237	Toluene	108-88-3	N.D.	49	40.06
10237	1,2,4-Trimethylbenzene	95-63-6	230 J	49	40.06
10237	1,3,5-Trimethylbenzene	108-67-8	89 J	49	40.06
10237	Xylene (Total)	1330-20-7	N.D.	49	40.06
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	18.7 %	0.50 %	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q150391AA	02/08/2015 18:16	Sarah A Guill	40.06
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201503636746	02/05/2015 14:00	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15042820006B	02/11/2015 20:49	Scott W Freisher	1

Sample Description: SB-16 @ 12 Ft Grab Soil
101722001

LL Sample # SW 7762640
LL Group # 1536371
Account # 00721

Project Name: Project 101722001

Collected: 02/05/2015 14:45 by DB

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 02/05/2015 18:19

Reported: 02/17/2015 10:18

S1612

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	28	40.26
10237	Ethylbenzene	100-41-4	N.D.	56	40.26
10237	Isopropylbenzene	98-82-8	N.D.	56	40.26
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	28	40.26
10237	Naphthalene	91-20-3	N.D.	56	40.26
10237	Toluene	108-88-3	N.D.	56	40.26
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	56	40.26
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	56	40.26
10237	Xylene (Total)	1330-20-7	N.D.	56	40.26

Wet Chemistry	SM 2540 G-1997	%	%	
00111	Moisture	n.a.	27.9	0.50
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q150391AA	02/08/2015 18:39	Sarah A Guill	40.26
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201503636746	02/05/2015 14:45	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15042820006B	02/11/2015 20:49	Scott W Freisher	1

Sample Description: SB-20 @ 8 Ft Grab Soil
101722001

LL Sample # SW 7762641
LL Group # 1536371
Account # 00721

Project Name: Project 101722001

Collected: 02/05/2015 15:20 by DB

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 02/05/2015 18:19

Reported: 02/17/2015 10:18

S20-8

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	1,300	28	43.48
10237	Ethylbenzene	100-41-4	630	55	43.48
10237	Isopropylbenzene	98-82-8	N.D.	55	43.48
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	28	43.48
10237	Naphthalene	91-20-3	130 J	55	43.48
10237	Toluene	108-88-3	4,500	55	43.48
10237	1,2,4-Trimethylbenzene	95-63-6	590	55	43.48
10237	1,3,5-Trimethylbenzene	108-67-8	180 J	55	43.48
10237	Xylene (Total)	1330-20-7	2,500	55	43.48

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: Naphthalene

Wet Chemistry	SM 2540 G-1997	%	%	
00111	Moisture	n.a.	21.4	0.50
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q150411AA	02/10/2015 18:45	Sarah A Guill	43.48
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201503636746	02/05/2015 15:20	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15042820006B	02/11/2015 20:49	Scott W Freisher	1

Sample Description: SB-20 @ 11 Ft Grab Soil
101722001

LL Sample # SW 7762642
LL Group # 1536371
Account # 00721

Project Name: Project 101722001

Collected: 02/05/2015 15:25 by DB

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 02/05/2015 18:19

Reported: 02/17/2015 10:18

S2011

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	1,900	31	46.47
10237	Ethylbenzene	100-41-4	680	61	46.47
10237	Isopropylbenzene	98-82-8	N.D.	61	46.47
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	31	46.47
10237	Naphthalene	91-20-3	93 J	61	46.47
10237	Toluene	108-88-3	5,000	61	46.47
10237	1,2,4-Trimethylbenzene	95-63-6	500	61	46.47
10237	1,3,5-Trimethylbenzene	108-67-8	150 J	61	46.47
10237	Xylene (Total)	1330-20-7	2,900	61	46.47

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: Naphthalene

Wet Chemistry	SM 2540 G-1997	%	%	
00111	Moisture	n.a.	24.2	0.50
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q150411AA	02/10/2015 19:08	Sarah A Guill	46.47
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201503636746	02/05/2015 15:25	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15042820006B	02/11/2015 20:49	Scott W Freisher	1

Sample Description: SB-20 @ 15 Ft Grab Soil
101722001

LL Sample # SW 7762643
LL Group # 1536371
Account # 00721

Project Name: Project 101722001

Collected: 02/05/2015 15:30 by DB

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 02/05/2015 18:19

Reported: 02/17/2015 10:18

S2015

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	26	46.13
10237	Ethylbenzene	100-41-4	N.D.	53	46.13
10237	Isopropylbenzene	98-82-8	N.D.	53	46.13
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	26	46.13
10237	Naphthalene	91-20-3	N.D.	53	46.13
10237	Toluene	108-88-3	N.D.	53	46.13
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	53	46.13
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	53	46.13
10237	Xylene (Total)	1330-20-7	N.D.	53	46.13

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: Naphthalene

Wet Chemistry	SM 2540 G-1997	%	%	
00111	Moisture	n.a.	12.3	0.50
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q150411AA	02/10/2015 19:31	Sarah A Guill	46.13
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201503636746	02/05/2015 15:30	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15042820006B	02/11/2015 20:49	Scott W Freisher	1

Sample Description: SB-17 @ 7 Ft Grab Soil
101722001

LL Sample # SW 7762644
LL Group # 1536371
Account # 00721

Project Name: Project 101722001

Collected: 02/05/2015 12:50 by DB

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 02/05/2015 18:19

Reported: 02/17/2015 10:18

S17-7

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10237	Benzene	71-43-2	N.D.	27	44.72
10237	Ethylbenzene	100-41-4	100 J	54	44.72
10237	Isopropylbenzene	98-82-8	N.D.	54	44.72
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	27	44.72
10237	Naphthalene	91-20-3	350	54	44.72
10237	Toluene	108-88-3	1,100	54	44.72
10237	1,2,4-Trimethylbenzene	95-63-6	450	54	44.72
10237	1,3,5-Trimethylbenzene	108-67-8	250 J	54	44.72
10237	Xylene (Total)	1330-20-7	1,100	54	44.72
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	17.6	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q150421AA	02/11/2015 12:03	Anita M Dale	44.72
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201503636746	02/05/2015 12:50	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15042820006B	02/11/2015 20:49	Scott W Freisher	1

Sample Description: SB-17 @ 11 Ft Grab Soil
101722001

LL Sample # SW 7762645
LL Group # 1536371
Account # 00721

Project Name: Project 101722001

Collected: 02/05/2015 12:55 by DB

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 02/05/2015 18:19

Reported: 02/17/2015 10:18

S1711

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	240 J	60	88.97
10237	Ethylbenzene	100-41-4	130,000	1,200	889.68
10237	Isopropylbenzene	98-82-8	7,400	120	88.97
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	60	88.97
10237	Naphthalene	91-20-3	15,000	120	88.97
10237	Toluene	108-88-3	390,000	12,000	8896.8
10237	1,2,4-Trimethylbenzene	95-63-6	210,000	1,200	889.68
10237	1,3,5-Trimethylbenzene	108-67-8	68,000	1,200	889.68
10237	Xylene (Total)	1330-20-7	590,000	1,200	889.68

Wet Chemistry	SM 2540 G-1997	%	%	
00111	Moisture	n.a.	26.2	0.50
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.			

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q150421AA	02/11/2015 12:25	Anita M Dale	88.97
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q150421AA	02/11/2015 12:48	Anita M Dale	889.68
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q150431AA	02/12/2015 12:30	Anita M Dale	8896.8
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201503636746	02/05/2015 12:55	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15042820006B	02/11/2015 20:49	Scott W Freisher	1

Sample Description: SB-17 @ 15 Ft Grab Soil
101722001

LL Sample # SW 7762646
LL Group # 1536371
Account # 00721

Project Name: Project 101722001

Collected: 02/05/2015 13:00 by DB

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 02/05/2015 18:19

Reported: 02/17/2015 10:18

S1715

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	25	42.81
10237	Ethylbenzene	100-41-4	N.D.	51	42.81
10237	Isopropylbenzene	98-82-8	N.D.	51	42.81
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	25	42.81
10237	Naphthalene	91-20-3	N.D.	51	42.81
10237	Toluene	108-88-3	N.D.	51	42.81
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	51	42.81
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	51	42.81
10237	Xylene (Total)	1330-20-7	N.D.	51	42.81

Wet Chemistry	SM 2540 G-1997	%	%	
00111	Moisture	n.a.	16.0	0.50
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.			

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q150431AA	02/12/2015 10:25	Anita M Dale	42.81
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201503636746	02/05/2015 13:00	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15043820001A	02/12/2015 18:47	Scott W Freisher	1

Quality Control Summary

Client Name: Rettew Associates
Reported: 02/17/15 at 10:18 AM

Group Number: 1536371

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: Q150391AA Sample number(s): 7762626-7762640								
Benzene	N.D.	25.	ug/kg	89	90	80-120	1	30
Ethylbenzene	N.D.	50.	ug/kg	85	85	80-120	0	30
Isopropylbenzene	N.D.	50.	ug/kg	81	81	76-120	0	30
Methyl Tertiary Butyl Ether	N.D.	25.	ug/kg	94	94	76-122	0	30
Naphthalene	N.D.	50.	ug/kg	65	68	64-120	5	30
Toluene	N.D.	50.	ug/kg	90	87	80-120	4	30
1,2,4-Trimethylbenzene	N.D.	50.	ug/kg	88	86	79-120	3	30
1,3,5-Trimethylbenzene	N.D.	50.	ug/kg	84	84	78-120	0	30
Xylene (Total)	N.D.	50.	ug/kg	88	85	80-120	3	30
Batch number: Q150411AA Sample number(s): 7762634,7762641-7762643								
Benzene	N.D.	25.	ug/kg	87	89	80-120	2	30
Ethylbenzene	N.D.	50.	ug/kg	83	84	80-120	2	30
Isopropylbenzene	N.D.	50.	ug/kg	78	82	76-120	5	30
Methyl Tertiary Butyl Ether	N.D.	25.	ug/kg	92	95	76-122	3	30
Naphthalene	N.D.	50.	ug/kg	62*	66	64-120	7	30
Toluene	N.D.	50.	ug/kg	84	87	80-120	2	30
1,2,4-Trimethylbenzene	N.D.	50.	ug/kg	81	84	79-120	4	30
1,3,5-Trimethylbenzene	N.D.	50.	ug/kg	81	81	78-120	1	30
Xylene (Total)	N.D.	50.	ug/kg	82	85	80-120	3	30
Batch number: Q150421AA Sample number(s): 7762644-7762645								
Benzene	N.D.	25.	ug/kg	95	99	80-120	4	30
Ethylbenzene	N.D.	50.	ug/kg	91	93	80-120	2	30
Isopropylbenzene	N.D.	50.	ug/kg	89	90	76-120	1	30
Methyl Tertiary Butyl Ether	N.D.	25.	ug/kg	102	104	76-122	2	30
Naphthalene	N.D.	50.	ug/kg	82	77	64-120	7	30
Toluene	N.D.	50.	ug/kg	91	94	80-120	3	30
1,2,4-Trimethylbenzene	N.D.	50.	ug/kg	95	93	79-120	1	30
1,3,5-Trimethylbenzene	N.D.	50.	ug/kg	95	92	78-120	3	30
Xylene (Total)	N.D.	50.	ug/kg	90	93	80-120	3	30
Batch number: Q150431AA Sample number(s): 7762645-7762646								
Benzene	N.D.	25.	ug/kg	95	103	80-120	8	30
Ethylbenzene	N.D.	50.	ug/kg	93	103	80-120	11	30
Isopropylbenzene	N.D.	50.	ug/kg	91	100	76-120	10	30
Methyl Tertiary Butyl Ether	N.D.	25.	ug/kg	100	109	76-122	8	30
Naphthalene	N.D.	50.	ug/kg	78	88	64-120	13	30
Toluene	N.D.	50.	ug/kg	93	105	80-120	12	30
1,2,4-Trimethylbenzene	N.D.	50.	ug/kg	90	106	79-120	16	30
1,3,5-Trimethylbenzene	N.D.	50.	ug/kg	89	106	78-120	17	30
Xylene (Total)	N.D.	50.	ug/kg	92	103	80-120	11	30

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rettew Associates
Reported: 02/17/15 at 10:18 AM

Group Number: 1536371

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 15046049531A	Sample number(s): 7762627							
TOC Solids/Sludges Combustion	N.D.	0.0100	% by wt.	123		47-143		
Batch number: 15042820006A	Sample number(s): 7762626-7762635							
Moisture				100		99-101		
Batch number: 15042820006B	Sample number(s): 7762636-7762645							
Moisture				100		99-101		
Batch number: 15043820001A	Sample number(s): 7762646							
Moisture				100		99-101		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: Q150411AA	Sample number(s): 7762634, 7762641-7762643 UNSPK: P763227								
Benzene	97	102	55-143	2	30				
Ethylbenzene	133	85	44-141	10	30				
Isopropylbenzene	60	38	38-144	10	30				
Methyl Tertiary Butyl Ether	98	110	55-129	6	30				
Naphthalene	-33 (2)	-69 (2)	10-138	3	30				
Toluene	82	86	50-146	2	30				
1,2,4-Trimethylbenzene	-70 (2)	-9 (2)	37-149	2	30				
1,3,5-Trimethylbenzene	-54 (2)	-201 (2)	38-150	12	30				
Xylene (Total)	184 (2)	113 (2)	44-136	9	30				
Batch number: Q150421AA	Sample number(s): 7762644-7762645 UNSPK: P764250								
Benzene	82	82	55-143	6	30				
Ethylbenzene	80	81	44-141	5	30				
Isopropylbenzene	79	79	38-144	7	30				
Methyl Tertiary Butyl Ether	87	85	55-129	9	30				
Naphthalene	63	61	10-138	9	30				
Toluene	78	80	50-146	4	30				
1,2,4-Trimethylbenzene	81	81	37-149	7	30				
1,3,5-Trimethylbenzene	80	80	38-150	6	30				
Xylene (Total)	80	80	44-136	6	30				
Batch number: 15046049531A	Sample number(s): 7762627 UNSPK: 7762627 BKG: 7762627								
TOC Solids/Sludges Combustion	124		22-155			N.D.	N.D.	0 (1)	13
Batch number: 15042820006A	Sample number(s): 7762626-7762635 BKG: 7762632								
Moisture						28.2	26.6	6*	5
Batch number: 15042820006B	Sample number(s): 7762636-7762645 BKG: 7762638								
Moisture						15.7	14.3	10*	5
Batch number: 15043820001A	Sample number(s): 7762646 BKG: P762282								

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rettew Associates
Reported: 02/17/15 at 10:18 AM

Group Number: 1536371

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Moisture						7.7	9.4	20*	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- Solid by 8260B

Batch number: Q150391AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7762626	64	63	65	66
7762627	77	76	73	72
7762628	71	69	72	75
7762629	77	77	74	75
7762630	79	79	77	75
7762631	68	68	65	67
7762632	69	71	66	66
7762633	70	75	78	80
7762634	60	60	61	60
7762635	85	83	83	81
7762636	67	69	67	68
7762637	60	62	60	60
7762638	89	92	86	83
7762639	68	70	66	67
7762640	60	57	58	60
Blank	95	95	94	88
LCS	86	85	84	80
LCSD	89	89	86	83
Limits:	50-141	54-135	52-141	50-131

Analysis Name: VOCs- Solid by 8260B

Batch number: Q150411AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7762641	69	70	65	69
7762642	68	67	65	65
7762643	84	81	77	78
Blank	103	105	100	94
LCS	89	87	86	83
LCSD	93	91	89	86
MS	64	61	66	74
MSD	69	68	68	76
Limits:	50-141	54-135	52-141	50-131

Analysis Name: VOCs- Solid by 8260B

Batch number: Q150421AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7762644	81	80	74	72
7762645	65	69	67	66

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rettew Associates
Reported: 02/17/15 at 10:18 AM

Group Number: 1536371

Surrogate Quality Control

Blank	117	115	110	102
LCS	98	96	95	91
LCSD	99	98	95	93
MS	86	81	80	78
MSD	84	81	80	79
Limits:	50-141	54-135	52-141	50-131

Analysis Name: VOCs- Solid by 8260B

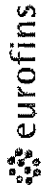
Batch number: Q150431AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7762646	80	79	80	81
Blank	95	93	95	88
LCS	97	96	98	93
LCSD	106	103	106	103
Limits:	50-141	54-135	52-141	50-131

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories
Environmental

Acct. # 721
Group # 1536371
Sample # 7702620-47

For Eurofins Lancaster Laboratories Environmental use only
Instructions on reverse side correspond with circled numbers.

1 Client Information				4 Matrix				5 Analysis Requested				6 For Lab Use Only			
Client: RETTEK ASSOCIATES, INC				<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Surface				Preservation Codes				FSC: SCR# 110607860			
Project Name#: 101722001				PWSID #: _____				Total # of Containers				Preservation Codes			
Project Manager: EDD DZIEDZIC				P.O. #: _____				Other: _____				H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other			
Sampler: DEVAN BUTEL				Quote #: _____				Composite				Remarks			
Name of state where samples were collected: _____				Grab				Date				Time			
2 Sample Identification				3				Date				Time			
SB-12 C 18 ft				X				2/5/15				1225			
SB-18 C 16 ft				X				2/5/15				1320			
SB-18 C 13 ft				X				2/5/15				1325			
SB-18 C 10 ft				X				2/5/15				1330			
SB-19 C 10 ft				X				2/5/15				1400			
SB-16 C 12 ft				X				2/5/15				1445			
SB-20 C 8 ft				X				2/5/15				1520			
SB-20 C 1 ft				X				2/5/15				1525			
SB-20 C 15 ft				X				2/5/15				1530			
SB-17 C 6 ft				X				2/5/15				1250			
7 Turnaround Time (TAT) Requested (please circle) Standard Rush				Relinquished by Date				Time				Date			
Date results are needed: _____				Relinquished by Date				Time				Date			
E-mail address: EDD@RETTEK.COM				Relinquished by Date				Time				Date			
8 Data Package Options (circle if required)				Relinquished by Date				Time				Date			
Type I (Validation/non-CLP)				Type VI (Raw Data Only)				Relinquished by Date				Time			
Type III (Reduced non-CLP)				TX TRRP-13				Relinquished by Date				Time			
NYSDEC Category A or B				MA MCP CT RCP				Relinquished by Date				Time			
EDD Required? (Yes) No				Relinquished by Commercial Carrier: UPS FedEx Other				Relinquished by Date				Time			
Site-Specific QC (MS/MSD/Dup)? Yes No				Temperature upon receipt 0.0 °C				Relinquished by Date				Time			

The white copy should accompany samples to Eurofins Lancaster. The yellow copy should be retained by the client.

Eurofins Lancaster Laboratories Environmental, LLC • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300

Client: Rettew Associates, Inc.**Delivery and Receipt Information**

Delivery Method:	<u>Client Drop Off</u>	Arrival Timestamp:	<u>02/05/2015 18:19</u>
Number of Packages:	<u>1</u>	Number of Projects:	<u>1</u>
State/Province of Origin:	<u>PA</u>		

Arrival Condition Summary

Shipping Container Sealed:	No	Sample IDs on COC match Containers:	No
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	VOA Vial Headspace \geq 6mm:	No
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	2
Samples Intact:	Yes	Trip Blank Type:	HCI
Missing Samples:	No	Air Quality Samples Present:	No
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

*Unpacked by Jordan Woods (6698) at 18:46 on 02/05/2015***Samples Chilled Details***Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	0.0	DT	Wet	Y	Bagged	N

Sample ID Discrepancy Details

<u>Sample ID on COC</u>	<u>Sample ID on Label</u>	<u>Comments</u>
SB-18 @ 10 ft	No ID (vial)	Sample in same bag as corresponding soil jar

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value \geq the Method Detection Limit (MDL or DL) and the $<$ Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, ISO17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

SUMMARY OF LABORATORY TESTING

HERR FOODS, INC.

PROJECT #:	101722001	SAMPLED:	-	JAY KAY TESTING, INC.
SAMPLES:	1	LOCATION:	-	5233 Lehman Road, Suite 110
REPORT:	02/13/15	REMARKS:	-	Spring Grove, PA 17362
				Phone: (410) 259-5101

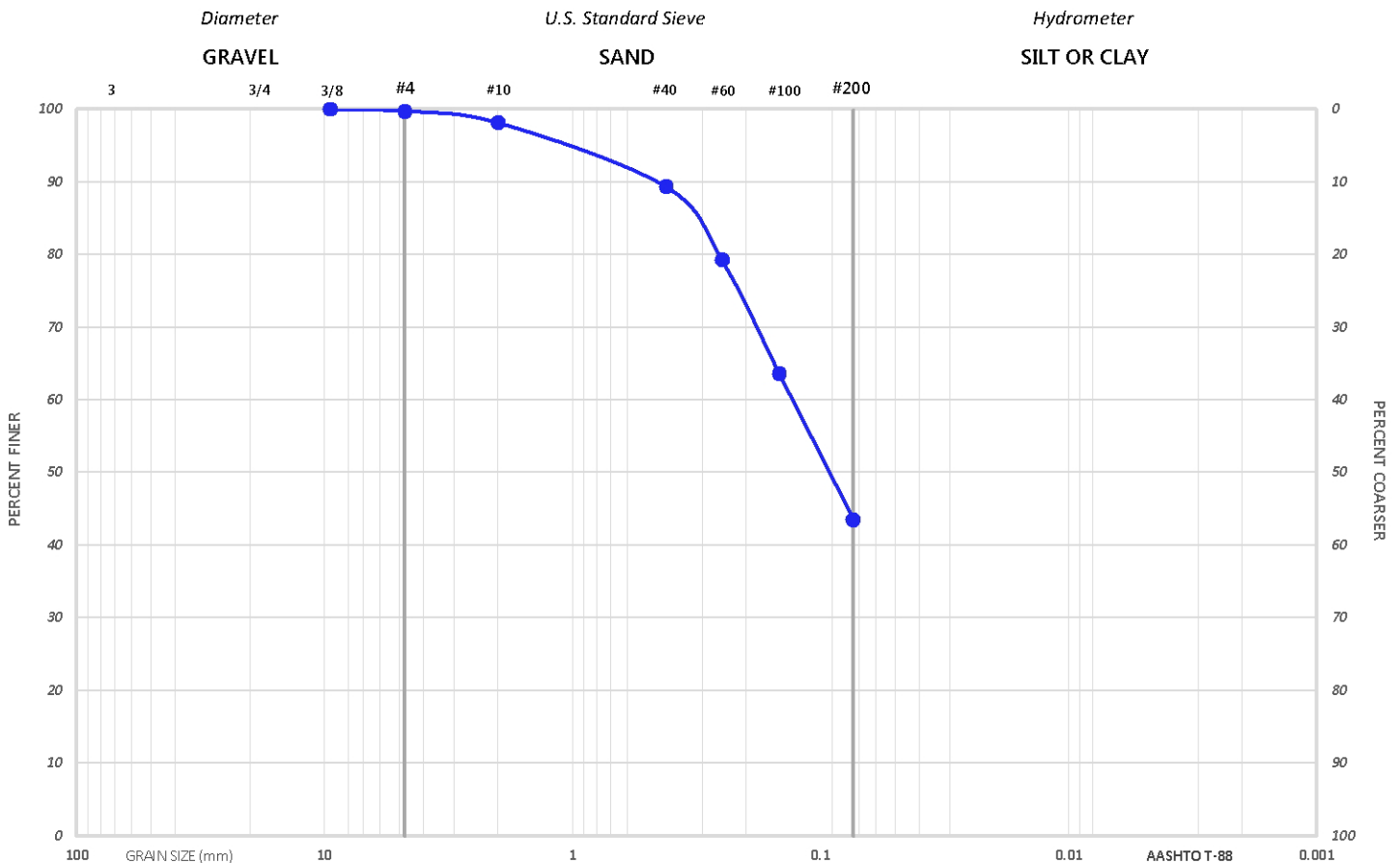
BORING	SAMPLE	DEPTH (ft.)	MC %	WET DENSITY (PCF)	DRY DENSITY (PCF)	Pass #200
SB-11	Tube	14.0-15.0	17.4	130.9	111.6	43.5
Jay Kay Testing (AASHTO-Accredited)						

HERR FOODS, INC.

Boring: SB-11
Sample: Tube
Depth: 14.0-15.0'

Project No.: 101722001
Sampled: -
Location: -

JAY KAY TESTING, INC.
5233 Lehman Road, Suite 110
Spring Grove, PA 17362
Phone: (410) 259-5101



GRAIN SIZE ANALYSIS

Diameter	75.0	50.8	37.5	25.4	19.0	12.7	9.51	4.75	2.0	0.42	0.25	0.147	0.074
Sieve Size	3"	2"	1.5"	1"	3/4"	1 1/2"	3/8"	#4	#10	#40	#60	#100	# 200
% Passing	-	-	-	-	-	-	100.0	99.7	98.2	89.4	79.3	63.6	43.5

% GRAVEL	% SAND	Coarse Gravel	Fine Gravel	Coarse Sand	Medium Sand	Fine Sand	CC	CU
0.3	56.2	-	0.3	1.5	8.8	45.9	-	-

Moisture Content	17.4	Organic Content	-
pH	-	Other	-

ATTERBERG LIMITS

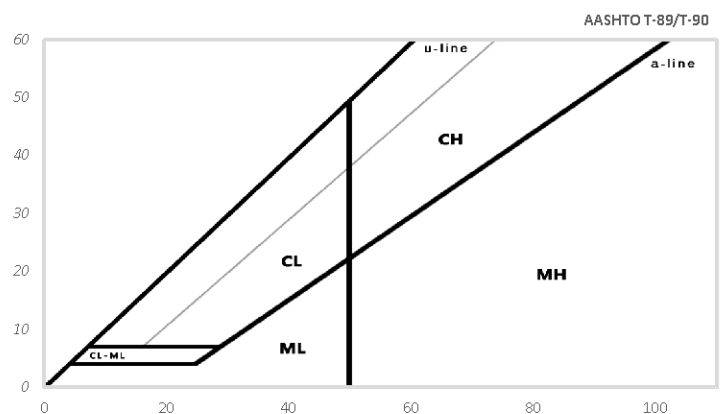
Liquid Limit	-
Plastic Limit	-
Plasticity Index	-

CLASSIFICATION

AASHTO	-
USCS	-

VISUAL SOIL DESCRIPTION

Brown Silty SAND



Sample Description: SB-24 @ 10 Ft Grab Soil
Herr Foods Inc.

LL Sample # SW 7926806
LL Group # 1568784
Account # 00721

Project Name: Herr Foods Inc.

Collected: 06/12/2015 09:20 by SH

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 06/12/2015 14:45

Reported: 06/27/2015 19:31

24-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	1,300	29	45.05
10237	Ethylbenzene	100-41-4	200 J	58	45.05
10237	Isopropylbenzene	98-82-8	N.D.	58	45.05
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	29	45.05
10237	Naphthalene	91-20-3	N.D.	58	45.05
10237	Toluene	108-88-3	3,300	58	45.05
10237	1,2,4-Trimethylbenzene	95-63-6	120 J	58	45.05
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	58	45.05
10237	Xylene (Total)	1330-20-7	1,000	58	45.05

Wet Chemistry	SM 2540 G-1997	%	%	
00111	Moisture	n.a.	21.8	0.50
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.			

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q151701AA	06/19/2015 10:47	Anita M Dale	45.05
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201516337951	06/12/2015 09:20	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15174820001A	06/23/2015 13:29	Lisa J Cooke	1

Sample Description: SB-24 @ 19 Ft Grab Soil
Herr Foods Inc.

LL Sample # SW 7926807
LL Group # 1568784
Account # 00721

Project Name: Herr Foods Inc.

Collected: 06/12/2015 09:30 by SH

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 06/12/2015 14:45

Reported: 06/27/2015 19:31

24-19

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	21	36.76
10237	Ethylbenzene	100-41-4	N.D.	42	36.76
10237	Isopropylbenzene	98-82-8	N.D.	42	36.76
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	21	36.76
10237	Naphthalene	91-20-3	N.D.	42	36.76
10237	Toluene	108-88-3	N.D.	42	36.76
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	42	36.76
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	42	36.76
10237	Xylene (Total)	1330-20-7	N.D.	42	36.76

Wet Chemistry	SM 2540 G-1997	%	%	
00111	Moisture	n.a.	13.1	0.50
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.			

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q151701AA	06/19/2015 11:10	Anita M Dale	36.76
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201516337951	06/12/2015 09:30	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15174820001A	06/23/2015 13:29	Lisa J Cooke	1

Sample Description: SB-25 @ 9 Ft Grab Soil
Herr Foods Inc.

LL Sample # SW 7926808
LL Group # 1568784
Account # 00721

Project Name: Herr Foods Inc.

Collected: 06/12/2015 09:40 by SH

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 06/12/2015 14:45

Reported: 06/27/2015 19:31

25-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	31	45.05
10237	Ethylbenzene	100-41-4	N.D.	62	45.05
10237	Isopropylbenzene	98-82-8	N.D.	62	45.05
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	31	45.05
10237	Naphthalene	91-20-3	N.D.	62	45.05
10237	Toluene	108-88-3	N.D.	62	45.05
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	62	45.05
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	62	45.05
10237	Xylene (Total)	1330-20-7	N.D.	62	45.05

Wet Chemistry	SM 2540 G-1997	%	%	
00111	Moisture	n.a.	27.6	0.50
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.			

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q151701AA	06/19/2015 11:34	Anita M Dale	45.05
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201516337951	06/12/2015 09:40	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15174820001A	06/23/2015 13:29	Lisa J Cooke	1

Sample Description: SB-25 @ 15 Ft Grab Soil
Herr Foods Inc.

LL Sample # SW 7926809
LL Group # 1568784
Account # 00721

Project Name: Herr Foods Inc.

Collected: 06/12/2015 09:50 by SH

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 06/12/2015 14:45

Reported: 06/27/2015 19:31

25-15

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	29	47.62
10237	Ethylbenzene	100-41-4	N.D.	57	47.62
10237	Isopropylbenzene	98-82-8	N.D.	57	47.62
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	29	47.62
10237	Naphthalene	91-20-3	N.D.	57	47.62
10237	Toluene	108-88-3	N.D.	57	47.62
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	57	47.62
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	57	47.62
10237	Xylene (Total)	1330-20-7	N.D.	57	47.62

Wet Chemistry	SM 2540 G-1997	%	%	
00111	Moisture	n.a.	16.6	0.50
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.			

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q151701AA	06/19/2015 11:57	Anita M Dale	47.62
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201516337951	06/12/2015 09:50	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15174820001A	06/23/2015 13:29	Lisa J Cooke	1

Sample Description: SB-26 @ 10 Ft Grab Soil
Herr Foods Inc.

LL Sample # SW 7926810
LL Group # 1568784
Account # 00721

Project Name: Herr Foods Inc.

Collected: 06/12/2015 10:10 by SH

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 06/12/2015 14:45

Reported: 06/27/2015 19:31

26-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	31	50.71
10237	Ethylbenzene	100-41-4	N.D.	62	50.71
10237	Isopropylbenzene	98-82-8	N.D.	62	50.71
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	31	50.71
10237	Naphthalene	91-20-3	N.D.	62	50.71
10237	Toluene	108-88-3	N.D.	62	50.71
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	62	50.71
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	62	50.71
10237	Xylene (Total)	1330-20-7	N.D.	62	50.71

Wet Chemistry	SM 2540 G-1997	%	%	
00111	Moisture	n.a.	18.7	0.50
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.			

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q151701AA	06/19/2015 12:20	Anita M Dale	50.71
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201516337951	06/12/2015 10:10	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15174820001A	06/23/2015 13:29	Lisa J Cooke	1

Sample Description: SB-26 @ 15 Ft Grab Soil
Herr Foods Inc.

LL Sample # SW 7926811
LL Group # 1568784
Account # 00721

Project Name: Herr Foods Inc.

Collected: 06/12/2015 10:20 by SH

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 06/12/2015 14:45

Reported: 06/27/2015 19:31

26-15

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	28	49.12
10237	Ethylbenzene	100-41-4	N.D.	57	49.12
10237	Isopropylbenzene	98-82-8	N.D.	57	49.12
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	28	49.12
10237	Naphthalene	91-20-3	N.D.	57	49.12
10237	Toluene	108-88-3	N.D.	57	49.12
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	57	49.12
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	57	49.12
10237	Xylene (Total)	1330-20-7	N.D.	57	49.12

Wet Chemistry	SM 2540 G-1997	%	%	
00111	Moisture	n.a.	13.7	0.50
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q151701AA	06/19/2015 13:28	Anita M Dale	49.12
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201516337951	06/12/2015 10:20	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15174820001A	06/23/2015 13:29	Lisa J Cooke	1

Sample Description: SB-30 @ 8 Ft Grab Soil
Herr Foods Inc.

LL Sample # SW 7926812
LL Group # 1568784
Account # 00721

Project Name: Herr Foods Inc.

Collected: 06/12/2015 10:40 by SH

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 06/12/2015 14:45

Reported: 06/27/2015 19:31

30-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	53 J	28	43.33
10237	Ethylbenzene	100-41-4	N.D.	56	43.33
10237	Isopropylbenzene	98-82-8	N.D.	56	43.33
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	28	43.33
10237	Naphthalene	91-20-3	N.D.	56	43.33
10237	Toluene	108-88-3	N.D.	56	43.33
10237	1,2,4-Trimethylbenzene	95-63-6	510	56	43.33
10237	1,3,5-Trimethylbenzene	108-67-8	200 J	56	43.33
10237	Xylene (Total)	1330-20-7	440	56	43.33

Wet Chemistry	SM 2540 G-1997	%	%	
00111	Moisture	n.a.	22.0	0.50
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.			

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q151701AA	06/19/2015 13:51	Anita M Dale	43.33
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201516337951	06/12/2015 10:40	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15174820001B	06/23/2015 13:29	Lisa J Cooke	1

Sample Description: SB-30 @ 20 Ft Grab Soil
Herr Foods Inc.

LL Sample # SW 7926813
LL Group # 1568784
Account # 00721

Project Name: Herr Foods Inc.

Collected: 06/12/2015 10:50 by SH

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 06/12/2015 14:45

Reported: 06/27/2015 19:31

30-20

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	27	46.73
10237	Ethylbenzene	100-41-4	N.D.	55	46.73
10237	Isopropylbenzene	98-82-8	N.D.	55	46.73
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	27	46.73
10237	Naphthalene	91-20-3	N.D.	55	46.73
10237	Toluene	108-88-3	N.D.	55	46.73
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	55	46.73
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	55	46.73
10237	Xylene (Total)	1330-20-7	N.D.	55	46.73

Wet Chemistry	SM 2540 G-1997	%	%	
00111	Moisture	n.a.	14.6	0.50
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q151701AA	06/19/2015 14:14	Anita M Dale	46.73
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201516337951	06/12/2015 10:50	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15174820001B	06/23/2015 13:29	Lisa J Cooke	1

Sample Description: SB-28 @ 11 Ft Grab Soil
Herr Foods Inc.

LL Sample # SW 7926814
LL Group # 1568784
Account # 00721

Project Name: Herr Foods Inc.

Collected: 06/12/2015 11:40 by SH

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 06/12/2015 14:45

Reported: 06/27/2015 19:31

28-11

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	29	49.02
10237	Ethylbenzene	100-41-4	N.D.	58	49.02
10237	Isopropylbenzene	98-82-8	N.D.	58	49.02
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	29	49.02
10237	Naphthalene	91-20-3	N.D.	58	49.02
10237	Toluene	108-88-3	N.D.	58	49.02
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	58	49.02
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	58	49.02
10237	Xylene (Total)	1330-20-7	N.D.	58	49.02

Wet Chemistry	SM 2540 G-1997	%	%	
00111	Moisture	n.a.	15.2	0.50
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.			

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q151703AA	06/20/2015 00:03	Kevin A Sposito	49.02
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201516337951	06/12/2015 11:40	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15174820001B	06/23/2015 13:29	Lisa J Cooke	1

Sample Description: SB-28 @ 20 Ft Grab Soil
Herr Foods Inc.

LL Sample # SW 7926815
LL Group # 1568784
Account # 00721

Project Name: Herr Foods Inc.

Collected: 06/12/2015 11:50 by SH

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 06/12/2015 14:45

Reported: 06/27/2015 19:31

28-20

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	25	43.18
10237	Ethylbenzene	100-41-4	N.D.	51	43.18
10237	Isopropylbenzene	98-82-8	N.D.	51	43.18
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	25	43.18
10237	Naphthalene	91-20-3	N.D.	51	43.18
10237	Toluene	108-88-3	N.D.	51	43.18
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	51	43.18
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	51	43.18
10237	Xylene (Total)	1330-20-7	N.D.	51	43.18

Wet Chemistry	SM 2540 G-1997	%	%	
00111	Moisture	n.a.	14.9	0.50
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.			

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q151703AA	06/20/2015 00:26	Kevin A Sposito	43.18
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201516337951	06/12/2015 11:50	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15174820001B	06/23/2015 13:29	Lisa J Cooke	1

Sample Description: SB-29 @ 3 Ft Grab Soil
Herr Foods Inc.

LL Sample # SW 7926816
LL Group # 1568784
Account # 00721

Project Name: Herr Foods Inc.

Collected: 06/12/2015 12:10 by SH

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 06/12/2015 14:45

Reported: 06/27/2015 19:31

29-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10237	Benzene	71-43-2	34 J	29	44.48
10237	Ethylbenzene	100-41-4	7,700	57	44.48
10237	Isopropylbenzene	98-82-8	1,400	57	44.48
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	29	44.48
10237	Naphthalene	91-20-3	3,700	57	44.48
10237	Toluene	108-88-3	N.D.	57	44.48
10237	1,2,4-Trimethylbenzene	95-63-6	49,000	570	444.84
10237	1,3,5-Trimethylbenzene	108-67-8	16,000	57	44.48
10237	Xylene (Total)	1330-20-7	28,000	57	44.48
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	22.2	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q151703AA	06/20/2015 02:43	Kevin A Sposito	44.48
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q151703AA	06/20/2015 03:06	Kevin A Sposito	444.84
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201516337951	06/12/2015 12:10	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15174820001B	06/23/2015 13:29	Lisa J Cooke	1

Sample Description: SB-29 @ 18 Ft Grab Soil
Herr Foods Inc.

LL Sample # SW 7926817
LL Group # 1568784
Account # 00721

Project Name: Herr Foods Inc.

Collected: 06/12/2015 12:20 by SH

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 06/12/2015 14:45

Reported: 06/27/2015 19:31

29-18

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	24	41.6
10237	Ethylbenzene	100-41-4	N.D.	49	41.6
10237	Isopropylbenzene	98-82-8	N.D.	49	41.6
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	24	41.6
10237	Naphthalene	91-20-3	N.D.	49	41.6
10237	Toluene	108-88-3	N.D.	49	41.6
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	49	41.6
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	49	41.6
10237	Xylene (Total)	1330-20-7	N.D.	49	41.6
Wet Chemistry	SM 2540 G-1997	%	%		
00111	Moisture	n.a.	14.4	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q151703AA	06/20/2015 00:48	Kevin A Sposito	41.6
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201516337951	06/12/2015 12:20	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15174820001B	06/23/2015 13:29	Lisa J Cooke	1

Sample Description: SB-27 @ 9 Ft Grab Soil
Herr Foods Inc.

LL Sample # SW 7926818
LL Group # 1568784
Account # 00721

Project Name: Herr Foods Inc.

Collected: 06/12/2015 12:40 by SH

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 06/12/2015 14:45

Reported: 06/27/2015 19:31

27-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10237	Benzene	71-43-2	N.D.	29	48.45
10237	Ethylbenzene	100-41-4	2,000	58	48.45
10237	Isopropylbenzene	98-82-8	730	58	48.45
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	29	48.45
10237	Naphthalene	91-20-3	1,300	58	48.45
10237	Toluene	108-88-3	N.D.	58	48.45
10237	1,2,4-Trimethylbenzene	95-63-6	20,000	580	484.5
10237	1,3,5-Trimethylbenzene	108-67-8	6,700	58	48.45
10237	Xylene (Total)	1330-20-7	6,400	58	48.45
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	16.1	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q151703AA	06/20/2015 03:29	Kevin A Sposito	48.45
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q151703AA	06/20/2015 03:51	Kevin A Sposito	484.5
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201516337951	06/12/2015 12:40	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15174820001B	06/23/2015 13:29	Lisa J Cooke	1

Sample Description: SB-27 @ 20 Ft Grab Soil
Herr Foods Inc.

LL Sample # SW 7926819
LL Group # 1568784
Account # 00721

Project Name: Herr Foods Inc.

Collected: 06/12/2015 12:50 by SH

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 06/12/2015 14:45

Reported: 06/27/2015 19:31

27-20

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	28	47.08
10237	Ethylbenzene	100-41-4	N.D.	57	47.08
10237	Isopropylbenzene	98-82-8	N.D.	57	47.08
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	28	47.08
10237	Naphthalene	91-20-3	N.D.	57	47.08
10237	Toluene	108-88-3	N.D.	57	47.08
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	57	47.08
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	57	47.08
10237	Xylene (Total)	1330-20-7	N.D.	57	47.08

Wet Chemistry	SM 2540 G-1997	%	%	
00111	Moisture	n.a.	16.7	0.50
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.			

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	Q151703AA	06/20/2015 01:11	Kevin A Sposito	47.08
06171	GC/MS-5g Field Preserv. MeOH	SW-846 5035A	1	201516337951	06/12/2015 12:50	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	15174820001B	06/23/2015 13:29	Lisa J Cooke	1

Quality Control Summary

Client Name: Rettew Associates
Reported: 06/27/2015 19:31

Group Number: 1568784

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: Q151701AA	Sample number(s): 7926802-7926803, 7926805-7926813							
Benzene	N.D.	25.	ug/kg	100	107	80-120	7	30
Ethylbenzene	N.D.	50.	ug/kg	96	103	80-120	8	30
Isopropylbenzene	N.D.	50.	ug/kg	92	98	76-120	7	30
Methyl Tertiary Butyl Ether	N.D.	25.	ug/kg	99	106	72-120	7	30
Naphthalene	N.D.	50.	ug/kg	86	93	64-120	8	30
Toluene	N.D.	50.	ug/kg	101	107	80-120	6	30
1,2,4-Trimethylbenzene	N.D.	50.	ug/kg	94	101	79-120	7	30
1,3,5-Trimethylbenzene	N.D.	50.	ug/kg	94	99	78-120	5	30
Xylene (Total)	N.D.	50.	ug/kg	95	102	80-120	7	30
Batch number: Q151703AA	Sample number(s): 7926804, 7926814-7926819							
Benzene	N.D.	25.	ug/kg	100	99	80-120	1	30
Ethylbenzene	N.D.	50.	ug/kg	95	95	80-120	0	30
Isopropylbenzene	N.D.	50.	ug/kg	91	92	76-120	1	30
Methyl Tertiary Butyl Ether	N.D.	25.	ug/kg	98	99	72-120	1	30
Naphthalene	N.D.	50.	ug/kg	88	83	64-120	7	30
Toluene	N.D.	50.	ug/kg	100	99	80-120	1	30
1,2,4-Trimethylbenzene	N.D.	50.	ug/kg	93	89	79-120	4	30
1,3,5-Trimethylbenzene	N.D.	50.	ug/kg	94	89	78-120	6	30
Xylene (Total)	N.D.	50.	ug/kg	94	93	80-120	1	30
Batch number: 15174820001A	Sample number(s): 7926802-7926811							
Moisture				100		99-101		
Batch number: 15174820001B	Sample number(s): 7926812-7926819							
Moisture				100		99-101		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 15174820001A	Sample number(s): 7926802-7926811 BKG: 7926807								
Moisture						13.1	12.5	5	5
Batch number: 15174820001B	Sample number(s): 7926812-7926819 BKG: 7926815								
Moisture						14.9	14.4	4	5

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rettew Associates
Reported: 06/27/2015 19:31

Group Number: 1568784

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- Solid by 8260B

Batch number: Q151701AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7926802	79	81	80	80
7926803	88	94	87	87
7926805	82	87	82	83
7926806	71	76	70	70
7926807	78	83	77	76
7926808	70	78	69	73
7926809	82	87	80	81
7926810	59	59	59	69
7926811	78	84	80	81
7926812	57	61	56	70
7926813	86	94	86	85
Blank	86	91	88	86
LCS	83	88	85	85
LCSD	89	94	91	89
Limits:	50-141	54-135	52-141	50-131

Analysis Name: VOCs- Solid by 8260B

Batch number: Q151703AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7926804	60	61	62	75
7926814	83	87	81	80
7926815	83	89	82	81
7926816	73	79	75	79
7926817	70	74	70	74
7926818	71	78	73	74
7926819	79	83	79	75
Blank	86	89	86	82
LCS	83	86	84	83
LCSD	82	84	83	81
Limits:	50-141	54-135	52-141	50-131

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Client: Rettew Associates**Delivery and Receipt Information**

Delivery Method: Client Drop Off Arrival Timestamp: 06/12/2015 14:45
Number of Packages: 1 Number of Projects: 1
State/Province of Origin: PA

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	No
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	VOA Vial Headspace \geq 6mm:	N/A
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	0
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	Yes		

Unpacked by Timothy Cubberley (6520) at 15:43 on 06/12/2015

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	2.4	DT	Wet	N	Loose	N

Container Quantity Discrepancy Details

Sample ID on COC	Container Qty. Received	Container Qty. on COC	Comments
All samples	2	3	

Sample ID Discrepancy Details

Sample ID on COC	Sample ID on Label	Comments
SB-29 @18	SB-29 @3	Already have the @3 sample. Only the jar is marked wrong.

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value \geq the Method Detection Limit (MDL or DL) and the $<$ Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, ISO17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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APPENDIX E
Waste Disposal Manifests



ERC

NON-HAZARDOUS WASTE MANIFEST

NON-HAZARDOUS
WASTE MANIFEST1. Generator's US EPA ID No.
NON HAZManifest
Document No. D170032. Page 1
of 1

3. Generator's Name and Mailing Address

Herr Foods Incorporated
273 Old Baltimore Pike
Nottingham, PA 19362

Site Address

4. Generator's Phone () 610-932-9330

5. Transporter 1 Company Name
Environmental Recovery Corporation6. US EPA ID Number
PAD987266749

A. State Transporter's ID

B. Transporter 1 Phone 717-393-2627

7. Transporter 2 Company Name

8. US EPA ID Number

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address
Environmental Recovery Corporation
1076 Old Manheim Pike
Lancaster, PA 1760110. US EPA ID Number
PAD987266749

E. State Facility's ID

717-393-2627

F. Facility's Phone

11. WASTE DESCRIPTION

Containers

No.

Type

13.
Total
Quantity14.
Unit
Wt./Vol.

a. NON-RCRA / NON-DOT Drill Cuttings Soil

(SW) 21

DM

10,500 EST.
~~1500~~

P.

b. NON-RCRA / NON-DOT Purged Groundwater

3

DM

150 EST.
~~150~~

G.

c.

d.

G. Additional Descriptions for Materials Listed Above

- 1.) Approval #: 1503-00818-SPT
- 2.) Approval #: 1503-00819-LWT

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

PO:

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed / Typed Name

ED DZIENZIC (RETIRED)

Signature

Date

Month Day Year
03 23 15

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed / Typed Name

J. Wiggins

Signature

Date

Month Day Year
03 23 15

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed / Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed / Typed Name

Signature

Date

Month Day Year

White Copy: Environmental Recovery Corp.

Yellow Copy: Invoice Copy

Pink Copy: Transporter

Gold Copy: Generator

NON-HAZARDOUS WASTE
GENERATOR
TRANSPORTER
FACILITY



ERC

NON-HAZARDOUS WASTE MANIFEST

NON-HAZARDOUS
WASTE MANIFEST1. Generator's US EPA ID No.
NON HAZManifest
Document No. D203952. Page 1
of 1

3. Generator's Name and Mailing Address

Site Address

Herr Foods Incorporated
273 Old Baltimore Pike
Nottingham, PA 19362

4. Generator's Phone (

610-932-9330

5. Transporter 1 Company Name

Environmental Recovery Corporation

6.

US EPA ID Number

PAD987268749

A. State Transporter's ID

B. Transporter 1 Phone

717-393-2627

7. Transporter 2 Company Name

8.

US EPA ID Number

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address

Environmental Recovery Corporation
1076 Old Manheim Pike
Lancaster, PA 17601

10.

US EPA ID Number

PAD987268749

E. State Facility's ID

F. Facility's Phone

717-393-2627

11. WASTE DESCRIPTION

Containers

No.

Type

13.
Total
Quantity14.
Unit
Wt./Vol.

a. Non RCRA/DOT Liquids (Drill Cuttings)

(Jw)

3

DM

150
~~750~~ EST.

G.

b. Non RCRA/DOT Liquids (Purged Groundwater)

13

DM

7,500 EST.

P.

c.

d.

G. Additional Descriptions for Materials Listed Above

1.) Approval #: 1506-01926-LPT

2.) Approval #: 1506-01927-LWT

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

PO:

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed / Typed Name

C. D. DZIEDZIC

Signature

Date

Month Day Year

07 01 12

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed / Typed Name

J. Wiggins

Signature

Date

Month Day Year

07 01 12

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed / Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed / Typed Name

Signature

Date

Month Day Year

NON-HAZARDOUS WASTE

GENERATOR

TRANSPORTER

FACILITY



ERC NON-HAZARDOUS WASTE MANIFEST

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No. **D25735**

2. Page 11 of

3. Generator's Name and Mailing Address
Hen Foods Incorporated
273 Old Baltimore Pike
Nottingham, PA 19362

Site Address

4. Generator's Phone (**610-932-9330**)

5. Transporter 1 Company Name
Environmental Recovery Corporation

6. US EPA ID Number
PAD987266749

A. State Transporter's ID **717-393-2627**

B. Transporter 1 Phone

7. Transporter 2 Company Name

8. US EPA ID Number

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address
Environmental Recovery Corporation
1076 Old Manheim Pike
Lancaster, PA 17601

10. US EPA ID Number
PAD987266749

E. State Facility's ID **717-393-2627**

F. Facility's Phone

11. WASTE DESCRIPTION

Containers

No.

Type

13. Total Quantity

14. Unit Wt./Vol.

a. **Non RCRA/DOT Liquids (Drill Cuttings)**
2
DM
1,100 EST.
P.

b.

c.

d.

G. Additional Descriptions for Materials Listed Above

1.) Approval #: 1506-01926-LPT

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

PO:

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed / Typed Name

Signature

Date

Month Day Year
12 21 15

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed / Typed Name

Signature

Date

Month Day Year
12 21 15

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed / Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed / Typed Name

Signature

Date

Month Day Year
12 21 15

White Copy: Environmental Recovery Corp.

Yellow Copy: Invoice Copy

Pink Copy: Transporter

Gold Copy: Generator

NON-HAZARDOUS WASTE

GENERATOR

TRANSPORTER

FACILITY

APPENDIX F

Low Flow Groundwater Purging and Monitoring Data Sheets



We answer to you.

LOW-FLOW PURGING AND SAMPLING DATA SHEET

Site: Herr Foods, Inc., Nottingham, PA

Field Personnel: Ed Dziedzic

Date: 3/2/15

Pump: 4-Stage SS Mega Monsoon With DC Controller

Weather: SUNNY 50°

Meter: YSI 556 Multiparameter With Flow Cell

Well No.:	MW-1	Screened Interval:	7 to 27 ft.	X 4.5 gal Pulled										
Well Depth:	27 ft.	Depth To Water Before Pump Installation:	2.20											
Well Diameter:	2-inch	Pump Intake Depth:	10 ft.	Sample Time: 10:55										
Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
10:10		NA		NA		NA		NA		NA		NA	600	2.20
10:32	6.03		0.277		309.4		7.25		0.245		11.40		500	3.40
10:36	6.12		0.285		304.7		6.68		0.251		11.65		500	3.36
10:41	6.15		0.302		301.1		6.39		0.267		11.65	0	400	3.25
10:47	6.24	+0.09	0.337	+10%	294.3	-6.8	6.05	-0.34	0.295	+9%	11.72	+0.07	200	3.26
10:51	6.25	+0.01	0.342	+2%	293.4	-0.9	6.03	-0.02	0.299	+1%	11.51	-0.21	200	3.18
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		=/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C		NA	

* Not to exceed 500 ml/min
** Resolution accuracy of YSI 556

X 10:10 - 10:32 ADDED CLAMPS AND ADJUSTED FLOW CELL TO CONTROL LEAKS, ADJUSTED FLOW RATE



We answer to you.

LOW-FLOW PURGING AND SAMPLING DATA SHEET

Site: Herr Foods, Inc., Nottingham, PA

Field Personnel: Ed Dziedzic

Date: 3/9/15

Pump: 4-Stage SS Mega Monsoon With DC Controller

Weather: sunny 50°

Meter: YSI 556 Multiparameter With Flow Cell

Well No.: MW-2

Screened Interval: 3 to 23 ft.

Well Depth: 23 ft.

Depth To Water Before Pump Installation: 2.26

Well Diameter: 2-inch

Pump Intake Depth: 10 ft.

Sample Time: 12:00

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
11:34		NA		NA		NA		NA		NA		NA	600	2.96
11:37	5.35		1.982		323.1		7.01		1.793		10.28		450	4.88
11:44	5.32		2.028		326.8		6.39		1.808		10.83		600	4.55
11:50	5.32	0	2.040		328.4		6.28		1.815		10.91		350	4.42
11:55	5.32	0	2.058	+1%	330.9	+2.5	6.30	+0.02	1.830	+1%	10.93	+0.02	450	4.30
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		=/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C			NA

* Not to exceed 500 ml/min
** Resolution accuracy of YSI 556

LOW-FLOW PURGING AND SAMPLING DATA SHEET

Site: Herr Foods, Inc., Nottingham, PA

Field Personnel: Ed Dziedzic

Date: 3/9/15

Pump: 4-Stage SS Mega Monsoon With DC Controller

Weather:

Meter: YSI 556 Multiparameter With Flow Cell

Well No.: MW-3

Screened Interval: 5 to 25 ft.

Well Depth:

Depth To Water Before Pump Installation: 3.38

Well Diameter:

Pump Intake Depth: 11 ft.

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
14:25	6.24	NA	1.550	NA	196.9	NA	5.50	NA	1.373	NA	10.30	NA	600	3.40
14:32	6.03		1.584		201.9		2.97		1.417		10.97		400	4.04
14:36	5.99		1.694		196.1		2.43		1.483		11.41		500	4.14
14:40	6.01	+0.02	1.707		183.8		2.59		1.484		11.51		300	4.14
14:45	6.03	+0.02	1.727	+1%	179.7	-4.1	2.69	+0.10	1.508	+0.02%	11.58	+0.07	400	4.02
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		=/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2 °C			NA

* Not to exceed 500 ml/min

** Resolution accuracy of YSI 556



Site: Herr Foods, Inc., Nottingham, PA

Date: 3/9/15

Weather: sunny 50°

3.94

Sample Time: 14:05

6.1 ✓

H:\Projects\10172\101722001\GS\Site Characterization\Low-Flow Data Sheet.xlsx



LOW-FLOW PURGING AND SAMPLING DATA SHEET

We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Field Personnel: Ed Dzedzic

Date: 3/9/15

Weather: Sunny 50°

Well No.:	MW-5	Screened Interval:	7 to 27 ft.	3 gcl Pulver
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Well Depth: 27 ft.

Well Diameter:	2-inch	Pump Intake Depth:	10 ft.	Sample Time:	13:05
----------------	--------	--------------------	--------	--------------	-------

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
12:47		NA		NA		NA		NA		NA		NA	600	3.42
12:50	4.73		1.288		236.9		4.03		1.135		11.36		600	3.95
12:55	4.73		1.351		227.2		3.23		1.172		12.01		400	3.98
12:59	4.75		1.388		225.6		2.98		1.190		12.30		500	4.15
13:03	4.73	-0.02	1.403	1%	223.8	-1.8	3.11	+0.13	1.197	1%	12.56	+0.14	500	4.16
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		=/- 20 mV**		+/- 0.2 mg/L***		+/- 10% of Reading		+/- 0.2 °C			NA

* Not to exceed 500 ml/min
** Resolution accuracy of YSI 556



We answer to you.

LOW-FLOW PURGING AND SAMPLING DATA SHEET

Site: Herr Foods, Inc., Nottingham, PA

Date: 4/1/15

Weather: SUNNY 45°

Field Personnel: Ed Dziedzic

Pump: 4-Stage SS Mega Monsoon With DC Controller

Meter: YSI 556 Multiparameter With Flow Cell

4 gal purged

Well No.: MW-1

Well Depth: 27 ft.

Well Diameter: 2-inch

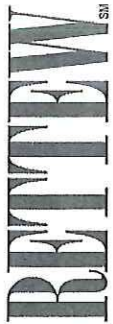
Screened Interval: 7 to 27 ft.

Depth To Water Before Pump Installation: 1.39 ft

Pump Intake Depth: 10 ft. Sample Time: 8:47

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
8:24		NA		NA		NA		NA		NA		NA		1.33
8:28	6.25		0.192		494.1		7.53		0.169		11.03		600	2.39
8:31	5.96		0.192		498.8		6.68		0.169		11.40		575	2.42
8:34	5.90		0.196		502.4		5.87		0.169		11.72		500	2.46
8:38	5.86		0.197		504.6		5.40		0.170		11.79		500	2.40
8:41	5.85		0.196		505.4		5.26		0.171		11.74		500	2.37
8:43	5.89	+0.01	0.198	+1%	506.5	+1.1	5.06	-0.2	0.172	+1%	11.76	+0.02	500	2.35
8:46	5.81	-0.03	0.199	+1%	507.6	+1.1	4.91	-0.15	0.174	+1%	11.77	+0.01	500	2.34
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		=/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C			NA

* Not to exceed 500 ml/min
** Resolution accuracy of YSI 556



We answer to you.

LOW-FLOW PURGING AND SAMPLING DATA SHEET

Site: Herr Foods, Inc., Nottingham, PA

Field Personnel: Ed Dziedzic

Date: 4/11/15

Pump: 4-Stage SS Mega Monsoon With DC Controller

Weather: SUNNY 45°

Meter: YSI 556 Multiparameter With Flow Cell

3.5 gal Purged

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
9:27		NA		NA		NA		NA		NA		NA		1.96
9:31	5.27		2.018		507.5		6.40		1.848		9.97		750	3.11
9:34	5.25		2.038		494.9		5.30		1.861		9.95		375	2.77
9:37	5.25		2.039		482.2		3.37		1.868		9.81		300	2.66
9:40	5.26		2.047		470.3		2.93		1.850		10.22		400	2.71
9:44	5.27	+6.01	2.084	+2%	468.2	-2.1	2.86	-0.07	1.882	+2%	10.22	0	400	3.04
9:46	5.28	+0.01	2.121	+2%	468.6	+0.4	2.87	+0.01	1.909	+1%	10.30	+0.08	400	3.06
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		=/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C			NA

* Not to exceed 500 ml/min
** Resolution accuracy of YSI 556



We answer to you.

LOW-FLOW PURGING AND SAMPLING DATA SHEET

Site: Herr Foods, Inc., Nottingham, PA

Field Personnel: Ed Dziedzic

Date: 4/1/15

Pump: 4-Stage SS Mega Monsoon With DC Controller

Weather: SUNNY 45°

Meter: YSI 556 Multiparameter With Flow Cell

Well No.: MW-5

Screened Interval: 7 to 27 ft.

Well Depth: 27 ft.

Depth To Water Before Pump Installation: 2.94 ft

Well Diameter: 2-inch

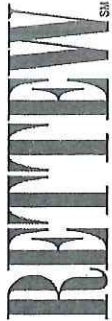
Pump Intake Depth: 10 ft.

Sample Time: 11:03

3.5 gal Purged

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
10:38		NA		NA		NA		NA		NA		NA	600	2.88
10:42	5.01		1.679		285.4		6.60		1.474		11.45		400	3.24
10:45	4.93		1.685		281.1		4.20		1.474		11.56		375	3.20
10:48	4.94		1.698		277.3		2.88		1.482		11.70		550	3.35
10:52	4.89		1.705		283.1		2.93		1.467		12.19		600	3.43
10:55	4.91		1.701		276.0		3.17		1.468		12.08		400	3.35
10:59	4.89	-0.02	1.682	-1%	274.4	-1.6	2.97	-0.20	1.451	-1%	12.17	+0.09	400	3.29
11:01	4.89	0	1.688	<1%	272.6	-1.8	2.91	-0.08	1.456	<1%	12.08	-0.09	300	3.25
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		=/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2 °C			NA

* Not to exceed 500 ml/min
** Resolution accuracy of YSI 556



LOW-FLOW PURGING AND SAMPLING DATA SHEET

We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: 4/1/15

Weather: SUNNY 45°

Field Personnel: Ed Dziedzic

Pump: 4-Stage SS Mega Monsoon With DC Controller

Meter: YSI 556 Multiparameter With Flow Cell

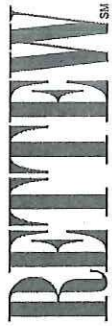
Well No.: MW-4
Well Depth: 19 ft.
Well Diameter: 2-inch
Screened Interval: 0 to 19 ft.
Depth To Water Before Pump Installation: 3.37 ft. SUGEN, SMOKE ODOR
Pump Intake Depth: 10 ft. Sample Time: 12:02
5.5 gal Pulses

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
11:38		NA		NA		NA		NA		NA		NA		3.37
11:41	9.92		1.193		76.6		5.40		1.077		10.78			
11:45	9.53		1.159		62.5		2.90		1.021		11.37		7500	4.40
11:48	9.17		1.138		-157.8		2.73		0.991		11.64		600	4.48
11:51	8.54		1.131		-167.0		2.05		0.988		11.46		400	4.43
11:53	8.19		1.077		-74.2		1.86		0.927		11.93		300	4.30
11:56	7.82		1.054		-23.4		1.77		0.905		12.22		800	4.35
11:58	7.58	-0.24	1.048	<1%	-8.8	+14.6	1.76	-0.01	0.900	-1%	12.29	+0.07	300	4.30
12:00	7.39	-0.19	1.055	<1%	-10.1	-1.3	1.80	+0.04	0.907	+1%	12.27	-0.02	450	4.28
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		=/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C			NA

* Not to exceed 500 ml/min

** Resolution accuracy of YSI 556

* FIXED LEAK, BOBBING SUSPECT
EMULSIFIED SPL OBSERVED ON TUBING UPON REMOVAL



We answer to you.

LOW-FLOW PURGING AND SAMPLING DATA SHEET

Site: Herr Foods, Inc., Nottingham, PA

Field Personnel: Ed Dziedzic

Date: 4/1/15

Pump: 4-Stage SS Mega Monsoon With DC Controller

Weather: SUNNY 45°

Meter: YSI 556 Multiparameter With Flow Cell

Well No.: MW-3

Screened Interval: 5 to 25 ft.

Well Depth: 25 ft.

Depth To Water Before Pump Installation: 2.96 ft

Well Diameter: 2-inch

Pump Intake Depth: 11 ft.

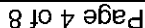
Sample Time: 13:29

4.5 gal purged

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
13:00		NA		NA		NA		NA		NA		NA		2.85
13:04	6.38		1.725		168.6		4.60		1.538		10.75		400	3.20
13:07	6.21		1.723		167.5		3.20		1.533		10.91		400	3.24
13:10	6.08		1.735		162.5		4.35		1.539		11.10		400	3.25
13:13	6.08		1.742		162.0		4.37		1.543		11.08		400	3.29
13:15	6.07		1.741		163.9		4.18		1.539		11.18		400	3.34
13:17	6.09		1.759		161.6		4.02		1.546		11.26		500	3.38
13:20	6.10		1.799		155.7		3.23		1.577		11.26		500	3.43
13:23	6.12		1.811		150.3		2.79		1.592		11.33		500	3.48
13:25	6.13	+0.01	1.842	+1.7%	144.2	-6.1	2.67	-0.12	1.607	+1%	11.36	+0.03	500	3.48
13:27	6.13	0	1.829	-1%	141.2	-3.0	2.59	-0.08	1.606	<1%	11.41	+0.05	500	3.45
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		=/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C			NA

* Not to exceed 500 ml/min

** Resolution accuracy of YSI 556



LOW-FLOW PURGING AND SAMPLING DATA SHEET

We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: 7-9-13

Weather: Cloudy 78°F

Field Personnel: DAWYNI COLLEEN (SR)

Pump: Peristaltic Pump

Meter: Multiparameter With Flow Cell

Well No.: MW-2

Screened Interval: 3 to 23 ft.

Well Depth: 23 ft.

Depth To Water Before Pump Installation: 3.71 Start Pump: 0445

Well Diameter: 2-inch

Pump Intake Depth: 10 ft. **Sample Time:** 1730

Well Diameter:		pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
		Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
Time		Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
0950		5.35	NA	2.265	NA	109.9	NA	5.10	NA	1.648	NA	19.41	NA	270	3.86
1000		5.10	0.25	2.262	0.003	106.6	3.3	3.85	1.25	1.654	0.006	19.22	0.19	270	3.86
1010		5.07	0.03	2.264	0.002	103.1	3.5	3.42	0.43	1.656	0.002	19.15	0.07	270	3.86
1015		5.06	0.01	2.265	0.001	101.9	1.2	3.37	0.05	1.657	0.001	19.16	0.01	270	3.86
1020		5.06	0.00	2.263	0.002	100.9	1.0	3.35	0.02	1.657	0.000	19.10	0.06	270	3.86
1025		5.05	0.01	2.261	0.002	99.7	1.2	3.28	0.07	1.656	0.001	19.14	0.04	270	3.86
Stabilization Criteria		+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C			NA

Total mixed 3.2 gal.



* Not to exceed 500 ml/min
** Resolution accuracy of YSI 556

5072359
Deborah Hannum



We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: 7-9-15

Weather: Partly Cloudy 79°F

Field Personnel: Donovan Correlli (STL)

Pump: Peristaltic Pump Cole-Parmer Masterflex E/S

Meter: Multiparameter With Flow Cell YSI 556

Well No.: MW-1

Well Depth: 27 ft.

Well Diameter: 2-inch

Screened Interval: 7 to 27 ft.

Depth To Water Before Pump Installation: 2.85

Pump Start: 1045

Pump Intake Depth: 10 ft.

Sample Time: 1132

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
1050	5.45	NA	0.158	NA	44.6	NA	23.05	NA	0.123	NA	16.15	NA	268	3.15
1100	5.51	0.03	0.155	0.003	97.4	2.8	23.01	0.04	0.122	0.001	15.87	0.28	268	3.18
1110	5.97	0.46	0.155	0.000	78.1	19.3	22.97	0.04	0.123	0.001	15.70	0.17	268	3.18
1120	5.80	0.17	0.155	0.000	87.2	9.1	22.10	0.87	0.123	0.000	15.36	0.34	268	3.18
1125	5.79	0.01	0.156	0.001	87.7	0.5	22.14	0.04	0.124	0.001	15.36	0.00	268	3.18
1130	5.94	0.07	0.157	0.001	89.8	2.9	22.05	0.09	0.125	0.001	15.36	0.00	268	3.18
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C			NA

Total Purged 3.3 gal.



5072359
Deborah Hannum

* Not to exceed 500 ml/min
** Resolution accuracy of YSI 556



We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Field Personnel: Donovan Carroll (BTH)
Pump: Peristaltic Pump Safe-Pumpers Mustang 15 F/15

pump: Peristaltic Pump

Meter: Multiparameter With Flow Cell

Screened Interval: 3 to 20 ft.

Depth To Water Before Pump Installation: 4

Pump Intake Depth: 10 ft

Over 500,000

Sample Time: 22

Well Diameter: 2-Inch		pH (SU)			Conductivity (mS/cm)			ORP (mV)			DO (mg/L)			TDS (g/L)			Temp. (°C)			Pumping Rate* (ml/min)	Depth To Water
		Reading	Change		Reading	Change		Reading	Change		Reading	Change		Reading	Change		Reading	Change			
Time																					
1150		5.75	NA	0.200	NA	87.6	NA	15.79	NA	0.154	NA	16.96	NA	263	3.06						
1200		5.25	0.5	0.200	0.000	102.2	18.6	14.11	1.68	0.153	0.001	16.94	0.02	263	3.13						
1205		5.26	0.01	0.199	0.001	98.4	3.8	13.53	0.58	0.153	0.000	16.98	0.04	263	3.16						
1210		5.35	0.09	0.203	0.004	92.4	6.0	12.88	0.65	0.156	0.003	16.96	0.02	263	3.16						
1215		5.41	0.06	0.201	0.002	87.6	4.8	14.07	1.19	0.155	0.001	16.91	0.05	263	3.16						
1220		5.41	0.00	0.200	0.001	87.3	0.3	13.98	0.09	0.154	0.001	16.81	0.10	263	3.16						
Stabilization Criteria		+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C		NA							

Total Paved 2.5 gal

*** Resolution accuracy of multiparameter meter



5072359
Jehorah Hannum



We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: 7-24-18

Weather: Cloudy 81°F

Field Personnel: Donovan Carroll (STL)

Pump: Peristaltic Pump Cole-Parmer MasterFlex E/S

Meter: Multiparameter With Flow Cell 452556

Well No.: MW-10

Screened Interval: 3 to 20 ft.

Well Depth: 20 ft.

Depth To Water Before Pump Installation: 3.85

Purge Started: 1240

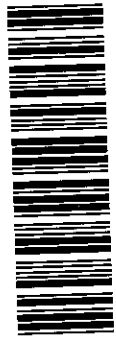
Well Diameter: 2-inch

Pump Intake Depth: 8

Sample Time: 1312

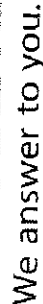
Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
1245	5.70	NA	1.431	NA	5.6	NA	2.17	NA	1.039	NA	19.52	NA	285	3.14
1250	5.70	0	1.437	0.006	10.0	4.4	1.66	0.51	1.053	0.014	19.04	0.48	285	3.18
1300	5.72	0.02	1.424	0.013	11.1	1.1	1.48	0.18	1.052	0.001	18.64	0.40	285	3.19
1305	5.72	0.00	1.403	0.021	13.0	1.9	1.41	0.06	1.043	0.009	18.34	0.30	285	3.20
1310	5.73	0.01	1.394	0.009	14.3	1.3	1.39	0.02	1.038	0.005	18.27	0.07	285	3.20
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C			NA

Total Purged 2.4 gal.



* Not to exceed 500 ml/min
** Resolution accuracy of multiparameter meter

5072359
Deborah Hamnum



LOW-FLOW PURGING AND SAMPLING DATA SHEET

Site: Herr Foods, Inc., Nottingham, PA

Date: 7-10-13

Pump: Peristaltic Pump *like a blood pressure cuff*

Meter: Multiparameter With Flow Cell

Well No.: MW-6

Screened Interval: 3 to 20 ft.

Well Depth: 20 ft.

Depth To Water Before Pump Installation: 1.490

Well Diameter: 2-inch

Pump Intake Depth: 10 ft.

Sample Time: 09:38

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
0910	6.33	NA	0.294	NA	42.0	NA	9.09	NA	0.215	NA	19.06	NA	334	2.30
0920	5.80	0.52	0.286	0.008	59.9	17.9	7.86	1.23	0.209	0.006	19.22	0.16	334	2.31
0930	5.78	0.02	0.284	0.002	57.6	2.3	7.80	0.06	0.207	0.002	19.22	0.00	394	2.31
0935	5.77	0.01	0.277	0.007	57.0	0.6	7.73	0.07	0.203	0.004	19.16	0.06	394	2.31
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2 °C		NA	NA

* Not to exceed 500 ml/min

Resolution accuracy of multiparameter meter



5072398
Deborah Hannum

[illegible]



We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: 7-10-15

Weather: Sunny 70°F

Field Personnel: Donovan Cannel (STL)

Pump: Peristaltic Pump Cole-Parmer MasterFlex E/S

Meter: Multiparameter With Flow Cell YSI 556

Well No.: MW-9

Screened Interval: 3 to 20 ft.

Well Depth: 20 ft.

Depth To Water Before Pump Installation: 2.40

Purge Started: 0815

Well Diameter: 2-inch

Pump Intake Depth: 10 ft.

Sample Time: 0842

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
0820	6.35	NA	1.570	NA	-44.7	NA	3.92	NA	1.246	NA	15.51	NA	340	3.06
0825	6.08	0.27	1.575	0.005	-33.6	11.1	2.27	1.65	1.266	0.020	15.00	0.51	240	3.10
0830	5.99	0.09	1.603	0.028	-26.4	7.2	1.83	0.44	1.298	0.032	14.74	0.26	340	3.14
0835	5.92	0.07	1.675	0.072	-14.2	12.7	1.66	0.17	1.358	0.060	14.65	0.09	340	3.16
0840	5.91	0.01	1.691	0.016	-11.8	2.4	1.69	0.03	1.372	0.014	14.59	0.06	340	3.16
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C		NA	

* Not to exceed 500 ml/min

** Resolution accuracy of multiparameter meter



5072398
Deborah Hannum

Total Purged: 2.4 gal.

LOW-FLOW PURGING AND SAMPLING DATA SHEET

We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Field Personnel: *Robert J. ...* 1576

Date: 7-10-15

Pump: Peristaltic Pump

Weather: Sunny

Meter: Multiparameter With Flow Cell YSI 550

Well No.: MW-4

Screened Interval: 0 to 19 ft. 504141 4 29

Well Depth: 19 ft.

Depth To Water Before Pump Installation: 4.3

Well Diameter: 2-inch

Pump Intake Depth: 10 ft.

Sample Time: 248

Sample Time: 248

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
1225	6.84	NA	1.194	NA	-145.3	NA	6.75	NA	0.874	NA	18.87	NA	346	4.60
1230	6.58	0.26	1.162	0.032	-137.0	8.3	2.59	4.16	0.857	0.017	18.76	0.11	346	4.61
1240	6.54	0.04	1.153	0.009	-134.9	2.9	1.79	0.80	0.855	0.002	18.56	0.20	346	4.61
1245	5.56	0.92	1.147	0.006	-140.9	1.0	1.74	0.05	0.852	0.003	18.49	0.07	346	4.62
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C			NA

* Not to exceed 500 ml/min
** Resolution accuracy of YSI 556

Total Pumped: 2.6 gal.



5072398
Deborah Hannum



We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: 7-10-15

Weather: Sunny 73°F

Field Personnel: Donovan Cornell (STL)

Pump: Peristaltic Pump Cole-Parmer MasterFlex E15

Meter: Multiparameter With Flow Cell YSI 586

Well No.: MW-5

Well Depth: 27 ft.

Well Diameter: 2-inch

Screened Interval: 7 to 27 ft.

Depth To Water Before Pump Installation: 3.53

Pump Intake Depth: 10 ft.

Purge started 0950

Sample Time: 1022

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
0955	5.30	NA	2.351	NA	66.5	NA	5.21	NA	1.611	NA	20.29	NA	322	3.75
1005	4.81	0.49	2.243	0.008	110.4	43.9	2.58	2.63	1.621	0.010	19.69	0.54	322	3.80
1010	4.77	0.04	2.227	0.016	110.5	0.4	2.89	0.31	1.611	0.010	19.64	0.05	322	3.81
1015	4.75	0.02	2.204	0.019	110.3	0.5	2.99	0.10	1.599	0.012	19.56	0.08	322	3.92
1020	4.77	0.02	2.199	0.009	110.5	0.2	3.09	0.10	1.587	0.012	19.53	0.03	322	3.92
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C		NA	

* Not to exceed 500 ml/min
 ** Resolution accuracy of multiparameter meter



5072398
 Deborah Hamum

Total Purged: 2.7 gal.



We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: 7-10-15

Weather: Sunny 73°F

Field Personnel: Donovan Conner II (STL)

Pump: Peristaltic Pump Cole-Palmer Masterflex E/S

Meter: Multiparameter With Flow Cell YSI 556

Well No.: MW-7

Well Depth: 20 ft.

Well Diameter: 2-inch

Screened Interval: 3 to 20 ft.

Depth To Water Before Pump Installation: 4.45

Pump Intake Depth: 8 ft.

Start Range 1035

Sample Time: 112

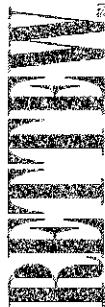
Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
1040	5.92	NA	0.543	NA	58.5	NA	2.51	NA	0.399	NA	19.75	NA	318	4.95
1050	5.08	0.24	0.509	0.035	64.9	6.4	0.88	1.13	0.382	0.017	17.98	0.77	318	4.98
1100	5.16	0.08	0.497	0.035	58.6	6.7	0.65	0.23	0.376	0.006	17.25	0.73	318	5.18
1105	5.20	0.04	0.488	0.005	55.6	3.0	0.61	0.04	0.379	0.002	17.03	0.22	318	5.21
1110	5.23	0.03	0.485	0.003	55.0	0.6	0.56	0.05	0.372	0.002	17.00	0.03	318	5.25
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C			NA

Total Pumped: 3.1 gal.



5072368
Deborah Hamnum

* Not to exceed 500 ml/min
** Resolution accuracy of multiparameter meter



We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: 7-10-15

Weather: Sunny 75°F

Field Personnel: Donovan Connell (SYL)

Pump: Peristaltic Pump Cole-Parmer Masterflex E/S

Meter: Multiparameter With Flow Cell YSI 556

Well No.: MW-3

Well Depth: 25 ft.

Well Diameter: 2-inch

Screened Interval: 5 to 25 ft.

Depth To Water Before Pump Installation: 3.61

Pump Intake Depth: 11 ft.

Start Pump: 11:25

Sample Time: 12:02

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
1130	5.66	NA	2.394	NA	-177.1	NA	8.60	NA	1.763	NA	18.82	NA	350	3.90
1140	5.86	0.20	2.222	0.172	-184.4	7.3	2.68	5.92	1.673	0.090	17.88	0.97	350	3.93
1150	6.00	0.14	2.231	0.009	-189.4	5.0	1.98	0.70	1.680	0.007	17.81	0.04	350	3.96
1155	6.07	0.07	2.216	0.015	-188.3	1.1	1.72	0.26	1.673	0.007	17.73	0.08	350	3.96
1200	6.10	0.03	2.216	0.000	-192.5	4.2	1.72	0.00	1.675	0.002	17.68	0.05	350	3.97
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C		NA	

Total Pumped: 3.4



5072398
Deborah Hamm

* Not to exceed 500 ml/min
** Resolution accuracy of YSI 556



We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: 9/18/15

Weather: Sunny 54°F

Field Personnel: Doreen Cornell (STL)

Pump: Peristaltic Pump Colog-Panor Master-Flex E/S

Meter: Multiparameter With Flow Cell YSI 556 MAPS

Well No.: MW-1

Well Depth: 27 ft.

Well Diameter: 2-inch

Screened Interval: 7 to 27 ft.

Depth To Water Before Pump Installation: 4.79

Pump Intake Depth: 10 ft.

Purge Started: 0955

Purge Ended: 1022

Sample Time: 1022

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
1000	7.07	NA	0.174	NA	80.2	NA	5.62	NA	0.129	NA	17.75	NA	376	5.14
1005	6.82	0.24	0.154	0.02	97.0	16.8	5.52	0.1	0.118	0.011	17.09	0.66	376	5.28
1010	6.77	0.06	0.149	0.005	102.1	5.1	5.51	0.01	0.115	0.003	16.63	0.46	376	5.31
1015	6.80	0.03	0.148	0.001	101.3	0.8	5.48	0.03	0.115	0.0	16.51	0.12	376	5.33
1020	6.86	0.06	0.147	0.001	99.1	2.2	5.47	0.01	0.114	0.001	16.39	0.12	376	5.39
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C		NA	

* Not to exceed 500 ml/min
 ** Resolution accuracy of YSI 556



5100575
 Deborah Hannum

2.5 gals purged

LOW-FLOW PURGING AND SAMPLING DATA SHEET

We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: 10/11/13

Weather: Sunny

Field Personnel: *Dennis Conley*

Pump: Peristaltic Pump *Colony Form on* *Master plate* *2/5*

Meter: Multiparameter With Flow Cell *YSI 9600 Pro*

Well No.: MW-2

Screened Interval: 3 to 23 ft.

Prüfungssitzung: 0915

Well Depth: 23 ft.

Depth To Water Before Pump Installation: 5.62

[illegible]

Well Diameter: 2-inch

Pump Intake Depth: 10 ft.

Sample Time: 0947

	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
Time	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
0920	6.98	NA	2431	NA	145.0	NA	2.24	NA	1.666	NA	22.55	NA	375	6.20
0925	6.43	0.45	2452	0.021	134.1	10.9	1.65	0.99	1.672	0.006	22.55	0	375	6.25
0930	6.20	0.27	2432	-0.020	129.0	5.1	1.25	0.4	1.666	0.006	22.24	0.31	375	6.38
0935	6.12	0.08	2418	-0.014	130.1	1.1	1.17	0.08	1.668	0.002	21.97	0.27	375	6.49
0940	6.10	0.02	2402	-0.016	128.4	1.7	1.12	0.05	1.662	0.006	21.89	0.08	375	6.55
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C			NA

* Not to exceed 500 ml/min

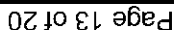
Resolution accuracy of YSI 556



5100575

Deborah Hannum

2.5 gals purged



LOW-FLOW PURGING AND SAMPLING DATA SHEET

We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Field Personnel: *Don Davis* *CE*

Date: 01/13

Pump: Peristaltic Pump

Weather: Cloudy

Meter: Multiparameter With Flow Cell

Well No.: MW-3

Screened interval: 5 to 25 ft. Purge Start: 09:50

Well Depth: 25 ft.

Depth To Water Before Pump Installation:

Well Diameter: 2-inch

Pump Intake Depth: 11 ft.

Sample Time: 03

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
0955	6.45	NA	2.010	NA	-10.5	NA	2.10	NA	1.438	NA	21.64	NA	375	5.60
1000	6.61	0.16	2.008	0.002	-19.7	20.8	3.07	0.97	1.425	0.013	20.58	1.06	375	5.61
1005	6.62	0.01	2.007	0.001	-19.8	12.1	3.19	0.12	1.425	0	20.55	0.03	975	5.62
1010	6.62	0	2.005	0.002	-19.2	0.4	3.20	0.01	1.425	0	20.54	0.01	375	5.62
1015	6.62	0	2.006	0.001	-19.8	0.4	3.21	0.01	1.428	0.003	20.51	0.03	975	5.62
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C		NA	

* Not to exceed 500 ml/min
** Resolution accuracy of YSI 556

25-1-20



5100575
Deborah Hannum

LOW-FLOW PURGING AND SAMPLING DATA SHEET

We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: 10/10/2010

Weather: Sunny

Field Personnel: *Donna Gould (ST)*

Pump: Peristaltic Pump *Coste Peristaltic Pump*

Meter: Multiparameter With Flow Cell *YSI 556 MP5*

Well No.: MW-4

Well Depth: 19 ft.

Well Diameter: 2-inch

Screened Interval: 0 to 19 ft.

Depth To Water Before Pump Installation:

Pump Intake Depth: 10 ft.

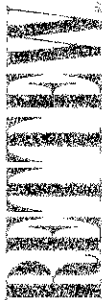
Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
1045	6.55	NA	1.004	NA	-144.2	NA	3.54	NA	0.714	NA	20.50	NA	395	6.23
1050	6.57	0.02	1.005	0.001	-148.2	4.0	3.41	0.13	0.714	0	20.58	0.08	395	6.24
1055	6.54	0.03	1.007	0.002	-150.5	2.3	3.45	0.04	0.714	0	20.61	0.03	395	6.24
1100	6.52	0.02	1.007	0	-148.8	1.7	3.83	0.38	0.715	0.001	20.60	0.01	395	6.24
1105	6.50	0.02	1.011	0.004	-147.0	1.8	4.52	0.69	0.715	0.003	20.53	0.07	395	6.24
1110	6.51	0.01	1.012	0.001	-146.2	0.8	4.53	0.01	0.717	0.001	20.55	0.02	395	6.24
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C		NA	

* Not to exceed 500 ml/min
** Resolution accuracy of YSI 556



5100575
Deborah Hannum

3.3015. 40022



LOW-FLOW PURGING AND SAMPLING DATA SHEET

We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Field Personnel: *Deborah Hannum (576)*

Date: *10/17/15*

Pump: Peristaltic Pump Cohn Partner Masterflex E/S

Weather: *Cloudy 55°F*

Meter: Multiparameter With Flow Cell YSI 556 MPS

Well No.: MW-5
Well Depth: 27 ft.
Well Diameter: 2-inch
Screened Interval: 7 to 27 ft.
Depth To Water Before Pump Installation: *4.94*
Pump Intake Depth: 10 ft.
Sample Time: *0838*
Purge Started: 0830
Purge Ended: 0838

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
0815	7.45	NA	1.386	NA	-28.4	NA	2.91	NA	0.946	NA	22.86	NA	400	5.25
0820	7.90	0.15	1.433	0.047	-44.7	16.3	2.11	0.8	0.976	0.030	22.57	0.13	400	5.25
0825	7.67	0.17	1.475	0.042	-52.5	7.8	1.65	0.46	1.008	0.032	22.39	0.14	400	5.25
0830	7.62	0.05	1.469	0.006	-52.0	0.5	1.57	0.48	1.006	0.002	22.30	0.09	400	5.25
0835	7.60	0.02	1.455	0.014	-51.5	0.5	1.51	0.06	1.009	0.003	22.26	0.04	400	5.25
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C		NA	

* Not to exceed 500 ml/min
** Resolution accuracy of multiparameter meter



5100575
Deborah Hannum

2.9 gals Purged



We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: 10/6/15

Weather: Sunny 70°F

Field Personnel: Donovan Cornell (STL)

Pump: Peristaltic Pump Cole Parmer Masterflex E/S

Meter: Multiparameter With Flow Cell YSI 556 MPS

Well No.: MW-6

Well Depth: 20 ft.

Well Diameter: 2-inch

Screened Interval: 3 to 20 ft.

Depth To Water Before Pump Installation: 3.42

Pump Intake Depth: 10 ft.

Purge Start: 1240

Purge End: 1308

Sample Time: 1308

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
1245	7.05	NA	0.186	NA	56.5	NA	6.57	NA	0.133	NA	21.92	NA	400	3.45
1250	6.86	0.19	0.177	0.019	65.3	8.8	6.40	0.17	0.124	0.009	21.58	0.34	400	3.52
1255	6.81	0.05	0.177	0	69.4	4.1	6.32	0.08	0.122	0.002	21.82	0.24	400	3.54
1300	6.75	0.06	0.177	0	72.5	3.1	6.62	0.30	0.123	0.001	21.54	0.28	400	3.55
1305	6.76	0.01	0.177	0	73.3	0.8	6.54	0.08	0.125	0.002	21.48	0.06	400	3.56
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C		NA	

2.6 gals purged



5100575
Deborah Hannum

* Not to exceed 500 ml/min
** Resolution accuracy of multiparameter meter



We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: 10/7/15

Weather: Cloudy 59°F

Field Personnel: Donovan Cornell (SRI)

Pump: Peristaltic Pump Cole Parmer Masterflex E15

Meter: Multiparameter With Flow Cell YSI 55C MPS

Well No.: MW-7

Well Depth: 20 ft.

Well Diameter: 2-inch

Screened Interval: 3 to 20 ft.

Depth To Water Before Pump Installation: 6.01

Pump Intake Depth: 8 ft.

Purge Start: 0855

Purge End: 0932

Sample Time: 0932

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
0900	8.24	NA	0.308	NA	-81.1	NA	2.32	NA	0.226	NA	19.06	NA	375	7.24
0905	8.57	0.33	0.305	0.003	-64.3	16.8	2.16	0.16	0.224	0.002	18.95	0.11	375	7.25
0910	6.71	1.86	0.298	0.007	-52.5	10.8	2.30	0.14	0.221	0.003	18.69	0.26	375	7.25
0915	6.81	0.10	0.280	0.018	-1.9	51.7	2.31	0.01	0.222	0.001	18.51	0.18	375	7.25
0920	6.89	0.08	0.300	0.020	-4.4	2.6	2.29	0.02	0.221	0.001	18.47	0.04	375	7.25
0925	6.78	0.11	0.279	0.001	-11.4	7	2.26	0.03	0.223	0.002	18.45	0.02	375	7.25
0930	6.75	0.03	0.301	0.002	-14.0	2.6	2.22	0.04	0.224	0.001	18.42	0.03	375	7.25
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C			NA

* Not to exceed 500 ml/min

** Resolution accuracy of multiparameter meter



5100575
Deborah Hannum

3.66 gals. Purged



We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: 10-6-15

Weather: Sunny 63°F

Field Personnel: Damon Girelli (STL)

Pump: Peristaltic Pump Cole Parmer Masterflex E/s

Meter: Multiparameter With Flow Cell YSI 556 MPS

Well No.: MW-38

Well Depth: 20 ft. -25 ft.

Well Diameter: 2-inch

Screened Interval: 3-20 ft. 5-to-25 ft.

Depth To Water Before Pump Installation: 3.84

Pump Intake Depth: 10 ft. 14 ft.

Purge Started: 10:55

Purge Ended: 11:02

Sample Time: 11:02

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
1040	6.91	NA	0.209	NA	107.3	NA	5.12	NA	0.151	NA	19.76	NA	401	4.00
1045	6.68	0.23	0.212	0.002	100.1	3.2	4.38	0.74	0.153	0.002	19.69	0.07	401	4.10
1050	6.57	0.11	0.211	0.001	100.6	0.5	4.15	0.23	0.153	0.0	19.55	0.14	401	4.14
1055	6.54	0.03	0.211	0	99.8	0.8	3.89	0.24	0.154	0.001	19.36	0.19	401	4.20
1100	6.48	0.06	0.209	0.002	98.9	0.9	3.86	0.03	0.153	0.001	19.21	0.15	401	4.24
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C		NA	

* Not to exceed 500 ml/min
** Resolution accuracy of YSI 556



5100575
Deborah Hannum

2.6 gals. purged



We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: 10/6/15

Weather: Sunny 66°F

Field Personnel: Donovan Corne II (SFL)

Pump: Peristaltic Pump Cole Parmer MasterFlex E/s

Meter: Multiparameter With Flow Cell YSI 556 MPS

Well No.: MW-9

Well Depth: 20 ft.

Well Diameter: 2-inch

Screened Interval: 3 to 20 ft.

Depth To Water Before Pump Installation: 4.16

Pump Intake Depth: 10 ft.

Purge Start: 1155

Purge End: 1228

Sample Time: 1228

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
1200	6.82	NA	1.932	NA	0.0	NA	2.54	NA	1.433	NA	18.53	NA	400	4.52
1205	6.81	0.01	1.923	0.01	1.8	1.8	1.61	0.93	1.441	0.008	18.04	0.49	400	4.71
1210	6.64	0.17	2.093	0.11	19.8	18	1.43	0.18	1.550	0.109	18.35	0.66	400	4.80
1215	6.45	0.19	2.107	0.074	92.5	72.7	1.32	0.11	1.612	0.062	17.20	0.18	400	4.84
1220	6.40	0.05	2.165	0.058	96.9	4.4	1.34	0.02	1.663	0.051	17.00	0.20	400	4.86
1225	6.39	0.01	2.184	0.019	97.8	0.9	1.32	0.02	1.677	0.014	16.97	0.03	400	4.91
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C		NA	

* Not to exceed 500 ml/min
** Resolution accuracy of multiparameter meter



5100575
Deborah Hamum

3.2 gals purged

LOW-FLOW PURGING AND SAMPLING DATA SHEET

Page 20 of 20

Field Personnel: Peruvian Cornell (STL)

Pump: Peristaltic Pump Cole Parmer Masterflex E/s

Meter: Multiparameter With Flow Cell YSI 550 MPS

Screened Interval: 3-20 ft 0 to 19 ft: *Orange Street 1115*

Depth To Water Before Pump Installation: 4.88

Pump Intake Depth: 10 ft.

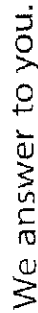
	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
Time														
1120	6.76	NA	1.718	NA	10.5	NA	1.96	NA	1.215	NA	20.81	NA	400	4.85
1125	6.79	0.03	1.719	0.001	12.4	1.6	1.53	0.43	1.216	0.001	20.75	0.06	400	4.90
1130	6.84	0.05	1.670	-0.049	13.5	1.1	1.32	0.21	1.193	0.033	20.66	0.09	400	4.75
1135	6.84	0	1.649	-0.021	14.1	0.6	1.24	0.08	1.169	0.014	20.63	0.03	400	4.75
1140	6.84	0	1.628	-0.021	13.0	-1.1	1.18	0.06	1.153	0.016	20.65	0.02	400	4.75
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C		NA	

2.6 gals. purged

**** Resolution accuracy of YSI 556**



5100575
Deborah Hannum



LOW-FLOW PURGING AND SAMPLING DATA SHEET

Site: Herr Foods, Inc., Nottingham, PA

Field Personnel: *Deanna Carroll*

Pump: Peristaltic Pump

Meter: Multiparameter With Flow Cell

Screened Interval: 2 to 12 ft.

Depth To Water Before Pump Installation: 3.41

Pump Intake Depth: 9 ft. Sample Time: 049736

Well Diameter:	2-Inch		Pump Intake Depth:		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water		
	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)				Temp. (°C)	
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change			Reading	Change
Time	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
1025	5.18	NA	0.295	NA	208.4	NA	4.90	NA	0.148	NA	10.52	NA	350	3.89
1030	5.11	0.07	0.300	0.005	230.6	22.2	4.35	0.55	0.150	0.002	11.09	0.57	350	4.00
1035	5.09	0.02	0.299	0.001	240.5	9.9	4.41	0.06	0.150	0.000	11.36	0.27	350	4.01
1040	5.07	0.02	0.297	0.002	248.0	7.5	4.43	0.02	0.148	0.002	11.52	0.16	350	4.03
1045	5.06	0.01	0.294	0.003	255.4	7.4	4.38	0.05	0.147	0.001	11.73	0.12	350	4.05
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C		NA	

1.8 gallons purged



* Not to exceed 500 ml/min
** Resolution accuracy of multiparameter meter

6012049
Deborah Hannum



We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: 1/15/12

Weather: Sunny 43°F

Field Personnel: Deborah Cornell (BTL)

Pump: Peristaltic Pump Master Flex E15

Meter: Multiparameter With Flow Cell Hanna HI 98194

Well No.: MW-12

Well Depth: 12 ft.

Well Diameter: 2-inch

Screened Interval: 2 to 12 ft.

Depth To Water Before Pump Installation: 2.20

Pump Intake Depth: 9 ft.

Sample Time: 10:12 1-15-12

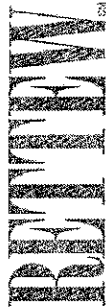
Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
0945	5.33	NA	0.115	NA	152.1	NA	3.95	NA	0.058	NA	10.18	NA	400	2.91
0950	5.13	0.20	0.105	0.013	144.3	42.3	2.96	0.99	0.052	0.06	10.68	0.50	400	2.90
0955	5.09	0.04	0.104	0.001	214.9	20.2	2.90	0.06	0.052	0	11.02	0.34	400	2.91
1000	5.09	0	0.103	0.001	221.6	7.1	2.92	0.02	0.051	0.001	11.33	0.31	400	2.98
1005	5.05	0.01	0.102	0	227.7	6.1	2.99	0.07	0.052	0.001	11.28	0.05	400	2.98
1010	5.05	0	0.102	0.001	228.7	1.0	3.05	0.06	0.051	0.001	11.41	0.13	400	3.00
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C		NA	

* Not to exceed 500 ml/min
** Resolution accuracy of multiparameter meter



6012049
Deborah Hannum

2.6 gallons purged



We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: 1/15/16

Weather: Sunny 50°F

Field Personnel: Donovan Correll (STL)

Pump: Peristaltic Pump Masterflex E15

Meter: Multiparameter With Flow Cell Hanna HI98194

Well No.: MW-3

Well Depth: 25 ft.

Well Diameter: 2-inch

Screened Interval: 5 to 25 ft.

Depth To Water Before Pump Installation: 4.91

Pump Intake Depth: 11 ft.

Sample Time: 12:43 1/15/16

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
1205	6.17	NA	1.405	NA	-117.5	NA	2.23	NA	.959	NA	14.53	NA	300	5.01
1210	6.19	0.02	1.464	0.059	-143.0	75.5	2.04	0.24	.983	0.024	14.73	0.20	300	5.05
1215	6.20	0.01	2.003	0.039	-214.8	26.2	1.88	0.16	1.003	0.02	14.74	0.01	300	5.06
1220	6.21	0.01	2.096	0.083	-231.4	11.6	1.81	0.07	1.046	0.043	14.58	0.16	300	5.06
1225	6.22	0.01	2.155	0.064	-236.3	4.9	1.76	0.03	1.080	0.034	14.50	0.08	300	5.09
1230	6.23	0.01	2.220	0.065	-236.2	0.1	1.74	0.04	1.111	0.031	14.65	0.15	300	5.11
1235	6.24	0.01	2.253	0.033	-239.7	3.5	1.73	0.01	1.126	0.015	14.64	0.01	300	5.12
1240	6.25	0.01	2.278	0.025	-240.2	0.5	1.72	0.01	1.140	0.014	14.67	0.03	300	5.12
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C		NA	

* Not to exceed 500 ml/min

** Resolution accuracy of YSI 556



6012049
Deborah Harnum

2.8 gallons purged



We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: 1/15/16

Weather: Overcast 48°C

Field Personnel:

Pump: Peristaltic Pump Masterflex E/S

Meter: Multiparameter With Flow Cell Hanna HI 98199

LOW-FLOW PURGING AND SAMPLING DATA SHEET

Well No.: MW-4

Well Depth: 19 ft.

Well Diameter: 2-inch

Screened Interval: 0 to 19 ft.

Depth To Water Before Pump Installation: 5.81

Pump Intake Depth: 10 ft.

Sample Time: 1:38 1-18-16

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
1315	6.45	NA	1.146	NA	-116.4	NA	2.54	NA	1575	NA	15.02	NA	320	5.94
1320	6.46	0.03	1.171	0.025	-140.6	23.1	1.81	0.73	1586	0.011	15.11	0.17	320	6.03
1325	6.50	0.02	1.172	0.001	-156.3	10.3	1.85	0.04	1585	0.001	15.14	0.05	320	6.02
1330	6.51	0.01	1.166	0.006	-156.4	6.1	1.74	0.11	1582	0.003	15.25	0.11	320	6.11
1335	6.52	0.01	1.160	0.006	-163.2	6.8	1.72	0.02	1580	0.002	15.27	0.02	320	6.15
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C			NA

* Not to exceed 500 ml/min
** Resolution accuracy of YSI 556



6012049
Deborah Hannum

1.7 gallons purged



We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: 1/14/16

Weather: Sunny 39°F

Field Personnel: Donovan Corneil (STL)

Pump: Peristaltic Pump Masterflex E15

Meter: Multiparameter With Flow Cell Hamam H198194

Well No.: MW-5

Well Depth: 27 ft.

Well Diameter: 2-inch

Screened Interval: 7 to 27 ft.

Depth To Water Before Pump Installation: 4.60

Pump Intake Depth: 10 ft.

Sample Time: 1/14/16 1309

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
1230	5.53	NA	1.064	NA	54.9	NA	0.70	NA	0.529	NA	16.77	NA	310	4.78
1235	5.19	0.34	1.057	0.007	62.6	7.7	0.28	0.42	0.524	0	17.02	0.25	310	4.81
1240	5.01	0.18	1.166	0.049	34.9	27.7	0.26	0.02	0.553	0.024	17.15	0.13	310	4.83
1245	4.97	0.04	1.124	0.018	20.6	14.3	0.24	0.02	0.562	0.009	17.22	0.07	310	4.83
1250	4.95	0.02	1.145	0.021	10.0	10.6	0.24	0	0.573	0.011	17.20	0.02	310	4.83
1255	4.95	0	1.167	0.022	-33.8	43.8	0.23	0.01	0.584	0.011	17.29	0.09	310	4.83
1300	4.94	0.01	1.160	0.007	-68.4	34.6	0.24	0.01	0.580	0.004	17.92	0.13	310	4.83
1305	4.93	0.01	1.162	0.002	-70.5	2.1	0.21	0.03	0.582	0.002	17.37	0.05	310	4.83
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C		NA	

* Not to exceed 500 ml/min

** Resolution accuracy of multiparameter meter



6012049
Deborah Hamum

2.9 gallons purged



We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: 1/14/16

Weather: Sunny 37°F

Field Personnel: Deborah Cornell

Pump: Peristaltic Pump Masterflex E/S

Meter: Multiparameter With Flow Cell Hanna HI 98194

Well No.: MW-9

Well Depth: 20 ft.

Well Diameter: 2-inch

Screened Interval: 3 to 20 ft.

Depth To Water Before Pump Installation: 3.94

Pump Intake Depth: 10 ft.

Sample Time: 12:18 1/14/16

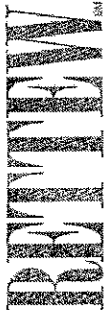
Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
11:50	6.56	NA	2.451	NA	-11.3	NA	0.00	NA	1.226	NA	13.97	NA	400	4.19
11:59	6.54	0.02	2.453	0.002	-7.2	4.1	0.00	0	1.226	0	13.96	0.3	400	4.21
12:00	6.54	0	2.454	0.001	-8.3	-1.1	0.31	0.31	1.227	0.001	13.98	0.05	400	4.25
12:05	6.54	0	2.453	0.001	-20.1	11.8	0.22	0.09	1.227	0	13.98	0.03	400	4.32
12:10	6.52	0.02	2.463	0.010	-21.2	1.3	0.21	0.01	1.233	0.006	14.00	0.15	400	4.39
12:15	6.51	0.01	2.463	0	-19.7	1.5	0.22	0.01	1.231	0.002	13.96	0.04	400	4.40
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C			NA

* Not to exceed 500 ml/min
** Resolution accuracy of multiparameter meter



6012049
Deborah Hannum

2.6 gallons Purged



We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: 1/18/16

Weather: Sunny 43°F

Field Personnel: Donovan Carroll (STL)

Pump: Peristaltic Pump Masterflex E15

Meter: Multiparameter With Flow Cell Hanna HI914194

Well No.: MW-11

Well Depth: 12.5 ft.

Well Diameter: 2-inch

Screened Interval: 2 to 12.5 ft.

Depth To Water Before Pump Installation: 0.24

Pump Intake Depth: 11.5 ft.

Sample Time: 1/15/16

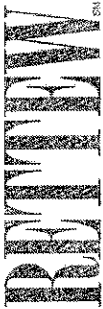
Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
1110	5.96	NA	0.477	NA	204.6	NA	3.20	NA	0.238	NA	11.35	NA	300	0.61
1115	5.94	0.02	0.503	0.026	205.7	0.001	2.52	0.68	0.256	0.018	11.59	0.24	300	0.62
1120	5.94	0	0.524	0.021	206.3	0.6	2.59	0.17	0.262	0.006	11.48	0.11	300	0.62
1125	5.94	0	0.528	0.004	201.6	4.7	2.73	0.04	0.264	0.002	11.61	0.13	300	0.62
1130	5.94	0	0.555	0.007	193.5	8.1	2.72	0.01	0.267	0.003	11.63	0.03	300	0.62
1135	5.95	0.01	0.528	0.007	185.9	7.6	2.70	0.02	0.266	0.001	11.63	0	300	0.62
1140	5.95	0	0.526	0.002	171.5	6.4	2.69	0.01	0.262	0.004	11.64	0.01	300	0.62
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C			NA

* Not to exceed 500 ml/min
 ** Resolution accuracy of multiparameter meter



6012049
 Deborah Hannum

2.4 gallons purged



We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: 1-14-16

Weather: Sunny 36°F

Field Personnel: Donavan Cornell (STL)

Pump: Peristaltic Pump Masterflex E/S

Meter: Multiparameter With Flow Cell Hanna HI 98194

Well No.: MW-10

Well Depth: 20 ft.

Well Diameter: 2-inch

Screened Interval: 3 to 20 ft.

Depth To Water Before Pump Installation: 4.01

Pump Intake Depth: 10 ft.

Sample Time: 1/13/16

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
0105	5.61	NA	2.202	NA	110.7	NA	0.00	NA	1101	NA	16.05	NA	340	4.28
0110	5.67	0.06	2.247	0.034	108.9	1.8	0.00	0	1121	0.020	16.13	0.08	340	4.31
0115	5.67	0	2.241	0.006	111.1	2.2	0.00	0	1122	0.001	16.22	0.09	340	4.35
0120	5.66	0.01	2.237	0.004	113.2	2.1	0.00	0	1121	0.001	16.26	0.04	340	4.39
0125	5.66	0	2.247	0.010	113.8	0.6	0.00	0	1121	0	16.39	0.07	340	4.41
0130	5.68	0.02	2.236	0.011	112.8	1.0	0.00	0	1117	0.004	16.39	0.20	340	4.41
0135	5.69	0.01	2.232	0.004	112.1	0.7	0.00	0	1109	0.008	16.47	0.06	340	4.41
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C			NA

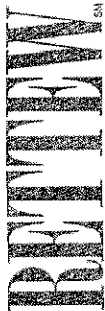
* Not to exceed 500 ml/min

** Resolution accuracy of multiparameter meter



6012049
Deborah Hannum

2.7 gallons purged



We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: 1/15/16

Weather: Sunny 37°F

Field Personnel: Deborah Hannum (STL)

Pump: Peristaltic Pump Masterflex E/s

Meter: Multiparameter With Flow Cell Hanna HI 98144

Well No.: MW-7

Well Depth: 20 ft.

Well Diameter: 2-inch

Screened Interval: 3 to 20 ft.

Depth To Water Before Pump Installation: 590

Pump Intake Depth: 8 ft.

Sample Time: 0912 1-15-16

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
0840	5.64	NA	0.507	NA	-61.0	NA	3.15	NA	0.253	NA	13.99	NA	320	6.60
0850	5.76	0.07	0.513	0.006	-118.7	57.7	1.72	1.43	0.255	0.002	14.80	0.81	320	6.61
0855	5.75	0.02	0.505	0.008	-174.2	20.5	1.73	0.01	0.252	0.003	15.90	1.0	320	6.65
0900	5.75	0	0.499	0.006	-170.6	1.4	1.69	0.04	0.249	0.004	15.34	0.46	320	6.70
0905	5.77	0.01	0.496	0.003	-141.8	1.2	1.67	0.02	0.247	0.001	15.41	0.07	320	6.70
0910	5.74	0.03	0.497	0.001	-141.1	0.7	1.65	0.02	0.237	0.010	15.49	0.08	320	6.70
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C		NA	NA

* Not to exceed 500 ml/min

** Resolution accuracy of multiparameter meter



G012049
Deborah Hannum

2.5 gallons purged



LOW-FLOW PURGING AND SAMPLING DATA SHEET

We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: 4/7/16

Weather: Rain 54°F

Field Personnel: Duncan Cornell (STL)

Pump: Peristaltic Pump Proactive Alexis

Meter: Multiparameter With Flow Cell Hand HI 98194

Well No.: MW-3

Screened Interval: 5 to 25 ft.

Well Depth: 25 ft.

Depth To Water Before Pump Installation: 2.55

Well Diameter: 2-inch

Pump Intake Depth: 11 ft.

Purge Start: 1100

Sample Time: 4/7/16 1134

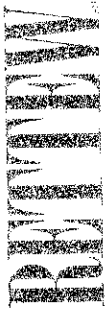
Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
1105	6.18	NA	1.540	NA	-72.0	NA	0.97	NA	0.770	NA	12.60	NA	400	3.70
1110	6.22	0.04	1.597	0.057	-97.7	9.7	0.93	0.04	0.900	0.030	12.75	0.09	400	3.75
1115	6.23	0.01	1.623	0.026	-92.8	11.7	0.92	0.01	0.814	0.014	12.81	0.06	400	3.76
1120	6.26	0.03	1.664	0.041	-99.3	6.5	0.92	0	0.835	0.021	12.81	0	400	3.78
1125	6.27	0.01	1.675	0.011	-103.0	3.7	0.91	0.01	0.845	0.010	12.81	0	400	3.79
1130	6.28	0.01	1.687	0.012	-105.1	2.1	0.91	0	0.849	0.003	12.84	0.03	400	3.81
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C			NA

* Not to exceed 500 ml/min
** Resolution accuracy of YSI 556

3.2 gal's purged



6040798
Deborah Hamum



LOW-FLOW PURGING AND SAMPLING DATA SHEET

We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: 4/7/16

Weather: Rain 54°F

Field Personnel: Donovan Connell (571)

Pump: Peristaltic Pump Proactive Alarms

Meter: Multiparameter With Flow Cell HANNA HI98199

Well No.: MW-4

Well Depth: 19 ft.

Well Diameter: 2-inch

Screened Interval: 0 to 19 ft.

Depth To Water Before Pump Installation: 3.08

Pump Intake Depth: 10 ft.

Purge Start: 1145

Sample Time: 4/7/16 1217

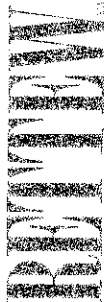
Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
1150	7.13	NA	0.824	NA	-179.7	NA	1.00	NA	0.401	NA	13.05	NA	400	4.41
1155	7.14	0.01	0.747	0.027	-180.9	1.2	0.43	0.07	0.399	0.010	13.11	0.06	400	4.35
1200	7.02	0.12	0.902	0.005	-157.2	13.7	0.43	0	0.401	0.002	13.00	0.11	400	4.60
1205	6.98	0.04	0.860	0.002	-162.1	13.1	0.42	0.01	0.401	0	13.07	0.01	400	4.64
1210	6.96	0.02	0.906	0.006	-191.2	2.9	0.42	0	0.403	0.002	12.98	0.03	400	4.67
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C		NA	

2.6 gals purged



* Not to exceed 500 ml/min
** Resolution accuracy of YSI 556

6040798
Deborah Hannum



We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: 4/6/16

Weather: 47°F Sunny

Well No.: MW-5

Well Depth: 27 ft.

Well Diameter: 2-inch

LOW-FLOW PURGING AND SAMPLING DATA SHEET

Field Personnel: Deborah Hannum

Pump: Peristaltic Pump Proactive Alexrs

Meter: Multiparameter With Flow Cell Hanna HI 98194

Screened Interval: 7 to 27 ft.

Depth To Water Before Pump Installation: 4.61

Pump Intake Depth: 10 ft.

Purge Started: 1340

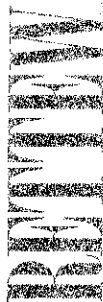
Sample Time: 4/6/16 1404

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
1345	4.85	NA	1.007	NA	120.9	NA	1.07	NA	0.504	NA	15.03	NA	400	3.81
1350	4.85	0	1.029	0.022	127.6	7	0.99	0.08	0.515	0.011	14.92	0.11	400	3.85
1355	4.86	0.01	1.047	0.018	124.6	-3	0.96	0.03	0.532	0.007	14.92	0	400	3.89
1400	4.86	0	1.037	-0.010	125.6	1.0	0.94	0.02	0.520	-0.002	14.93	0.01	400	3.92
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C		NA	

* Not to exceed 500 ml/min

** Resolution accuracy of multiparameter meter

2.1 gals. purged



LOW-FLOW PURGING AND SAMPLING DATA SHEET

We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: 4/7/16

Weather: Rain 54°F

Field Personnel: Dennis Cornell (STL)

Pump: Peristaltic Pump Proactive Alexis

Meter: Multiparameter With Flow Cell Hanna HI 98194

Well No.: MW-7

Well Depth: 20 ft.

Well Diameter: 2-inch

Screened Interval: 3 to 20 ft. ^{gac}

Depth To Water Before Pump Installation: 2-484.33 ⁷⁻¹⁶ ^{Purge Start 10:15}

Pump Intake Depth: 8 ft.

Sample Time: 4/7/16 1044

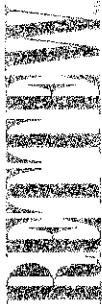
Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
1020	5.83	NA	0.443	NA	45.7	NA	1.16	NA	0.221	NA	12.42	NA	400	4.75
1025	5.79	0.04	0.424	0.019	12.4	33.3	0.94	0.22	0.213	0.008	12.75	0.33	400	4.91
1030	5.77	0.02	0.413	0.011	4.2	3.2	0.93	0.01	0.206	0.007	13.04	0.29	400	5.94
1035	5.78	0.01	0.408	0.005	4.3	4.9	0.92	0.01	0.208	0.002	13.14	0.10	400	5.00
1040	5.81	0.03	0.423	0.007	0.5	3.8	0.93	0.01	0.210	0.002	13.12	0.02	400	5.02
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C		NA	

2-6 gals. purged



* Not to exceed 500 ml/min
** Resolution accuracy of multiparameter meter

6040796
Deborah Hamum



We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: 4/6/16

Weather: 48°F Sunny

Field Personnel: Donovan Corneil (STL)

Pump: Peristaltic Pump Proactive Alerts

Meter: Multiparameter With Flow Cell Hanna HI98194

Well No.: MW-9

Screened Interval: 3 to 20 ft.

Well Depth: 20 ft.

Depth To Water Before Pump Installation: 2.05

Purge Started: 11:50

Well Diameter: 2-inch

Pump Intake Depth: 10 ft.

Sample Time: 4/6/16 12:28

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
11:55	6.04	NA	1.510	NA	24.6	NA	1.14	NA	0.756	NA	11.75	NA	400	3-10
12:00	6.05	0.04	1.526	0.016	32.1	7.5	1.04	0.1	0.764	0.008	11.70	0.32	400	3-19
12:05	6.05	0	1.532	0.006	32.5	0.7	1.03	0.01	0.767	0.003	11.85	0.15	400	3-21
12:10	6.03	0.02	1.547	0.015	32.5	3.0	1.02	0.01	0.785	0.018	12.11	0.20	400	3-22
12:15	6.03	0	1.604	0.037	34.1	1.7	1.01	0.01	0.802	0.017	12.13	0.02	400	3-22
12:20	6.02	0.01	1.622	0.018	34.7	0.6	1.00	0.01	0.810	0.008	12.14	0.01	400	3-24
12:25	6.00	0.02	1.631	0.009	39.5	4.8	0.99	0.01	0.813	0.003	12.15	0.01	400	3-26
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C		NA	

3.7 gals purged

* Not to exceed 500 ml/min
** Resolution accuracy of multiparameter meter



LOW-FLOW PURGING AND SAMPLING DATA SHEET

We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: _____

Pump: Peristaltic Pump

Weather: Sunny 40° F

Meter: Multiparameter With Flow Cell Hanna HI9914-4

Well No.: MW-10

Screened Interval: 3 to 20 ft.

Well Depth: 20 ft.

Depth To Water Before Pump Installation: 3.63

Well Diameter: 2-inch

Pump Intake Depth:

1-6-62
St. Louis
Mo

Sample Time: 16:34

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
1115	5.61	NA	1.470	NA	66.8	NA	0.97	NA	0.736	NA	14.28	NA	400	3.32
1120	5.60	0.01	1.473	0.003	67.0	0.2	0.95	0.02	0.737	0.001	14.24	0.04	400	3.38
1125	5.59	0.01	1.489	0.016	67.7	2.7	0.94	0.01	0.742	0.005	14.31	0.07	400	3.42
1130	5.57	0.02	1.497	0.008	67.9	2.8	0.94	0.0	0.751	0.009	14.35	0.04	400	3.42
Stabilization Criteria:	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C			NA

2.1 α is a β -element

* Not to exceed 500 ml/min

** Resolution accuracy of multiparameter meter

LOW-FLOW PURGING AND SAMPLING DATA SHEET

We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: 4/2/16

Weather: Rainy

Field Personnel: Shirvan Correll (STL)

Pump: Peristaltic Pump ^{by} Veeva Alex's

Meter: Multiparameter With Flow Cell

Well No.: MW-11.

Well Depth: 12.5 ft.

Well Diameter: 2-inch

Screened Interval: 2 to 12.5 ft.

Depth To Water Before Pump Installation: 0.34 米

Pump Intake Depth:

One shot: 0935

Sample Time: 17:16 054

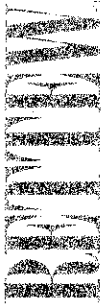
Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
0930	5.84	NA	0.442	NA	130.0	NA	1.65	NA	0.492	NA	10.69	NA	400	0.03
0935	5.84	0	0.493	0.001	223.1	43.1	1.58	0.07	0.492	0	10.78	0.09	400	0.05
0940	5.82	-0.02	0.578	0.005	263.8	40.7	1.48	0.1	0.261	0.231	10.93	0.15	400	0.07
0945	5.82	0	0.526	0.005	280.1	16.3	1.42	0.01	0.263	0.002	10.93	0	400	0.10
0950	5.92	0	0.525	0.001	292.3	12.2	1.48	0.01	0.262	0.001	10.97	0	400	0.11
Stabilization	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C			NA

2.6 gels investigated

* Not to exceed 500 ml/min

**** Resolution accuracy of multiparameter meter**

* From top on metal protective casing, water was overflowing inner PVC casing.



We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: 4/6/16

Weather: Sunny

LOW-FLOW PURGING AND SAMPLING DATA SHEET

Field Personnel: Donovan Corbett (SIL)

Pump: Peristaltic Pump Proactive Alexis

Meter: Multiparameter With Flow Cell Hanna HI 98194

Start Purge: 0935

Well No.: MW-12

Well Depth: 12 ft.

Well Diameter: 2-Inch

Screened Interval: 2 to 12 ft.

Depth To Water Before Pump Installation: 2.09

Pump Intake Depth: 9 ft.

Sample Time: 4/6/16 1005

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
0940	5.06	NA	0.115	NA	196.4	NA	3.92	NA	0.044	NA	10.26	NA	400	2.42
0945	5.04	0.04	0.084	0.034	222.1	25.2	3.05	0.87	0.042	0.002	10.15	0.03	400	2.42
0950	5.03	0.01	0.083	0.002	229.6	6.5	2.84	0.21	0.041	0.001	10.27	0.04	400	2.42
0955	5.03	0.01	0.078	0.006	249.6	20.0	2.42	0.42	0.039	0.002	10.27	0.0	400	2.42
1000	5.04	0.01	0.078	0.0	254.7	5.1	2.39	0.03	0.039	0.0	10.33	0.06	400	2.42
1005	5.04	0.0	0.077	0.001	262.4	7.7	2.37	0.02	0.037	0.002	10.30	0.03	400	2.42
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C		NA	

2.6 gal. purged

* Not to exceed 500 ml/min
** Resolution accuracy of multiparameter meter



Site: Herr Foods, Inc., Nottingham, PA

Weather: Sunny

Field Personnel: *Dennis Conrad (STL)*

Pump: Peristaltic Pump Protective Albers

Meter: Multiparameter With Flow Cell

Well No.: MW-13

Well Depth: 12 ft.

Well Diameter: 2-inch

Screened Interval: 2 to 12 ft.

Depth To Water Before Pump Installation: 3'4"

Pump Intake Depth:

Start page: 102

Sample Time: 10:34

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
1025	4.94	NA	0.283	NA	262.1	NA	4.45	NA	0.142	NA	10.00	NA	400	4.6
1030	4.95	0.01	0.292	0.009	276.5	14.4	4.44	0.01	0.141	0.001	10.09	0.09	400	4.20
1035	4.93	0.00	0.281	0.001	297.0	20.5	4.37	0.07	0.141	0.0	10.05	0.04	400	4.22
1040	4.92	0.02	0.292	0.001	287.4	0.4	4.29	0.08	0.140	0.001	12.83	0.0	400	4.24
Stabilization Criteria		+/- 0.2 SU	+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C			NA

* Not to exceed 500 ml/min

** Resolution accuracy of multiparameter meter

2.1 gals. purged



We answer to you.

Site: Herr Foods, Inc., Nottingham, PA

Date: 4/16/16

Weather: 46°F Sunny

Field Personnel: Donovan Carr II (STL)

Pump: Peristaltic Pump ESP SS-Monsoon Pro

Meter: Multiparameter With Flow Cell Hanna HI 98194

Well No.: MW-1 SW

Screened Interval: 7 to 27 ft

Well Depth: 27 ft ?

Depth To Water Before Pump Installation: 5.31

Well Diameter: 2-inch 6-inch

Pump Intake Depth: 30 ft 100 ft

Purge Started: 12:45

Sample Time: 4/16/16 13:14

Time	pH (SU)		Conductivity (mS/cm)		ORP (mV)		DO (mg/L)		TDS (g/L)		Temp. (°C)		Pumping Rate* (ml/min)	Depth To Water
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
1250	6.42	NA	0.832	NA	-53.7	NA	1.94	NA	0.419	NA	13.86	NA	400	5.36
1255	6.52	0.1	0.862	0.030	-77.7	24.0	1.64	0.3	0.431	0.012	14.09	0.23	400	5.43
1300	6.52	0	0.861	0.001	-84.7	7.0	1.44	0.2	0.430	0.001	14.03	0.06	400	5.45
1305	6.52	0	0.859	0.002	-89.7	3.6	1.28	0.16	0.429	0.001	14.27	0.24	400	5.46
1310	6.52	0	0.857	0.002	-92.7	4.4	1.11	0.17	0.428	0.001	14.32	0.05	400	5.48
Stabilization Criteria	+/- 0.2 SU		+/- 3% of Reading		+/- 20 mV**		+/- 0.2 mg/L**		+/- 10% of Reading		+/- 0.2°C			NA

2.6 gals. purged

* Not to exceed 500 ml/min
 ** Resolution accuracy of YSI 556

APPENDIX G
Groundwater Sample Laboratory Analytical Reports

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

March 16, 2015

Project: Herr Foods, Inc.

Submittal Date: 03/09/2015

Group Number: 1543676

PO Number: 101722001

State of Sample Origin: PA

Client Sample DescriptionMW-1 Grab Groundwater
MW-2 Grab Groundwater
MW-5 Grab Groundwater
MW-4 Grab Groundwater
MW-3 Grab Groundwater
Supply Well Grab Potable Water
Trip Blank WaterLancaster Labs (LL) #7796532
7796533
7796534
7796535
7796536
7796537
7796538

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>.

ELECTRONIC
COPY TO

Rettew Associates

Attn: Ed Dziedzic

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Stacy L. Butt". The signature is fluid and cursive, with the first name "Stacy" and last name "Butt" clearly distinguishable.

Stacy L. Butt
Specialist

(717) 556-7236

Sample Description: MW-1 Grab Groundwater
Herr Foods, Inc.

LL Sample # WW 7796532
LL Group # 1543676
Account # 00721

Project Name: Herr Foods, Inc.

Collected: 03/09/2015 10:55 by EGD

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 03/09/2015 17:05

Reported: 03/16/2015 16:12

HERR1

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Isopropylbenzene	98-82-8	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Naphthalene	91-20-3	N.D.	1	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.5	1
10945	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	PA UST Unleaded + TMBs	SW-846 8260B	1	D150701AA	03/11/2015 16:30	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D150701AA	03/11/2015 16:30	Daniel H Heller	1

Sample Description: MW-2 Grab Groundwater
Herr Foods, Inc.

LL Sample # WW 7796533
LL Group # 1543676
Account # 00721

Project Name: Herr Foods, Inc.

Collected: 03/09/2015 12:00 by EGD

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 03/09/2015 17:05

Reported: 03/16/2015 16:12

HERR2

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Isopropylbenzene	98-82-8	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Naphthalene	91-20-3	N.D.	1	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.5	1
10945	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	PA UST Unleaded + TMBs	SW-846 8260B	1	D150701AA	03/11/2015 16:53	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D150701AA	03/11/2015 16:53	Daniel H Heller	1

Sample Description: MW-5 Grab Groundwater
Herr Foods, Inc.

LL Sample # WW 7796534
LL Group # 1543676
Account # 00721

Project Name: Herr Foods, Inc.

Collected: 03/09/2015 13:05 by EGD

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 03/09/2015 17:05

Reported: 03/16/2015 16:12

HERR5

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10945	Benzene	71-43-2	1,100	10	20
10945	Ethylbenzene	100-41-4	740	10	20
10945	Isopropylbenzene	98-82-8	25 J	10	20
10945	Methyl Tertiary Butyl Ether	1634-04-4	15 J	10	20
10945	Naphthalene	91-20-3	100	20	20
10945	Toluene	108-88-3	1,900	10	20
10945	1,2,4-Trimethylbenzene	95-63-6	280	10	20
10945	1,3,5-Trimethylbenzene	108-67-8	68	10	20
10945	Xylene (Total)	1330-20-7	1,600	10	20

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	PA UST Unleaded + TMBs	SW-846 8260B	1	D150701AA	03/11/2015 17:16	Daniel H Heller	20
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D150701AA	03/11/2015 17:16	Daniel H Heller	20

Sample Description: MW-4 Grab Groundwater
Herr Foods, Inc.

LL Sample # WW 7796535
LL Group # 1543676
Account # 00721

Project Name: Herr Foods, Inc.

Collected: 03/09/2015 14:05 by EGD

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 03/09/2015 17:05

Reported: 03/16/2015 16:12

HERR4

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10945	Benzene	71-43-2	580	5	10
10945	Ethylbenzene	100-41-4	2,500	50	100
10945	Isopropylbenzene	98-82-8	63	5	10
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	5	10
10945	Naphthalene	91-20-3	310	10	10
10945	Toluene	108-88-3	7,300	50	100
10945	1,2,4-Trimethylbenzene	95-63-6	1,400	5	10
10945	1,3,5-Trimethylbenzene	108-67-8	400	5	10
10945	Xylene (Total)	1330-20-7	9,900	50	100

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	PA UST Unleaded + TMBs	SW-846 8260B	1	D150701AA	03/11/2015 17:39	Daniel H Heller	10
10945	PA UST Unleaded + TMBs	SW-846 8260B	1	D150701AA	03/11/2015 18:02	Daniel H Heller	100
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D150701AA	03/11/2015 17:39	Daniel H Heller	10
01163	GC/MS VOA Water Prep	SW-846 5030B	2	D150701AA	03/11/2015 18:02	Daniel H Heller	100

Sample Description: MW-3 Grab Groundwater
Herr Foods, Inc.

LL Sample # WW 7796536
LL Group # 1543676
Account # 00721

Project Name: Herr Foods, Inc.

Collected: 03/09/2015 14:45 by EGD

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 03/09/2015 17:05

Reported: 03/16/2015 16:12

HERR3

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10945	Benzene	71-43-2	180	25	50
10945	Ethylbenzene	100-41-4	1,100	25	50
10945	Isopropylbenzene	98-82-8	33 J	25	50
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	25	50
10945	Naphthalene	91-20-3	140 J	50	50
10945	Toluene	108-88-3	14,000	250	500
10945	1,2,4-Trimethylbenzene	95-63-6	670	25	50
10945	1,3,5-Trimethylbenzene	108-67-8	180	25	50
10945	Xylene (Total)	1330-20-7	6,500	25	50

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	PA UST Unleaded + TMBs	SW-846 8260B	1	D150701AA	03/11/2015 18:25	Daniel H Heller	50
10945	PA UST Unleaded + TMBs	SW-846 8260B	1	D150701AA	03/11/2015 18:48	Daniel H Heller	500
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D150701AA	03/11/2015 18:25	Daniel H Heller	50
01163	GC/MS VOA Water Prep	SW-846 5030B	2	D150701AA	03/11/2015 18:48	Daniel H Heller	500

Sample Description: Supply Well Grab Potable Water
Herr Foods, Inc.

LL Sample # PW 7796537
LL Group # 1543676
Account # 00721

Project Name: Herr Foods, Inc.

Collected: 03/09/2015 15:30 by EGD

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 03/09/2015 17:05

Reported: 03/16/2015 16:12

HERRS

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Isopropylbenzene	98-82-8	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Naphthalene	91-20-3	N.D.	1	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.5	1
10945	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	PA UST Unleaded + TMBs	SW-846 8260B	1	D150701AA	03/11/2015 19:11	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D150701AA	03/11/2015 19:11	Daniel H Heller	1

Sample Description: Trip Blank Water
Herr Foods, Inc.

LL Sample # WW 7796538
LL Group # 1543676
Account # 00721

Project Name: Herr Foods, Inc.

Collected: 03/09/2015

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 03/09/2015 17:05

Reported: 03/16/2015 16:12

HERRT

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Isopropylbenzene	98-82-8	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Naphthalene	91-20-3	N.D.	1	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.5	1
10945	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	PA UST Unleaded + TMBs	SW-846 8260B	1	D150701AA	03/11/2015 12:40	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D150701AA	03/11/2015 12:40	Daniel H Heller	1

Quality Control Summary

Client Name: Rettew Associates
Reported: 03/16/2015 16:12

Group Number: 1543676

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: D150701AA	Sample number(s): 7796532-7796538							
Benzene	N.D.	0.5	ug/l	89		78-120		
Ethylbenzene	N.D.	0.5	ug/l	90		80-120		
Isopropylbenzene	N.D.	0.5	ug/l	92		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	89		75-120		
Naphthalene	N.D.	1.	ug/l	85		59-120		
Toluene	N.D.	0.5	ug/l	90		80-120		
1,2,4-Trimethylbenzene	N.D.	0.5	ug/l	88		80-120		
1,3,5-Trimethylbenzene	N.D.	0.5	ug/l	91		80-120		
Xylene (Total)	N.D.	0.5	ug/l	92		80-120		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: D150701AA	Sample number(s): 7796532-7796538 UNSPK: P798130								
Benzene	102	102	72-134	0	30				
Ethylbenzene	104	102	71-134	2	30				
Isopropylbenzene	106	105	75-128	1	30				
Methyl Tertiary Butyl Ether	99	97	72-126	2	30				
Naphthalene	99	93	52-125	6	30				
Toluene	102	101	80-125	1	30				
1,2,4-Trimethylbenzene	103	101	72-130	2	30				
1,3,5-Trimethylbenzene	107	103	65-132	4	30				
Xylene (Total)	104	103	79-125	1	30				

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PA UST Unleaded + TMBs
Batch number: D150701AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7796532	103	101	98	97

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rettew Associates
Reported: 03/16/2015 16:12

Group Number: 1543676

Surrogate Quality Control

7796533	102	100	100	98
7796534	101	97	98	100
7796535	101	99	98	100
7796536	100	101	98	101
7796537	102	102	99	99
7796538	101	101	100	98
Blank	102	101	99	99
LCS	103	100	100	102
MS	101	100	99	99
MSD	101	102	100	101
Limits:	80-116	77-113	80-113	78-113

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

93933

7044 0614

Client: Rettew Assoc. Inc.**Delivery and Receipt Information**

Delivery Method:	<u>Client Drop Off</u>	Arrival Timestamp:	<u>03/09/2015 17:05</u>
Number of Packages:	<u>1</u>	Number of Projects:	<u>1</u>
State/Province of Origin:	<u>PA</u>		

Arrival Condition Summary

Shipping Container Sealed:	No	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	VOA Vial Headspace \geq 6mm:	Yes
Paperwork Enclosed:	Yes	VOA IDs (\geq 6mm):	See Below
Samples Intact:	No	Total Trip Blank Qty:	1
Missing Samples:	No	Trip Blank Type:	HCl
Extra Samples:	No	Air Quality Samples Present:	No
Discrepancy in Container Qty on COC:	No		

VOA Vial IDs (Headspace \geq 6mm): 1 Trip Blank Vial

Unpacked by Patrick Engle (3472) at 17:13 on 03/09/2015

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT121	2.2	DT	Wet	Y	Bagged	N

Samples Not Intact Details

Sample ID on Label	Bottle Code	Bottle Quantity	Container Salvageable?	Comments
Trip Blank	40 ml glass vial (GC/MS) - HCl	1	N	Received 1 trip blank broken in cooler.

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value \geq the Method Detection Limit (MDL or DL) and the $<$ Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, ISO17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

April 13, 2015

Project: Herr Foods 101722001Submittal Date: 04/01/2015
Group Number: 1549961
PO Number: 101722001
State of Sample Origin: PA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
MW-1 Grab Groundwater	7830323
MW-2 Grab Groundwater	7830324
MW-5 Grab Groundwater	7830325
MW-4 Grab Groundwater	7830326
MW-3 Grab Groundwater	7830327
Trip Blank Water	7830328

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>.

ELECTRONIC Rettew Associates
COPY TO

Attn: Ed Dziedzic

Respectfully Submitted,

A handwritten signature in black ink, reading "Stacy L. Butt". The signature is fluid and cursive, with the first name "Stacy" and last name "Butt" clearly legible.

Stacy L. Butt
Specialist

(717) 556-7236

Sample Description: MW-1 Grab Groundwater
Herr Foods 101722001

LL Sample # WW 7830323
LL Group # 1549961
Account # 00721

Project Name: Herr Foods 101722001

Collected: 04/01/2015 08:47 by EGD

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 04/01/2015 16:36

Reported: 04/13/2015 17:44

HER01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Isopropylbenzene	98-82-8	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Naphthalene	91-20-3	N.D.	1	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.5	1
10945	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	PA UST Unleaded + TMBs	SW-846 8260B	1	Z151001AA	04/10/2015 14:38	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z151001AA	04/10/2015 14:38	Anita M Dale	1

Sample Description: MW-2 Grab Groundwater
Herr Foods 101722001

LL Sample # WW 7830324
LL Group # 1549961
Account # 00721

Project Name: Herr Foods 101722001

Collected: 04/01/2015 09:48 by EGD

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 04/01/2015 16:36

Reported: 04/13/2015 17:44

HER02

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Isopropylbenzene	98-82-8	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Naphthalene	91-20-3	N.D.	1	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.5	1
10945	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	PA UST Unleaded + TMBs	SW-846 8260B	1	Z151001AA	04/10/2015 15:02	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z151001AA	04/10/2015 15:02	Anita M Dale	1

Sample Description: MW-5 Grab Groundwater
Herr Foods 101722001

LL Sample # WW 7830325
LL Group # 1549961
Account # 00721

Project Name: Herr Foods 101722001

Collected: 04/01/2015 11:03 by EGD

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 04/01/2015 16:36

Reported: 04/13/2015 17:44

HER05

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10945	Benzene	71-43-2	1,700	10	20
10945	Ethylbenzene	100-41-4	1,300	10	20
10945	Isopropylbenzene	98-82-8	42	10	20
10945	Methyl Tertiary Butyl Ether	1634-04-4	21	10	20
10945	Naphthalene	91-20-3	190	20	20
10945	Toluene	108-88-3	3,500	10	20
10945	1,2,4-Trimethylbenzene	95-63-6	500	10	20
10945	1,3,5-Trimethylbenzene	108-67-8	130	10	20
10945	Xylene (Total)	1330-20-7	3,000	10	20

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	PA UST Unleaded + TMBs	SW-846 8260B	1	Z151001AA	04/10/2015 15:26	Anita M Dale	20
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z151001AA	04/10/2015 15:26	Anita M Dale	20

Sample Description: MW-4 Grab Groundwater
Herr Foods 101722001

LL Sample # WW 7830326
LL Group # 1549961
Account # 00721

Project Name: Herr Foods 101722001

Collected: 04/01/2015 12:02 by EGD

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 04/01/2015 16:36

Reported: 04/13/2015 17:44

HER04

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10945	Benzene	71-43-2	1,000	5	10
10945	Ethylbenzene	100-41-4	2,200	50	100
10945	Isopropylbenzene	98-82-8	67	5	10
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	5	10
10945	Naphthalene	91-20-3	310	10	10
10945	Toluene	108-88-3	9,000	50	100
10945	1,2,4-Trimethylbenzene	95-63-6	1,500	5	10
10945	1,3,5-Trimethylbenzene	108-67-8	440	5	10
10945	Xylene (Total)	1330-20-7	9,200	50	100

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	PA UST Unleaded + TMBs	SW-846 8260B	1	Z151001AA	04/10/2015 15:50	Anita M Dale	10
10945	PA UST Unleaded + TMBs	SW-846 8260B	1	Z151001AA	04/10/2015 16:14	Anita M Dale	100
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z151001AA	04/10/2015 15:50	Anita M Dale	10
01163	GC/MS VOA Water Prep	SW-846 5030B	2	Z151001AA	04/10/2015 16:14	Anita M Dale	100

Sample Description: MW-3 Grab Groundwater
Herr Foods 101722001

LL Sample # WW 7830327
LL Group # 1549961
Account # 00721

Project Name: Herr Foods 101722001

Collected: 04/01/2015 13:29 by EGD

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 04/01/2015 16:36

Reported: 04/13/2015 17:44

HER03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10945	Benzene	71-43-2	270	5	10
10945	Ethylbenzene	100-41-4	1,600	5	10
10945	Isopropylbenzene	98-82-8	49	5	10
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	5	10
10945	Naphthalene	91-20-3	240	10	10
10945	Toluene	108-88-3	17,000	50	100
10945	1,2,4-Trimethylbenzene	95-63-6	1,100	5	10
10945	1,3,5-Trimethylbenzene	108-67-8	310	5	10
10945	Xylene (Total)	1330-20-7	9,000	50	100

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	PA UST Unleaded + TMBs	SW-846 8260B	1	Z151001AA	04/10/2015 16:38	Anita M Dale	10
10945	PA UST Unleaded + TMBs	SW-846 8260B	1	Z151001AA	04/10/2015 17:02	Anita M Dale	100
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z151001AA	04/10/2015 16:38	Anita M Dale	10
01163	GC/MS VOA Water Prep	SW-846 5030B	2	Z151001AA	04/10/2015 17:02	Anita M Dale	100

Sample Description: Trip Blank Water
Herr Foods 101722001

LL Sample # WW 7830328
LL Group # 1549961
Account # 00721

Project Name: Herr Foods 101722001

Collected: 04/01/2015

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 04/01/2015 16:36

Reported: 04/13/2015 17:44

HERTB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Isopropylbenzene	98-82-8	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Naphthalene	91-20-3	N.D.	1	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.5	1
10945	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	PA UST Unleaded + TMBs	SW-846 8260B	1	Z151002AA	04/10/2015 12:26	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z151002AA	04/10/2015 12:26	Anita M Dale	1

Quality Control Summary

Client Name: Rettew Associates
Reported: 04/13/2015 17:44

Group Number: 1549961

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: Z151001AA	Sample number(s): 7830323-7830327							
Benzene	N.D.	0.5	ug/l	95		78-120		
Ethylbenzene	N.D.	0.5	ug/l	95		80-120		
Isopropylbenzene	N.D.	0.5	ug/l	97		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	88		75-120		
Naphthalene	N.D.	1.	ug/l	93		59-120		
Toluene	N.D.	0.5	ug/l	97		80-120		
1,2,4-Trimethylbenzene	N.D.	0.5	ug/l	95		80-120		
1,3,5-Trimethylbenzene	N.D.	0.5	ug/l	96		80-120		
Xylene (Total)	N.D.	0.5	ug/l	98		80-120		
Batch number: Z151002AA	Sample number(s): 7830328							
Benzene	N.D.	0.5	ug/l	97		78-120		
Ethylbenzene	N.D.	0.5	ug/l	99		80-120		
Isopropylbenzene	N.D.	0.5	ug/l	102		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	93		75-120		
Naphthalene	N.D.	1.	ug/l	94		59-120		
Toluene	N.D.	0.5	ug/l	102		80-120		
1,2,4-Trimethylbenzene	N.D.	0.5	ug/l	100		80-120		
1,3,5-Trimethylbenzene	N.D.	0.5	ug/l	102		80-120		
Xylene (Total)	N.D.	0.5	ug/l	102		80-120		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: Z151001AA	Sample number(s): 7830323-7830327 UNSPK: P829769								
Benzene	105	105	72-134	0	30				
Ethylbenzene	106	108	71-134	2	30				
Isopropylbenzene	112	111	75-128	1	30				
Methyl Tertiary Butyl Ether	91	93	72-126	2	30				
Naphthalene	99	100	52-125	1	30				
Toluene	107	109	80-125	1	30				
1,2,4-Trimethylbenzene	107	107	72-130	0	30				
1,3,5-Trimethylbenzene	109	111	65-132	2	30				
Xylene (Total)	109	111	79-125	1	30				
Batch number: Z151002AA	Sample number(s): 7830328 UNSPK: P833521								

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rettew Associates
Reported: 04/13/2015 17:44

Group Number: 1549961

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Benzene	101	93	72-134	7	30				
Ethylbenzene	108	108	71-134	0	30				
Isopropylbenzene	112	112	75-128	0	30				
Methyl Tertiary Butyl Ether	97	97	72-126	0	30				
Naphthalene	99	101	52-125	1	30				
Toluene	112	111	80-125	0	30				
1,2,4-Trimethylbenzene	109	113	72-130	4	30				
1,3,5-Trimethylbenzene	111	113	65-132	1	30				
Xylene (Total)	113	113	79-125	0	30				

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PA UST Unleaded + TMBs
Batch number: Z151001AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7830323	102	99	98	95
7830324	102	100	99	95
7830325	100	98	97	95
7830326	102	99	97	94
7830327	100	98	99	95
Blank	100	100	100	96
LCS	99	100	99	97
MS	100	100	99	98
MSD	100	101	99	97
Limits:	80-116	77-113	80-113	78-113

Analysis Name: PA UST Unleaded + TMBs
Batch number: Z151002AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7830328	101	98	98	94
Blank	101	99	99	95
LCS	100	100	99	97
MS	100	100	100	98
MSD	99	101	98	96
Limits:	80-116	77-113	80-113	78-113

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

1. The first step is to identify the problem or question that needs to be addressed. This involves understanding the context and the specific requirements of the task.

2. Next, it is important to gather relevant information and resources. This can include researching existing solutions, consulting with experts, and identifying any constraints or limitations.

3. Once the information is gathered, the next step is to develop a plan or strategy. This involves breaking down the problem into smaller, manageable tasks and determining the sequence of steps to be followed.

4. The fourth step is to implement the plan. This involves carrying out the tasks identified in the plan, using the resources available, and monitoring progress as the work progresses.

5. Finally, it is essential to evaluate the results and reflect on the process. This involves assessing whether the problem has been solved, identifying any areas for improvement, and learning from the experience for future tasks.

Lancaster Laboratories
Environmental

For Eurofins Lancaster Laboratories Environmental use only
Group # 519961 Sample # 7830323-28
Instructions on reverse side correspond with circled numbers.

374746

Eurofins Lancaster Laboratories Environmental, LLC, 25 New Holland Pike, Lancaster, PA 17601 • 717-656-2300
The white copy should accompany samples to Eurofins Lancaster Laboratories Environmental. The yellow copy should be retained by the client.

Client: Rettew Associates**Delivery and Receipt Information**

Delivery Method:	<u>Client Drop Off</u>	Arrival Timestamp:	<u>04/01/2015 16:36</u>
Number of Packages:	<u>1</u>	Number of Projects:	<u>1</u>
State/Province of Origin:	<u>PA</u>		

Arrival Condition Summary

Shipping Container Sealed:	No	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	VOA Vial Headspace \geq 6mm:	No
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	2
Samples Intact:	Yes	Trip Blank Type:	HCl
Missing Samples:	No	Air Quality Samples Present:	No
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

*Unpacked by Patrick Engle (3472) at 16:41 on 04/01/2015***Samples Chilled Details**

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

<u>Cooler #</u>	<u>Thermometer ID</u>	<u>Corrected Temp</u>	<u>Therm. Type</u>	<u>Ice Type</u>	<u>Ice Present?</u>	<u>Ice Container</u>	<u>Elevated Temp?</u>
1	DT121	3.8	DT	Wet	Y	Bagged	N

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value \geq the Method Detection Limit (MDL or DL) and the $<$ Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, ISO17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.



Results Report

Order ID: 5072359

Rettew - Lancaster
3020 Columbia Avenue
Lancaster, PA 17603

Project: Herr Foods

Attn: Ed Dziedzic

Regulatory ID:

Sample Number: 5072359-01

Site: MW-2

Sample ID:

Collector: DRC

Collect Date: 07/09/2015 10:30 am

Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	10.0	N/A	N/A		1	07/09/15	KAL	07/09/15 10:30	DRC
Static Water Level (ft)	3.21	N/A	N/A		1	07/09/15	KAL	07/09/15 10:30	DRC
Total Volume Purged (gal)	3.20	N/A	N/A		1	07/09/15	KAL	07/09/15 10:30	DRC
Total Well Depth (ft)	23.0	N/A	N/A		1	07/09/15	KAL	07/09/15 10:30	DRC
Well Diameter (in)	2.00	N/A	N/A		1	07/09/15	KAL	07/09/15 10:30	DRC

Volatiles

VOA, 8260, UST Unleaded

Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 14:59	JMM
Ethyl Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 14:59	JMM
Isopropylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 14:59	JMM
Methyl-t-butyl ether (MTBE)	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 14:59	JMM
Naphthalene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 14:59	JMM
Toluene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 14:59	JMM
1,2,4-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 14:59	JMM
1,3,5-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 14:59	JMM
Xylenes, Total	< 1.0	µg/L	SW 846 8260B	1.0	1	07/17/15	JMM	07/17/15 14:59	JMM

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	49.8	µg/L	99.6%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	51.4	µg/L	103%	SW 846 8260B	80-120
Surrogate: Toluene-d8	49.6	µg/L	99.1%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	50.0	µg/L	99.9%	SW 846 8260B	80-120

Sample Number: 5072359-02

Site: MW-1

Sample ID:

Collector: DRC

Collect Date: 07/09/2015 11:32 am

Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	10.0	N/A	N/A		1	07/09/15	KAL	07/09/15 11:32	DRC
Static Water Level (ft)	2.85	N/A	N/A		1	07/09/15	KAL	07/09/15 11:32	DRC
Total Volume Purged (gal)	3.30	N/A	N/A		1	07/09/15	KAL	07/09/15 11:32	DRC
Total Well Depth (ft)	27.0	N/A	N/A		1	07/09/15	KAL	07/09/15 11:32	DRC
Well Diameter (in)	2.00	N/A	N/A		1	07/09/15	KAL	07/09/15 11:32	DRC

Report Generated On: 07/21/2015 1:25 pm

5072359

STL_Results Revision #1.6

Effective: 07/09/2014





SUBURBAN TESTING LABS

Sample Number: 5072359-02
Collector: DRC

Site: MW-1
Collect Date: 07/09/2015 11:32 am

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method (Continued)

Volatiles

VOA, 8260, USTUnleaded

Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 16:47	JMM
Ethyl Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 16:47	JMM
Isopropylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 16:47	JMM
Methyl-t-butyl ether (MTBE)	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 16:47	JMM
Naphthalene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 16:47	JMM
Toluene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 16:47	JMM
1,2,4-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 16:47	JMM
1,3,5-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 16:47	JMM
Xylenes, Total	< 1.0	µg/L	SW 846 8260B	1.0	1	07/17/15	JMM	07/17/15 16:47	JMM

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	49.1	µg/L	98.2%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	50.2	µg/L	100%	SW 846 8260B	80-120
Surrogate: Toluene-d8	49.5	µg/L	98.9%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	49.1	µg/L	98.2%	SW 846 8260B	80-120

Sample Number: 5072359-03
Collector: DRC

Site: MW-8
Collect Date: 07/09/2015 12:22 pm

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	10.0	N/A	N/A		1	07/09/15	KAL	07/09/15 12:22	DRC
Static Water Level (ft)	2.89	N/A	N/A		1	07/09/15	KAL	07/09/15 12:22	DRC
Total Volume Purged (gal)	2.50	N/A	N/A		1	07/09/15	KAL	07/09/15 12:22	DRC
Total Well Depth (ft)	20.0	N/A	N/A		1	07/09/15	KAL	07/09/15 12:22	DRC
Well Diameter (in)	2.00	N/A	N/A		1	07/09/15	KAL	07/09/15 12:22	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 17:13	JMM
Ethyl Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 17:13	JMM
Isopropylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 17:13	JMM
Methyl-t-butyl ether (MTBE)	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 17:13	JMM
Naphthalene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 17:13	JMM
Toluene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 17:13	JMM
1,2,4-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 17:13	JMM
1,3,5-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 17:13	JMM
Xylenes, Total	< 1.0	µg/L	SW 846 8260B	1.0	1	07/17/15	JMM	07/17/15 17:13	JMM

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
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Report Generated On: 07/21/2015 1:25 pm 5072359
STL_Results Revision #1.6 Effective: 07/09/2014





SUBURBAN TESTING LABS

Sample Number: 5072359-03
Collector: DRC

Site: MW-8
Collect Date: 07/09/2015 12:22 pm

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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Volatiles (Continued)

VOA, 8260, USTUnleaded (Continued)

Surrogate Recoveries (Continued)	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	49.3	µg/L	98.6%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	50.5	µg/L	101%	SW 846 8260B	80-120
Surrogate: Toluene-d8	49.4	µg/L	98.8%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	49.4	µg/L	98.8%	SW 846 8260B	80-120

Sample Number: 5072359-04
Collector: DRC

Site: MW-10
Collect Date: 07/09/2015 1:12 pm

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	10.0	N/A	N/A		1	07/09/15	KAL	07/09/15 13:12	DRC
Static Water Level (ft)	3.05	N/A	N/A		1	07/09/15	KAL	07/09/15 13:12	DRC
Total Volume Purged (gal)	2.40	N/A	N/A		1	07/09/15	KAL	07/09/15 13:12	DRC
Total Well Depth (ft)	20.0	N/A	N/A		1	07/09/15	KAL	07/09/15 13:12	DRC
Well Diameter (in)	2.00	N/A	N/A		1	07/09/15	KAL	07/09/15 13:12	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	1450	µg/L	SW 846 8260B	50.0	100	07/17/15	JMM	07/17/15 21:16	JMM
Ethyl Benzene	23.1	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 20:49	JMM
Isopropylbenzene	13.2	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 20:49	JMM
Methyl-t-butyl ether (MTBE)	122	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 20:49	JMM
Naphthalene	59.1	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 20:49	JMM
Toluene	11.3	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 20:49	JMM
1,2,4-Trimethylbenzene	0.7	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 20:49	JMM
1,3,5-Trimethylbenzene	0.8	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 20:49	JMM
Xylenes, Total	17.0	µg/L	SW 846 8260B	1.0	1	07/17/15	JMM	07/17/15 20:49	JMM

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	47.0	µg/L	94.0%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	49.8	µg/L	99.5%	SW 846 8260B	80-120
Surrogate: Toluene-d8	50.2	µg/L	100%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	48.9	µg/L	97.8%	SW 846 8260B	80-120

Sample Number: 5072359-05
Collector: DRC

Site: Trip Blank
Collect Date: 07/09/2015 6:30 am

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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Report Generated On: 07/21/2015 1:25 pm 5072359
STL_Results Revision #1.6 Effective: 07/09/2014





SUBURBAN TESTING LABS

Sample Number: 5072359-05
Collector: DRC

Site: Trip Blank
Collect Date: 07/09/2015 6:30 am

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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Volatiles

VOA, 8260, UST Unleaded

Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 14:32	JMM
Ethyl Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 14:32	JMM
Isopropylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 14:32	JMM
Methyl-t-butyl ether (MTBE)	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 14:32	JMM
Naphthalene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 14:32	JMM
Toluene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 14:32	JMM
1,2,4-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 14:32	JMM
1,3,5-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/17/15	JMM	07/17/15 14:32	JMM
Xylenes, Total	< 1.0	µg/L	SW 846 8260B	1.0	1	07/17/15	JMM	07/17/15 14:32	JMM

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	50.3	µg/L	101%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	51.6	µg/L	103%	SW 846 8260B	80-120
Surrogate: Toluene-d8	50.0	µg/L	100%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	49.6	µg/L	99.2%	SW 846 8260B	80-120

Data Qualifiers:

All results meet the requirements of STL's TNI (NELAC) Accredited Quality System unless otherwise noted. If your results contain any data qualifiers or comments, you should evaluate useability relative to your needs. Qualified data is generally acceptable for most data needs.

If collectors initials include "STL", samples have been collected in accordance with STL SOP SL0015.

All results reported on an As Received (Wet Weight) basis unless otherwise noted.

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Results are considered Preliminary unless report is signed by authorized representative of STL.

Reviewed and Released By:

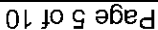
Carol Schrenkel
QA Manager

Report Generated On: 07/21/2015 1:25 pm 5072359
STL_Results Revision #1.6 Effective: 07/09/2014





Deborah Hannum



TAT (Circle One): Standard 24hr / 48hr / 72hr / Other _____
(Additional charges may apply for rush TAT. If not specified, standard TAT will apply).

Order ID:

Client Name: Reiter Phone: _____
Address: _____ Fax: _____
Contact Name: _____ Email: _____

Project Name: Herb Foods

Address: _____

Payment / P.O. Info: _____

Comments:

STL Sample Number	Sample Description / Site ID:	Date Sampled	Time Sampled	Samplers Initials	Test(s) Requested:	Bottle Quantity	See Codes Below				Comments / Field Data:
							Matrix	Sample Type	Bottle Type	Preservative	
	MW-2	7/9/15	1030	DRC	PA-VST Volatiles	3	MW	G	G	C	
	MW-1	7/9/15	1132	DRC	↓	↓	↓	↓	↓	↓	
	MW-8	7/9/15	1222	DRC	↓	↓	↓	↓	↓	↓	
	MW-10	7/9/15	1312	DRC	↓	↓	↓	↓	↓	↓	
	Trip Blank	7/9/15	0630	DRC	↓	3		G	G	C	
					X						
					X						
					X						

Relinquished By:		Date:		Sample Conditions		Matrix Key		Bottle Type Key		Reporting Options	
		Time:		Submitted with COC? <input checked="" type="checkbox"/> / N		NPW = Non-Potable Water		P = Plastic		<input type="checkbox"/> SDWA Reporting	
		Date:		Number of containers match number on COC? <input checked="" type="checkbox"/> / N		Solid = Raw Sludge, Dewatered sludge, soil, etc. (reported as mg/kg)		G = Glass		PWSID:	
		Time:		All containers in test? <input checked="" type="checkbox"/> / N		PW = Potable Water (not for SDWA compliance)		O = Other		<input type="checkbox"/> Fax	
		Date:		Temp °C: _____		SDWA = Safe Drinking Water Act Potable Sample		Preservative Key		<input type="checkbox"/> Email	
		Time:		Acceptable: Y / N		Sample Type Key		N = Sodium Thiosulfate		<input type="checkbox"/> Other	
		Date:		Temp °C: 7.8		G = Grab		A = Ascorbic Acid		[] Return a copy of this form with Report	
		Time:		Acceptable: Y / N		8HC = 8 Hr Composite		H = HNO ₃			
		Date:		Temp °C: _____		24HC = 24 Hr Composite		C = HCl			
		Time:		Acceptable: Y / N		40 mL VCA vials free of headspace? <input checked="" type="checkbox"/> / N		S = H ₂ SO ₄			
		Date:		Temp °C: _____				OH = NaOH			
		Time:		Acceptable: Y / N				G = Other			
		Date:		Temp °C: _____				NA = None Required			
		Time:		Acceptable: Y / N							

SLF059 Rev. 1.3 Effective May 16, 2013.

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Results Report

Order ID: 5072398

Rettew - Lancaster
3020 Columbia Avenue
Lancaster, PA 17603

Project: Herr Foods

Attn: Ed Dziedzic

Regulatory ID:

Sample Number: 5072398-01

Site: MW-9

Sample ID:

Collector: DRC

Collect Date: 07/10/2015 8:42 am

Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	10.0	N/A	N/A		1	07/10/15	KAL	07/10/15 8:42	DRC
Static Water Level (ft)	2.40	N/A	N/A		1	07/10/15	KAL	07/10/15 8:42	DRC
Total Volume Purged (gal)	2.40	N/A	N/A		1	07/10/15	KAL	07/10/15 8:42	DRC
Total Well Depth (ft)	20.0	N/A	N/A		1	07/10/15	KAL	07/10/15 8:42	DRC
Well Diameter (in)	2.00	N/A	N/A		1	07/10/15	KAL	07/10/15 8:42	DRC

Volatiles

VOA, 8260, UST Unleaded

Benzene	4.8	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 18:23	JMM
Ethyl Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 18:23	JMM
Isopropylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 18:23	JMM
Methyl-t-butyl ether (MTBE)	< 0.5	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 18:23	JMM
Naphthalene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 18:23	JMM
Toluene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 18:23	JMM
1,2,4-Trimethylbenzene	1.4	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 18:23	JMM
1,3,5-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 18:23	JMM
Xylenes, Total	2.3	µg/L	SW 846 8260B	1.0	1	07/14/15	JMM	07/14/15 18:23	JMM

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	46.6	µg/L	93.1%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	51.4	µg/L	103%	SW 846 8260B	80-120
Surrogate: Toluene-d8	44.5	µg/L	89.0%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	45.9	µg/L	91.9%	SW 846 8260B	80-120

Sample Number: 5072398-02

Site: MW-6

Sample ID:

Collector: DRC

Collect Date: 07/10/2015 9:38 am

Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	10.0	N/A	N/A		1	07/10/15	KAL	07/10/15 9:38	DRC
Static Water Level (ft)	1.90	N/A	N/A		1	07/10/15	KAL	07/10/15 9:38	DRC
Total Volume Purged (gal)	3.35	N/A	N/A		1	07/10/15	KAL	07/10/15 9:38	DRC
Total Well Depth (ft)	20.0	N/A	N/A		1	07/10/15	KAL	07/10/15 9:38	DRC
Well Diameter (in)	2.00	N/A	N/A		1	07/10/15	KAL	07/10/15 9:38	DRC

Report Generated On: 07/20/2015 4:51 pm

5072398

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Effective: 07/09/2014





SUBURBAN TESTING LABS

Sample Number: 5072398-02
Collector: DRC

Site: MW-6
Collect Date: 07/10/2015 9:38 am

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method (Continued)

Volatiles

VOA, 8260, USTUnleaded

Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 18:50	JMM
Ethyl Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 18:50	JMM
Isopropylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 18:50	JMM
Methyl-t-butyl ether (MTBE)	< 0.5	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 18:50	JMM
Naphthalene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 18:50	JMM
Toluene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 18:50	JMM
1,2,4-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 18:50	JMM
1,3,5-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 18:50	JMM
Xylenes, Total	< 1.0	µg/L	SW 846 8260B	1.0	1	07/14/15	JMM	07/14/15 18:50	JMM

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	46.8	µg/L	93.6%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	51.1	µg/L	102%	SW 846 8260B	80-120
Surrogate: Toluene-d8	44.0	µg/L	88.0%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	45.3	µg/L	90.6%	SW 846 8260B	80-120

Sample Number: 5072398-03
Collector: DRC

Site: MW-5
Collect Date: 07/10/2015 10:22 am

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	10.0	N/A	N/A		1	07/10/15	KAL	07/10/15 10:22	DRC
Static Water Level (ft)	3.53	N/A	N/A		1	07/10/15	KAL	07/10/15 10:22	DRC
Total Volume Purged (gal)	2.70	N/A	N/A		1	07/10/15	KAL	07/10/15 10:22	DRC
Total Well Depth (ft)	27.0	N/A	N/A		1	07/10/15	KAL	07/10/15 10:22	DRC
Well Diameter (in)	2.00	N/A	N/A		1	07/10/15	KAL	07/10/15 10:22	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	2620 C1	µg/L	SW 846 8260B	25.0	50	07/15/15	JMM	07/15/15 14:40	JMM
Ethyl Benzene	1580 C1	µg/L	SW 846 8260B	25.0	50	07/15/15	JMM	07/15/15 14:40	JMM
Isopropylbenzene	58.2	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 19:17	JMM
Methyl-t-butyl ether (MTBE)	< 0.5	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 19:17	JMM
Naphthalene	306	µg/L	SW 846 8260B	25.0	50	07/15/15	JMM	07/15/15 14:40	JMM
Toluene	9020 C1	µg/L	SW 846 8260B	25.0	50	07/15/15	JMM	07/15/15 14:40	JMM
1,2,4-Trimethylbenzene	1090	µg/L	SW 846 8260B	25.0	50	07/15/15	JMM	07/15/15 14:40	JMM
1,3,5-Trimethylbenzene	284	µg/L	SW 846 8260B	25.0	50	07/15/15	JMM	07/15/15 14:40	JMM
Xylenes, Total	8260	µg/L	SW 846 8260B	50.0	50	07/15/15	JMM	07/15/15 14:40	JMM

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
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Report Generated On: 07/20/2015 4:51 pm 5072398
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SUBURBAN TESTING LABS

Sample Number: 5072398-03
Collector: DRC

Site: MW-5
Collect Date: 07/10/2015 10:22 am

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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Volatiles (Continued)

VOA, 8260, USTUnleaded (Continued)

Surrogate Recoveries (Continued)	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	46.2	µg/L	92.3%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	50.0	µg/L	99.9%	SW 846 8260B	80-120
Surrogate: Toluene-d8	43.3	µg/L	86.6%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	44.0	µg/L	88.0%	SW 846 8260B	80-120

Sample Number: 5072398-04
Collector: DRC

Site: MW-7
Collect Date: 07/10/2015 11:12 am

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	8.00	N/A	N/A		1	07/10/15	KAL	07/10/15 11:12	DRC
Static Water Level (ft)	4.45	N/A	N/A		1	07/10/15	KAL	07/10/15 11:12	DRC
Total Volume Purged (gal)	3.10	N/A	N/A		1	07/10/15	KAL	07/10/15 11:12	DRC
Total Well Depth (ft)	20.0	N/A	N/A		1	07/10/15	KAL	07/10/15 11:12	DRC
Well Diameter (in)	2.00	N/A	N/A		1	07/10/15	KAL	07/10/15 11:12	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	1820	µg/L	SW 846 8260B	25.0	50	07/17/15	JMM	07/17/15 21:43	JMM
Ethyl Benzene	1300	µg/L	SW 846 8260B	25.0	50	07/17/15	JMM	07/17/15 21:43	JMM
Isopropylbenzene	59.3	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 19:44	JMM
Methyl-t-butyl ether (MTBE)	< 0.5	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 19:44	JMM
Naphthalene	352	µg/L	SW 846 8260B	25.0	50	07/17/15	JMM	07/17/15 21:43	JMM
Toluene	3200	µg/L	SW 846 8260B	25.0	50	07/17/15	JMM	07/17/15 21:43	JMM
1,2,4-Trimethylbenzene	1060	µg/L	SW 846 8260B	25.0	50	07/17/15	JMM	07/17/15 21:43	JMM
1,3,5-Trimethylbenzene	275	µg/L	SW 846 8260B	25.0	50	07/17/15	JMM	07/17/15 21:43	JMM
Xylenes, Total	7940	µg/L	SW 846 8260B	50.0	50	07/17/15	JMM	07/17/15 21:43	JMM

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	38.6	V µg/L	77.1%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	44.5	µg/L	89.0%	SW 846 8260B	80-120
Surrogate: Toluene-d8	42.9	µg/L	85.8%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	42.4	µg/L	84.7%	SW 846 8260B	80-120

Sample Number: 5072398-05
Collector: DRC

Site: MW-3
Collect Date: 07/10/2015 12:02 pm

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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Report Generated On: 07/20/2015 4:51 pm 5072398
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SUBURBAN TESTING LABS

Sample Number: 5072398-05
Collector: DRC

Site: MW-3
Collect Date: 07/10/2015 12:02 pm

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	11.0	N/A	N/A		1	07/10/15	KAL	07/10/15 12:02	DRC
Static Water Level (ft)	3.61	N/A	N/A		1	07/10/15	KAL	07/10/15 12:02	DRC
Total Volume Purged (gal)	3.40	N/A	N/A		1	07/10/15	KAL	07/10/15 12:02	DRC
Total Well Depth (ft)	25.0	N/A	N/A		1	07/10/15	KAL	07/10/15 12:02	DRC
Well Diameter (in)	2.00	N/A	N/A		1	07/10/15	KAL	07/10/15 12:02	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	141	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 20:11	JMM
Ethyl Benzene	1400	µg/L	SW 846 8260B	25.0	50	07/17/15	JMM	07/17/15 22:10	JMM
Isopropylbenzene	50.8	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 20:11	JMM
Methyl-t-butyl ether (MTBE)	< 0.5	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 20:11	JMM
Naphthalene	254	µg/L	SW 846 8260B	25.0	50	07/17/15	JMM	07/17/15 22:10	JMM
Toluene	11100 E	µg/L	SW 846 8260B	25.0	50	07/17/15	JMM	07/17/15 22:10	JMM
1,2,4-Trimethylbenzene	866	µg/L	SW 846 8260B	25.0	50	07/17/15	JMM	07/17/15 22:10	JMM
1,3,5-Trimethylbenzene	252	µg/L	SW 846 8260B	25.0	50	07/17/15	JMM	07/17/15 22:10	JMM
Xylenes, Total	6840	µg/L	SW 846 8260B	50.0	50	07/17/15	JMM	07/17/15 22:10	JMM

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	43.4	µg/L	86.8%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	47.0	µg/L	94.1%	SW 846 8260B	80-120
Surrogate: Toluene-d8	42.0	µg/L	83.9%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	43.6	µg/L	87.3%	SW 846 8260B	80-120

Sample Number: 5072398-06
Collector: DRC

Site: MW-4
Collect Date: 07/10/2015 12:48 pm

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	10.0	N/A	N/A		1	07/10/15	KAL	07/10/15 12:48	DRC
Static Water Level (ft)	4.31	N/A	N/A		1	07/10/15	KAL	07/10/15 12:48	DRC
Total Volume Purged (gal)	2.60	N/A	N/A		1	07/10/15	KAL	07/10/15 12:48	DRC
Total Well Depth (ft)	19.0	N/A	N/A		1	07/10/15	KAL	07/10/15 12:48	DRC
Well Diameter (in)	2.00	N/A	N/A		1	07/10/15	KAL	07/10/15 12:48	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	237	µg/L	SW 846 8260B	25.0	50	07/15/15	JMM	07/15/15 16:02	JMM
Ethyl Benzene	1330	µg/L	SW 846 8260B	25.0	50	07/15/15	JMM	07/15/15 16:02	JMM
Isopropylbenzene	65.8	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 20:38	JMM
Methyl-t-butyl ether (MTBE)	< 0.5	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 20:38	JMM
Naphthalene	346	µg/L	SW 846 8260B	25.0	50	07/15/15	JMM	07/15/15 16:02	JMM

Report Generated On: 07/20/2015 4:51 pm 5072398
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SUBURBAN TESTING LABS

Sample Number: 5072398-06
Collector: DRC

Site: MW-4
Collect Date: 07/10/2015 12:48 pm

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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Volatiles (Continued)

VOA, 8260, USTUnleaded (Continued)

Toluene	2280	µg/L	SW 846 8260B	25.0	50	07/15/15	JMM	07/15/15 16:02	JMM
1,2,4-Trimethylbenzene	1550	µg/L	SW 846 8260B	25.0	50	07/15/15	JMM	07/15/15 16:02	JMM
1,3,5-Trimethylbenzene	406	µg/L	SW 846 8260B	25.0	50	07/15/15	JMM	07/15/15 16:02	JMM
Xylenes, Total	7320	µg/L	SW 846 8260B	50.0	50	07/15/15	JMM	07/15/15 16:02	JMM

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)	
Surrogate: Dibromofluoromethane	37.1	V	µg/L	74.3%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	45.0		µg/L	89.9%	SW 846 8260B	80-120
Surrogate: Toluene-d8	40.0		µg/L	80.0%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	42.7		µg/L	85.5%	SW 846 8260B	80-120

Sample Number: 5072398-07
Collector: DRC

Site: Trip Blank
Collect Date: 07/09/2015 6:30 am

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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Volatiles

VOA, 8260, USTUnleaded

Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 17:56	JMM
Ethyl Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 17:56	JMM
Isopropylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 17:56	JMM
Methyl-t-butyl ether (MTBE)	< 0.5	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 17:56	JMM
Naphthalene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 17:56	JMM
Toluene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 17:56	JMM
1,2,4-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 17:56	JMM
1,3,5-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	07/14/15	JMM	07/14/15 17:56	JMM
Xylenes, Total	< 1.0	µg/L	SW 846 8260B	1.0	1	07/14/15	JMM	07/14/15 17:56	JMM

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	47.0	µg/L	94.0%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	50.8	µg/L	102%	SW 846 8260B	80-120
Surrogate: Toluene-d8	44.3	µg/L	88.6%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	46.0	µg/L	92.1%	SW 846 8260B	80-120

Data Qualifiers:

- C1 The CCV for this analyte was below acceptance criteria.
- E The concentration exceeds the calibration range and has greater uncertainty.
- V The surrogate associated with this sample was not within the established acceptance criteria.

Report Generated On: 07/20/2015 4:51 pm 5072398
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SUBURBAN TESTING LABS

All results meet the requirements of STL's TNI (NELAC) Accredited Quality System unless otherwise noted. If your results contain any data qualifiers or comments, you should evaluate useability relative to your needs. Qualified data is generally acceptable for most data needs.

If collectors initials include "STL", samples have been collected in accordance with STL SOP SL0015.

All results reported on an As Received (Wet Weight) basis unless otherwise noted.

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Results are considered Preliminary unless report is signed by authorized representative of STL.

Reviewed and Released By:

Carol Schrenkel
QA Manager

Report Generated On: 07/20/2015 4:51 pm 5072398
STL_Results Revision #1.6 Effective: 07/09/2014





5072308
Deborah Hannum

TAT (Circle One): Standard 24hr / 48hr / 72hr / Other
(Additional charges may apply for rush TAT. If not specified, standard TAT will apply)

Order ID: _____

Client Name: <u>Reflex</u>	Project Name: <u>Herr Foods</u>
Address: _____	Address: _____
Phone: _____	Payment / P.O. Info: _____
Fax: _____	
Email: _____	
Contact Name: _____	
Comments: _____	

STL Sample Number	Sample Description / Site ID:	Date Sampled	Time Sampled	Samplers Initials	Test(s) Requested:	Bottle Quantity	Matrix	Sample Type	Bottle Type	Preservative	Comments / Field Data:
	MW-9	7-10-15	0842	DRC	PA VST Volatiles	3	W	G	G	C	
	MW-6		0938	DRC		1					
	MW-5		1022			1					
	MW-7		1112			1					
	MW-3		1202			1					
	MW-4		1248			1					
	Trip Blank	7-9-15	0630	DRC	PA VST Volatiles	3		G	G	C	

Relinquished By: _____	Date: _____	Temp °C: _____	Acceptable: Y / N	Sample Conditions	Matrix Key	Bottle Type Key	Reporting Options
Received By: _____	Time: _____	Temp °C: _____	Acceptable: Y / N	Submitted with COC? Y / N	NPW = Non-Potable Water Solid = Raw Sludge, Dewatered sludge, soil, etc. (reported as mg/kg) PW = Potable Water (not for SDWA compliance) SDWA = Safe Drinking Water Act Potable Sample	P = Plastic G = Glass O = Other	<input type="checkbox"/> SDWA Reporting PWSID: _____
Relinquished By: _____	Date: 7-10-15	Temp °C: 3.8	Acceptable: Y / N	Number of containers, match number on COC? Y / N	Sample Type Key	Preservative Key	<input type="checkbox"/> Fax <input type="checkbox"/> Email <input type="checkbox"/> Other <input type="checkbox"/> Return a copy of this form with Report
Received in Lab By: _____	Time: 1412	Temp °C: 3.8	Acceptable: Y / N	All containers in tact? Y / N	D-Distribution E-Empty Point R-Raw C-Check S-Special M-Maximum Residence	N = Sodium Thiosulfate A = Ascorbic Acid H = HNO ₃ C = HCl S = H ₂ SO ₄ OH = NaOH O = Other NA = None Required	
Received in Lab By: _____	Date: 7-10-15	Temp °C: 3.8	Acceptable: Y / N	Tests within holding times Y / N	G = Grab BHC = 8 Hr Composite 24HC = 24 Hr Composite		
Received in Lab By: _____	Time: 1410	Temp °C: 3.8	Acceptable: Y / N	40 mL VOA vials free of headspace? Y / N			



Results Report

Order ID: 5100575

Rettew - Lancaster
3020 Columbia Avenue
Lancaster, PA 17603

Project: Herr Foods- Monitoring Wells

Attn: Ed Dziedzic

Regulatory ID:

Sample Number: 5100575-01
Collector: DRC

Site: MW 1
Collect Date: 10/06/2015 10:22 am

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	10.0	N/A	N/A		1	10/06/15	KAL	10/06/15 10:22	DRC
Static Water Level (ft)	4.79	N/A	N/A		1	10/06/15	KAL	10/06/15 10:22	DRC
Total Volume Purged (gal)	2.50	N/A	N/A		1	10/06/15	KAL	10/06/15 10:22	DRC
Total Well Depth (ft)	27.0	N/A	N/A		1	10/06/15	KAL	10/06/15 10:22	DRC
Well Diameter (in)	2.00	N/A	N/A		1	10/06/15	KAL	10/06/15 10:22	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 12:38	DMP
Ethyl Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 12:38	DMP
Isopropylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 12:38	DMP
Methyl-t-butyl ether (MTBE)	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 12:38	DMP
Naphthalene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 12:38	DMP
Toluene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 12:38	DMP
1,2,4-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 12:38	DMP
1,3,5-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 12:38	DMP
Xylenes, Total	< 1.0	µg/L	SW 846 8260B	1.0	1	10/08/15	DMP	10/08/15 12:38	DMP

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	50.5	µg/L	101%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	49.6	µg/L	99.2%	SW 846 8260B	80-120
Surrogate: Toluene-d8	49.3	µg/L	98.6%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	46.5	µg/L	93.0%	SW 846 8260B	80-120

Sample Number: 5100575-02
Collector: DRC

Site: MW 2
Collect Date: 10/06/2015 9:42 am

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	10.0	N/A	N/A		1	10/06/15	KAL	10/06/15 9:42	DRC
Static Water Level (ft)	5.62	N/A	N/A		1	10/06/15	KAL	10/06/15 9:42	DRC

Report Generated On: 10/16/2015 4:16 pm 5100575

STL_Results Revision #1.6 Effective: 07/09/2014



SUBURBAN TESTING LABS

Sample Number: 5100575-02
Collector: DRC

Site: MW 2
Collect Date: 10/06/2015 9:42 am

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method (Continued)

Monitor Well Sampling (Continued)

Total Volume Purged (gal)	2.50	N/A	N/A		1	10/06/15	KAL	10/06/15 9:42	DRC
Total Well Depth (ft)	23.0	N/A	N/A		1	10/06/15	KAL	10/06/15 9:42	DRC
Well Diameter (in)	2.00	N/A	N/A		1	10/06/15	KAL	10/06/15 9:42	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 13:06	DMP
Ethyl Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 13:06	DMP
Isopropylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 13:06	DMP
Methyl-t-butyl ether (MTBE)	< 0.5 D1	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 13:06	DMP
Naphthalene	< 0.5 D1	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 13:06	DMP
Toluene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 13:06	DMP
1,2,4-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 13:06	DMP
1,3,5-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 13:06	DMP
Xylenes, Total	< 1.0 D1	µg/L	SW 846 8260B	1.0	1	10/08/15	DMP	10/08/15 13:06	DMP

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	50.2	µg/L	100%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	49.0	µg/L	98.0%	SW 846 8260B	80-120
Surrogate: Toluene-d8	49.8	µg/L	99.6%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	46.7	µg/L	93.5%	SW 846 8260B	80-120

Sample Number: 5100575-03
Collector: DRC

Site: MW 3
Collect Date: 10/07/2015 10:18 am

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	11.0	N/A	N/A		1	10/07/15	KAL	10/07/15 10:18	DRC
Static Water Level (ft)	5.34	N/A	N/A		1	10/07/15	KAL	10/07/15 10:18	DRC
Total Volume Purged (gal)	2.70	N/A	N/A		1	10/07/15	KAL	10/07/15 10:18	DRC
Total Well Depth (ft)	25.0	N/A	N/A		1	10/07/15	KAL	10/07/15 10:18	DRC
Well Diameter (in)	2.00	N/A	N/A		1	10/07/15	KAL	10/07/15 10:18	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	42.7	µg/L	SW 846 8260B	5.0	10	10/12/15	DMP	10/12/15 18:19	DMP
Ethyl Benzene	430	µg/L	SW 846 8260B	5.0	10	10/12/15	DMP	10/12/15 18:19	DMP
Isopropylbenzene	21.5	µg/L	SW 846 8260B	5.0	10	10/12/15	DMP	10/12/15 18:19	DMP
Methyl-t-butyl ether (MTBE)	< 5.0	µg/L	SW 846 8260B	5.0	10	10/12/15	DMP	10/12/15 18:19	DMP

Report Generated On: 10/16/2015 4:16 pm 5100575
STL_Results Revision #1.6 Effective: 07/09/2014





SUBURBAN TESTING LABS

Sample Number: 5100575-03

Site: MW 3

Sample ID:

Collector: DRC

Collect Date: 10/07/2015 10:18 am

Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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Volatiles (Continued)

VOA, 8260, USTUnleaded (Continued)

Naphthalene	88.7	µg/L	SW 846 8260B	5.0	10	10/12/15	DMP	10/12/15 18:19	DMP
Toluene	3890	µg/L	SW 846 8260B	50.0	100	10/08/15	DMP	10/08/15 16:25	DMP
1,2,4-Trimethylbenzene	292	µg/L	SW 846 8260B	5.0	10	10/12/15	DMP	10/12/15 18:19	DMP
1,3,5-Trimethylbenzene	111	µg/L	SW 846 8260B	5.0	10	10/12/15	DMP	10/12/15 18:19	DMP
Xylenes, Total	1610	µg/L	SW 846 8260B	10.0	10	10/12/15	DMP	10/12/15 18:19	DMP

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	48.8	µg/L	97.5%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	47.1	µg/L	94.2%	SW 846 8260B	80-120
Surrogate: Toluene-d8	49.0	µg/L	97.9%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	48.4	µg/L	96.7%	SW 846 8260B	80-120

Sample Number: 5100575-04

Site: MW 4

Sample ID:

Collector: DRC

Collect Date: 10/07/2015 11:12 am

Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	10.0	N/A	N/A		1	10/07/15	KAL	10/07/15 11:12	DRC
Static Water Level (ft)	6.16	N/A	N/A		1	10/07/15	KAL	10/07/15 11:12	DRC
Total Volume Purged (gal)	3.30	N/A	N/A		1	10/07/15	KAL	10/07/15 11:12	DRC
Total Well Depth (ft)	19.0	N/A	N/A		1	10/07/15	KAL	10/07/15 11:12	DRC
Well Diameter (in)	2.00	N/A	N/A		1	10/07/15	KAL	10/07/15 11:12	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	1760	µg/L	SW 846 8260B	50.0	100	10/12/15	DMP	10/12/15 17:51	DMP
Ethyl Benzene	1600	µg/L	SW 846 8260B	50.0	100	10/12/15	DMP	10/12/15 17:51	DMP
Isopropylbenzene	68.1	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 15:27	DMP
Methyl-t-butyl ether (MTBE)	2.1	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 15:27	DMP
Naphthalene	199	µg/L	SW 846 8260B	50.0	100	10/12/15	DMP	10/12/15 17:51	DMP
Toluene	8610	µg/L	SW 846 8260B	50.0	100	10/12/15	DMP	10/12/15 17:51	DMP
1,2,4-Trimethylbenzene	857	µg/L	SW 846 8260B	50.0	100	10/12/15	DMP	10/12/15 17:51	DMP
1,3,5-Trimethylbenzene	228	µg/L	SW 846 8260B	50.0	100	10/12/15	DMP	10/12/15 17:51	DMP
Xylenes, Total	6180	µg/L	SW 846 8260B	100	100	10/12/15	DMP	10/12/15 17:51	DMP

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	40.0	µg/L	79.9%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	46.8	µg/L	93.5%	SW 846 8260B	80-120
Surrogate: Toluene-d8	43.9	µg/L	87.8%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	56.1	µg/L	112%	SW 846 8260B	80-120

Report Generated On: 10/16/2015 4:16 pm

5100575

STL_Results Revision #1.6

Effective: 07/09/2014

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SUBURBAN TESTING LABS



PADEP 06-00208



SUBURBAN TESTING LABS

Sample Number: 5100575-04
Collector: DRC

Site: MW 4
Collect Date: 10/07/2015 11:12 am

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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Volatiles (Continued)

Sample Number: 5100575-05
Collector: DRC

Site: MW 5
Collect Date: 10/07/2015 8:38 am

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	10.0	N/A	N/A		1	10/07/15	KAL	10/07/15 8:38	DRC
Static Water Level (ft)	4.94	N/A	N/A		1	10/07/15	KAL	10/07/15 8:38	DRC
Total Volume Purged (gal)	2.90	N/A	N/A		1	10/07/15	KAL	10/07/15 8:38	DRC
Total Well Depth (ft)	27.0	N/A	N/A		1	10/07/15	KAL	10/07/15 8:38	DRC
Well Diameter (in)	2.00	N/A	N/A		1	10/07/15	KAL	10/07/15 8:38	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	1040	µg/L	SW 846 8260B	5.0	10	10/12/15	DMP	10/12/15 18:48	DMP
Ethyl Benzene	694	µg/L	SW 846 8260B	5.0	10	10/12/15	DMP	10/12/15 18:48	DMP
Isopropylbenzene	21.7	µg/L	SW 846 8260B	5.0	10	10/12/15	DMP	10/12/15 18:48	DMP
Methyl-t-butyl ether (MTBE)	9.0	µg/L	SW 846 8260B	5.0	10	10/12/15	DMP	10/12/15 18:48	DMP
Naphthalene	86.8	µg/L	SW 846 8260B	5.0	10	10/12/15	DMP	10/12/15 18:48	DMP
Toluene	1550	µg/L	SW 846 8260B	5.0	10	10/12/15	DMP	10/12/15 18:48	DMP
1,2,4-Trimethylbenzene	299	µg/L	SW 846 8260B	5.0	10	10/12/15	DMP	10/12/15 18:48	DMP
1,3,5-Trimethylbenzene	77.3	µg/L	SW 846 8260B	5.0	10	10/12/15	DMP	10/12/15 18:48	DMP
Xylenes, Total	1650	µg/L	SW 846 8260B	10.0	10	10/12/15	DMP	10/12/15 18:48	DMP

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	48.4	µg/L	96.8%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	46.2	µg/L	92.4%	SW 846 8260B	80-120
Surrogate: Toluene-d8	50.0	µg/L	100%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	49.2	µg/L	98.4%	SW 846 8260B	80-120

Sample Number: 5100575-06
Collector: DRC

Site: TRIP BLANK DAY 1 OF SAMPLING
Collect Date: 10/05/2015 3:20 pm

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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Volatiles

VOA, 8260, USTUnleaded

Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 11:41	DMP
Ethyl Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 11:41	DMP
Isopropylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 11:41	DMP

Report Generated On: 10/16/2015 4:16 pm 5100575
STL_Results Revision #1.6 Effective: 07/09/2014





SUBURBAN TESTING LABS

Sample Number: 5100575-06
Collector: DRC

Site: TRIP BLANK DAY 1 OF SAMPLING
Collect Date: 10/05/2015 3:20 pm

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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Volatiles (Continued)

VOA, 8260, USTUnleaded (Continued)

Methyl-t-butyl ether (MTBE)	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 11:41	DMP
Naphthalene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 11:41	DMP
Toluene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 11:41	DMP
1,2,4-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 11:41	DMP
1,3,5-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 11:41	DMP
Xylenes, Total	< 1.0	µg/L	SW 846 8260B	1.0	1	10/08/15	DMP	10/08/15 11:41	DMP

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	48.7	µg/L	97.4%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	47.8	µg/L	95.7%	SW 846 8260B	80-120
Surrogate: Toluene-d8	49.6	µg/L	99.2%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	47.3	µg/L	94.6%	SW 846 8260B	80-120

Sample Number: 5100575-07
Collector: DRC

Site: MW 6
Collect Date: 10/06/2015 1:05 pm

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	10.0	N/A	N/A		1	10/06/15	KAL	10/06/15 13:08	DRC
Static Water Level (ft)	3.42	N/A	N/A		1	10/06/15	KAL	10/06/15 13:08	DRC
Total Volume Purged (gal)	2.60	N/A	N/A		1	10/06/15	KAL	10/06/15 13:08	DRC
Total Well Depth (ft)	20.0	N/A	N/A		1	10/06/15	KAL	10/06/15 13:08	DRC
Well Diameter (in)	2.00	N/A	N/A		1	10/06/15	KAL	10/06/15 13:08	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/12/15	DMP	10/12/15 17:22	DMP
Ethyl Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/12/15	DMP	10/12/15 17:22	DMP
Isopropylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/12/15	DMP	10/12/15 17:22	DMP
Methyl-t-butyl ether (MTBE)	< 0.5	µg/L	SW 846 8260B	0.5	1	10/12/15	DMP	10/12/15 17:22	DMP
Naphthalene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/12/15	DMP	10/12/15 17:22	DMP
Toluene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/12/15	DMP	10/12/15 17:22	DMP
1,2,4-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/12/15	DMP	10/12/15 17:22	DMP
1,3,5-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/12/15	DMP	10/12/15 17:22	DMP
Xylenes, Total	< 1.0	µg/L	SW 846 8260B	1.0	1	10/12/15	DMP	10/12/15 17:22	DMP

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	47.8	µg/L	95.6%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	45.9	µg/L	91.8%	SW 846 8260B	80-120
Surrogate: Toluene-d8	49.4	µg/L	98.8%	SW 846 8260B	80-120

Report Generated On: 10/16/2015 4:16 pm
STL_Results Revision #1.6

5100575
Effective: 07/09/2014





SUBURBAN TESTING LABS

Sample Number: 5100575-07

Site: MW 6

Sample ID:

Collector: DRC

Collect Date: 10/06/2015 1:05 pm

Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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Volatiles (Continued)

VOA, 8260, USTUnleaded (Continued)

Surrogate Recoveries (Continued)	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Bromofluorobenzene	48.2	µg/L	96.4%	SW 846 8260B	80-120

Sample Number: 5100575-08

Site: MW 7

Sample ID:

Collector: DRC

Collect Date: 10/07/2015 9:32 am

Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	8.00	N/A	N/A		1	10/07/15	KAL	10/07/15 9:32	DRC
Static Water Level (ft)	6.01	N/A	N/A		1	10/07/15	KAL	10/07/15 9:32	DRC
Total Volume Purged (gal)	3.66	N/A	N/A		1	10/07/15	KAL	10/07/15 9:32	DRC
Total Well Depth (ft)	20.0	N/A	N/A		1	10/07/15	KAL	10/07/15 9:32	DRC
Well Diameter (in)	2.00	N/A	N/A		1	10/07/15	KAL	10/07/15 9:32	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	514	µg/L	SW 846 8260B	5.0	10	10/12/15	DMP	10/12/15 19:17	DMP
Ethyl Benzene	728	µg/L	SW 846 8260B	5.0	10	10/12/15	DMP	10/12/15 19:17	DMP
Isopropylbenzene	53.4	µg/L	SW 846 8260B	5.0	10	10/12/15	DMP	10/12/15 19:17	DMP
Methyl-t-butyl ether (MTBE)	< 5.0	µg/L	SW 846 8260B	5.0	10	10/12/15	DMP	10/12/15 19:17	DMP
Naphthalene	240	µg/L	SW 846 8260B	5.0	10	10/12/15	DMP	10/12/15 19:17	DMP
Toluene	741	µg/L	SW 846 8260B	5.0	10	10/12/15	DMP	10/12/15 19:17	DMP
1,2,4-Trimethylbenzene	622	µg/L	SW 846 8260B	5.0	10	10/12/15	DMP	10/12/15 19:17	DMP
1,3,5-Trimethylbenzene	169	µg/L	SW 846 8260B	5.0	10	10/12/15	DMP	10/12/15 19:17	DMP
Xylenes, Total	3050	µg/L	SW 846 8260B	10.0	10	10/12/15	DMP	10/12/15 19:17	DMP

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	48.1	µg/L	96.1%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	46.1	µg/L	92.2%	SW 846 8260B	80-120
Surrogate: Toluene-d8	49.6	µg/L	99.1%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	49.2	µg/L	98.4%	SW 846 8260B	80-120

Sample Number: 5100575-09

Site: MW 8

Sample ID:

Collector: DRC

Collect Date: 10/06/2015 11:02 am

Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Report Generated On: 10/16/2015 4:16 pm

5100575

STL_Results Revision #1.6

Effective: 07/09/2014

1037F MacArthur Road, Reading, PA 19605

Phone: 800-433-6595

Fax: 610-375-4090

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PADEP 06-00208



SUBURBAN TESTING LABS

Sample Number: 5100575-09
Collector: DRC

Site: MW 8
Collect Date: 10/06/2015 11:02 am

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method (Continued)

Monitor Well Sampling

Sampling Depth (ft)	10.0	N/A	N/A		1	10/06/15	KAL	10/06/15 11:02	DRC
Static Water Level (ft)	3.84	N/A	N/A		1	10/06/15	KAL	10/06/15 11:02	DRC
Total Volume Purged (gal)	2.60	N/A	N/A		1	10/06/15	KAL	10/06/15 11:02	DRC
Total Well Depth (ft)	20.0	N/A	N/A		1	10/06/15	KAL	10/06/15 11:02	DRC
Well Diameter (in)	2.00	N/A	N/A		1	10/06/15	KAL	10/06/15 11:02	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 14:31	DMP
Ethyl Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 14:31	DMP
Isopropylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 14:31	DMP
Methyl-t-butyl ether (MTBE)	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 14:31	DMP
Naphthalene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 14:31	DMP
Toluene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 14:31	DMP
1,2,4-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 14:31	DMP
1,3,5-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 14:31	DMP
Xylenes, Total	< 1.0	µg/L	SW 846 8260B	1.0	1	10/08/15	DMP	10/08/15 14:31	DMP

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	50.0	µg/L	100%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	49.7	µg/L	99.3%	SW 846 8260B	80-120
Surrogate: Toluene-d8	49.4	µg/L	98.9%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	47.1	µg/L	94.2%	SW 846 8260B	80-120

Sample Number: 5100575-10
Collector: DRC

Site: MW 9
Collect Date: 10/06/2015 12:28 pm

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	10.0	N/A	N/A		1	10/06/15	KAL	10/06/15 12:28	DRC
Static Water Level (ft)	4.16	N/A	N/A		1	10/06/15	KAL	10/06/15 12:28	DRC
Total Volume Purged (gal)	3.20	N/A	N/A		1	10/06/15	KAL	10/06/15 12:28	DRC
Total Well Depth (ft)	20.0	N/A	N/A		1	10/06/15	KAL	10/06/15 12:28	DRC
Well Diameter (in)	2.00	N/A	N/A		1	10/06/15	KAL	10/06/15 12:28	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	2.6	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 14:59	DMP
Ethyl Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 14:59	DMP

Report Generated On: 10/16/2015 4:16 pm 5100575
STL_Results Revision #1.6 Effective: 07/09/2014





SUBURBAN TESTING LABS

Sample Number: 5100575-10
Collector: DRC

Site: MW 9
Collect Date: 10/06/2015 12:28 pm

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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Volatiles (Continued)

VOA, 8260, USTUnleaded (Continued)

Isopropylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 14:59	DMP
Methyl-t-butyl ether (MTBE)	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 14:59	DMP
Naphthalene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 14:59	DMP
Toluene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 14:59	DMP
1,2,4-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 14:59	DMP
1,3,5-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 14:59	DMP
Xylenes, Total	< 1.0	µg/L	SW 846 8260B	1.0	1	10/08/15	DMP	10/08/15 14:59	DMP

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	50.1	µg/L	100%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	50.2	µg/L	100%	SW 846 8260B	80-120
Surrogate: Toluene-d8	50.5	µg/L	101%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	46.6	µg/L	93.1%	SW 846 8260B	80-120

Sample Number: 5100575-11
Collector: DRC

Site: MW 10
Collect Date: 10/06/2015 11:42 am

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	10.0	N/A	N/A		1	10/06/15	KAL	10/06/15 11:42	DRC
Static Water Level (ft)	4.88	N/A	N/A		1	10/06/15	KAL	10/06/15 11:42	DRC
Total Volume Purged (gal)	2.60	N/A	N/A		1	10/06/15	KAL	10/06/15 11:42	DRC
Total Well Depth (ft)	20.0	N/A	N/A		1	10/06/15	KAL	10/06/15 11:42	DRC
Well Diameter (in)	2.00	N/A	N/A		1	10/06/15	KAL	10/06/15 11:42	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	2040	µg/L	SW 846 8260B	50.0	100	10/08/15	DMP	10/08/15 18:20	DMP
Ethyl Benzene	< 50.0	µg/L	SW 846 8260B	50.0	100	10/08/15	DMP	10/08/15 18:20	DMP
Isopropylbenzene	< 50.0	µg/L	SW 846 8260B	50.0	100	10/08/15	DMP	10/08/15 18:20	DMP
Methyl-t-butyl ether (MTBE)	91.0	µg/L	SW 846 8260B	50.0	100	10/08/15	DMP	10/08/15 18:20	DMP
Naphthalene	< 50.0	µg/L	SW 846 8260B	50.0	100	10/08/15	DMP	10/08/15 18:20	DMP
Toluene	< 50.0	µg/L	SW 846 8260B	50.0	100	10/08/15	DMP	10/08/15 18:20	DMP
1,2,4-Trimethylbenzene	< 50.0	µg/L	SW 846 8260B	50.0	100	10/08/15	DMP	10/08/15 18:20	DMP
1,3,5-Trimethylbenzene	< 50.0	µg/L	SW 846 8260B	50.0	100	10/08/15	DMP	10/08/15 18:20	DMP
Xylenes, Total	< 100	µg/L	SW 846 8260B	100	100	10/08/15	DMP	10/08/15 18:20	DMP

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	48.6	µg/L	97.3%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	49.1	µg/L	98.2%	SW 846 8260B	80-120

Report Generated On: 10/16/2015 4:16 pm
STL_Results Revision #1.6

5100575
Effective: 07/09/2014





SUBURBAN TESTING LABS

Sample Number: 5100575-11

Site: MW 10

Sample ID:

Collector: DRC

Collect Date: 10/06/2015 11:42 am

Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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Volatiles (Continued)

VOA, 8260, USTUnleaded (Continued)

Surrogate Recoveries (Continued)	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Toluene-d8	48.8	µg/L	97.6%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	46.6	µg/L	93.2%	SW 846 8260B	80-120

Sample Number: 5100575-12

Site: TRIP BLANK DAY 2 OF SAMPLING

Sample ID:

Collector: DRC

Collect Date: 10/05/2015 3:22 pm

Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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Volatiles

VOA, 8260, USTUnleaded

Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 12:10	DMP
Ethyl Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 12:10	DMP
Isopropylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 12:10	DMP
Methyl-t-butyl ether (MTBE)	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 12:10	DMP
Naphthalene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 12:10	DMP
Toluene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 12:10	DMP
1,2,4-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 12:10	DMP
1,3,5-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	10/08/15	DMP	10/08/15 12:10	DMP
Xylenes, Total	< 1.0	µg/L	SW 846 8260B	1.0	1	10/08/15	DMP	10/08/15 12:10	DMP

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	49.6	µg/L	99.2%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	48.1	µg/L	96.3%	SW 846 8260B	80-120
Surrogate: Toluene-d8	49.2	µg/L	98.4%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	46.7	µg/L	93.4%	SW 846 8260B	80-120

Data Qualifiers:

D1 The Duplicate for this sample was not within the established acceptance criteria.

Report Generated On: 10/16/2015 4:16 pm

5100575

STL_Results Revision #1.6

Effective: 07/09/2014

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PADEP 06-00208



SUBURBAN
TESTING LABS

All results meet the requirements of STL's TNI (NELAC) Accredited Quality System unless otherwise noted. If your results contain any data qualifiers or comments, you should evaluate useability relative to your needs.

If collectors initials include "STL", samples have been collected in accordance with STL SOP SL0015.

All results reported on an As Received (Wet Weight) basis unless otherwise noted.

This laboratory report may not be reproduced, except in full, without the written approval of STL.

Results are considered Preliminary unless report is signed by authorized representative of STL.

Reviewed and Released By:

Deborah Hannum
Project Manager

Report Generated On: 10/16/2015 4:16 pm 5100575
STL_Results Revision #1.6 Effective: 07/09/2014





SUBURBAN
TESTING LABS

Chain of Custody Record

1037F MacArthur Road, Reading, PA 19605
Phone: 610-375-8378 - Fax: 610-375-4090 - suburantestinglabs.com

TAT (Circle One): Standard - 24hr - 48hr - 72hr - Other _____
(Additional charges may apply for rush TAT. If not specified, standard TAT will apply.)

ORDER ID: 5100575



Client Name / Address:

Rettew - Lancaster
3020 Columbia Avenue
Lancaster, PA 17603

Project Name / Address:

Phone: (717) 394-1063
Fax:

Herr Foods- Monitoring Wells

Client Project Manager: Ed Dziedzic

Payment / P.O. Info:

Project Description:

Order Comments: Monitoring Well Collection = \$65/hour; Travel time to/from site = \$40/hour; Equipment Rental = \$115 flat fee per event;

Sample Number	Sample Description - Site ID	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
5100575-01	MW 1	10/6/15 1022	DR	Non-potable	Grab	

Container Type / Preservation				Preservation Check		Analysis - Method		Field Results
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Field Services	A
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl	B
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl	C
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl	D

General Method
Monitor Well Sampling - N/A

Unassigned
Sample Collection, Custom 3 - SL0015

Volatiles
VOA, 8260, USTUnleaded - SW 846 8260B

5100575-02	MW 2	10/6/15 0947	DR	Non-potable	Grab	
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Container Type / Preservation				Preservation Check		Analysis - Method		Field Results
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Field Services	A
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl	B
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl	C
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl	D

General Method
Monitor Well Sampling - N/A

Volatiles
VOA, 8260, USTUnleaded - SW 846 8260B

5100575-03	MW 3	10/11/15 1018	DR	Non-potable	Grab	
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Container Type / Preservation				Preservation Check		Analysis - Method		Field Results
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Field Services	A
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl	B
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl	C
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl	D

General Method
Monitor Well Sampling - N/A

Volatiles
VOA, 8260, USTUnleaded - SW 846 8260B



Sample Number	Sample Description - Site ID	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time	Field Results
5100575-04	MW 4	10/15/15 13:25	DKC	Non-potable	Grab		
Container Type / Preservation							Analysis - Method
Field Services							General Method
							Monitor Well Sampling - N/A
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							Volatiles
							VOA, 8260, USTUnleaded - SW 846 8260B
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
5100575-05	MW 5	10/15/15 09:38	DKC	Non-potable	Grab		
Container Type / Preservation							Analysis - Method
Field Services							General Method
							Monitor Well Sampling - N/A
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							Volatiles
							VOA, 8260, USTUnleaded - SW 846 8260B
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
5100575-06	TRIP BLANK DAY 1 OF SAMPLING	10/15/15 15:20	DKC	Non-potable	Grab		
Container Type / Preservation							Analysis - Method
Field Services							General Method
							Monitor Well Sampling - N/A
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							Volatiles
							VOA, 8260, USTUnleaded - SW 846 8260B
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
5100575-07	MW 6	10-6-15 13:08	DKC	Non-potable	Grab		
Container Type / Preservation							Analysis - Method
Field Services							General Method
							Monitor Well Sampling - N/A
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							Volatiles
							VOA, 8260, USTUnleaded - SW 846 8260B
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							



Sample Number	Sample Description - Site ID	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time	Field Results
5100575-08	MW7	10/16/15 1043Z	OKC	Non-potable	Grab		
Container Type / Preservation							Analysis - Method
Field Services							General Method Monitor Well Sampling - N/A
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							Volatiles VOA, 8260, USTUnleaded - SW 846 8260B
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
5100575-09							
MW3							
Container Type / Preservation							Analysis - Method
Field Services							General Method Monitor Well Sampling - N/A
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							Volatiles VOA, 8260, USTUnleaded - SW 846 8260B
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
5100575-10							
MW3							
Container Type / Preservation							Analysis - Method
Field Services							General Method Monitor Well Sampling - N/A
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							Volatiles VOA, 8260, USTUnleaded - SW 846 8260B
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
5100575-11							
MW10							
Container Type / Preservation							Analysis - Method
Field Services							General Method Monitor Well Sampling - N/A
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							Volatiles VOA, 8260, USTUnleaded - SW 846 8260B
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							



Sample Number	Sample Description - Site ID	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time	Field Results
5100575-12	TRIP BLANK DAY 2 OF SAMPLING	10/5/15 1522	ORC	Non-potable	Grab		
Container Type / Preservation							Analysis - Method
Field Services							General Method
							Monitor Well Sampling - N/A
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							Volatiles
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							VOA, 8260, USTUnleaded - SW 846 8260B
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							

Field Services	Preservation Check
A	
B	
C	
D	

Relinquished By:	Date:	Temp (°C):	Y / N
Received By:	Date:	Temp (°C):	Y / N
Relinquished By:	Date: 10-6-15	Temp (°C): 17	Y / N
Received in Lab By:	Date: 10-7-15	Temp (°C): 17	Y / N
	Date: 10-7-15	Temp (°C): 17	Y / N

Sample Conditions	Sample Type Key	Reporting Options
Submitted with COC? Y / N	G = Grab	<input type="checkbox"/> SDWA Reporting PWSID:
Number of Containers Match Number of COC? Y / N	8HC = 8 Hr. Composite	<input type="checkbox"/> Fax
All Containers Intact? Y / N	24HC = 24 Hr. Composite	<input type="checkbox"/> Email
Tests within Holding Times? Y / N	D = Distribution	<input type="checkbox"/> Return a copy of this form with Report
VOC Vials Free of Headspace? Y / N	S = Entry Point	<input type="checkbox"/> Other
	D = Raw	
	W = Check	
	A = Special	
	M = Maximum Residence	



Sample Number	Sample Description - Site ID	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
5100575-12	TRIP BLANK DAY 2 OF SAMPLING			Non-potable	Grab	

Container Type / Preservation	Preservation Check	Analysis - Method	Field Results
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Field Services	A
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl	B
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl	C
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl	D

General Method
Monitor Well Sampling - N/A

Volatiles

VOA, 8260, USTUnleaded - SW 846 8260B

Relinquished By:	Date: _____ Time: _____	Temp (°C): _____ Acceptable?: Y/N	Sample Conditions Submitted with COC? <u>Y/N</u> Number of Containers: <u>Y/N</u> Match Number of COC? All Containers Intact? <u>Y/N</u> Tests within Holding Times? <u>Y/N</u> VOC Vials Free of Headspace? <u>Y/N</u>	Sample Type Key G = Grab 8HC = 8 Hr. Composite 24HC = 24 Hr. Composite D = Distribution S = Entry Point R = Raw C = Check S = Special M = Maximum Residence	Reporting Options <input type="checkbox"/> SDWA Reporting PWSID: <input checked="" type="checkbox"/> Fax <input type="checkbox"/> Email <input type="checkbox"/> Return a copy of this form with Report <input type="checkbox"/> Other
Received By:	Date: _____ Time: _____	Temp (°C): _____ Acceptable?: Y/N			
Relinquished By:	Date: 10-6-15 Time: 1435	Temp (°C): 4.2 Acceptable?: Y/N			
Received in Lab By:	Date: 10-6-15 Time: 1435	Temp (°C): 4.2 Acceptable?: Y/N			



Results Report

Order ID: 6012049

Rettew - Lancaster
3020 Columbia Avenue
Lancaster, PA 17603

Project: Herr Foods- Monitoring Wells

Attn: Ed Dziedzic

Regulatory ID:

Sample Number: 6012049-03

Site: MW 3

Sample ID:

Collector: DRC

Collect Date: 01/15/2016 12:43 pm

Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	11.0	N/A	N/A		1	01/15/16	BAK	01/15/16 12:43	DRC
Static Water Level (ft)	4.91	N/A	N/A		1	01/15/16	BAK	01/15/16 12:43	DRC
Total Volume Purged (gal)	2.80	N/A	N/A		1	01/15/16	BAK	01/15/16 12:43	DRC
Total Well Depth (ft)	25.0	N/A	N/A		1	01/15/16	BAK	01/15/16 12:43	DRC
Well Diameter (in)	2.00	N/A	N/A		1	01/15/16	BAK	01/15/16 12:43	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	88.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 14:02	AMD
Ethyl Benzene	802	µg/L	SW 846 8260B	50.0	100	01/20/16	AMD	01/22/16 12:10	AMD
Isopropylbenzene	20.8	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 14:02	AMD
Methyl-t-butyl ether (MTBE)	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 14:02	AMD
Naphthalene	116	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 14:02	AMD
Toluene	6550	µg/L	SW 846 8260B	50.0	100	01/20/16	AMD	01/22/16 12:10	AMD
1,2,4-Trimethylbenzene	337	µg/L	SW 846 8260B	50.0	100	01/20/16	AMD	01/22/16 12:10	AMD
1,3,5-Trimethylbenzene	93.3	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 14:02	AMD
Xylenes, Total	4020	µg/L	SW 846 8260B	100	100	01/20/16	AMD	01/22/16 12:10	AMD

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	46.1	µg/L	92.2%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	53.4	µg/L	107%	SW 846 8260B	80-120
Surrogate: Toluene-d8	49.6	µg/L	99.2%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	44.1	µg/L	88.2%	SW 846 8260B	80-120

Sample Number: 6012049-04

Site: MW 4

Sample ID:

Collector: DRC

Collect Date: 01/15/2016 1:39 pm

Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	10.0	N/A	N/A		1	01/15/16	BAK	01/15/16 13:39	DRC
Static Water Level (ft)	5.81	N/A	N/A		1	01/15/16	BAK	01/15/16 13:39	DRC

Report Generated On: 01/25/2016 2:06 pm 6012049

STL_Results Revision #1.6

Effective: 07/09/2014



SUBURBAN TESTING LABS

Sample Number: 6012049-04
Collector: DRC

Site: MW 4
Collect Date: 01/15/2016 1:39 pm

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method (Continued)

Monitor Well Sampling (Continued)

Total Volume Purged (gal)	1.70	N/A	N/A		1	01/15/16	BAK	01/15/16 13:39	DRC
Total Well Depth (ft)	19.0	N/A	N/A		1	01/15/16	BAK	01/15/16 13:39	DRC
Well Diameter (in)	2.00	N/A	N/A		1	01/15/16	BAK	01/15/16 13:39	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	1790	µg/L	SW 846 8260B	50.0	100	01/20/16	AMD	01/22/16 12:38	AMD
Ethyl Benzene	1290	µg/L	SW 846 8260B	50.0	100	01/20/16	AMD	01/22/16 12:38	AMD
Isopropylbenzene	36.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 14:30	AMD
Methyl-t-butyl ether (MTBE)	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 14:30	AMD
Naphthalene	129	µg/L	SW 846 8260B	50.0	100	01/20/16	AMD	01/22/16 12:38	AMD
Toluene	8710	µg/L	SW 846 8260B	50.0	100	01/20/16	AMD	01/22/16 12:38	AMD
1,2,4-Trimethylbenzene	725	µg/L	SW 846 8260B	50.0	100	01/20/16	AMD	01/22/16 12:38	AMD
1,3,5-Trimethylbenzene	220	µg/L	SW 846 8260B	50.0	100	01/20/16	AMD	01/22/16 12:38	AMD
Xylenes, Total	5860	µg/L	SW 846 8260B	100	100	01/20/16	AMD	01/22/16 12:38	AMD

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	39.9	µg/L	79.8%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	55.2	µg/L	110%	SW 846 8260B	80-120
Surrogate: Toluene-d8	44.5	µg/L	89.0%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	45.3	µg/L	90.7%	SW 846 8260B	80-120

Sample Number: 6012049-05
Collector: DRC-STL

Site: MW 5
Collect Date: 01/14/2016 1:05 pm

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	10.0	N/A	N/A		1	01/14/16	BAK	01/14/16 13:05	DRC
Static Water Level (ft)	4.60	N/A	N/A		1	01/14/16	BAK	01/14/16 13:05	DRC
Total Volume Purged (gal)	2.90	N/A	N/A		1	01/14/16	BAK	01/14/16 13:05	DRC
Total Well Depth (ft)	27.0	N/A	N/A		1	01/14/16	BAK	01/14/16 13:05	DRC
Well Diameter (in)	2.00	N/A	N/A		1	01/14/16	BAK	01/14/16 13:05	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	187	µg/L	SW 846 8260B	0.5	1	01/19/16	AMD	01/19/16 21:04	AMD
Ethyl Benzene	94.7	µg/L	SW 846 8260B	0.5	1	01/19/16	AMD	01/19/16 21:04	AMD
Isopropylbenzene	5.6	µg/L	SW 846 8260B	0.5	1	01/19/16	AMD	01/19/16 21:04	AMD
Methyl-t-butyl ether (MTBE)	4.1	µg/L	SW 846 8260B	0.5	1	01/19/16	AMD	01/19/16 21:04	AMD

Report Generated On: 01/25/2016 2:06 pm 6012049
STL_Results Revision #1.6 Effective: 07/09/2014





SUBURBAN TESTING LABS

Sample Number: 6012049-05
Collector: DRC-STL

Site: MW 5
Collect Date: 01/14/2016 1:05 pm

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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Volatiles (Continued)

VOA, 8260, USTUnleaded (Continued)

Naphthalene	21.8	µg/L	SW 846 8260B	0.5	1	01/19/16	AMD	01/19/16 21:04	AMD
Toluene	6.4	µg/L	SW 846 8260B	0.5	1	01/19/16	AMD	01/19/16 21:04	AMD
1,2,4-Trimethylbenzene	56.8	µg/L	SW 846 8260B	0.5	1	01/19/16	AMD	01/19/16 21:04	AMD
1,3,5-Trimethylbenzene	17.9	µg/L	SW 846 8260B	0.5	1	01/19/16	AMD	01/19/16 21:04	AMD
Xylenes, Total	151	µg/L	SW 846 8260B	1.0	1	01/19/16	AMD	01/19/16 21:04	AMD

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	51.5	µg/L	103%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	50.8	µg/L	102%	SW 846 8260B	80-120
Surrogate: Toluene-d8	53.1	µg/L	106%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	49.0	µg/L	98.1%	SW 846 8260B	80-120

Sample Number: 6012049-06
Collector: HMB-STL

Site: TRIP BLANK DAY 1 OF SAMPLING
Collect Date: 01/14/2016 12:00 am

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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Volatiles

VOA, 8260, USTUnleaded

Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/22/16 11:15	AMD
Ethyl Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/22/16 11:15	AMD
Isopropylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/22/16 11:15	AMD
Methyl-t-butyl ether (MTBE)	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/22/16 11:15	AMD
Naphthalene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/22/16 11:15	AMD
Toluene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/22/16 11:15	AMD
1,2,4-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/22/16 11:15	AMD
1,3,5-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/22/16 11:15	AMD
Xylenes, Total	< 1.0	µg/L	SW 846 8260B	1.0	1	01/20/16	AMD	01/22/16 11:15	AMD

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	54.8	µg/L	110%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	52.0	µg/L	104%	SW 846 8260B	80-120
Surrogate: Toluene-d8	49.7	µg/L	99.4%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	51.2	µg/L	102%	SW 846 8260B	80-120

Sample Number: 6012049-08
Collector: DRC

Site: MW 7
Collect Date: 01/15/2016 9:12 am

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Report Generated On: 01/25/2016 2:06 pm 6012049
STL_Results Revision #1.6 Effective: 07/09/2014





SUBURBAN TESTING LABS

Sample Number: 6012049-08
Collector: DRC

Site: MW 7
Collect Date: 01/15/2016 9:12 am

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method (Continued)

Monitor Well Sampling

Sampling Depth (ft)	8.00	N/A	N/A		1	01/15/16	BAK	01/15/16 9:12	DRC
Static Water Level (ft)	5.96	N/A	N/A		1	01/15/16	BAK	01/15/16 9:12	DRC
Total Volume Purged (gal)	2.50	N/A	N/A		1	01/15/16	BAK	01/15/16 9:12	DRC
Total Well Depth (ft)	20.0	N/A	N/A		1	01/15/16	BAK	01/15/16 9:12	DRC
Well Diameter (in)	2.00	N/A	N/A		1	01/15/16	BAK	01/15/16 9:12	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	692	µg/L	SW 846 8260B	50.0	100	01/20/16	AMD	01/22/16 13:06	AMD
Ethyl Benzene	681	µg/L	SW 846 8260B	50.0	100	01/20/16	AMD	01/22/16 13:06	AMD
Isopropylbenzene	50.0	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 15:27	AMD
Methyl-t-butyl ether (MTBE)	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 15:27	AMD
Naphthalene	171	µg/L	SW 846 8260B	50.0	100	01/20/16	AMD	01/22/16 13:06	AMD
Toluene	784	µg/L	SW 846 8260B	50.0	100	01/20/16	AMD	01/22/16 13:06	AMD
1,2,4-Trimethylbenzene	623	µg/L	SW 846 8260B	50.0	100	01/20/16	AMD	01/22/16 13:06	AMD
1,3,5-Trimethylbenzene	167	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 15:27	AMD
Xylenes, Total	3760	µg/L	SW 846 8260B	100	100	01/20/16	AMD	01/22/16 13:06	AMD

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	43.8	µg/L	87.6%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	54.8	µg/L	110%	SW 846 8260B	80-120
Surrogate: Toluene-d8	49.0	µg/L	97.9%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	37.9	V µg/L	75.9%	SW 846 8260B	80-120

Sample Number: 6012049-10
Collector: DRC-STL

Site: MW 9
Collect Date: 01/14/2016 12:18 pm

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	10.0	N/A	N/A		1	01/14/16	BAK	01/14/16 12:18	DRC
Static Water Level (ft)	3.94	N/A	N/A		1	01/14/16	BAK	01/14/16 12:18	DRC
Total Volume Purged (gal)	2.60	N/A	N/A		1	01/14/16	BAK	01/14/16 12:18	DRC
Total Well Depth (ft)	20.0	N/A	N/A		1	01/14/16	BAK	01/14/16 12:18	DRC
Well Diameter (in)	2.00	N/A	N/A		1	01/14/16	BAK	01/14/16 12:18	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	5.4	µg/L	SW 846 8260B	0.5	1	01/19/16	AMD	01/19/16 21:31	AMD
Ethyl Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/19/16	AMD	01/19/16 21:31	AMD

Report Generated On: 01/25/2016 2:06 pm 6012049
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SUBURBAN TESTING LABS

Sample Number: 6012049-10

Site: MW 9

Sample ID:

Collector: DRC-STL

Collect Date: 01/14/2016 12:18 pm

Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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Volatiles (Continued)

VOA, 8260, USTUnleaded (Continued)

Isopropylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/19/16	AMD	01/19/16 21:31	AMD
Methyl-t-butyl ether (MTBE)	< 0.5	µg/L	SW 846 8260B	0.5	1	01/19/16	AMD	01/19/16 21:31	AMD
Naphthalene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/19/16	AMD	01/19/16 21:31	AMD
Toluene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/19/16	AMD	01/19/16 21:31	AMD
1,2,4-Trimethylbenzene	0.7	µg/L	SW 846 8260B	0.5	1	01/19/16	AMD	01/19/16 21:31	AMD
1,3,5-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/19/16	AMD	01/19/16 21:31	AMD
Xylenes, Total	< 1.0	µg/L	SW 846 8260B	1.0	1	01/19/16	AMD	01/19/16 21:31	AMD

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	53.2	µg/L	106%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	50.8	µg/L	102%	SW 846 8260B	80-120
Surrogate: Toluene-d8	50.3	µg/L	101%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	45.9	µg/L	91.7%	SW 846 8260B	80-120

Sample Number: 6012049-11

Site: MW 10

Sample ID:

Collector: DRC-STL

Collect Date: 01/14/2016 11:38 am

Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	10.0	N/A	N/A		1	01/14/16	BAK	01/14/16 11:38	DRC
Static Water Level (ft)	4.01	N/A	N/A		1	01/14/16	BAK	01/14/16 11:38	DRC
Total Volume Purged (gal)	2.70	N/A	N/A		1	01/14/16	BAK	01/14/16 11:38	DRC
Total Well Depth (ft)	20.0	N/A	N/A		1	01/14/16	BAK	01/14/16 11:38	DRC
Well Diameter (in)	2.00	N/A	N/A		1	01/14/16	BAK	01/14/16 11:38	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	2190	µg/L	SW 846 8260B	50.0	100	01/19/16	AMD	01/21/16 0:30	AMD
Ethyl Benzene	13.6	µg/L	SW 846 8260B	0.5	1	01/19/16	AMD	01/19/16 21:58	AMD
Isopropylbenzene	22.6	µg/L	SW 846 8260B	0.5	1	01/19/16	AMD	01/19/16 21:58	AMD
Methyl-t-butyl ether (MTBE)	114	µg/L	SW 846 8260B	0.5	1	01/19/16	AMD	01/19/16 21:58	AMD
Naphthalene	75.4	µg/L	SW 846 8260B	0.5	1	01/19/16	AMD	01/19/16 21:58	AMD
Toluene	43.6	µg/L	SW 846 8260B	0.5	1	01/19/16	AMD	01/19/16 21:58	AMD
1,2,4-Trimethylbenzene	3.9	µg/L	SW 846 8260B	0.5	1	01/19/16	AMD	01/19/16 21:58	AMD
1,3,5-Trimethylbenzene	3.2	µg/L	SW 846 8260B	0.5	1	01/19/16	AMD	01/19/16 21:58	AMD
Xylenes, Total	42.2	µg/L	SW 846 8260B	1.0	1	01/19/16	AMD	01/19/16 21:58	AMD

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	46.6	µg/L	93.2%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	45.7	µg/L	91.4%	SW 846 8260B	80-120

Report Generated On: 01/25/2016 2:06 pm

6012049

STL_Results Revision #1.6

Effective: 07/09/2014



SUBURBAN TESTING LABS

Sample Number: 6012049-11

Site: MW 10

Sample ID:

Collector: DRC-STL

Collect Date: 01/14/2016 11:38 am

Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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Volatiles (Continued)

VOA, 8260, USTUnleaded (Continued)

Surrogate Recoveries (Continued)	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Toluene-d8	51.5	µg/L	103%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	50.2	µg/L	100%	SW 846 8260B	80-120

Sample Number: 6012049-12

Site: TRIP BLANK DAY 2 OF SAMPLING

Sample ID:

Collector:

Collect Date: 01/14/2016 12:00 am

Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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Volatiles

VOA, 8260, USTUnleaded

Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/22/16 11:42	AMD
Ethyl Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/22/16 11:42	AMD
Isopropylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/22/16 11:42	AMD
Methyl-t-butyl ether (MTBE)	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/22/16 11:42	AMD
Naphthalene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/22/16 11:42	AMD
Toluene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/22/16 11:42	AMD
1,2,4-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/22/16 11:42	AMD
1,3,5-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/22/16 11:42	AMD
Xylenes, Total	< 1.0	µg/L	SW 846 8260B	1.0	1	01/20/16	AMD	01/22/16 11:42	AMD

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	56.7	µg/L	113%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	54.0	µg/L	108%	SW 846 8260B	80-120
Surrogate: Toluene-d8	49.3	µg/L	98.6%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	49.2	µg/L	98.4%	SW 846 8260B	80-120

Sample Number: 6012049-13

Site: MW 11

Sample ID:

Collector: DRC

Collect Date: 01/15/2016 11:43 am

Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	11.5	N/A	N/A		1	01/15/16	BAK	01/15/16 11:43	DRC
Static Water Level (ft)	0.240	N/A	N/A		1	01/15/16	BAK	01/15/16 11:43	DRC
Total Volume Purged (gal)	2.40	N/A	N/A		1	01/15/16	BAK	01/15/16 11:43	DRC
Total Well Depth (ft)	12.5	N/A	N/A		1	01/15/16	BAK	01/15/16 11:43	DRC
Well Diameter (in)	2.00	N/A	N/A		1	01/15/16	BAK	01/15/16 11:43	DRC

Report Generated On: 01/25/2016 2:06 pm

6012049

STL_Results Revision #1.6

Effective: 07/09/2014

1037F MacArthur Road, Reading, PA 19605

Phone: 800-433-6595

Fax: 610-375-4090

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SUBURBAN TESTING LABS



PADEP 06-00208



SUBURBAN TESTING LABS

Sample Number: 6012049-13
Collector: DRC

Site: MW 11
Collect Date: 01/15/2016 11:43 am

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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Volatiles

VOA, 8260, USTUnleaded

Benzene	0.9	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 16:24	AMD
Ethyl Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 16:24	AMD
Isopropylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 16:24	AMD
Methyl-t-butyl ether (MTBE)	137	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 16:24	AMD
Naphthalene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 16:24	AMD
Toluene	0.6	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 16:24	AMD
1,2,4-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 16:24	AMD
1,3,5-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 16:24	AMD
Xylenes, Total	< 1.0	µg/L	SW 846 8260B	1.0	1	01/20/16	AMD	01/20/16 16:24	AMD

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	53.4	µg/L	107%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	57.6	µg/L	115%	SW 846 8260B	80-120
Surrogate: Toluene-d8	50.0	µg/L	100%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	50.7	µg/L	101%	SW 846 8260B	80-120

Sample Number: 6012049-14
Collector: DRC

Site: MW 12
Collect Date: 01/15/2016 10:12 am

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	9.00	N/A	N/A		1	01/15/16	BAK	01/15/16 10:12	DRC
Static Water Level (ft)	2.20	N/A	N/A		1	01/15/16	BAK	01/15/16 10:12	DRC
Total Volume Purged (gal)	2.60	N/A	N/A		1	01/15/16	BAK	01/15/16 10:12	DRC
Total Well Depth (ft)	12.0	N/A	N/A		1	01/15/16	BAK	01/15/16 10:12	DRC
Well Diameter (in)	2.00	N/A	N/A		1	01/15/16	BAK	01/15/16 10:12	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 16:53	AMD
Ethyl Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 16:53	AMD
Isopropylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 16:53	AMD
Methyl-t-butyl ether (MTBE)	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 16:53	AMD
Naphthalene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 16:53	AMD
Toluene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 16:53	AMD
1,2,4-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 16:53	AMD
1,3,5-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 16:53	AMD
Xylenes, Total	< 1.0	µg/L	SW 846 8260B	1.0	1	01/20/16	AMD	01/20/16 16:53	AMD

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
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Report Generated On: 01/25/2016 2:06 pm 6012049
STL_Results Revision #1.6 Effective: 07/09/2014





SUBURBAN TESTING LABS

Sample Number: 6012049-14

Site: MW 12

Sample ID:

Collector: DRC

Collect Date: 01/15/2016 10:12 am

Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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Volatiles (Continued)

VOA, 8260, USTUnleaded (Continued)

Surrogate Recoveries (Continued)	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	54.2	µg/L	108%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	57.6	µg/L	115%	SW 846 8260B	80-120
Surrogate: Toluene-d8	49.5	µg/L	99.0%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	50.6	µg/L	101%	SW 846 8260B	80-120

Sample Number: 6012049-15

Site: MW 13

Sample ID:

Collector: DRC

Collect Date: 01/15/2016 10:49 am

Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	9.00	N/A	N/A		1	01/15/16	BAK	01/15/16 10:49	DRC
Static Water Level (ft)	3.41	N/A	N/A		1	01/15/16	BAK	01/15/16 10:49	DRC
Total Volume Purged (gal)	1.80	N/A	N/A		1	01/15/16	BAK	01/15/16 10:49	DRC
Total Well Depth (ft)	12.0	N/A	N/A		1	01/15/16	BAK	01/15/16 10:49	DRC
Well Diameter (in)	2.00	N/A	N/A		1	01/15/16	BAK	01/15/16 10:49	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	< 0.5 M	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 17:21	AMD
Ethyl Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 17:21	AMD
Isopropylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 17:21	AMD
Methyl-t-butyl ether (MTBE)	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 17:21	AMD
Naphthalene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 17:21	AMD
Toluene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 17:21	AMD
1,2,4-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 17:21	AMD
1,3,5-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	01/20/16	AMD	01/20/16 17:21	AMD
Xylenes, Total	< 1.0	µg/L	SW 846 8260B	1.0	1	01/20/16	AMD	01/20/16 17:21	AMD

Surrogate Recoveries	Results	Units	%Recovery	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	52.9	µg/L	106%	SW 846 8260B	80-120
Surrogate: 1,2-Dichloroethane-d4	56.7	µg/L	113%	SW 846 8260B	80-120
Surrogate: Toluene-d8	49.4	µg/L	98.7%	SW 846 8260B	80-120
Surrogate: Bromofluorobenzene	48.8	µg/L	97.6%	SW 846 8260B	80-120

Report Generated On: 01/25/2016 2:06 pm

6012049

STL_Results Revision #1.6

Effective: 07/09/2014

1037F MacArthur Road, Reading, PA 19605

Phone: 800-433-6595

Fax: 610-375-4090

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SUBURBAN TESTING LABS



PADEP 06-00208



Data Qualifiers:

- M The Matrix Spike associated with this sample is not within established acceptance criteria, indicating potential matrix interference.
- V The surrogate associated with this sample was not within the established acceptance criteria.

All results meet the requirements of STL's TNI (NELAC) Accredited Quality System unless otherwise noted. If your results contain any data qualifiers or comments, you should evaluate useability relative to your needs.

If collectors initials include "STL", samples have been collected in accordance with STL SOP SL0015.

All results reported on an As Received (Wet Weight) basis unless otherwise noted.

This laboratory report may not be reproduced, except in full, without the written approval of STL.

Results are considered Preliminary unless report is signed by authorized representative of STL.

Reviewed and Released By:

Deborah Hannum
Project Manager

Report Generated On: 01/25/2016 2:06 pm 6012049
STL_Results Revision #1.6 Effective: 07/09/2014



SUBURBAN
TESTING LABS

Chain of Custody Record

1037F MacArthur Road, Reading, PA 19605
Phone: 610-375-8378 - Fax: 610-375-4090 - suburbantestinglabs.com

TAT (Circle One): Standard - 24hr - 48hr - 72hr - Other _____
(Additional charges may apply for rush TAT. If not specified, standard TAT will apply.)

ORDER ID: 6012049



Page 10 of 24

Client Name / Address:

Rettew - Lancaster
3020 Columbia Avenue
Lancaster, PA 17603

Phone: (717) 394-1063
Fax:

Project Name / Address:

Herr Foods- Monitoring Wells

Client Project Manager: Ed Dziedzic

Payment / P.O. Info:

Project Description:

Order Comments: Monitoring Well Collection = \$65/hour; Travel time to/from site = \$40/hour; Equipment Rental = \$115 flat fee per event;

Sample Number	Sample Description - Site ID	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time	Field Results
6012049-01	MW 1			Non-potable	Grab		
Container Type / Preservation							Analysis - Method
Field Services							General Method Monitor Well Sampling - N/A
40 ml VOA	- Cool to 6 C & Ascorbic Acid & HCl		A				
40 ml VOA	- Cool to 6 C & Ascorbic Acid & HCl		B				
40 ml VOA	- Cool to 6 C & Ascorbic Acid & HCl		C				
40 ml VOA	- Cool to 6 C & Ascorbic Acid & HCl		D				

Unassigned
Sample Collection, Custom 3 - SL0015

Volatiles
VOA, 8260, USTUnleaded - SW 846 8260B

6012049-02	MW 2			Non-potable	Grab		
Container Type / Preservation							Analysis - Method
Field Services							General Method Monitor Well Sampling - N/A
40 ml VOA	- Cool to 6 C & Ascorbic Acid & HCl		A				
40 ml VOA	- Cool to 6 C & Ascorbic Acid & HCl		B				
40 ml VOA	- Cool to 6 C & Ascorbic Acid & HCl		C				
40 ml VOA	- Cool to 6 C & Ascorbic Acid & HCl		D				

General Method
Monitor Well Sampling - N/A

Volatiles
VOA, 8260, USTUnleaded - SW 846 8260B

6012049-03	MW 3	11/5/16 12:43		Non-potable	Grab		
Container Type / Preservation							Analysis - Method
Field Services							General Method Monitor Well Sampling - N/A
40 ml VOA	- Cool to 6 C & Ascorbic Acid & HCl		A				
40 ml VOA	- Cool to 6 C & Ascorbic Acid & HCl		B				
40 ml VOA	- Cool to 6 C & Ascorbic Acid & HCl		C				
40 ml VOA	- Cool to 6 C & Ascorbic Acid & HCl		D				

General Method
Monitor Well Sampling - N/A

Volatiles
VOA, 8260, USTUnleaded - SW 846 8260B



Sample Number	Sample Description - Site ID	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time	Field Results
6012049-04	MW 4	11/16/16 1339	DRC	Non-potable	Grab		
Container Type / Preservation							Analysis - Method
Field Services							General Method Monitor Well Sampling - N/A
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							Volatiles VOA, 8260, USTUnleaded - SW 846 8260B
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
6012049-05	MW 5	11/16/16 1305	DRC	Non-potable	Grab		
Container Type / Preservation							Analysis - Method
Field Services							General Method Monitor Well Sampling - N/A
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							Volatiles VOA, 8260, USTUnleaded - SW 846 8260B
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
6012049-06	TRIP BLANK DAY 1 OF SAMPLING	12/20/16	HMB	Non-potable	Grab		
Container Type / Preservation							Analysis - Method
Field Services							General Method Monitor Well Sampling - N/A
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							Volatiles VOA, 8260, USTUnleaded - SW 846 8260B
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
6012049-07	MW 6			Non-potable	Grab		
Container Type / Preservation							Analysis - Method
Field Services							General Method Monitor Well Sampling - N/A
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							Volatiles VOA, 8260, USTUnleaded - SW 846 8260B
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							



Sample Number	Sample Description - Site ID	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time	Field Results
6012049-08	MW 7	11-15-16 0912	ARC	Non-potable	Grab		
Container Type / Preservation							Analysis - Method
Field Services							General Method Monitor Well Sampling - N/A
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							Volatiles VOA, 8260, USTUnleaded - SW 846 8260B
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
6012049-09	MW 8			Non-potable	Grab		
Container Type / Preservation							Analysis - Method
Field Services							General Method Monitor Well Sampling - N/A
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							Volatiles VOA, 8260, USTUnleaded - SW 846 8260B
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
6012049-10	MW 9	11-14-16 1218	ARC	Non-potable	Grab		
Container Type / Preservation							Analysis - Method
Field Services							General Method Monitor Well Sampling - N/A
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							Volatiles VOA, 8260, USTUnleaded - SW 846 8260B
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
6012049-11	MW 10	11-14-16 1138	ARC	Non-potable	Grab		
Container Type / Preservation							Analysis - Method
Field Services							General Method Monitor Well Sampling - N/A
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							Volatiles VOA, 8260, USTUnleaded - SW 846 8260B
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							



Sample Number	Sample Description - Site ID	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time	Field Results
6012049-12	TRIP BLANK DAY 2 OF SAMPLING	1/14/16	KAL	Non-potable	Grab		

Analysis - Method	Field Results
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General Method

Monitor Well Sampling - N/A

Volatiles

VOA, 8260, USTUnleaded - SW 846 8260B

6012049-13	MW 11	1-15-16 1143	ARC	Non-potable	Grab		
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Analysis - Method	Field Results
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General Method

Monitor Well Sampling - N/A

Unassigned

Sample Collection, Custom 3 - SL0015

Volatiles

VOA, 8260, USTUnleaded - SW 846 8260B

6012049-14	MW 12	1/15/16 1142	ARC	Non-potable	Grab		
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Analysis - Method	Field Results
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General Method

Monitor Well Sampling - N/A

Unassigned

Sample Collection, Custom 3 - SL0015

Volatiles

VOA, 8260, USTUnleaded - SW 846 8260B

6012049-15	MW 13	1/15/16 1149	ARC	Non-potable	Grab		
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Analysis - Method	Field Results
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General Method

Monitor Well Sampling - N/A

Unassigned

Sample Collection, Custom 3 - SL0015

Volatiles

VOA, 8260, USTUnleaded - SW 846 8260B



Sample Number	Sample Description - Site ID	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time	Field Results
6012049-16	SW			Non-potable	Grab		
Container Type / Preservation							
Field Services							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
6012049-17 Endwall							
Container Type / Preservation							
Field Services							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							

Suburban Testing Labs.
1037F MacArthur Road
Reading, PA 19605

In Lab Date/Time: 1/15/16 1520 In Lab Temp: 4.8

Submitted with COC? ☒ Y ☐ N

Number of containers match number on COC? ☒ Y ☐ N

All Containers in tact? ☒ Y ☐ N

Tests within holding times? ☒ Y ☐ N

40mL VOA vials free of headspace? ☒ Y ☐ N

Relinquished by: *[Signature]*

Received in Lab by: *[Signature]* Day 2

Relinquished By:	Date:	Temp (°C):	Temp (°C) Acceptable? Y/N	Sample Conditions	Sample Type Key	Reporting Options
Received By:	Time:	Time:	Time:	Submitted with COC? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	G = Grab	<input type="checkbox"/> SDWA Reporting
Relinquished By:	Date:	Temp (°C):	Temp (°C) Acceptable? Y/N	Number of Containers Match Number of COC? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	8HC = 8 Hr. Composite	<input type="checkbox"/> PWSID:
Received in Lab By:	Time:	Time:	Time:	All Containers Intact? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	24HC = 24 Hr. Composite	<input type="checkbox"/> Fax
	Date:	Temp (°C):	Temp (°C) Acceptable? Y/N	Tests within Holding Times? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	D = Distribution	<input type="checkbox"/> Email
	Time:	Time:	Time:	VOC Vials Free of Headspace? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	E = Entry Point	<input type="checkbox"/> Return a copy of this form with Report
	Date:	Temp (°C):	Temp (°C) Acceptable? Y/N		R = Raw	<input type="checkbox"/> Other
	Time:	Time:	Time:		C = Check	
	Date:	Temp (°C):	Temp (°C) Acceptable? Y/N		S = Special	
	Time:	Time:	Time:		M = Maximum Residence	

Signing this form indicates your agreement with STL's Standard Terms and Conditions (www.suburbantestinglabs.com/resources/standard-terms-and-conditions.htm) unless otherwise specified in writing.

wko_STL_Preflog_Is.rpt

Deborah Hannum

Date Created: 01/13/2016

Date Printed: 01/13/2016

6012049

Shaded areas are for SWTL use only



Results Report

Order ID: 6040798

Rettew - Lancaster
3020 Columbia Avenue
Lancaster, PA 17603

Project: Herr Foods- Monitoring Wells

Attn: Ed Dziedzic

Regulatory ID:

Sample Number: 6040798-03
Collector: DRC

Site: MW 3
Collect Date: 04/07/2016 11:34 am

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	11.0	N/A	N/A		1	04/07/16	KAL	04/07/16 11:34	DRC
Static Water Level (ft)	2.55	N/A	N/A		1	04/07/16	KAL	04/07/16 11:34	DRC
Total Volume Purged (gal)	3.20	N/A	N/A		1	04/07/16	KAL	04/07/16 11:34	DRC
Total Well Depth (ft)	25.0	N/A	N/A		1	04/07/16	KAL	04/07/16 11:34	DRC
Well Diameter (in)	2.00	N/A	N/A		1	04/07/16	KAL	04/07/16 11:34	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	160	µg/L	SW 846 8260B	0.5	1	04/19/16	CEM	04/19/16 21:13	CEM
Ethyl Benzene	1110	µg/L	SW 846 8260B	25.0	50	04/19/16	CEM	04/21/16 18:32	CEM
Isopropylbenzene	42.8	µg/L	SW 846 8260B	0.5	1	04/19/16	CEM	04/19/16 21:13	CEM
Methyl-t-butyl ether (MTBE)	1.3	µg/L	SW 846 8260B	0.5	1	04/19/16	CEM	04/19/16 21:13	CEM
Naphthalene	196	µg/L	SW 846 8260B	0.5	1	04/19/16	CEM	04/19/16 21:13	CEM
Toluene	8400	µg/L	SW 846 8260B	25.0	50	04/19/16	CEM	04/21/16 18:32	CEM
1,3,5-Trimethylbenzene	197	µg/L	SW 846 8260B	0.5	1	04/19/16	CEM	04/19/16 21:13	CEM
1,2,4-Trimethylbenzene	514	µg/L	SW 846 8260B	25.0	50	04/19/16	CEM	04/21/16 18:32	CEM
Xylenes, Total	4750	µg/L	SW 846 8260B	50.0	50	04/19/16	CEM	04/21/16 18:32	CEM

Surrogate Recoveries	Results	Units	%Recovery	DF	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	45.4	µg/L	91%	1	SW 846 8260B	72-136
Surrogate: 1,2-Dichloroethane-d4	48.6	µg/L	97%	1	SW 846 8260B	79-135
Surrogate: Toluene-d8	47.5	µg/L	95%	1	SW 846 8260B	88-112
Surrogate: Bromofluorobenzene	52.0	µg/L	104%	1	SW 846 8260B	75-117

Sample Number: 6040798-04
Collector: DRC

Site: MW 4
Collect Date: 04/07/2016 12:14 pm

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	10.0	N/A	N/A		1	04/07/16	KAL	04/07/16 12:14	DRC
Static Water Level (ft)	3.08	N/A	N/A		1	04/07/16	KAL	04/07/16 12:14	DRC

Report Generated On: 04/25/2016 11:41 am 6040798

STL_Results Revision #1.6 Effective: 07/09/2014



SUBURBAN TESTING LABS

Sample Number: 6040798-04
Collector: DRC

Site: MW 4
Collect Date: 04/07/2016 12:14 pm

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method (Continued)

Monitor Well Sampling (Continued)

Total Volume Purged (gal)	2.60	N/A	N/A		1	04/07/16	KAL	04/07/16 12:14	DRC
Total Well Depth (ft)	19.0	N/A	N/A		1	04/07/16	KAL	04/07/16 12:14	DRC
Well Diameter (in)	2.00	N/A	N/A		1	04/07/16	KAL	04/07/16 12:14	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	1170	µg/L	SW 846 8260B	10.0	20	04/21/16	CEM	04/21/16 15:48	CEM
Ethyl Benzene	2820	µg/L	SW 846 8260B	10.0	20	04/21/16	CEM	04/21/16 15:48	CEM
Isopropylbenzene	79.5	µg/L	SW 846 8260B	0.5	1	04/19/16	CEM	04/19/16 21:42	CEM
Methyl-t-butyl ether (MTBE)	1.9	µg/L	SW 846 8260B	0.5	1	04/19/16	CEM	04/19/16 21:42	CEM
Naphthalene	313	µg/L	SW 846 8260B	10.0	20	04/21/16	CEM	04/21/16 15:48	CEM
Toluene	4870	µg/L	SW 846 8260B	10.0	20	04/21/16	CEM	04/21/16 15:48	CEM
1,3,5-Trimethylbenzene	2180	µg/L	SW 846 8260B	10.0	20	04/21/16	CEM	04/21/16 15:48	CEM
1,2,4-Trimethylbenzene	1970	µg/L	SW 846 8260B	10.0	20	04/21/16	CEM	04/21/16 15:48	CEM
Xylenes, Total	9430	µg/L	SW 846 8260B	20.0	20	04/21/16	CEM	04/21/16 15:48	CEM

Surrogate Recoveries	Results		Units	%Recovery	DF	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	35.1	V	µg/L	70%	1	SW 846 8260B	72-136
Surrogate: 1,2-Dichloroethane-d4	48.6		µg/L	97%	1	SW 846 8260B	79-135
Surrogate: Toluene-d8	42.3	V	µg/L	85%	1	SW 846 8260B	88-112
Surrogate: Bromofluorobenzene	54.7		µg/L	109%	1	SW 846 8260B	75-117

Sample Number: 6040798-05
Collector: DRC

Site: MW 5
Collect Date: 04/06/2016 2:04 pm

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	10.0	N/A	N/A		1	04/06/16	KAL	04/06/16 14:04	DRC
Static Water Level (ft)	4.61	N/A	N/A		1	04/06/16	KAL	04/06/16 14:04	DRC
Total Volume Purged (gal)	2.10	N/A	N/A		1	04/06/16	KAL	04/06/16 14:04	DRC
Total Well Depth (ft)	27.0	N/A	N/A		1	04/06/16	KAL	04/06/16 14:04	DRC
Well Diameter (in)	2.00	N/A	N/A		1	04/06/16	KAL	04/06/16 14:04	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	594	µg/L	SW 846 8260B	5.0	10	04/07/16	CEM	04/13/16 23:58	RCS3
Ethyl Benzene	304	µg/L	SW 846 8260B	5.0	10	04/07/16	CEM	04/13/16 23:58	RCS3
Isopropylbenzene	12.5	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 14:40	CEM
Methyl-t-butyl ether (MTBE)	10.6	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 14:40	CEM
Naphthalene	36.7	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 14:40	CEM

Report Generated On: 04/25/2016 11:41 am 6040798
STL_Results Revision #1.6 Effective: 07/09/2014





SUBURBAN TESTING LABS

Sample Number: 6040798-05
Collector: DRC

Site: MW 5
Collect Date: 04/06/2016 2:04 pm

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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Volatiles (Continued)

VOA, 8260, USTUnleaded (Continued)

Toluene	155	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 14:40	CEM
1,3,5-Trimethylbenzene	35.2	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 14:40	CEM
1,2,4-Trimethylbenzene	156	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 14:40	CEM
Xylenes, Total	643	µg/L	SW 846 8260B	10.0	10	04/07/16	CEM	04/13/16 23:58	RCS3

Surrogate Recoveries	Results	Units	%Recovery	DF	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	49.3	µg/L	99%	1	SW 846 8260B	72-136
Surrogate: Dibromofluoromethane	49.2	µg/L	98%	10	SW 846 8260B	72-136
Surrogate: 1,2-Dichloroethane-d4	51.0	µg/L	102%	1	SW 846 8260B	79-135
Surrogate: 1,2-Dichloroethane-d4	48.6	µg/L	97%	10	SW 846 8260B	79-135
Surrogate: Toluene-d8	50.8	µg/L	102%	10	SW 846 8260B	88-112
Surrogate: Toluene-d8	50.9	µg/L	102%	1	SW 846 8260B	88-112
Surrogate: Bromofluorobenzene	52.7	µg/L	105%	1	SW 846 8260B	75-117
Surrogate: Bromofluorobenzene	51.0	µg/L	102%	10	SW 846 8260B	75-117

Sample Number: 6040798-06
Collector: DRC

Site: TRIP BLANK DAY 1 OF SAMPLING
Collect Date: 04/05/2016 2:40 pm

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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Volatiles

VOA, 8260, USTUnleaded

Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 15:08	CEM
Ethyl Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 15:08	CEM
Isopropylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 15:08	CEM
Methyl-t-butyl ether (MTBE)	< 0.5	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 15:08	CEM
Naphthalene	0.6	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 15:08	CEM
Toluene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 15:08	CEM
1,3,5-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 15:08	CEM
1,2,4-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 15:08	CEM
Xylenes, Total	< 1.0	µg/L	SW 846 8260B	1.0	1	04/07/16	CEM	04/07/16 15:08	CEM

Surrogate Recoveries	Results	Units	%Recovery	DF	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	49.6	µg/L	99%	1	SW 846 8260B	72-136
Surrogate: 1,2-Dichloroethane-d4	50.3	µg/L	101%	1	SW 846 8260B	79-135
Surrogate: Toluene-d8	49.9	µg/L	100%	1	SW 846 8260B	88-112
Surrogate: Bromofluorobenzene	50.0	µg/L	100%	1	SW 846 8260B	75-117

Sample Number: 6040798-08
Collector: DRC

Site: MW 7
Collect Date: 04/07/2016 10:44 am

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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Report Generated On: 04/25/2016 11:41 am 6040798
STL_Results Revision #1.6 Effective: 07/09/2014





SUBURBAN TESTING LABS

Sample Number: 6040798-08
Collector: DRC

Site: MW 7
Collect Date: 04/07/2016 10:44 am

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	8.00	N/A	N/A		1	04/07/16	KAL	04/07/16 10:44	DRC
Static Water Level (ft)	4.33	N/A	N/A		1	04/07/16	KAL	04/07/16 10:44	DRC
Total Volume Purged (gal)	2.60	N/A	N/A		1	04/07/16	KAL	04/07/16 10:44	DRC
Total Well Depth (ft)	20.0	N/A	N/A		1	04/07/16	KAL	04/07/16 10:44	DRC
Well Diameter (in)	2.00	N/A	N/A		1	04/07/16	KAL	04/07/16 10:44	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	2770	µg/L	SW 846 8260B	10.0	20	04/19/16	CEM	04/21/16 16:16	CEM
Ethyl Benzene	2050	µg/L	SW 846 8260B	10.0	20	04/19/16	CEM	04/21/16 16:16	CEM
Isopropylbenzene	91.4	µg/L	SW 846 8260B	0.5	1	04/19/16	CEM	04/19/16 22:11	CEM
Methyl-t-butyl ether (MTBE)	0.9	µg/L	SW 846 8260B	0.5	1	04/19/16	CEM	04/19/16 22:11	CEM
Naphthalene	389	µg/L	SW 846 8260B	10.0	20	04/19/16	CEM	04/21/16 16:16	CEM
Toluene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/19/16	CEM	04/19/16 22:11	CEM
1,3,5-Trimethylbenzene	373	µg/L	SW 846 8260B	10.0	20	04/19/16	CEM	04/21/16 16:16	CEM
1,2,4-Trimethylbenzene	1680	µg/L	SW 846 8260B	10.0	20	04/19/16	CEM	04/21/16 16:16	CEM
Xylenes, Total	10300	µg/L	SW 846 8260B	20.0	20	04/19/16	CEM	04/21/16 16:16	CEM

Surrogate Recoveries	Results	Units	%Recovery	DF	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	39.5	µg/L	79%	1	SW 846 8260B	72-136
Surrogate: 1,2-Dichloroethane-d4	43.5	µg/L	87%	1	SW 846 8260B	79-135
Surrogate: Toluene-d8	48.1	µg/L	96%	1	SW 846 8260B	88-112
Surrogate: Bromofluorobenzene	52.4	µg/L	105%	1	SW 846 8260B	75-117

Sample Number: 6040798-10
Collector: DRC

Site: MW 9
Collect Date: 04/06/2016 12:28 pm

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	10.0	N/A	N/A		1	04/06/16	KAL	04/06/16 12:28	DRC
Static Water Level (ft)	2.05	N/A	N/A		1	04/06/16	KAL	04/06/16 12:28	DRC
Total Volume Purged (gal)	3.70	N/A	N/A		1	04/06/16	KAL	04/06/16 12:28	DRC
Total Well Depth (ft)	20.0	N/A	N/A		1	04/06/16	KAL	04/06/16 12:28	DRC
Well Diameter (in)	2.00	N/A	N/A		1	04/06/16	KAL	04/06/16 12:28	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	5.3	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 15:35	CEM
Ethyl Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 15:35	CEM
Isopropylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 15:35	CEM

Report Generated On: 04/25/2016 11:41 am 6040798
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SUBURBAN TESTING LABS

Sample Number: 6040798-10
Collector: DRC

Site: MW 9
Collect Date: 04/06/2016 12:28 pm

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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Volatiles (Continued)

VOA, 8260, UST Unleaded (Continued)

Methyl-t-butyl ether (MTBE)	< 0.5	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 15:35	CEM
Naphthalene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 15:35	CEM
Toluene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 15:35	CEM
1,3,5-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 15:35	CEM
1,2,4-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 15:35	CEM
Xylenes, Total	< 1.0	µg/L	SW 846 8260B	1.0	1	04/07/16	CEM	04/07/16 15:35	CEM

Surrogate Recoveries	Results	Units	%Recovery	DF	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	49.1	µg/L	98%	1	SW 846 8260B	72-136
Surrogate: 1,2-Dichloroethane-d4	51.4	µg/L	103%	1	SW 846 8260B	79-135
Surrogate: Toluene-d8	50.3	µg/L	101%	1	SW 846 8260B	88-112
Surrogate: Bromofluorobenzene	52.6	µg/L	105%	1	SW 846 8260B	75-117

Sample Number: 6040798-11
Collector: DRC

Site: MW 10
Collect Date: 04/06/2016 11:34 am

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	10.0	N/A	N/A		1	04/06/16	KAL	04/06/16 11:34	DRC
Static Water Level (ft)	3.63	N/A	N/A		1	04/06/16	KAL	04/06/16 11:34	DRC
Total Volume Purged (gal)	2.10	N/A	N/A		1	04/06/16	KAL	04/06/16 11:34	DRC
Total Well Depth (ft)	20.0	N/A	N/A		1	04/06/16	KAL	04/06/16 11:34	DRC
Well Diameter (in)	2.00	N/A	N/A		1	04/06/16	KAL	04/06/16 11:34	DRC

Volatiles

VOA, 8260, UST Unleaded

Benzene	2050	µg/L	SW 846 8260B	5.0	10	04/14/16	CEM	04/14/16 0:26	RCS3
Ethyl Benzene	10.4	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 16:02	CEM
Isopropylbenzene	28.0	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 16:02	CEM
Methyl-t-butyl ether (MTBE)	122	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 16:02	CEM
Naphthalene	62.6	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 16:02	CEM
Toluene	22.3	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 16:02	CEM
1,3,5-Trimethylbenzene	4.0	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 16:02	CEM
1,2,4-Trimethylbenzene	3.0	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 16:02	CEM
Xylenes, Total	23.9	µg/L	SW 846 8260B	1.0	1	04/07/16	CEM	04/07/16 16:02	CEM

Surrogate Recoveries	Results	Units	%Recovery	DF	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	48.6	µg/L	97%	1	SW 846 8260B	72-136
Surrogate: 1,2-Dichloroethane-d4	51.3	µg/L	103%	1	SW 846 8260B	79-135
Surrogate: Toluene-d8	50.4	µg/L	101%	1	SW 846 8260B	88-112

Report Generated On: 04/25/2016 11:41 am
STL_Results Revision #1.6

6040798
Effective: 07/09/2014





SUBURBAN TESTING LABS

Sample Number: 6040798-11
Collector: DRC

Site: MW 10
Collect Date: 04/06/2016 11:34 am

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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Volatiles (Continued)

VOA, 8260, USTUnleaded (Continued)

Surrogate Recoveries (Continued)	Results	Units	%Recovery	DF	Method	Limits (%Recovery)
Surrogate: Bromofluorobenzene	51.6	µg/L	103%	1	SW 846 8260B	75-117

Sample Number: 6040798-12
Collector: DRC

Site: TRIP BLANK DAY 2 OF SAMPLING
Collect Date: 04/05/2016 2:42 pm

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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Volatiles

VOA, 8260, USTUnleaded

Benzene	< 0.5 H, X	µg/L	SW 846 8260B	0.5	1	04/21/16	CEM	04/21/16 14:53	CEM
Ethyl Benzene	< 0.5 H, Xa	µg/L	SW 846 8260B	0.5	1	04/21/16	CEM	04/21/16 14:53	CEM
Isopropylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/19/16	CEM	04/19/16 22:40	CEM
Methyl-t-butyl ether (MTBE)	< 0.5	µg/L	SW 846 8260B	0.5	1	04/19/16	CEM	04/19/16 22:40	CEM
Naphthalene	< 0.5 H, Xa	µg/L	SW 846 8260B	0.5	1	04/21/16	CEM	04/21/16 14:53	CEM
Toluene	< 0.5 H, Xa	µg/L	SW 846 8260B	0.5	1	04/21/16	CEM	04/21/16 14:53	CEM
1,3,5-Trimethylbenzene	< 0.5 H, Xa	µg/L	SW 846 8260B	0.5	1	04/21/16	CEM	04/21/16 14:53	CEM
1,2,4-Trimethylbenzene	< 0.5 H, Xa	µg/L	SW 846 8260B	0.5	1	04/21/16	CEM	04/21/16 14:53	CEM
Xylenes, Total	< 1.0 H, Xa	µg/L	SW 846 8260B	1.0	1	04/21/16	CEM	04/21/16 14:53	CEM

Surrogate Recoveries	Results	Units	%Recovery	DF	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	51.4	µg/L	103%	1	SW 846 8260B	72-136
Surrogate: Dibromofluoromethane	55.7	µg/L	111%	1	SW 846 8260B	72-136
Surrogate: 1,2-Dichloroethane-d4	49.3	µg/L	99%	1	SW 846 8260B	79-135
Surrogate: 1,2-Dichloroethane-d4	52.8	µg/L	106%	1	SW 846 8260B	79-135
Surrogate: Toluene-d8	50.4	µg/L	101%	1	SW 846 8260B	88-112
Surrogate: Toluene-d8	50.7	µg/L	101%	1	SW 846 8260B	88-112
Surrogate: Bromofluorobenzene	49.8	µg/L	100%	1	SW 846 8260B	75-117
Surrogate: Bromofluorobenzene	48.2	µg/L	96%	1	SW 846 8260B	75-117

Sample Number: 6040798-13
Collector: DRC

Site: MW 11
Collect Date: 04/07/2016 9:54 am

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	11.5	N/A	N/A		1	04/07/16	KAL	04/07/16 9:54	DRC
Static Water Level (ft)	0.340	N/A	N/A		1	04/07/16	KAL	04/07/16 9:54	DRC
Total Volume Purged (gal)	2.60	N/A	N/A		1	04/07/16	KAL	04/07/16 9:54	DRC
Total Well Depth (ft)	12.5	N/A	N/A		1	04/07/16	KAL	04/07/16 9:54	DRC

Report Generated On: 04/25/2016 11:41 am 6040798
STL_Results Revision #1.6 Effective: 07/09/2014





SUBURBAN TESTING LABS

Sample Number: 6040798-13
Collector: DRC

Site: MW 11
Collect Date: 04/07/2016 9:54 am

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method (Continued)

Monitor Well Sampling (Continued)

Well Diameter (in)	2.00	N/A	N/A		1	04/07/16	KAL	04/07/16 9:54	DRC
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Volatiles

VOA, 8260, USTUnleaded

Benzene	19.4	µg/L	SW 846 8260B	0.5	1	04/19/16	CEM	04/21/16 15:20	CEM
Ethyl Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/19/16	CEM	04/21/16 15:20	CEM
Isopropylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/19/16	CEM	04/21/16 15:20	CEM
Methyl-t-butyl ether (MTBE)	19.4	µg/L	SW 846 8260B	0.5	1	04/19/16	CEM	04/21/16 15:20	CEM
Naphthalene	0.7	µg/L	SW 846 8260B	0.5	1	04/19/16	CEM	04/21/16 15:20	CEM
Toluene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/19/16	CEM	04/21/16 15:20	CEM
1,3,5-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/19/16	CEM	04/21/16 15:20	CEM
1,2,4-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/19/16	CEM	04/21/16 15:20	CEM
Xylenes, Total	< 1.0	µg/L	SW 846 8260B	1.0	1	04/19/16	CEM	04/21/16 15:20	CEM

Surrogate Recoveries	Results	Units	%Recovery	DF	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	51.8	µg/L	104%	1	SW 846 8260B	72-136
Surrogate: 1,2-Dichloroethane-d4	52.2	µg/L	104%	1	SW 846 8260B	79-135
Surrogate: Toluene-d8	50.2	µg/L	100%	1	SW 846 8260B	88-112
Surrogate: Bromofluorobenzene	49.8	µg/L	100%	1	SW 846 8260B	75-117

Sample Number: 6040798-14
Collector: DRC

Site: MW 12
Collect Date: 04/06/2016 10:08 am

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	9.00	N/A	N/A		1	04/06/16	KAL	04/06/16 10:08	DRC
Static Water Level (ft)	2.09	N/A	N/A		1	04/06/16	KAL	04/06/16 10:08	DRC
Total Volume Purged (gal)	2.60	N/A	N/A		1	04/06/16	KAL	04/06/16 10:08	DRC
Total Well Depth (ft)	12.0	N/A	N/A		1	04/06/16	KAL	04/06/16 10:08	DRC
Well Diameter (in)	2.00	N/A	N/A		1	04/06/16	KAL	04/06/16 10:08	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/14/16	CEM	04/14/16 1:20	RCS3
Ethyl Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 16:30	CEM
Isopropylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 16:30	CEM
Methyl-t-butyl ether (MTBE)	< 0.5	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 16:30	CEM
Naphthalene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/14/16	CEM	04/14/16 1:20	RCS3
Toluene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 16:30	CEM
1,3,5-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 16:30	CEM

Report Generated On: 04/25/2016 11:41 am 6040798
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SUBURBAN TESTING LABS

Sample Number: 6040798-14
Collector: DRC

Site: MW 12
Collect Date: 04/06/2016 10:08 am

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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Volatiles (Continued)

VOA, 8260, USTUnleaded (Continued)

1,2,4-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 16:30	CEM
Xylenes, Total	< 1.0	µg/L	SW 846 8260B	1.0	1	04/07/16	CEM	04/07/16 16:30	CEM

Surrogate Recoveries	Results	Units	%Recovery	DF	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	50.2	µg/L	100%	1	SW 846 8260B	72-136
Surrogate: 1,2-Dichloroethane-d4	51.1	µg/L	102%	1	SW 846 8260B	79-135
Surrogate: Toluene-d8	49.9	µg/L	100%	1	SW 846 8260B	88-112
Surrogate: Bromofluorobenzene	51.0	µg/L	102%	1	SW 846 8260B	75-117

Sample Number: 6040798-15
Collector: DRC

Site: MW 13
Collect Date: 04/06/2016 10:44 am

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	9.00	N/A	N/A		1	04/06/16	KAL	04/06/16 10:44	DRC
Static Water Level (ft)	3.98	N/A	N/A		1	04/06/16	KAL	04/06/16 10:44	DRC
Total Volume Purged (gal)	2.10	N/A	N/A		1	04/06/16	KAL	04/06/16 10:44	DRC
Total Well Depth (ft)	12.0	N/A	N/A		1	04/06/16	KAL	04/06/16 10:44	DRC
Well Diameter (in)	2.00	N/A	N/A		1	04/06/16	KAL	04/06/16 10:44	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 16:57	CEM
Ethyl Benzene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 16:57	CEM
Isopropylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 16:57	CEM
Methyl-t-butyl ether (MTBE)	< 0.5	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 16:57	CEM
Naphthalene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 16:57	CEM
Toluene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 16:57	CEM
1,3,5-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 16:57	CEM
1,2,4-Trimethylbenzene	< 0.5	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 16:57	CEM
Xylenes, Total	< 1.0	µg/L	SW 846 8260B	1.0	1	04/07/16	CEM	04/07/16 16:57	CEM

Surrogate Recoveries	Results	Units	%Recovery	DF	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	49.6	µg/L	99%	1	SW 846 8260B	72-136
Surrogate: 1,2-Dichloroethane-d4	50.9	µg/L	102%	1	SW 846 8260B	79-135
Surrogate: Toluene-d8	49.7	µg/L	99%	1	SW 846 8260B	88-112
Surrogate: Bromofluorobenzene	51.0	µg/L	102%	1	SW 846 8260B	75-117

Report Generated On: 04/25/2016 11:41 am 6040798
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SUBURBAN TESTING LABS

Sample Number: 6040798-16
Collector: DRC

Site: SW
Collect Date: 04/06/2016 1:14 pm

Sample ID:
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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General Method

Monitor Well Sampling

Sampling Depth (ft)	100	N/A	N/A		1	04/06/16	KAL	04/06/16 13:14	DRC
Static Water Level (ft)	5.31	N/A	N/A		1	04/06/16	KAL	04/06/16 13:14	DRC
Total Volume Purged (gal)	2.60	N/A	N/A		1	04/06/16	KAL	04/06/16 13:14	DRC
Total Well Depth (ft)	Unknown	N/A	N/A		1	04/06/16	KAL	04/06/16 13:14	DRC
Well Diameter (in)	6.00	N/A	N/A		1	04/06/16	KAL	04/06/16 13:14	DRC

Volatiles

VOA, 8260, USTUnleaded

Benzene	2310	µg/L	SW 846 8260B	5.0	10	04/14/16	CEM	04/14/16 0:53	RCS3
Ethyl Benzene	1280	µg/L	SW 846 8260B	5.0	10	04/14/16	CEM	04/14/16 0:53	RCS3
Isopropylbenzene	33.4	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 17:24	CEM
Methyl-t-butyl ether (MTBE)	47.5	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 17:24	CEM
Naphthalene	118	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 17:24	CEM
Toluene	4730	µg/L	SW 846 8260B	5.0	10	04/14/16	CEM	04/14/16 0:53	RCS3
1,3,5-Trimethylbenzene	120	µg/L	SW 846 8260B	0.5	1	04/07/16	CEM	04/07/16 17:24	CEM
1,2,4-Trimethylbenzene	518	µg/L	SW 846 8260B	5.0	10	04/14/16	CEM	04/14/16 0:53	RCS3
Xylenes, Total	3160	µg/L	SW 846 8260B	10.0	10	04/14/16	CEM	04/14/16 0:53	RCS3

Surrogate Recoveries	Results	Units	%Recovery	DF	Method	Limits (%Recovery)
Surrogate: Dibromofluoromethane	45.3	µg/L	91%	1	SW 846 8260B	72-136
Surrogate: 1,2-Dichloroethane-d4	49.3	µg/L	99%	1	SW 846 8260B	79-135
Surrogate: Toluene-d8	50.3	µg/L	101%	1	SW 846 8260B	88-112
Surrogate: Bromofluorobenzene	53.0	µg/L	106%	1	SW 846 8260B	75-117

Data Qualifiers:

H	Hold time was exceeded for this analysis.
V	The surrogate associated with this sample was not within the established acceptance criteria.
X	Sample was reanalyzed outside of hold time due to suspected carryover in original analysis.
Xa	Sample was reanalyzed outside of hold time due to suspected carryover in the original analysis.

** This report has been Amended (Rev1) and replaces all previous reports for this order ID **

Report Generated On: 04/25/2016 11:41 am 6040798
STL_Results Revision #1.6 Effective: 07/09/2014

1037F MacArthur Road, Reading, PA 19605 Phone: 800-433-6595 Fax: 610-375-4090 suburbantestinglabs.com

SUBURBAN TESTING LABS



PADEP 06-00208



SUBURBAN
TESTING LABS

All results meet the requirements of STL's TNI (NELAC) Accredited Quality System unless otherwise noted. If your results contain any data qualifiers or comments, you should evaluate useability relative to your needs.

If collectors initials include "STL", samples have been collected in accordance with STL SOP SL0015.

All results reported on an As Received (Wet Weight) basis unless otherwise noted.

This laboratory report may not be reproduced, except in full, without the written approval of STL.

Results are considered Preliminary unless report is signed by authorized representative of STL.

Reviewed and Released By:

Deborah Hannum
Project Manager

Report Generated On: 04/25/2016 11:41 am 6040798
STL_Results Revision #1.6 Effective: 07/09/2014





SUBURBAN TESTING LABS

Chain of Custody Record

1037F MacArthur Road, Reading, PA 19605
Phone: 610-375-8378 - Fax: 610-375-4090 - suburbantestinglabs.com

TAT (Circle One): Standard - 24hr - 48hr - 72hr - Other
(Additional charges may apply for rush TAT. If not specified, standard TAT will apply.)

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ORDER ID: 6040798



Client Name / Address: Rettew - Lancaster 3020 Columbia Avenue Lancaster, PA 17603		Phone: (717) 394-1063 Fax:		Project Name / Address: Herr Foods- Monitoring Wells		Payment / P.O. Info:	
Client Project Manager: Ed Dziedzic				Project Description: Order Comments: Monitoring Well Collection = \$65/hour; Travel time to/from site = \$40/hour; Equipment Rental = \$115 flat fee per event;			

Sample Number	Sample-Description - Site ID	Sampling Location	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
6040798-01	MW 1				Non-potable	Grab	
Container Type / Preservation							
Field Services							
Analysis - Method							
General Method Monitor Well Sampling - N/A							
Unassigned Sample Collection, Custom 3 - SL0015							
Volatiles VOA, 8260, USTUnleaded - SW 846 8260B							
6040798-02 MW 2							
Container Type / Preservation							
Field Services							
Analysis - Method							
General Method Monitor Well Sampling - N/A							
Volatiles VOA, 8260, USTUnleaded - SW 846 8260B							
6040798-03 MW 3							
Container Type / Preservation							
Field Services							
Analysis - Method							
General Method Monitor Well Sampling - N/A							
Volatiles VOA, 8260, USTUnleaded - SW 846 8260B							



Sample Number	Sample Description - Site ID	Sampling Location	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
6040798-04	MW 4		4/7/16 12:14	ORC	Non-potable	Grab	
Container Type / Preservation							
Field Services							
A							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
B							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
C							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
D							
Analysis - Method							
General Method							
Monitor Well Sampling - N/A							
Volatiles							
VOA, 8260, USTUnleaded - SW 846 8260B							
6040798-05	MW 5		4/6/16 1404	ORC	Non-potable	Grab	
Container Type / Preservation							
Field Services							
A							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
B							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
C							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
D							
Analysis - Method							
General Method							
Monitor Well Sampling - N/A							
Volatiles							
VOA, 8260, USTUnleaded - SW 846 8260B							
6040798-06	TRIP BLANK DAY 1 OF SAMPLING		4/5/16 1740	ORC	Non-potable	Grab	
Container Type / Preservation							
Field Services							
A							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
B							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
C							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
D							
Analysis - Method							
General Method							
Monitor Well Sampling - N/A							
Volatiles							
VOA, 8260, USTUnleaded - SW 846 8260B							
6040798-07	MW 6				Non-potable	Grab	
Container Type / Preservation							
Field Services							
A							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
B							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
C							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
D							
Analysis - Method							
General Method							
Monitor Well Sampling - N/A							
Volatiles							
VOA, 8260, USTUnleaded - SW 846 8260B							



Sample Number	Sample Description - Site ID	Sampling Location	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
6040798-08	MW 7		4/16/16 1044	DRC	Non-potable	Grab	
Container Type / Preservation							
Field Services							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
Analysis - Method							
General Method Monitor Well Sampling - N/A							
Volatiles VOA, 8260, USTUnleaded - SW 846 8260B							
Field Results							
6040798-09 - MW 8							
Container Type / Preservation							
Field Services							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
Analysis - Method							
General Method Monitor Well Sampling - N/A							
Volatiles VOA, 8260, USTUnleaded - SW 846 8260B							
Field Results							
6040798-10 - MW 9							
Container Type / Preservation							
Field Services							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
Analysis - Method							
General Method Monitor Well Sampling - N/A							
Volatiles VOA, 8260, USTUnleaded - SW 846 8260B							
Field Results							
6040798-11 - MW 10							
Container Type / Preservation							
Field Services							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
Analysis - Method							
General Method Monitor Well Sampling - N/A							
Volatiles VOA, 8260, USTUnleaded - SW 846 8260B							
Field Results							



Sample Number	Sample Description - Site ID	Sampling Location	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
6040798-12	TRIP BLANK DAY 2 OF SAMPLING		4/5/16 1442	DRG	Non-potable	Grab	
Container Type / Preservation Field Services 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
Analysis - Method General Method Monitor Well Sampling - N/A Volatiles VOA, 8260, USTUnleaded - SW 846 8260B							
Field Results							
6040798-13	MW 11		4/7/16 0954		Non-potable	Grab	
Container Type / Preservation Field Services 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
Analysis - Method General Method Monitor Well Sampling - N/A Unassigned Sample Collection, Custom 3 - SL0015 Volatiles VOA, 8260, USTUnleaded - SW 846 8260B							
Field Results							
6040798-14	MW 12		4/6/16 1003	DRG	Non-potable	Grab	
Container Type / Preservation Field Services 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
Analysis - Method General Method Monitor Well Sampling - N/A Unassigned Sample Collection, Custom 3 - SL0015 Volatiles VOA, 8260, USTUnleaded - SW 846 8260B							
Field Results							
6040798-15	MW 13		4/6/16 1044	DRG	Non-potable	Grab	
Container Type / Preservation Field Services 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
Analysis - Method General Method Monitor Well Sampling - N/A Unassigned Sample Collection, Custom 3 - SL0015 Volatiles VOA, 8260, USTUnleaded - SW 846 8260B							
Field Results							



Sample Number	Sample Description - Site ID	Sampling Location	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
6040798-16	SW		4/6/16 13:14	ARC	Non-potable	Grab	
Container Type / Preservation							
Field Services							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							

Analysis - Method		Field Results	
General Method Monitor Well Sampling - N/A			
Unassigned Sample Collection, Custom 3 - SL0015			
Volatiles VOA, 8260, USTUnleaded - SW 846 8260B			

Suburban Testing Labs.
1037F MacArthur Road
Reading, PA 19605

In Lab Date/Time: 4/7/16 13:15 In Lab Temp: 4.2

Submitted with COC? ☒ Y ☐ N
 Number of containers match number on COC? ☒ Y ☐ N
 All Containers in tact? ☒ Y ☐ N
 Tests within holding times? ☒ Y ☐ N
 40mL VOA vials free of headspace? ☒ Y ☐ N

Relinquished by: *Kate*

Received in Lab by: *Kate*

Relinquished By:	Date:	Temp (°C):	Temp (°C) Acceptable: ?	Y / N
Received By:	Time:	Temp (°C):	Temp (°C) Acceptable: ?	Y / N
Relinquished By:	Date:	Temp (°C):	Temp (°C) Acceptable: ?	Y / N
Received in Lab By:	Time:	Temp (°C):	Temp (°C) Acceptable: ?	Y / N

Sample Conditions	Sample Type Key	Reporting Options
Submitted with COC? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	G = Grab 8HC = 8 Hr. Composite 24HC = 24 Hr. Composite	<input type="checkbox"/> SDWA Reporting PWSID: <input type="checkbox"/> Fax
Number of Containers Match Number of COC? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	D = Distribution E = Entry Point R = Raw C = Check S = Special M = Maximum-Residence	<input type="checkbox"/> Email
All Containers Intact? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N		<input type="checkbox"/> Return a copy of this form with Report
Tests within Holding Times? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N		<input type="checkbox"/> Other
VOC Vials Free of Headspace? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N		



Sample Number	Sample Description - Site ID	Sampling Location	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
6040798-04	MW 4				Non-potable	Grab	
Container Type / Preservation Field Services 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
Analysis - Method General Method Monitor Well Sampling - N/A Volatiles VOA, 8260, USTUnleaded - SW 846 8260B							
Field Results							
6040798-05	MW 5		4/6/16 1404	DRG	Non-potable	Grab	
Container Type / Preservation Field Services 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
Analysis - Method General Method Monitor Well Sampling - N/A Volatiles VOA, 8260, USTUnleaded - SW 846 8260B							
Field Results							
6040798-06	TRIP BLANK DAY 1 OF SAMPLING		4/5/16 1440	DRG	Non-potable	Grab	
Container Type / Preservation Field Services 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
Analysis - Method General Method Monitor Well Sampling - N/A Volatiles VOA, 8260, USTUnleaded - SW 846 8260B							
Field Results							
6040798-07	MW 6				Non-potable	Grab	
Container Type / Preservation Field Services 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
Analysis - Method General Method Monitor Well Sampling - N/A Volatiles VOA, 8260, USTUnleaded - SW 846 8260B							
Field Results							



Sample Number	Sample Description - Site ID	Sampling Location	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
6040798-08	MW 7				Non-potable	Grab	

Container Type / Preservation

Field Services	A
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl	B
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl	C
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl	D

Analysis - Method

General Method
Monitor Well Sampling - N/A

Volatiles

VOA, 8260, USTUnleaded - SW 846 8260B

Field Results

6040798-09	MW 8				Non-potable	Grab	
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Container Type / Preservation

Field Services	A
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl	B
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl	C
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl	D

Analysis - Method

General Method
Monitor Well Sampling - N/A

Volatiles

VOA, 8260, USTUnleaded - SW 846 8260B

Field Results

6040798-10	MW 9		4/6/16 12:28	DRC	Non-potable	Grab	
------------	------	--	--------------	-----	-------------	------	--

Container Type / Preservation

Field Services	A
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl	B
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl	C
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl	D

Analysis - Method

General Method
Monitor Well Sampling - N/A

Volatiles

VOA, 8260, USTUnleaded - SW 846 8260B

Field Results

6040798-11	MW 10		4/6/16 1:34	DRC	Non-potable	Grab	
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Container Type / Preservation

Field Services	A
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl	B
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl	C
40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl	D

Analysis - Method

General Method
Monitor Well Sampling - N/A

Volatiles

VOA, 8260, USTUnleaded - SW 846 8260B

Field Results



Sample Number	Sample Description - Site ID	Sampling Location	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
6040798-12	TRIP BLANK DAY 2 OF SAMPLING		4/15/16 1442	DRC	Non-potable	Grab	
Container Type / Preservation Field Services 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
Analysis - Method General Method Monitor Well Sampling - N/A Volatiles VOA, 8260, USTUnleaded - SW 846 8260B							
Field Results							
6040798-13	MW 11				Non-potable	Grab	
Container Type / Preservation Field Services 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
Analysis - Method General Method Monitor Well Sampling - N/A Unassigned Sample Collection, Custom 3 - SL0015 Volatiles VOA, 8260, USTUnleaded - SW 846 8260B							
Field Results							
6040798-14	MW 12		4/6/16 1008	DRC	Non-potable	Grab	
Container Type / Preservation Field Services 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
Analysis - Method General Method Monitor Well Sampling - N/A Unassigned Sample Collection, Custom 3 - SL0015 Volatiles VOA, 8260, USTUnleaded - SW 846 8260B							
Field Results							
6040798-15	MW 13		4/6/16 1044	DRC	Non-potable	Grab	
Container Type / Preservation Field Services 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
Analysis - Method General Method Monitor Well Sampling - N/A Unassigned Sample Collection, Custom 3 - SL0015 Volatiles VOA, 8260, USTUnleaded - SW 846 8260B							
Field Results							



Sample Number	Sample Description - Site ID	Sampling Location	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
6040798-16	SW		4/6/16 13:14	ACC	Non-potable	Grab	
Container Type / Preservation Field Services 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
Analysis - Method General Method Monitor Well Sampling - N/A Unassigned Sample Collection, Custom 3 - SL0015 Volatiles VOA, 8260, USTUnleaded - SW 846 8260B							
Field Results							

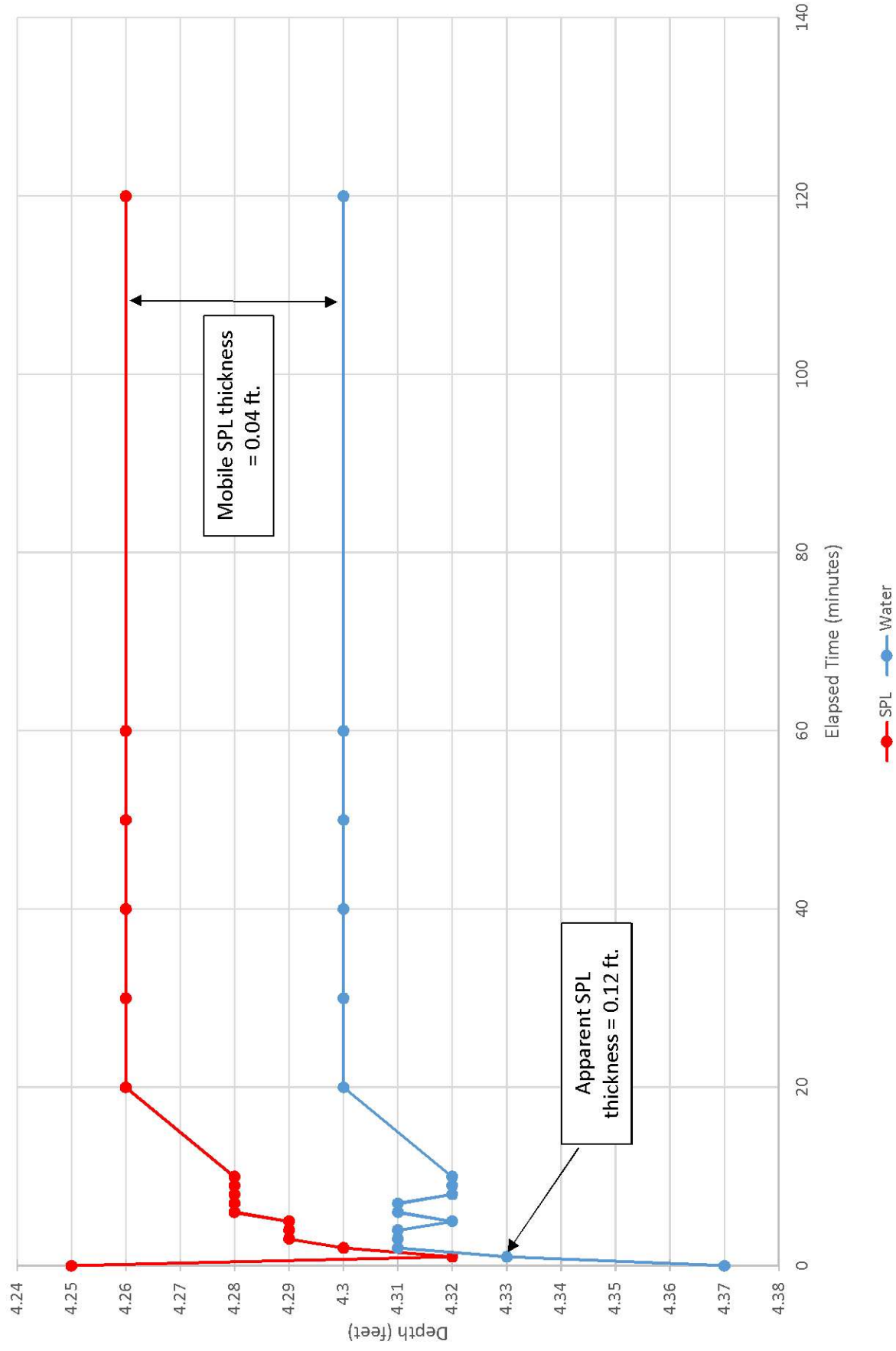
Sample Number	Sample Description - Site ID	Sampling Location	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
6040798-17	Endwell				Non-potable	Grab	
Container Type / Preservation Field Services 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl 40 ml VOA - Cool to 6 C & Ascorbic Acid & HCl							
Analysis - Method General Method Monitor Well Sampling - N/A Unassigned Sample Collection, Custom 3 - SL0015 Volatiles VOA, 8260, USTUnleaded - SW 846 8260B							
Field Results							

Relinquished By: Date: _____ Time: _____	Temp (°C): Acceptable: ? Y/N	Sample Conditions Submitted with COC? <input checked="" type="checkbox"/> Y/N Number of Containers Match Number of COC? <input checked="" type="checkbox"/> Y/N All Containers Intact? <input checked="" type="checkbox"/> Y/N Tests within Holding Times? <input checked="" type="checkbox"/> Y/N VOC Vials Free of Headspace? <input checked="" type="checkbox"/> Y/N	Sample Type Key G = Grab 8HC = 8 Hr. Composite 24HC = 24 Hr. Composite D = Distribution E = Entry Point R = Raw C = Check S = Special M = Maximum Residence	Reporting Options <input type="checkbox"/> SDWA Reporting PWSID: <input type="checkbox"/> Fax <input type="checkbox"/> Email <input type="checkbox"/> Return a copy of this form with Report <input type="checkbox"/> Other
Received By: Date: _____ Time: _____	Temp (°C): Acceptable: ? Y/N			
Relinquished By: Date: 4/6/16 Time: 15:38	Temp (°C): Acceptable: ? Y/N			
Received in Lab By: Date: 4/6/16 Time: 15:38	Temp (°C): Acceptable: ? Y/N			

APPENDIX H

Baildown Test Data Plots

MW-4 Baildown Test July 9, 2015



APPENDIX I
SPL Sample Laboratory Analytical Report

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

July 21, 2015

Project: Herr Foods Inc.

Submittal Date: 07/09/2015

Group Number: 1575572

PO Number: 101722001

State of Sample Origin: PA

Client Sample Description

MW-4 SPL Grab SPL

Lancaster Labs (LL)

7960539

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>.

ELECTRONIC COPY TO
Rettew Associates

Attn: Ed Dziedzic

Respectfully Submitted,



Stacy L. Butt
Specialist

(717) 556-7236

Sample Description: MW-4 SPL Grab SPL
HERR FOODS INC.

LL Sample # G5 7960539
LL Group # 1575572
Account # 00721

Project Name: Herr Foods Inc.

Collected: 07/09/2015 09:05 by EGD
through 07/09/2015 11:35
Submitted: 07/09/2015 13:30
Reported: 07/21/2015 14:46

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

M4SPL

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	600,000	10,000	20000
10237	Ethylbenzene	100-41-4	12,000,000	200,000	200000
10237	Isopropylbenzene	98-82-8	1,300,000	20,000	20000
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	10,000	20000
10237	Naphthalene	91-20-3	380,000	20,000	20000
10237	Toluene	108-88-3	22,000,000	200,000	200000
10237	1,2,4-Trimethylbenzene	95-63-6	38,000,000	200,000	200000
10237	1,3,5-Trimethylbenzene	108-67-8	12,000,000	200,000	200000
10237	Xylene (Total)	1330-20-7	59,000,000	200,000	200000
GC Petroleum	SW-846 8015B modified	see below	see below		
Hydrocarbons					
02535	Quantitative GC Fingerprint	n.a.	N.D.	100	100
The GC Fingerprint for this sample is most similar to our Gasoline reference standard. Based on relative peak intensities and ratios, the product in this sample does not appear to be weathered. When we calculate total sample area in the C8-C40 normal hydrocarbon range as petroleum distillate, it is present at 56% by weight.					

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PA Unleaded/Diesel	8260B SW-846 8260B	1	Q151951AA	07/14/2015 15:49	Sarah A Guill	20000
10237	PA Unleaded/Diesel	8260B SW-846 8260B	1	Q151951AA	07/14/2015 16:12	Sarah A Guill	200000
00373	DP 21 Bulk Prep of Oil Samples	SW-846 5030B	1	Q151951AA	07/13/2015 10:02	Sarah A Guill	n.a.
02535	Quantitative GC Fingerprint	SW-846 8015B modified	1	151960036A	07/15/2015 22:43	Heather E Williams	100

Quality Control Summary

Client Name: Rettew Associates
Reported: 07/21/2015 14:46

Group Number: 1575572

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: Q151951AA Sample number(s): 7960539								
Benzene	N.D.	250.	ug/kg	91	94	80-120	4	30
Ethylbenzene	N.D.	500.	ug/kg	85	87	80-120	2	30
Isopropylbenzene	N.D.	500.	ug/kg	81	84	76-120	4	30
Methyl Tertiary Butyl Ether	N.D.	250.	ug/kg	89	93	72-120	5	30
Naphthalene	N.D.	500.	ug/kg	81	88	64-120	8	30
Toluene	N.D.	500.	ug/kg	90	93	80-120	3	30
1,2,4-Trimethylbenzene	N.D.	500.	ug/kg	84	87	79-120	4	30
1,3,5-Trimethylbenzene	N.D.	500.	ug/kg	82	86	78-120	5	30
Xylene (Total)	N.D.	500.	ug/kg	85	87	80-120	2	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PA Unleaded/Diesel 8260B
Batch number: Q151951AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7960539	82	78	89	92
Blank	87	92	85	82
LCS	93	97	90	87
LCSD	97	102	95	91
Limits:	50-141	54-135	52-141	50-131

Analysis Name: Quantitative GC Fingerprint
Batch number: 151960036A

	Chlorobenzene	Orthoterphenyl
7960539	103	104
Limits:	50-150	50-150

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Client: Rettew Assoc.**Delivery and Receipt Information**

Delivery Method: Client Drop Off Arrival Timestamp: 07/09/2015 13:30
Number of Packages: 1 Number of Projects: 1

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	VOA Vial Headspace \geq 6mm:	N/A
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	0
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Timothy Cubberley (6520) at 13:48 on 07/09/2015

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?	<u>Samples</u> <u>Collected Same</u> <u>Day as Receipt?</u>
1	DT131	7.6	DT	Wet	Y	Bagged	Y	Y

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value \geq the Method Detection Limit (MDL or DL) and the $<$ Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, ISO17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

REVISED

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Report Date: April 27, 2016

Project: Herr Foods Inc.

Submittal Date: 07/09/2015

Group Number: 1575572

PO Number: 101722001

State of Sample Origin: PA

Client Sample Description

MW-4 SPL Grab SPL

Lancaster Labs

(LL) #

7960539

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>.

Electronic Copy To Rettew Associates

Attn: Ed Dziedzic

Respectfully Submitted,



Stacy L. Butt
Specialist

(717) 556-7236

REVISED

Sample Description: MW-4 SPL Grab SPL
HERR FOODS INC.

LL Sample # G5 7960539
LL Group # 1575572
Account # 00721

Project Name: Herr Foods Inc.

Collected: 07/09/2015 09:05 by EGD
through 07/09/2015 11:35
Submitted: 07/09/2015 13:30
Reported: 04/27/2016 08:41

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

M4SPL

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10237	Benzene	71-43-2	600,000	10,000	20000
10237	Ethylbenzene	100-41-4	12,000,000	200,000	200000
10237	Isopropylbenzene	98-82-8	1,300,000	20,000	20000
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	10,000	20000
10237	Naphthalene	91-20-3	380,000	20,000	20000
10237	Toluene	108-88-3	22,000,000	200,000	200000
10237	1,2,4-Trimethylbenzene	95-63-6	38,000,000	200,000	200000
10237	1,3,5-Trimethylbenzene	108-67-8	12,000,000	200,000	200000
10237	Xylene (Total)	1330-20-7	59,000,000	200,000	200000

GC Petroleum SW-846 8015B modified see below see below
Hydrocarbons

02535 Quantitative GC Fingerprint n.a. N.D. 100 100
The GC Fingerprint for this sample is most similar to our Gasoline reference standard. Based on relative peak intensities and ratios, the product in this sample does not appear to be weathered. When we calculate total sample area in the C8-C40 normal hydrocarbon range as petroleum distillate, it is present at 56% by weight.

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PA Unleaded/Diesel 8260B	SW-846 8260B	1	Q151951AA	07/14/2015 15:49	Sarah A Guill	20000
10237	PA Unleaded/Diesel 8260B	SW-846 8260B	1	Q151951AA	07/14/2015 16:12	Sarah A Guill	200000
00373	DP 21 Bulk Prep of Oil Samples	SW-846 5030B	1	Q151951AA	07/13/2015 10:02	Sarah A Guill	n.a.
02535	Quantitative GC Fingerprint	SW-846 8015B modified	1	151960036A	07/15/2015 22:43	Heather E Williams	100

Quality Control Summary

Client Name: Rettew Associates
Reported: 04/27/2016 08:41

Group Number: 1575572

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL
	ug/l	ug/l
Batch number: Q151951AA	Sample number(s): 7960539	
Benzene	N.D.	250
Ethylbenzene	N.D.	500
Isopropylbenzene	N.D.	500
Methyl Tertiary Butyl Ether	N.D.	250
Naphthalene	N.D.	500
Toluene	N.D.	500
1,2,4-Trimethylbenzene	N.D.	500
1,3,5-Trimethylbenzene	N.D.	500
Xylene (Total)	N.D.	500

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: Q151951AA	Sample number(s): 7960539								
Benzene	10000	9091.42	10000	9423.47	91	94	80-120	4	30
Ethylbenzene	10000	8537.2	10000	8728.82	85	87	80-120	2	30
Isopropylbenzene	10000	8113.95	10000	8417.58	81	84	76-120	4	30
Methyl Tertiary Butyl Ether	10000	8905.24	10000	9328.76	89	93	72-120	5	30
Naphthalene	10000	8125.11	10000	8774.92	81	88	64-120	8	30
Toluene	10000	9003.81	10000	9281.75	90	93	80-120	3	30
1,2,4-Trimethylbenzene	10000	8361.79	10000	8710.87	84	87	79-120	4	30
1,3,5-Trimethylbenzene	10000	8206.08	10000	8625.79	82	86	78-120	5	30
Xylene (Total)	30000	25630.08	30000	26135.86	85	87	80-120	2	30

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Rettew Associates
Reported: 04/27/2016 08:41

Group Number: 1575572

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PA Unleaded/Diesel 8260B

Batch number: Q151951AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7960539	82	78	89	92
Blank	87	92	85	82
LCS	93	97	90	87
LCSD	97	102	95	91
Limits:	50-141	54-135	52-141	50-131

Analysis Name: Quantitative GC Fingerprint

Batch number: 151960036A

	Chlorobenzene	Orthoterphenyl
7960539	103	104

Limits: 50-150 50-150

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Client: Rettew Assoc.**Delivery and Receipt Information**

Delivery Method: Client Drop Off Arrival Timestamp: 07/09/2015 13:30
Number of Packages: 1 Number of Projects: 1

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	VOA Vial Headspace \geq 6mm:	N/A
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	0
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Timothy Cubberley (6520) at 13:48 on 07/09/2015

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?	<u>Samples</u> <u>Collected Same</u> <u>Day as Receipt?</u>
1	DT131	7.6	DT	Wet	Y	Bagged	Y	Y

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

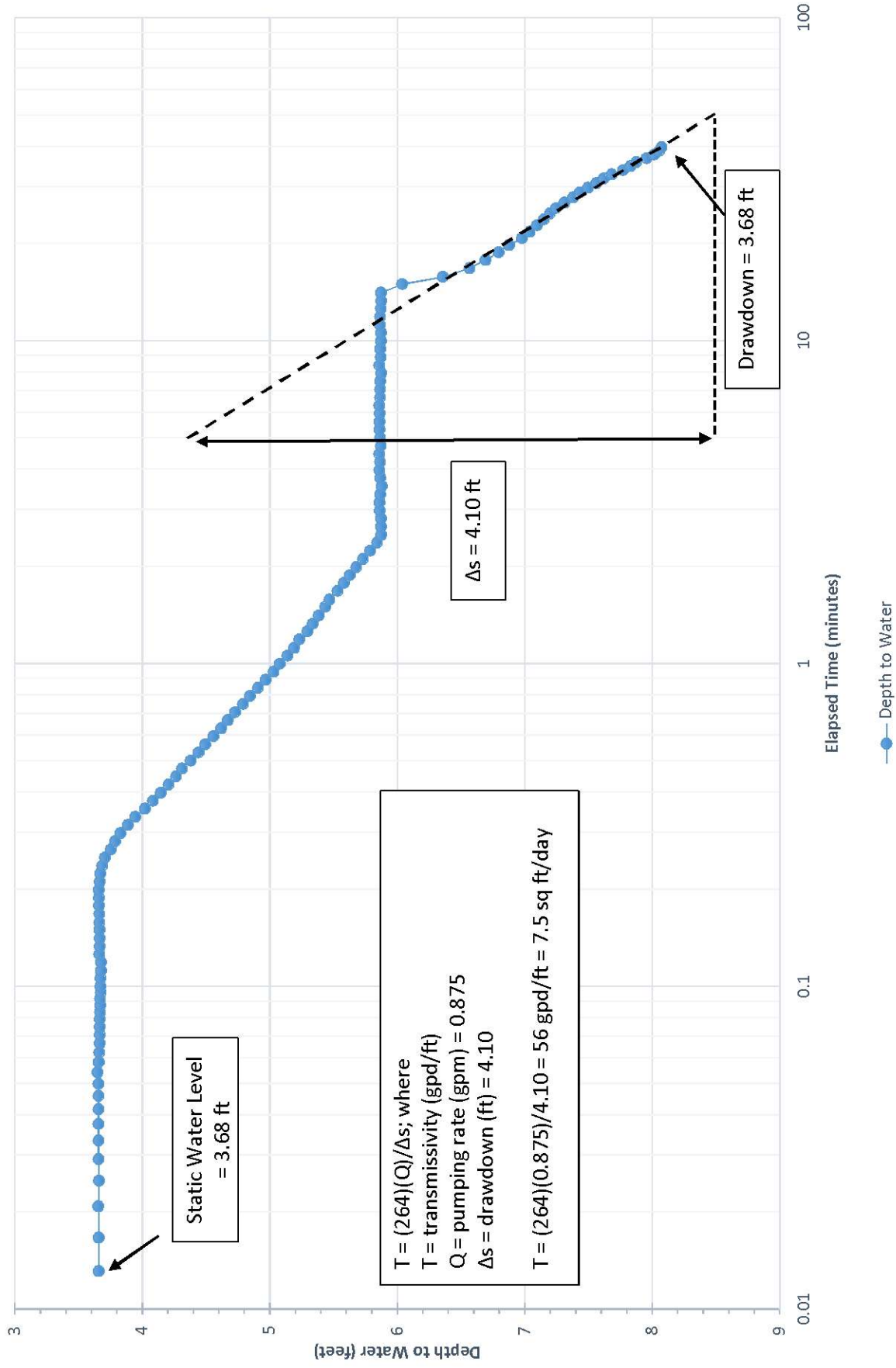
This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

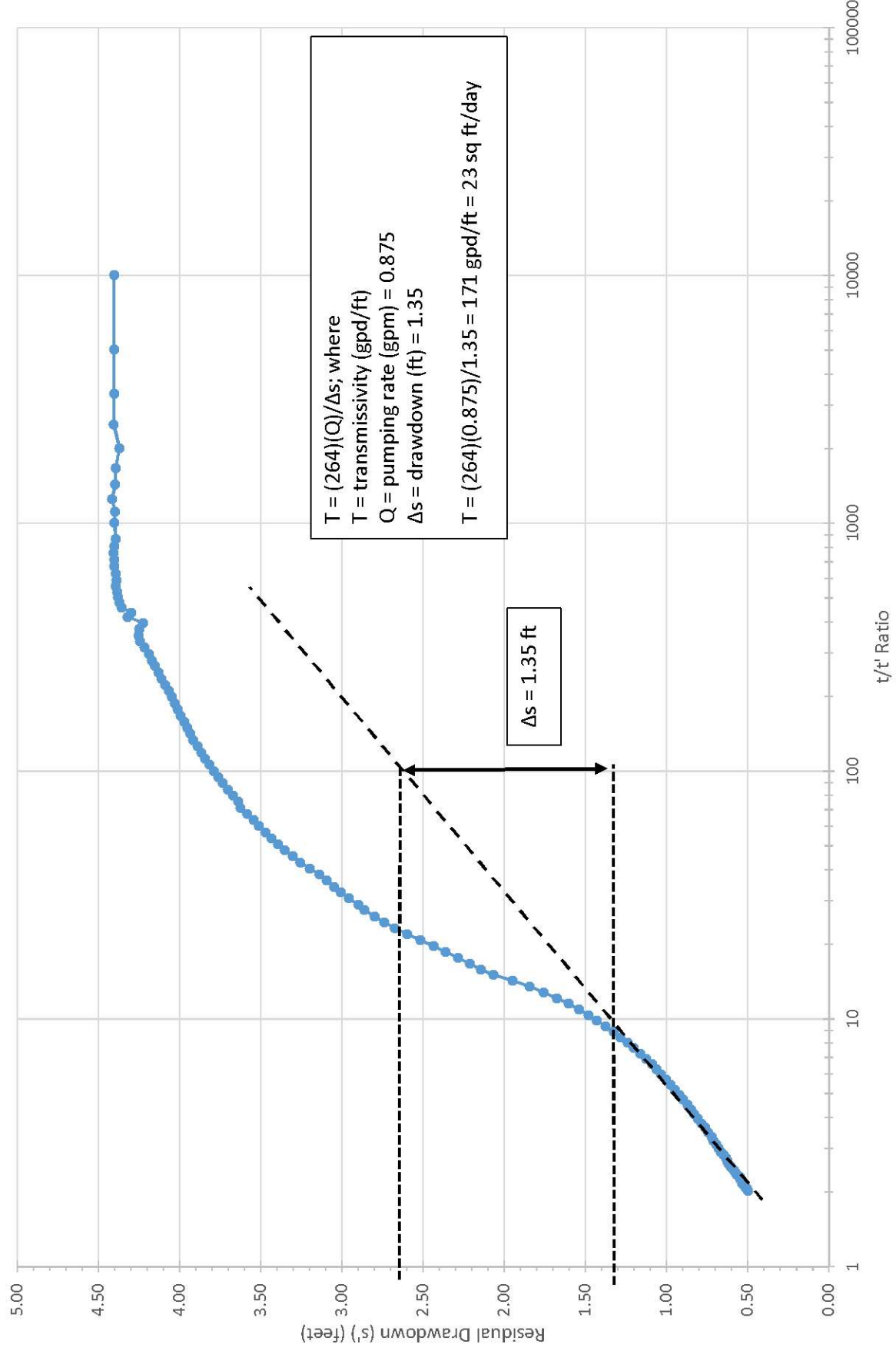
WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

APPENDIX J
Aquifer Test Data Plots

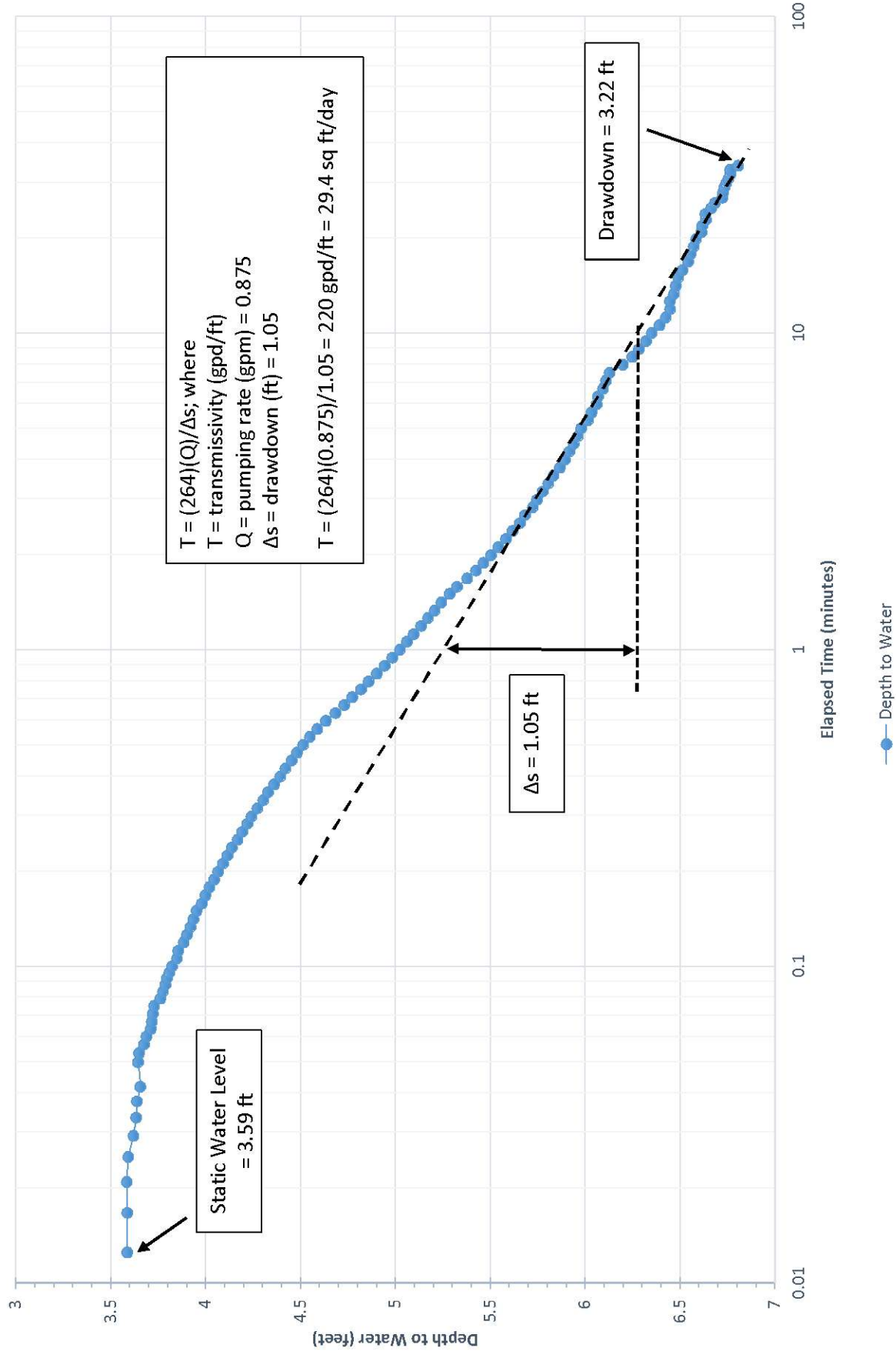
MW-3 Pumping Test July 14, 2015



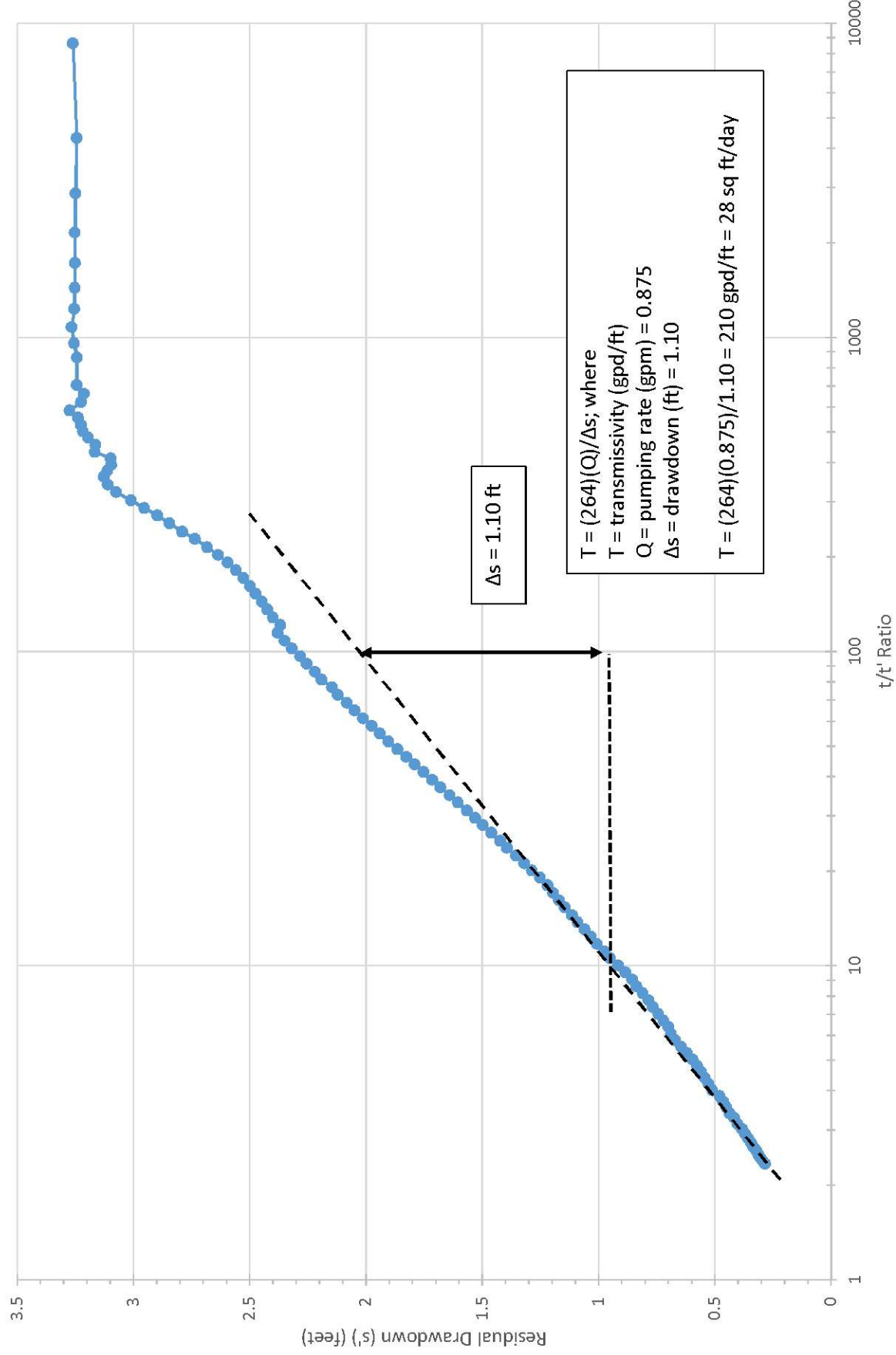
MW-3 Recovery Test July 14, 2015



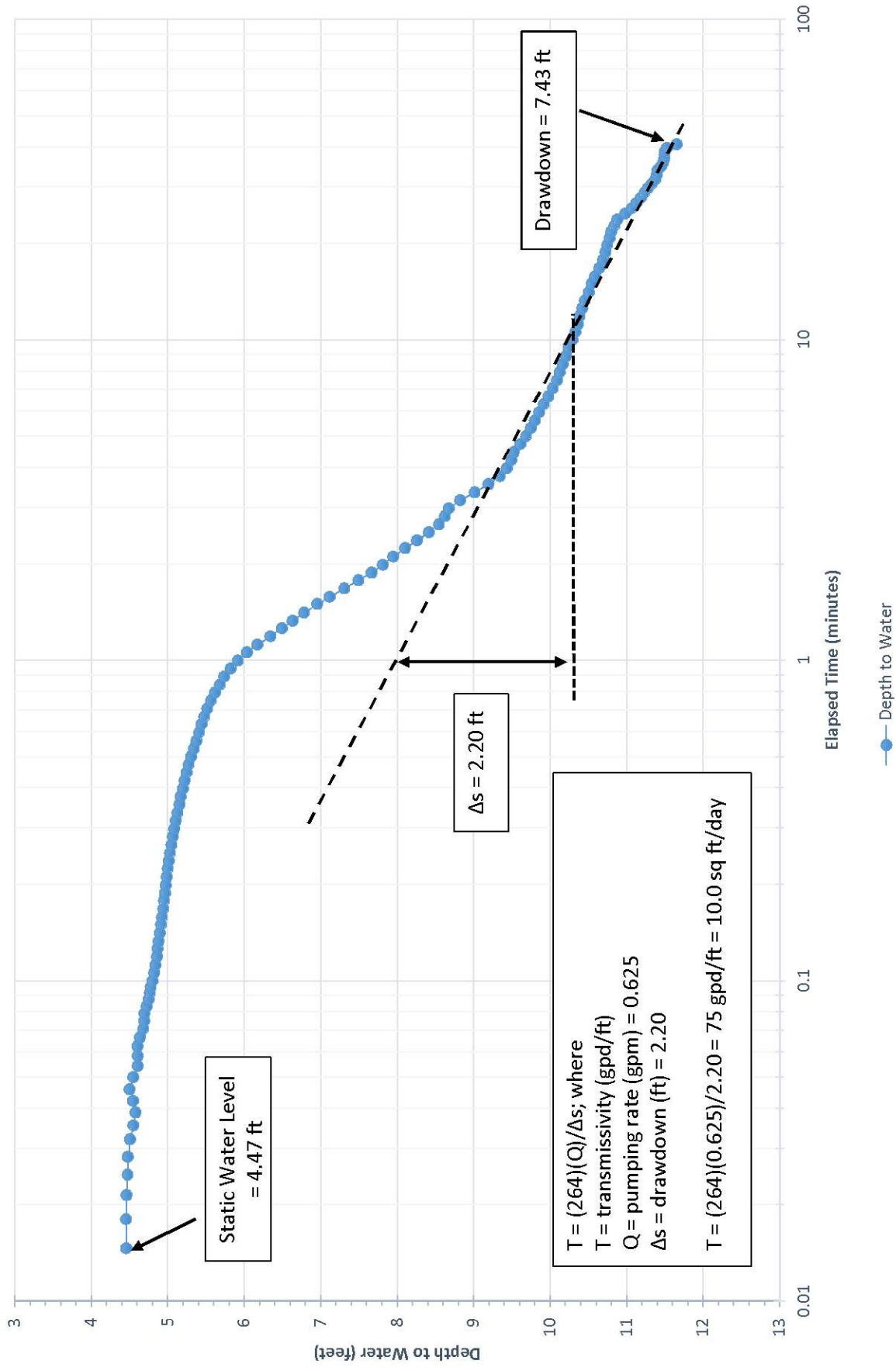
MW-5 Pumping Test July 14, 2014



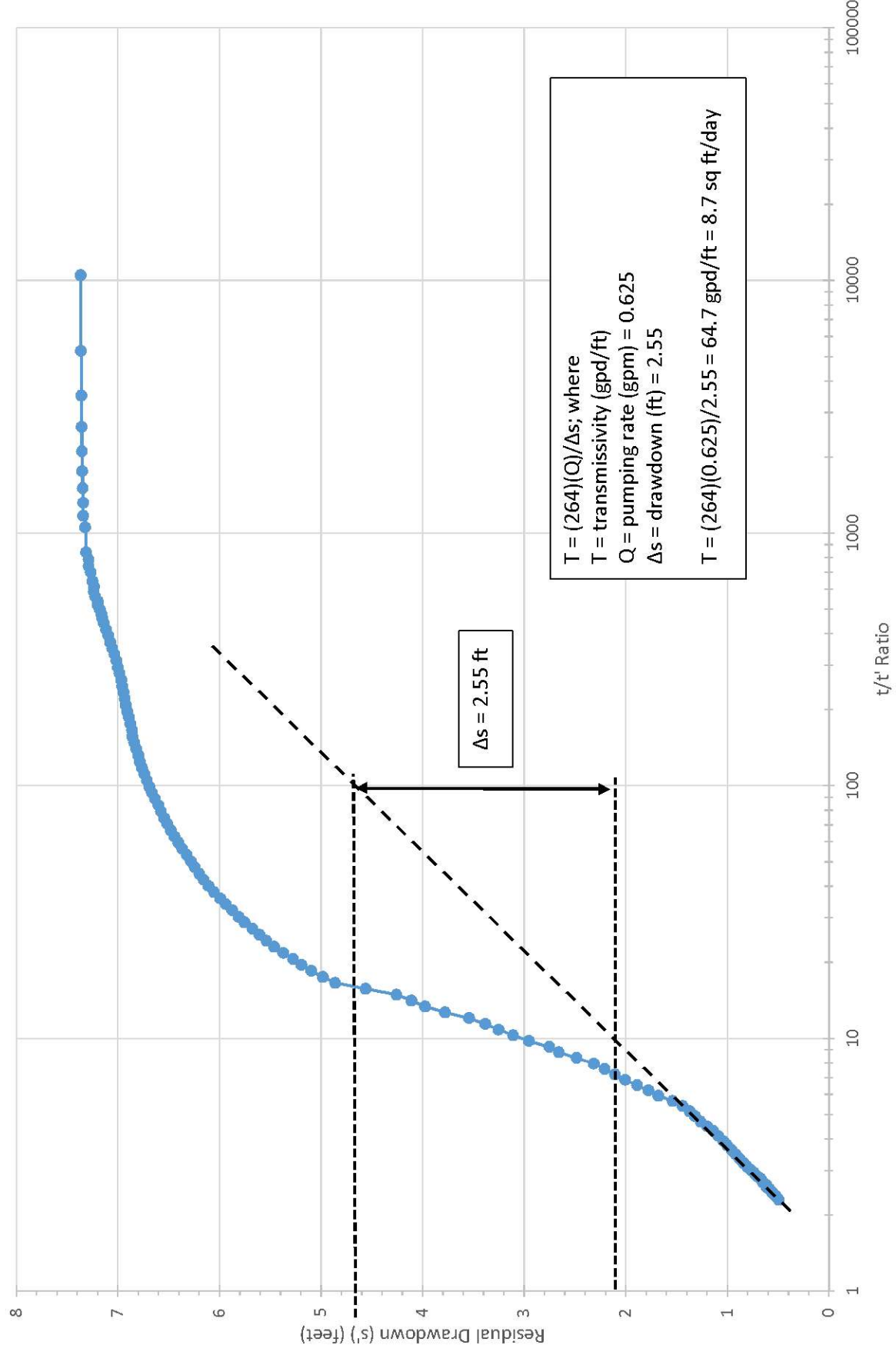
MW-5 Recovery Test July 14, 2015



MW-7 Pumping Test July 14, 2015



MW-7 Recovery Test July 14, 2014



APPENDIX K
Soil Gas Sample Laboratory Analytical Reports

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Report Date: April 06, 2016

Project: Herr Foods 101722001

Submittal Date: 03/25/2016

Group Number: 1644353

PO Number: 101722001

State of Sample Origin: PA

Client Sample Description

SG-2 Air

Lancaster Labs (LL) #

8304248

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>.

Electronic Copy To Rettew Associates

Attn: Ed Dziedzic

Respectfully Submitted,



Stacy L. Butt
Specialist

(717) 556-7236

Sample Description: SG-2 Air
SUMMA CAN # 1110
Herr Foods 101722001

LL Sample # AQ 8304248
LL Group # 1644353
Account # 00721

Project Name: Herr Foods 101722001

Collected: 03/25/2016 12:40 by ED
through 03/25/2016 13:35
Submitted: 03/25/2016 15:45
Reported: 04/06/2016 16:03

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air		EPA TO-15	ppb (v)	ppb (v)	ug/m3	ug/m3	
05298	Benzene	71-43-2	N.D.	0.20	N.D.	0.64	1
05298	Cumene	98-82-8	N.D.	0.20	N.D.	0.98	1
05298	Ethylbenzene	100-41-4	N.D.	0.20	N.D.	0.87	1
05298	Methyl t-Butyl Ether	1634-04-4	N.D.	0.20	N.D.	0.72	1
05298	Naphthalene	91-20-3	N.D.	0.50	N.D.	2.6	1
05298	Toluene	108-88-3	N.D.	0.20	N.D.	0.75	1
05298	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.20	N.D.	0.98	1
05298	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.20	N.D.	0.98	1
05298	m/p-Xylene	179601-23-1	N.D.	0.20	N.D.	0.87	1
05298	o-Xylene	95-47-6	N.D.	0.20	N.D.	0.87	1

MDL = Method Detection Limit

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	E1609630BA	04/05/2016 22:20	Jacob E Bailey	1

Quality Control Summary

Client Name: Rettew Associates
Reported: 04/06/2016 16:03

Group Number: 1644353

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL
	ppb (v)	ppb (v)
Batch number: E1609630BA	Sample number(s): 8304248	
Benzene	N.D.	0.20
Cumene	N.D.	0.20
Ethylbenzene	N.D.	0.20
Methyl t-Butyl Ether	N.D.	0.20
Naphthalene	N.D.	0.40
Toluene	N.D.	0.20
1,2,4-Trimethylbenzene	N.D.	0.20
1,3,5-Trimethylbenzene	N.D.	0.20
m/p-Xylene	N.D.	0.20
o-Xylene	N.D.	0.20

LCS/LCSD

Analysis Name	LCS Spike Added ppb (v)	LCS Conc ppb (v)	LCSD Spike Added ppb (v)	LCSD Conc ppb (v)	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: E1609630BA	Sample number(s): 8304248								
Benzene	10	10.04	10	9.95	100	100	70-130	1	25
Cumene	10	10.2	10	10.44	102	104	70-130	2	25
Ethylbenzene	10	9.92	10	9.97	99	100	70-130	1	25
Methyl t-Butyl Ether	10	9.22	10	9.72	92	97	52-129	5	25
Naphthalene	10	6.76	10	8.30	68	83	35-153	20	25
Toluene	10	10.24	10	10.23	102	102	70-130	0	25
1,2,4-Trimethylbenzene	10	10.39	10	10.64	104	106	60-128	2	25
1,3,5-Trimethylbenzene	10	10.26	10	10.54	103	105	61-132	3	25
m/p-Xylene	10	10.23	10	10.16	102	102	70-130	1	25
o-Xylene	10	10.34	10	10.48	103	105	70-130	1	25

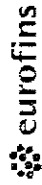
*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Summa Canister Field Test Data/Chain of Custody



Lancaster Laboratories
Environmental

Acct. # 321

Group # 1044853

For Eurofins Lancaster Laboratories Environmental use only

Sample # 8307218

Bottle Order (SCR) #

Client Information				Turnaround Time Requested (TAT) (circle one)				Analyses Requested			
Client Account # RETTEN ASSOCIATES, INC.				Standard Rush (specify) _____				EPA TO - 15 <input type="checkbox"/> EPA 18 <input type="checkbox"/> BTEX <input type="checkbox"/> MTBE <input type="checkbox"/> Helium as tracer <input type="checkbox"/> O2/CO2 <input type="checkbox"/> Library Search			
Project Name/# HENR FOODS 101722001				Data Package Required? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				EDD Required? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Project Manager EN DZIEDZIC				Temperature (F) Start Stop 64 64				Pressure (H _g) Start Stop 30 7			
Sampler EN DZIEDZIC				Ambient 64 64				30 7			
Name of state where samples were collected PA				Minimum 64 64				Maximum 64 64			
Quote # PA				Interior Temp. (F) (Start) (Stop) 64 64				Can Size (L) 110 6			
Stop Date/Time (24-hour clock) 13:35				Flow Rate (mL/min) 82.1				Controller Flowrate (mL/min) 82.1			
Start Date/Time (24-hour clock) 12:40				Canister Pressure in Field (H _g) (Start) (Stop) 30 7				EPA 25 (check one) <input type="checkbox"/> C1 - C4 <input type="checkbox"/> C1 - C10 <input type="checkbox"/> C2 - C4			
Sample Identification 56-2 56-2				Canister Pressure in Field (H _g) (Start) (Stop) 30 7				EPA 25 (check one) <input type="checkbox"/> C1 - C4 <input type="checkbox"/> C1 - C10 <input type="checkbox"/> C2 - C4			
Instructions/QC Requirements & Comments PAPER SHORT LIST PETROLEUM PRODUCTS DIESEL AND UNLEADED GASOLINE PARAMETERS											
Canisters Shipped by: <i>[Signature]</i>				Canisters Received by: <i>[Signature]</i>				Date/Time: 3/21/16			
Relinquished by: <i>[Signature]</i>				Relinquished by: <i>[Signature]</i>				Date/Time: 3/25/16 15:45			
Relinquished by: <i>[Signature]</i>				Relinquished by: <i>[Signature]</i>				Date/Time: 3/25/16 15:45			

Client: Rettew Associates

Delivery and Receipt Information

Delivery Method:	<u>Client Drop Off</u>	Arrival Timestamp:	<u>03/25/2016 15:45</u>
Number of Packages:	<u>1</u>	Number of Projects:	<u>1</u>
State/Province of Origin:	<u>PA</u>		

Arrival Condition Summary

Shipping Container Sealed:	No	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	N/A	VOA Vial Headspace \geq 6mm:	N/A
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	0
Samples Intact:	Yes	Air Quality Samples Present:	Yes
Missing Samples:	No	Air Quality Flow Controllers Present:	No
Extra Samples:	No	Air Quality Returns:	No
Discrepancy in Container Qty on COC:	No		

Unpacked by Patrick Engle (3472) at 16:06 on 03/25/2016

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Report Date: April 22, 2016

Project: Herr Foods 101722001

Submittal Date: 04/13/2016

Group Number: 1650083

PO Number: 101722001

State of Sample Origin: PA

Client Sample Description

SOIL GAS SG-2 Air

Lancaster Labs

(LL) #

8330858

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>.

Electronic Copy To Rettew Associates

Attn: Ed Dziedzic

Respectfully Submitted,



Stacy L. Butt
Specialist

(717) 556-7236

Sample Description: SOIL GAS SG-2 Air
SUMMA# 836
HERR FOODS 101722001

LL Sample # AQ 8330858
LL Group # 1650083
Account # 00721

Project Name: Herr Foods 101722001

Collected: 04/13/2016 08:45 by ED
through 04/13/2016 09:45
Submitted: 04/13/2016 11:50
Reported: 04/22/2016 15:54

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air		EPA TO-15	ppb (v)	ppb (v)	ug/m3	ug/m3	
05298	Benzene	71-43-2	N.D.	0.20	N.D.	0.64	1
05298	Cumene	98-82-8	N.D.	0.20	N.D.	0.98	1
05298	Ethylbenzene	100-41-4	N.D.	0.20	N.D.	0.87	1
05298	Methyl t-Butyl Ether	1634-04-4	N.D.	0.20	N.D.	0.72	1
05298	Naphthalene	91-20-3	N.D.	0.50	N.D.	2.6	1
05298	Toluene	108-88-3	0.26 J	0.20	0.98 J	0.75	1
05298	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.20	N.D.	0.98	1
05298	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.20	N.D.	0.98	1
05298	m/p-Xylene	179601-23-1	0.40 J	0.20	1.7 J	0.87	1
05298	o-Xylene	95-47-6	0.24 J	0.20	1.0 J	0.87	1

MDL = Method Detection Limit

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	E1611230AA	04/21/2016 19:56	Jacob E Bailey	1

Quality Control Summary

Client Name: Rettew Associates
Reported: 04/22/2016 15:54

Group Number: 1650083

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL
	ppb (v)	ppb (v)
Batch number: E1611230AA	Sample number(s): 8330858	
Benzene	N.D.	0.20
Cumene	N.D.	0.20
Ethylbenzene	N.D.	0.20
Methyl t-Butyl Ether	N.D.	0.20
Naphthalene	N.D.	0.40
Toluene	N.D.	0.20
1,2,4-Trimethylbenzene	N.D.	0.20
1,3,5-Trimethylbenzene	N.D.	0.20
m/p-Xylene	N.D.	0.20
o-Xylene	N.D.	0.20

LCS/LCSD

Analysis Name	LCS Spike Added ppb (v)	LCS Conc ppb (v)	LCSD Spike Added ppb (v)	LCSD Conc ppb (v)	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: E1611230AA	Sample number(s): 8330858								
Benzene	10	10.67	10	10.63	107	106	70-130	0	25
Cumene	10	11.12	10	10.47	111	105	70-130	6	25
Ethylbenzene	10	10.55	10	10.52	105	105	70-130	0	25
Methyl t-Butyl Ether	10	9.55	10	9.80	95	98	52-129	3	25
Naphthalene	10	10.18	10	11.19	102	112	35-153	9	25
Toluene	10	10.61	10	10.67	106	107	70-130	1	25
1,2,4-Trimethylbenzene	10	11.53	10	11.72	115	117	60-128	2	25
1,3,5-Trimethylbenzene	10	10.98	10	11.27	110	113	61-132	3	25
m/p-Xylene	10	10.76	10	10.82	108	108	70-130	1	25
o-Xylene	10	10.94	10	11.1	109	111	70-130	1	25

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

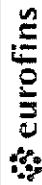
Quality Control SummaryClient Name: Rettew Associates
Reported: 04/22/2016 15:54Group Number: 1650083

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.



**Lancaster Laboratories
Environmental**

Acct. # 721

Group #

For Euro
654703

Sample #

laboratories En

Environmental use only

Bottle Order (SCR) #

3

Client Information										Turnaround Time Requested (TAT) (circle one)				Analyses Requested													
Client		Account #		Project Name/ID		Project Manager		Sampler		Standard		Rush (specify)		EPA TO - 15		EPA 18		EPA 25 (select range below)		Helium as tracer		O2/CO2		Library Search			
RETNEW ASSOCIATES, INC.				101722001				PA		Standard		No		X		<input type="checkbox"/> MTBE											
101722001				101722001				PA		Data Package Required?		Yes		No													
EN DIESEL				EN DIESEL				PA		Temperature (F)		Start		Stop													
PA				PA				PA		Ambient		40		44		29		14									
Name of state where samples were collected				Name of state where samples were collected				Name of state where samples were collected				Maximum															
Sample Identification		Start Date/Time (24-hour clock)		Stop Date/Time (24-hour clock)		Canister Pressure in Field ("Hg) (Start)		Canister Pressure in Field ("Hg) (Stop)		Interior Temp. (F) (Start)		Interior Temp. (F) (Stop)		Flow Reg. ID		Can ID		Can Size (L)		Controller Flowrate (ml/min)							
SOIL GAS 96-2		4/13/81 45		4/13/81 45		29"		14"		65		65		824833		836		6		84.5		X					

Sample Administration
Receipt Documentation Log

Doc Log ID:

142674

Group Number(s):

Client: Rettew Associates

1650083

Delivery and Receipt Information

Delivery Method:	<u>Client Drop Off</u>	Arrival Timestamp:	<u>04/13/2016 11:50</u>
Number of Packages:	<u>1</u>	Number of Projects:	<u>1</u>
State/Province of Origin:	<u>PA</u>		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	N/A	VOA Vial Headspace \geq 6mm:	N/A
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	0
Samples Intact:	Yes	Air Quality Samples Present:	Yes
Missing Samples:	No	Air Quality Flow Controllers Present:	Yes
Extra Samples:	No	Flow Controller Quantity:	1
Discrepancy in Container Qty on COC:	No	Air Quality Returns:	No

Unpacked by Krista Abel (3058) at 12:06 on 04/13/2016

General Comments: Rec'd 1 bag of Summa parts
--

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

APPENDIX L

Sediment and Surface Water Sample Laboratory Analytical Reports

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

March 01, 2016

Project: Herr Foods 101722001

Submittal Date: 02/22/2016

Group Number: 1633538

PO Number: 101722001

State of Sample Origin: PA

Client Sample DescriptionStream-2 Grab Surface Water
SED-2 Grab Sediment
Stream-1 Grab Surface Water
SED-1 Grab Sediment
Trip Blank WaterLancaster Labs (LL) #8252137
8252138
8252139
8252140
8252141

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>.

ELECTRONIC Rettew Associates
COPY TO

Attn: Ed Dziedzic

Respectfully Submitted,


Stacy L. Butt
Specialist

(717) 556-7236

Sample Description: Stream-2 Grab Surface Water
Herr Foods 101722001

LL Sample # WW 8252137
LL Group # 1633538
Account # 00721

Project Name: Herr Foods 101722001

Collected: 02/22/2016 10:45 by BO

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 02/22/2016 13:50

Reported: 03/01/2016 19:17

HRR-1

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10945	Benzene	71-43-2	1	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Isopropylbenzene	98-82-8	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	12	0.5	1
10945	Naphthalene	91-20-3	N.D.	1	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.5	1
10945	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	PA UST Unleaded + TMBs	SW-846 8260B	1	D160562AA	02/25/2016 19:44	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D160562AA	02/25/2016 19:44	Daniel H Heller	1

Sample Description: SED-2 Grab Sediment
Herr Foods 101722001

LL Sample # SW 8252138
LL Group # 1633538
Account # 00721

Project Name: Herr Foods 101722001

Collected: 02/22/2016 10:55 by BO

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 02/22/2016 13:50

Reported: 03/01/2016 19:17

HRR-2

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	0.5	0.82
10237	Ethylbenzene	100-41-4	N.D.	1	0.82
10237	Isopropylbenzene	98-82-8	N.D.	1	0.82
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	0.82
10237	Naphthalene	91-20-3	N.D.	1	0.82
10237	Toluene	108-88-3	N.D.	1	0.82
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	1	0.82
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	1	0.82
10237	Xylene (Total)	1330-20-7	N.D.	1	0.82

Wet Chemistry	SM 2540 G-1997	%	%	
00111	Moisture	n.a.	23.6	0.50
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.			

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PA Unleaded/Diesel	SW-846 8260B	1	A160601AA	02/29/2016 12:35	Jennifer K Howe	0.82
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201605440144	02/22/2016 10:55	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201605440144	02/22/2016 10:55	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201605440144	02/22/2016 10:55	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	16055820009B	02/25/2016 08:36	William C Schwebel	1

Sample Description: Stream-1 Grab Surface Water
Herr Foods 101722001

LL Sample # WW 8252139
LL Group # 1633538
Account # 00721

Project Name: Herr Foods 101722001

Collected: 02/22/2016 11:30 by BO

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 02/22/2016 13:50

Reported: 03/01/2016 19:17

HRR-3

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10945	Benzene	71-43-2	19	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Isopropylbenzene	98-82-8	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	25	0.5	1
10945	Naphthalene	91-20-3	N.D.	1	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.5	1
10945	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	PA UST Unleaded + TMBs	SW-846 8260B	1	F160571AA	02/26/2016 14:43	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F160571AA	02/26/2016 14:43	Anita M Dale	1

Sample Description: SED-1 Grab Sediment
Herr Foods 101722001

LL Sample # SW 8252140
LL Group # 1633538
Account # 00721

Project Name: Herr Foods 101722001

Collected: 02/22/2016 11:40 by BO

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 02/22/2016 13:50

Reported: 03/01/2016 19:17

HRR-4

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10237	Benzene	71-43-2	5 J	0.5	0.74
10237	Ethylbenzene	100-41-4	N.D.	0.9	0.74
10237	Isopropylbenzene	98-82-8	N.D.	0.9	0.74
10237	Methyl Tertiary Butyl Ether	1634-04-4	160	0.5	0.74
10237	Naphthalene	91-20-3	N.D.	0.9	0.74
10237	Toluene	108-88-3	N.D.	0.9	0.74
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.9	0.74
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.9	0.74
10237	Xylene (Total)	1330-20-7	N.D.	0.9	0.74
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	22.1	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PA Unleaded/Diesel	SW-846 8260B	1	A160601AA	02/29/2016 12:58	Jennifer K Howe	0.74
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201605440144	02/22/2016 11:40	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201605440144	02/22/2016 11:40	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201605440144	02/22/2016 11:40	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	16055820009B	02/25/2016 08:36	William C Schwebel	1

Sample Description: Trip Blank Water
Herr Foods 101722001

LL Sample # WW 8252141
LL Group # 1633538
Account # 00721

Project Name: Herr Foods 101722001

Collected: 02/22/2016

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 02/22/2016 13:50

Reported: 03/01/2016 19:17

HRR-5

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Isopropylbenzene	98-82-8	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Naphthalene	91-20-3	N.D.	1	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.5	1
10945	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	PA UST Unleaded + TMBs	SW-846 8260B	1	F160571AA	02/26/2016 15:04	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F160571AA	02/26/2016 15:04	Anita M Dale	1

Quality Control Summary

Client Name: Rettew Associates
Reported: 03/01/2016 19:17

Group Number: 1633538

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL
	ug/kg	ug/kg
Batch number: A160601AA	Sample number(s): 8252138, 8252140	
Benzene	N.D.	0.5
Ethylbenzene	N.D.	1
Isopropylbenzene	N.D.	1
Methyl Tertiary Butyl Ether	N.D.	0.5
Naphthalene	N.D.	1
Toluene	N.D.	1
1,2,4-Trimethylbenzene	N.D.	1
1,3,5-Trimethylbenzene	N.D.	1
Xylene (Total)	N.D.	1
	ug/l	ug/l
Batch number: D160562AA	Sample number(s): 8252137	
Benzene	N.D.	0.5
Ethylbenzene	N.D.	0.5
Isopropylbenzene	N.D.	0.5
Methyl Tertiary Butyl Ether	N.D.	0.5
Naphthalene	N.D.	1
Toluene	N.D.	0.5
1,2,4-Trimethylbenzene	N.D.	0.5
1,3,5-Trimethylbenzene	N.D.	0.5
Xylene (Total)	N.D.	0.5
Batch number: F160571AA	Sample number(s): 8252139, 8252141	
Benzene	N.D.	0.5
Ethylbenzene	N.D.	0.5
Isopropylbenzene	N.D.	0.5
Methyl Tertiary Butyl Ether	N.D.	0.5
Naphthalene	N.D.	1
Toluene	N.D.	0.5
1,2,4-Trimethylbenzene	N.D.	0.5
1,3,5-Trimethylbenzene	N.D.	0.5
Xylene (Total)	N.D.	0.5

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/kg	ug/kg	ug/kg	ug/kg					
Batch number: A160601AA	Sample number(s): 8252138, 8252140								
Benzene	20	18.62	20	17.83	93	89	80-120	4	30
Ethylbenzene	20	18.79	20	18.14	94	91	80-120	4	30

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Rettew Associates
Reported: 03/01/2016 19:17

Group Number: 1633538

Analysis Name	LCS Spike Added ug/kg	LCS Conc ug/kg	LCSD Spike Added ug/kg	LCSD Conc ug/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Isopropylbenzene	20	18.84	20	18.36	94	92	70-120	3	30
Methyl Tertiary Butyl Ether	20	18.58	20	18.22	93	91	72-120	2	30
Naphthalene	20	18.07	20	17.31	90	87	53-120	4	30
Toluene	20	18.6	20	18.29	93	91	80-120	2	30
1,2,4-Trimethylbenzene	20	18.88	20	18.39	94	92	74-120	3	30
1,3,5-Trimethylbenzene	20	18.6	20	18.34	93	92	73-120	1	30
Xylene (Total)	60	56.02	60	54.36	93	91	80-120	3	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: D160562AA	Sample number(s): 8252137								
Benzene	20	18.34			92		78-120		
Ethylbenzene	20	18.71			94		78-120		
Isopropylbenzene	20	18.73			94		80-120		
Methyl Tertiary Butyl Ether	20	18.34			92		75-120		
Naphthalene	20	17.67			88		59-120		
Toluene	20	18.41			92		80-120		
1,2,4-Trimethylbenzene	20	18.51			93		75-120		
1,3,5-Trimethylbenzene	20	18.65			93		75-120		
Xylene (Total)	60	55.81			93		80-120		
Batch number: F160571AA	Sample number(s): 8252139,8252141								
Benzene	20	19.64	20	19.86	98	99	78-120	1	30
Ethylbenzene	20	19.86	20	19.42	99	97	78-120	2	30
Isopropylbenzene	20	19.76	20	19.19	99	96	80-120	3	30
Methyl Tertiary Butyl Ether	20	19.01	20	18.79	95	94	75-120	1	30
Naphthalene	20	18.54	20	17.9	93	89	59-120	4	30
Toluene	20	19.82	20	19.39	99	97	80-120	2	30
1,2,4-Trimethylbenzene	20	19.22	20	18.66	96	93	75-120	3	30
1,3,5-Trimethylbenzene	20	19.91	20	18.67	100	93	75-120	6	30
Xylene (Total)	60	58.39	60	57.42	97	96	80-120	2	30
	%	%	%	%					
Batch number: 16055820009B	Sample number(s): 8252138,8252140								
Moisture	89.5	89.47			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: D160562AA	Sample number(s): 8252137 UNSPK: P251190									
Benzene	N.D.	20	20.43	20	18.15	102	91	78-120	12	30
Ethylbenzene	1.24	20	22.51	20	19.41	106	91	78-120	15	30
Isopropylbenzene	N.D.	20	21.43	20	18.52	107	93	80-120	15	30
Methyl Tertiary Butyl Ether	N.D.	20	21.81	20	19.07	109	95	75-120	13	30
Naphthalene	N.D.	20	18.48	20	15.64	92	78	59-120	17	30
Toluene	N.D.	20	20.85	20	18	104	90	80-120	15	30
1,2,4-Trimethylbenzene	1.19	20	22.27	20	18.83	105	88	75-120	17	30
1,3,5-Trimethylbenzene	N.D.	20	20.89	20	17.72	104	89	75-120	16	30

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Rettew Associates
Reported: 03/01/2016 19:17

Group Number: 1633538

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Xylene (Total)	0.629	60	63.14	60	55.06	104	91	80-120	14	30

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc %	DUP Conc %	DUP RPD	DUP RPD Max
Batch number: 16055820009B	Sample number(s): 8252138, 8252140 BKG: P254854			
Moisture	14.18	12.21	15*	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PA Unleaded/Diesel 8260B
Batch number: A160601AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8252138	106	102	95	92
8252140	107	109	96	92
Blank	106	103	97	92
LCS	104	99	101	100
LCSD	102	98	101	99
Limits:	50-141	54-135	52-141	50-131

Analysis Name: PA UST Unleaded + TMBs
Batch number: D160562AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8252137	92	96	101	97
Blank	95	96	101	97
LCS	94	98	101	100
MS	93	97	101	100
MSD	93	97	100	100
Limits:	80-116	77-113	80-113	78-113

Analysis Name: PA UST Unleaded + TMBs
Batch number: F160571AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8252139	93	98	98	94
8252141	94	98	98	93
Blank	93	98	100	95
LCS	93	99	99	96
LCSD	95	101	98	96

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Rettew Associates
Reported: 03/01/2016 19:17

Group Number: 1633538

Limits:	80-116	77-113	80-113	78-113
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*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Report Date: April 19, 2016

Project: Project No. 101722001

Submittal Date: 04/06/2016

Group Number: 1647796

PO Number: 101722001

State of Sample Origin: PA

Client Sample DescriptionStormwater Grab Surface Water
Stream 3 Grab Surface Water
Stream 1 Grab Surface Water
SED3 Grab Sediment
SED4 Grab Sediment
Stream 4 Grab Surface Water

Lancaster Labs

(LL) #

8320673
8320674
8320675
8320676
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8320678

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>.

Electronic Copy To Rettew Associates

Attn: Ed Dziedzic

Respectfully Submitted,


Stacy L. Butt
Specialist

(717) 556-7236

Sample Description: Stormwater Grab Surface Water
101722001

LL Sample # WW 8320673
LL Group # 1647796
Account # 00721

Project Name: Project No. 101722001

Collected: 04/06/2016 10:45 by EGD

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 04/06/2016 16:14

Reported: 04/19/2016 12:28

STORM

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Isopropylbenzene	98-82-8	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Naphthalene	91-20-3	N.D.	1	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.5	1
10945	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	PA UST Unleaded + TMBs	SW-846 8260B	1	F161034AA	04/13/2016 00:18	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F161034AA	04/13/2016 00:18	Hu Yang	1

Sample Description: Stream 3 Grab Surface Water
101722001

LL Sample # WW 8320674
LL Group # 1647796
Account # 00721

Project Name: Project No. 101722001

Collected: 04/06/2016 10:55 by EGD

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 04/06/2016 16:14

Reported: 04/19/2016 12:28

STRM3

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Isopropylbenzene	98-82-8	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	0.7 J	0.5	1
10945	Naphthalene	91-20-3	N.D.	1	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.5	1
10945	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	PA UST Unleaded + TMBs	SW-846 8260B	1	F161034AA	04/13/2016 00:40	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F161034AA	04/13/2016 00:40	Hu Yang	1

Sample Description: Stream 1 Grab Surface Water
101722001

LL Sample # WW 8320675
LL Group # 1647796
Account # 00721

Project Name: Project No. 101722001

Collected: 04/06/2016 11:05 by EGD

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 04/06/2016 16:14

Reported: 04/19/2016 12:28

STRM1

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10945	Benzene	71-43-2	14	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Isopropylbenzene	98-82-8	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	19	0.5	1
10945	Naphthalene	91-20-3	N.D.	1	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.5	1
10945	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	PA UST Unleaded + TMBs	SW-846 8260B	1	F161034AA	04/13/2016 01:02	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F161034AA	04/13/2016 01:02	Hu Yang	1

Sample Description: SED3 Grab Sediment
101722001

LL Sample # SW 8320676
LL Group # 1647796
Account # 00721

Project Name: Project No. 101722001

Collected: 04/06/2016 11:15 by EGD

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 04/06/2016 16:14

Reported: 04/19/2016 12:28

SED-3

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	2	1.2
10237	Ethylbenzene	100-41-4	N.D.	3	1.2
10237	Isopropylbenzene	98-82-8	N.D.	3	1.2
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	2	1.2
10237	Naphthalene	91-20-3	N.D.	3	1.2
10237	Toluene	108-88-3	N.D.	3	1.2
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	3	1.2
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	3	1.2
10237	Xylene (Total)	1330-20-7	N.D.	3	1.2

The recovery for the sample internal standard is outside the QC acceptance limits. The following corrective action was taken:
The sample was re-analyzed and the QC is again outside of the acceptance limits, indicating a matrix effect. The data is reported from the initial trial.

Wet Chemistry	SM 2540 G-1997	%	%	
00111	Moisture	n.a.	60.6	0.50
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PA Unleaded/Diesel	8260B	1	X160981AA	04/07/2016 12:54	Jennifer K Howe	1.2
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201609740724	04/06/2016 11:15	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201609740724	04/06/2016 11:15	Client Supplied	1
07579	GC/MS-Sg Field Preserv.MeOH-NC	SW-846 5035A	1	201609740724	04/06/2016 11:15	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	16098820006A	04/07/2016 19:17	Scott W Freisher	1

Sample Description: SED4 Grab Sediment
101722001

LL Sample # SW 8320677
LL Group # 1647796
Account # 00721

Project Name: Project No. 101722001

Collected: 04/06/2016 11:25 by EGD

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 04/06/2016 16:14

Reported: 04/19/2016 12:28

SED-4

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	
10237	Benzene	71-43-2	38	1	1.04
10237	Ethylbenzene	100-41-4	N.D.	2	1.04
10237	Isopropylbenzene	98-82-8	6 J	2	1.04
10237	Methyl Tertiary Butyl Ether	1634-04-4	5 J	1	1.04
10237	Naphthalene	91-20-3	N.D.	2	1.04
10237	Toluene	108-88-3	N.D.	2	1.04
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	2	1.04
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	2	1.04
10237	Xylene (Total)	1330-20-7	N.D.	2	1.04

The recovery for the sample internal standard(s) is outside the QC acceptance limits. Sufficient sample was not available to repeat the analysis.

Wet Chemistry	SM 2540 G-1997	%	%	
00111	Moisture	n.a.	53.3	0.50
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.			

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PA Unleaded/Diesel 8260B	SW-846 8260B	1	X160981AA	04/07/2016 13:17	Jennifer K Howe	1.04
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201609740724	04/06/2016 11:25	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201609740724	04/06/2016 11:25	Client Supplied	1
00111	Moisture	SM 2540 G-1997	1	16098820006A	04/07/2016 19:17	Scott W Freisher	1

Sample Description: Stream 4 Grab Surface Water
101722001

LL Sample # WW 8320678
LL Group # 1647796
Account # 00721

Project Name: Project No. 101722001

Collected: 04/06/2016 14:45 by EGD

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 04/06/2016 16:14

Reported: 04/19/2016 12:28

STRM4

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Isopropylbenzene	98-82-8	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Naphthalene	91-20-3	N.D.	1	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.5	1
10945	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	PA UST Unleaded + TMBs	SW-846 8260B	1	F161034AA	04/13/2016 01:24	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F161034AA	04/13/2016 01:24	Hu Yang	1

Quality Control Summary

Client Name: Rettew Associates
Reported: 04/19/2016 12:28

Group Number: 1647796

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL
	ug/kg	ug/kg
Batch number: X160981AA	Sample number(s): 8320676-8320677	
Benzene	N.D.	0.5
Ethylbenzene	N.D.	1
Isopropylbenzene	N.D.	1
Methyl Tertiary Butyl Ether	N.D.	0.5
Naphthalene	N.D.	1
Toluene	N.D.	1
1,2,4-Trimethylbenzene	N.D.	1
1,3,5-Trimethylbenzene	N.D.	1
Xylene (Total)	N.D.	1
	ug/l	ug/l
Batch number: F161034AA	Sample number(s): 8320673-8320675, 8320678	
Benzene	N.D.	0.5
Ethylbenzene	N.D.	0.5
Isopropylbenzene	N.D.	0.5
Methyl Tertiary Butyl Ether	N.D.	0.5
Naphthalene	N.D.	1
Toluene	N.D.	0.5
1,2,4-Trimethylbenzene	N.D.	0.5
1,3,5-Trimethylbenzene	N.D.	0.5
Xylene (Total)	N.D.	0.5

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/kg	ug/kg	ug/kg	ug/kg					
Batch number: X160981AA	Sample number(s): 8320676-8320677								
Benzene	20	20.79	20	20.63	104	103	80-120	1	30
Ethylbenzene	20	19.83	20	19.49	99	97	80-120	2	30
Isopropylbenzene	20	18.88	20	18.77	94	94	70-120	1	30
Methyl Tertiary Butyl Ether	20	19.98	20	19.13	100	96	72-120	4	30
Naphthalene	20	17.11	20	16.11	86	81	53-120	6	30
Toluene	20	19.87	20	19.65	99	98	80-120	1	30
1,2,4-Trimethylbenzene	20	18.54	20	18.48	93	92	74-120	0	30
1,3,5-Trimethylbenzene	20	18.54	20	18.42	93	92	73-120	1	30
Xylene (Total)	60	56.53	60	56.05	94	93	80-120	1	30
	ug/l	ug/l	ug/l	ug/l					

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Rettew Associates
Reported: 04/19/2016 12:28

Group Number: 1647796

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: F161034AA	Sample number(s): 8320673-8320675,8320678								
Benzene	20	20.08			100		78-120		
Ethylbenzene	20	18.81			94		78-120		
Isopropylbenzene	20	19.07			95		80-120		
Methyl Tertiary Butyl Ether	20	19.76			99		75-120		
Naphthalene	20	16.52			83		59-120		
Toluene	20	18.78			94		80-120		
1,2,4-Trimethylbenzene	20	18.36			92		75-120		
1,3,5-Trimethylbenzene	20	18.24			91		75-120		
Xylene (Total)	60	56.63			94		80-120		
	%	%	%	%					
Batch number: 16098820006A	Sample number(s): 8320676-8320677								
Moisture	89.5	89.39			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: F161034AA	Sample number(s): 8320673-8320675,8320678 UNSPK: P325302									
Benzene	N.D.	20	21.53	20	21.67	108	108	78-120	1	30
Ethylbenzene	N.D.	20	20.2	20	20.59	101	103	78-120	2	30
Isopropylbenzene	N.D.	20	20.36	20	21.03	102	105	80-120	3	30
Methyl Tertiary Butyl Ether	N.D.	20	20.33	20	20.54	102	103	75-120	1	30
Naphthalene	N.D.	20	16.34	20	17.08	82	85	59-120	4	30
Toluene	N.D.	20	20.01	20	20.53	100	103	80-120	3	30
1,2,4-Trimethylbenzene	N.D.	20	19.03	20	19.38	95	97	75-120	2	30
1,3,5-Trimethylbenzene	N.D.	20	19.63	20	20.1	98	100	75-120	2	30
Xylene (Total)	N.D.	60	59.71	60	61.48	100	102	80-120	3	30

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc %	DUP Conc %	DUP RPD	DUP RPD Max
Batch number: 16098820006A	Sample number(s): 8320676-8320677 BKG: P320715			
Moisture	21.72	16.71	26*	5

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Rettew Associates
Reported: 04/19/2016 12:28

Group Number: 1647796

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PA UST Unleaded + IMBs

Batch number: F161034AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8320673	97	95	98	94
8320674	96	95	97	92
8320675	100	94	99	95
8320678	99	94	97	92
Blank	99	98	99	93
LCS	97	98	97	96
MS	98	97	97	97
MSD	96	98	98	96
Limits:	80-116	77-113	80-113	78-113

Analysis Name: PA Unleaded/Diesel 8260B

Batch number: X160981AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8320676	104	104	116	80
8320677	99	97	115	80
Blank	101	100	101	97
LCS	101	100	101	101
LCSD	100	98	101	100
Limits:	50-141	54-135	52-141	50-131

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

**Lancaster Laboratories
Environmental**

Acct. # 721

For Eurofins Lancaster Laboratories Environmental use only

Group # 1647796 Sample # 8320673-79

67464#000

Eurofins | Lancaster Laboratories Environmental, LLC • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300

The white copy should accompany samples to Eurofins Lancaster Laboratories Environmental. The yellow copy should be retained by the client.

Client: Rettew Associates**Delivery and Receipt Information**

Delivery Method:	<u>Client Drop Off</u>	Arrival Timestamp:	<u>04/06/2016 16:14</u>
Number of Packages:	<u>1</u>	Number of Projects:	<u>1</u>
State/Province of Origin:	<u>AB</u>		

Arrival Condition Summary

Shipping Container Sealed:	No	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	VOA Vial Headspace \geq 6mm:	No
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	2
Samples Intact:	Yes	Trip Blank Type:	HCI
Missing Samples:	No	Air Quality Samples Present:	No
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

*Unpacked by Patrick Engle (3472) at 16:46 on 04/06/2016***Samples Chilled Details**

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?	<u>Samples</u> <u>Collected Same</u> <u>Day as Receipt?</u>
1	32170023	7.5	IR	Wet	Y	Bagged	Y	Y

General Comments: Samples Received with Ink Smearing due to contact with water, sample Stream 3 Identified through process of elimination, Sample ID, Date and Time illegible.

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.



For Eurofins Lancaster Laboratories Environmental use only

**Lancaster Laboratories
Environmental**

Acct. # 721

Group # 1633538

Sample # 0252137-41

[illegible]

Eurofins Lancaster Laboratories Environmental, LLC • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300

The white copy should accompany samples to Eurofins Lancaster Laboratories Environmental. The yellow copy should be retained by the client.

Page 12 of 14

7044 1115

Sample Administration
Receipt Documentation Log

Doc Log ID: 137099

Group Number(s): 1633538

Client: Rettew Associates**Delivery and Receipt Information**

Delivery Method:	<u>Client Drop Off</u>	Arrival Timestamp:	<u>02/22/2016 13:50</u>
Number of Packages:	<u>1</u>	Number of Projects:	<u>1</u>
State/Province of Origin:	<u>PA</u>		

Arrival Condition Summary

Shipping Container Sealed:	No	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	VOA Vial Headspace \geq 6mm:	No
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	2
Samples Intact:	Yes	Trip Blank Type:	HCl
Missing Samples:	No	Air Quality Samples Present:	No
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

*Unpacked by Katherine Metzger (2241) at 14:23 on 02/22/2016***Samples Chilled Details***Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

<u>Cooler #</u>	<u>Thermometer ID</u>	<u>Corrected Temp</u>	<u>Therm. Type</u>	<u>Ice Type</u>	<u>Ice Present?</u>	<u>Ice Container</u>	<u>Elevated Temp?</u>
1	DT121	1.3	DT	Wet	Y	Loose/Bag	N

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Report Date: April 21, 2016

Project: Project No. 101722001

Submittal Date: 04/13/2016

Group Number: 1650073

PO Number: 101722001

State of Sample Origin: PA

Client Sample Description

DPW-1 Grab Groundwater

DPW-2 Grab Groundwater

Lancaster Labs

(LL) #

8330790

8330791

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>.

Electronic Copy To Rettew Associates

Attn: Ed Dziedzic

Respectfully Submitted,



Stacy L. Butt
Specialist

(717) 556-7236

Sample Description: DPW-1 Grab Groundwater
101722001

LL Sample # WW 8330790
LL Group # 1650073
Account # 00721

Project Name: Project No. 101722001

Collected: 04/13/2016 10:15 by ED

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 04/13/2016 11:50

Reported: 04/21/2016 09:41

DPW-1

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Isopropylbenzene	98-82-8	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	2	0.5	1
10945	Naphthalene	91-20-3	N.D.	1	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.5	1
10945	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	PA UST Unleaded + TMBs	SW-846 8260B	1	D161101AA	04/19/2016 22:47	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D161101AA	04/19/2016 22:47	Hu Yang	1

Sample Description: DPW-2 Grab Groundwater
101722001

LL Sample # WW 8330791
LL Group # 1650073
Account # 00721

Project Name: Project No. 101722001

Collected: 04/13/2016 10:25 by ED

Rettew Associates
3020 Columbia Avenue
Lancaster PA 17603-4011

Submitted: 04/13/2016 11:50

Reported: 04/21/2016 09:41

DPW-2

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10945	Benzene	71-43-2	13	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Isopropylbenzene	98-82-8	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	5	0.5	1
10945	Naphthalene	91-20-3	N.D.	1	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.5	1
10945	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	0.7 J	0.5	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	PA UST Unleaded + TMBs	SW-846 8260B	1	D161101AA	04/19/2016 21:39	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D161101AA	04/19/2016 21:39	Hu Yang	1

Quality Control Summary

Client Name: Rettew Associates
Reported: 04/21/2016 09:41

Group Number: 1650073

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL
	ug/l	ug/l
Batch number: D161101AA	Sample number(s): 8330790-8330791	
Benzene	N.D.	0.5
Ethylbenzene	N.D.	0.5
Isopropylbenzene	N.D.	0.5
Methyl Tertiary Butyl Ether	N.D.	0.5
Naphthalene	N.D.	1
Toluene	N.D.	0.5
1,2,4-Trimethylbenzene	N.D.	0.5
1,3,5-Trimethylbenzene	N.D.	0.5
Xylene (Total)	N.D.	0.5

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: D161101AA	Sample number(s): 8330790-8330791								
Benzene	20	18.63			93		78-120		
Ethylbenzene	20	18.19			91		78-120		
Isopropylbenzene	20	19.12			96		80-120		
Methyl Tertiary Butyl Ether	20	20.84			104		75-120		
Naphthalene	20	17.24			86		59-120		
Toluene	20	18.72			94		80-120		
1,2,4-Trimethylbenzene	20	18.75			94		75-120		
1,3,5-Trimethylbenzene	20	17.11			86		75-120		
Xylene (Total)	60	56.62			94		80-120		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc	MS Spike Added	MS Conc	MSD Spike Added	MSD Conc	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: D161101AA	Sample number(s): 8330790-8330791				UNSPK: P326892					
Benzene	N.D.	20	20.22	20	18.29	101	91	78-120	10	30
Ethylbenzene	N.D.	20	22.66	20	17.1	113	85	78-120	28	30

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Rettew Associates
Reported: 04/21/2016 09:41

Group Number: 1650073

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Isopropylbenzene	N.D.	20	21.64	20	17.82	108	89	80-120	19	30
Methyl Tertiary Butyl Ether	N.D.	20	19.77	20	19.38	99	97	75-120	2	30
Naphthalene	N.D.	20	18.97	20	17.07	95	85	59-120	10	30
Toluene	N.D.	20	19.03	20	18.45	95	92	80-120	3	30
1,2,4-Trimethylbenzene	N.D.	20	21.22	20	16.78	106	84	75-120	23	30
1,3,5-Trimethylbenzene	N.D.	20	19.08	20	17.25	95	86	75-120	10	30
Xylene (Total)	N.D.	60	62.83	60	53.82	105	90	80-120	15	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PA UST Unleaded + TMBs

Batch number: D161101AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8330790	94	97	94	88
8330791	96	104	102	89
Blank	100	102	92	87
LCS	97	102	100	92
MS	97	103	94	104
MSD	98	101	100	93
Limits:	80-116	77-113	80-113	78-113

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Client: Rettew

Delivery and Receipt Information

Delivery Method:	<u>Client Drop Off</u>	Arrival Timestamp:	<u>04/13/2016 11:50</u>
Number of Packages:	<u>1</u>	Number of Projects:	<u>1</u>
State/Province of Origin:	<u>PA</u>		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	VOA Vial Headspace \geq 6mm:	No
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	2
Samples Intact:	Yes	Trip Blank Type:	HCl
Missing Samples:	No	Air Quality Samples Present:	No
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Krista Abel (3058) at 12:09 on 04/13/2016

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	4.5	DT	Wet	Y	Bagged	N

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

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Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

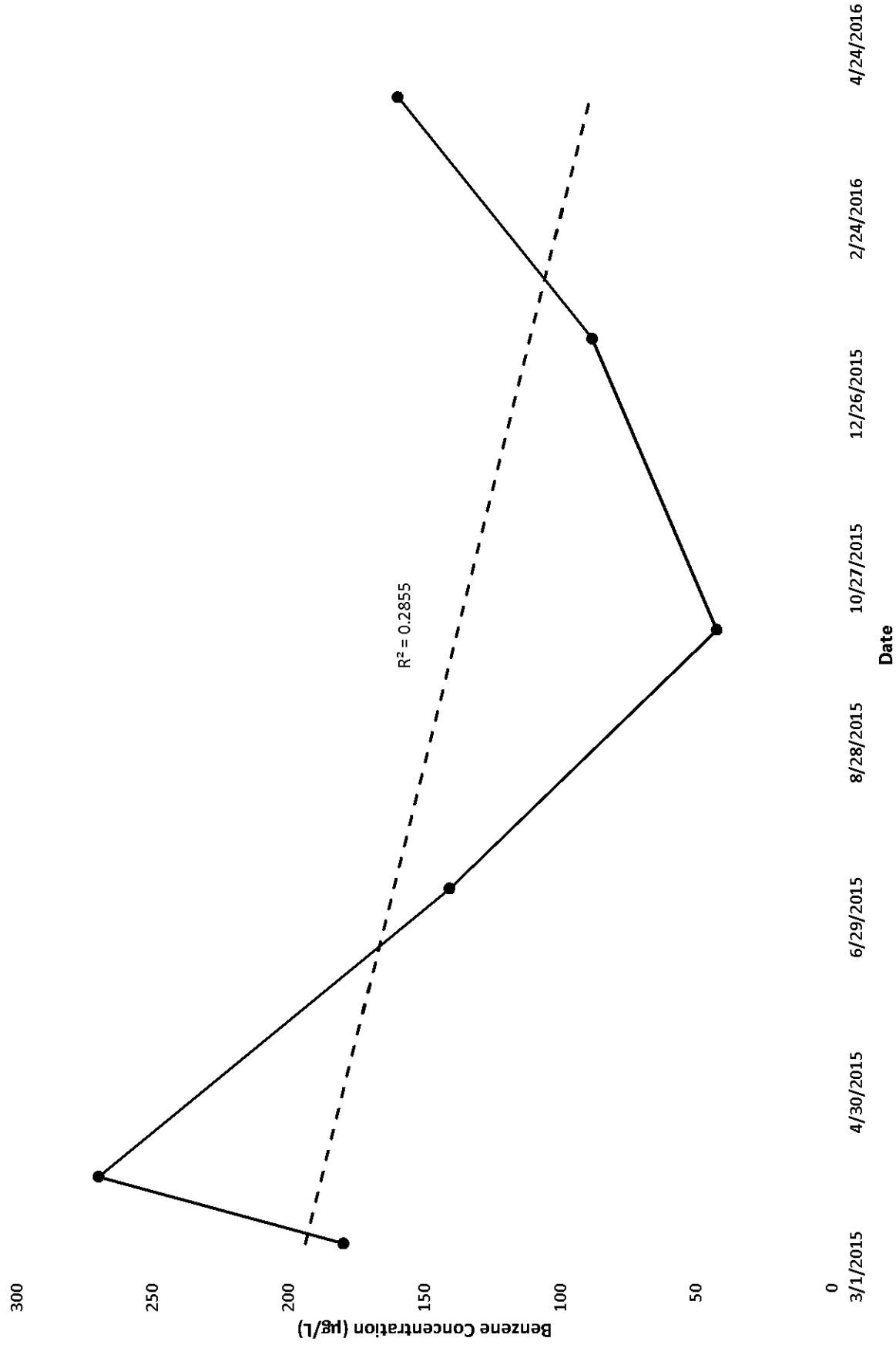
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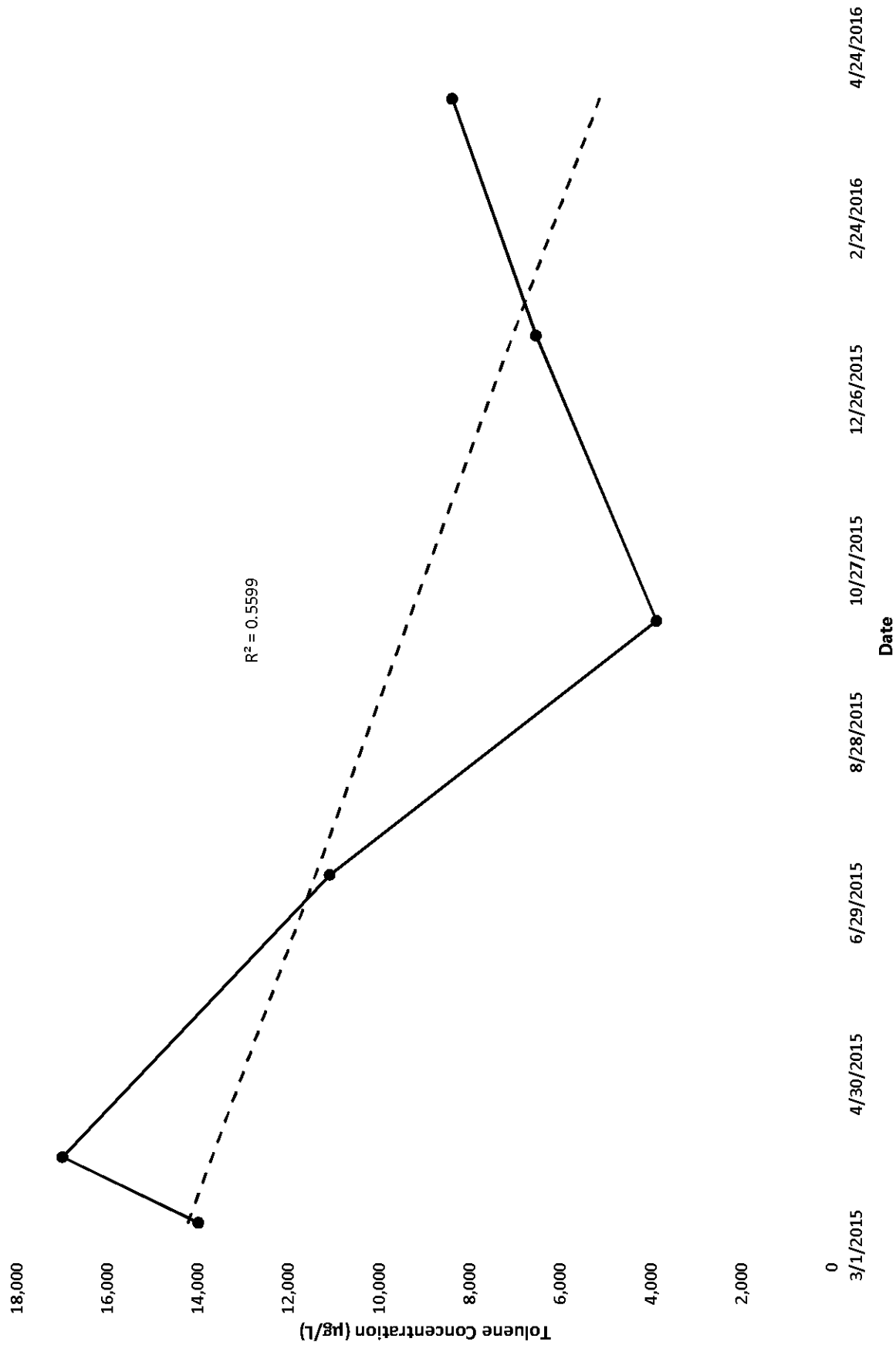
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APPENDIX M
Concentration vs Time Plots

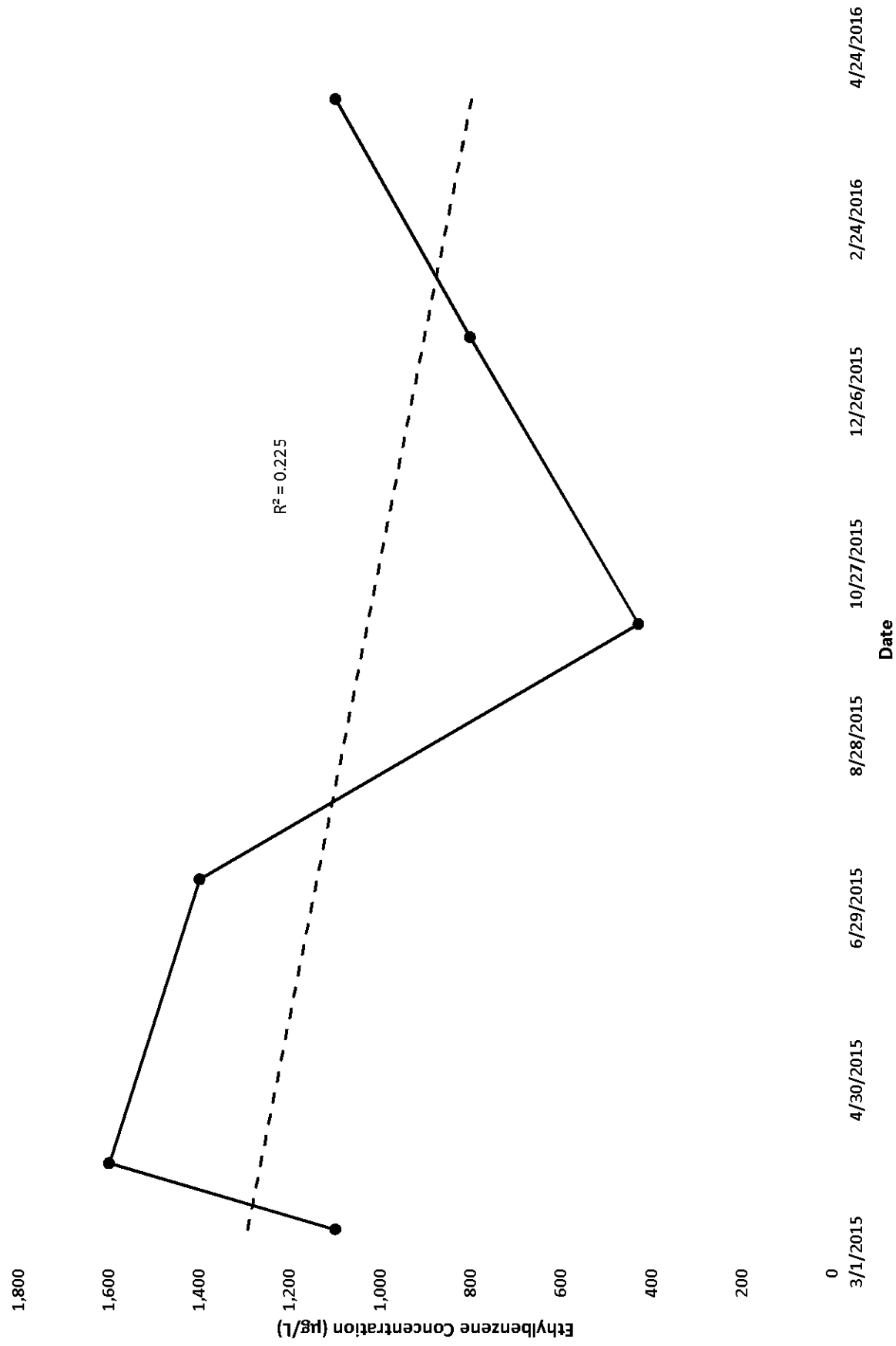
MW-3 Benzene Concentrations vs Time



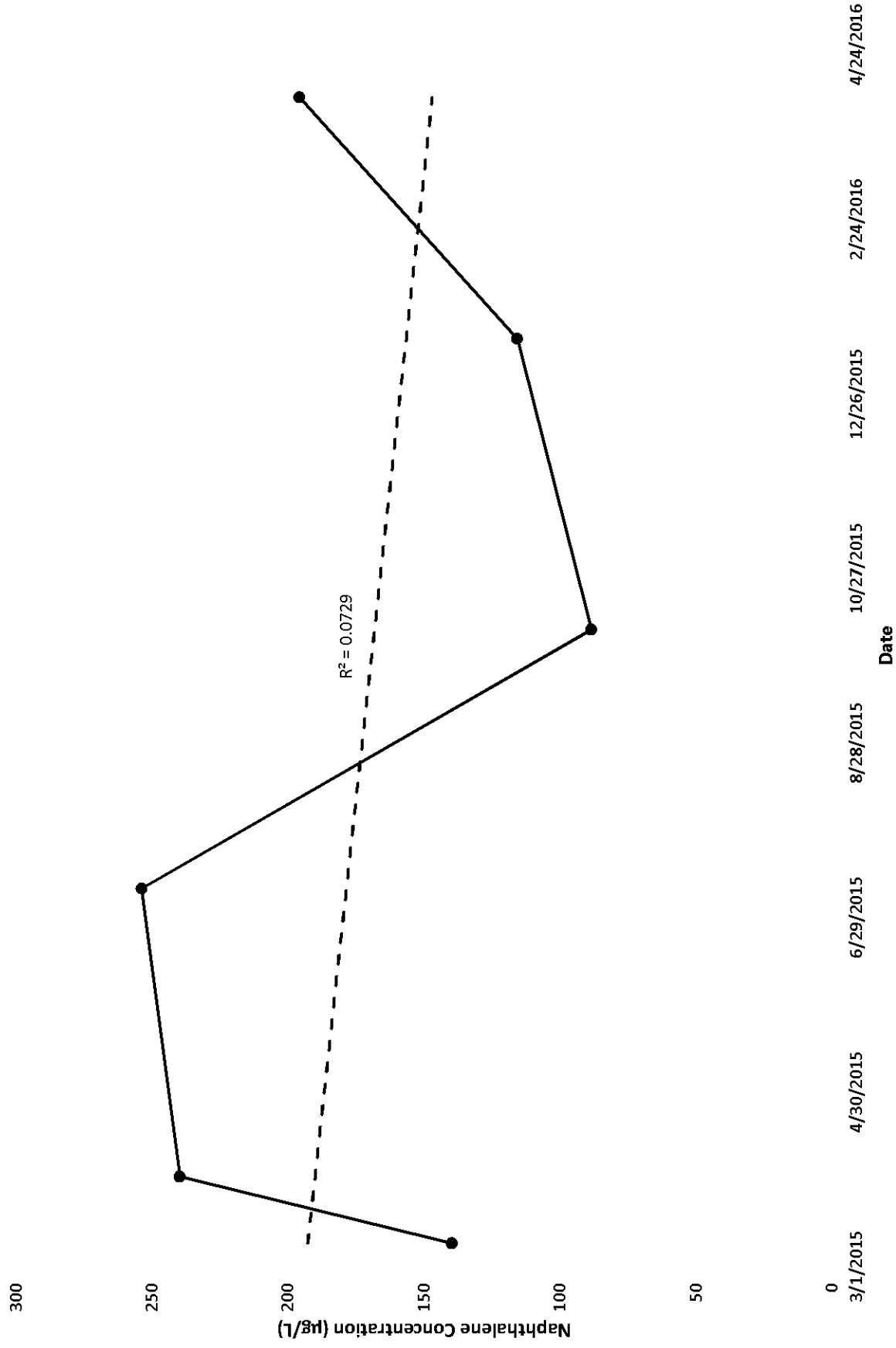
MW-3 Toluene Concentrations vs Time



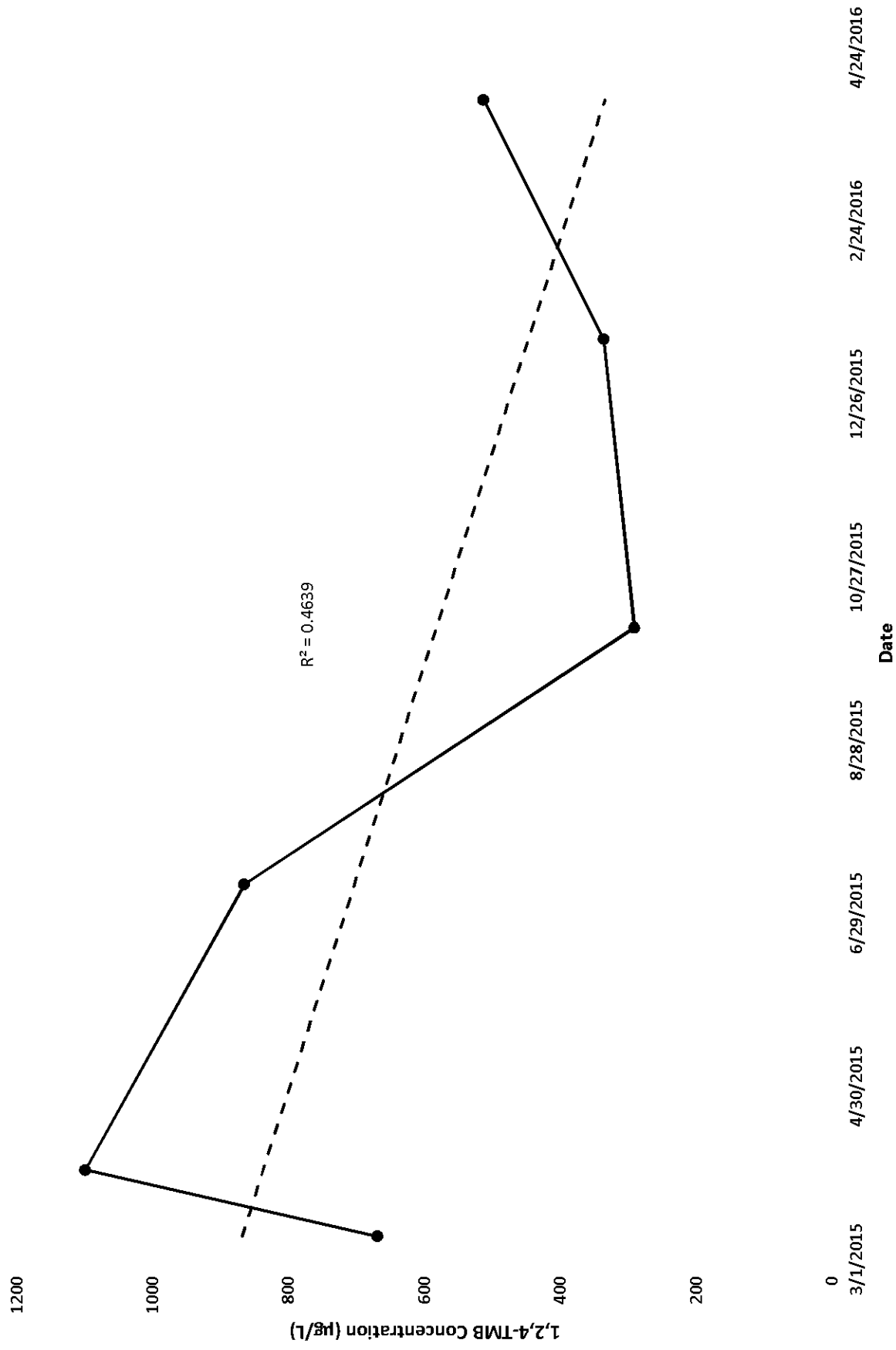
MW-3 Ethylbenzene Concentrations vs Time



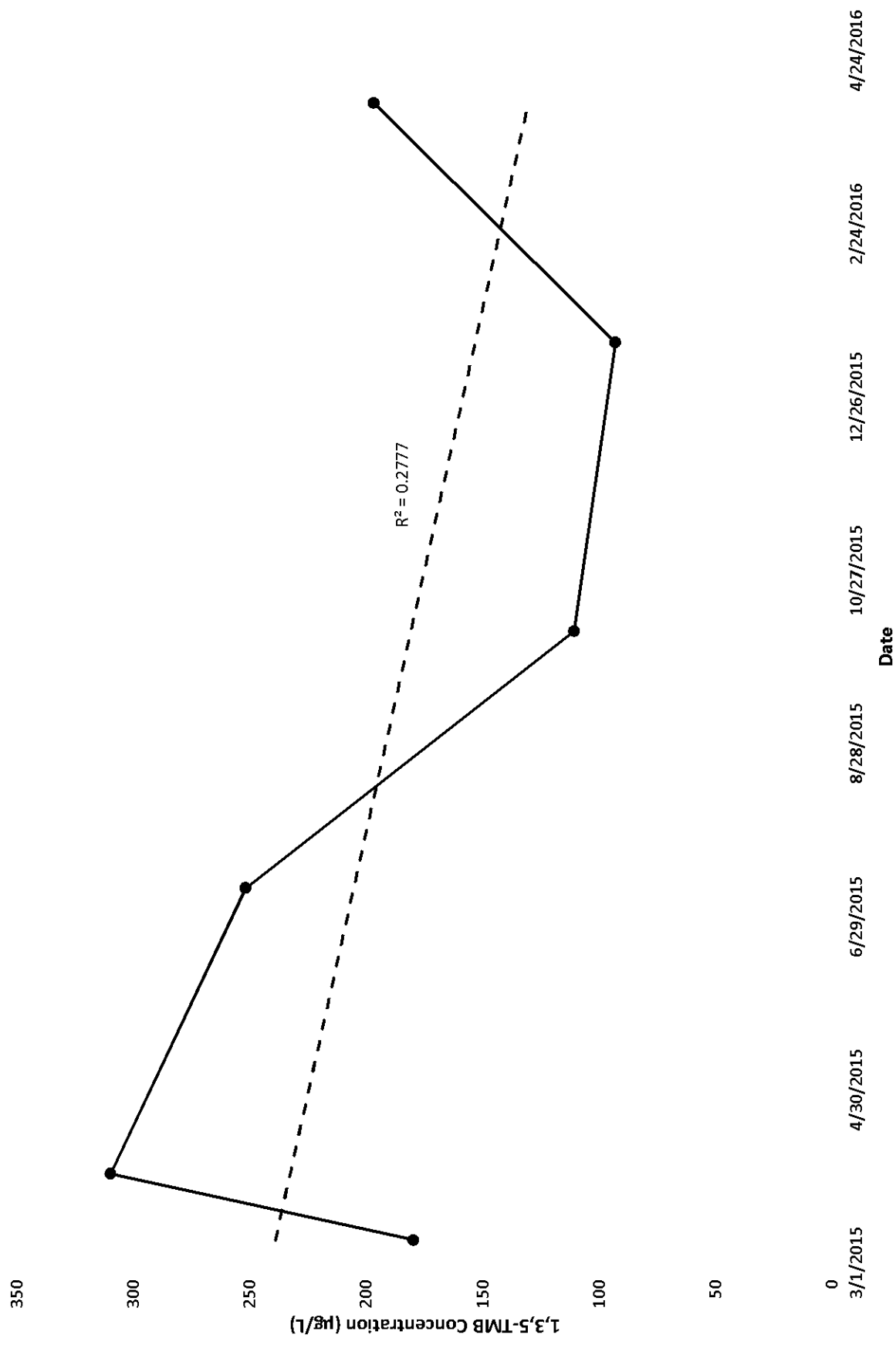
MW-3 Naphthalene Concentrations vs Time



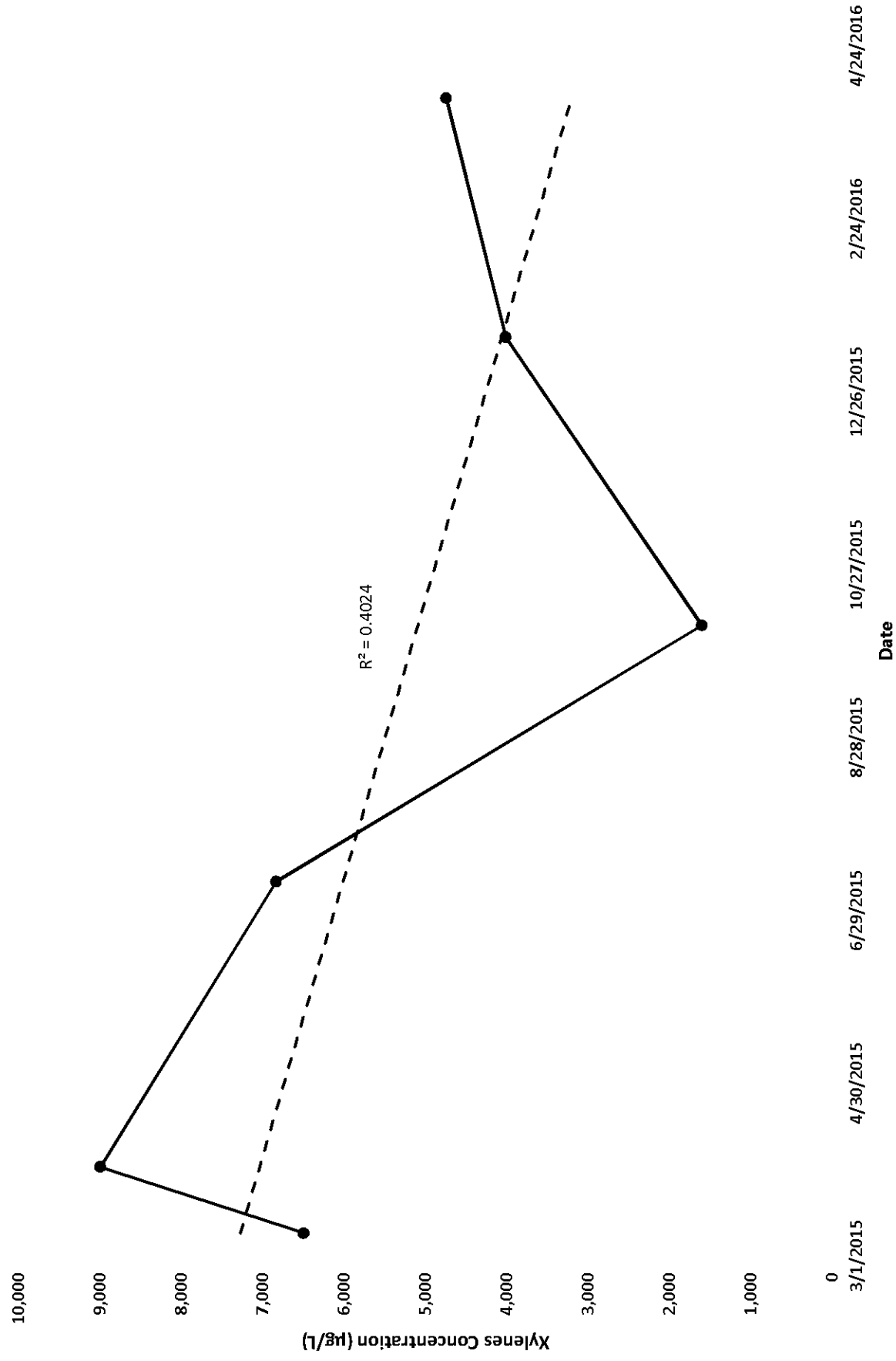
MW-3 1,2,4-TMB Concentrations vs Time



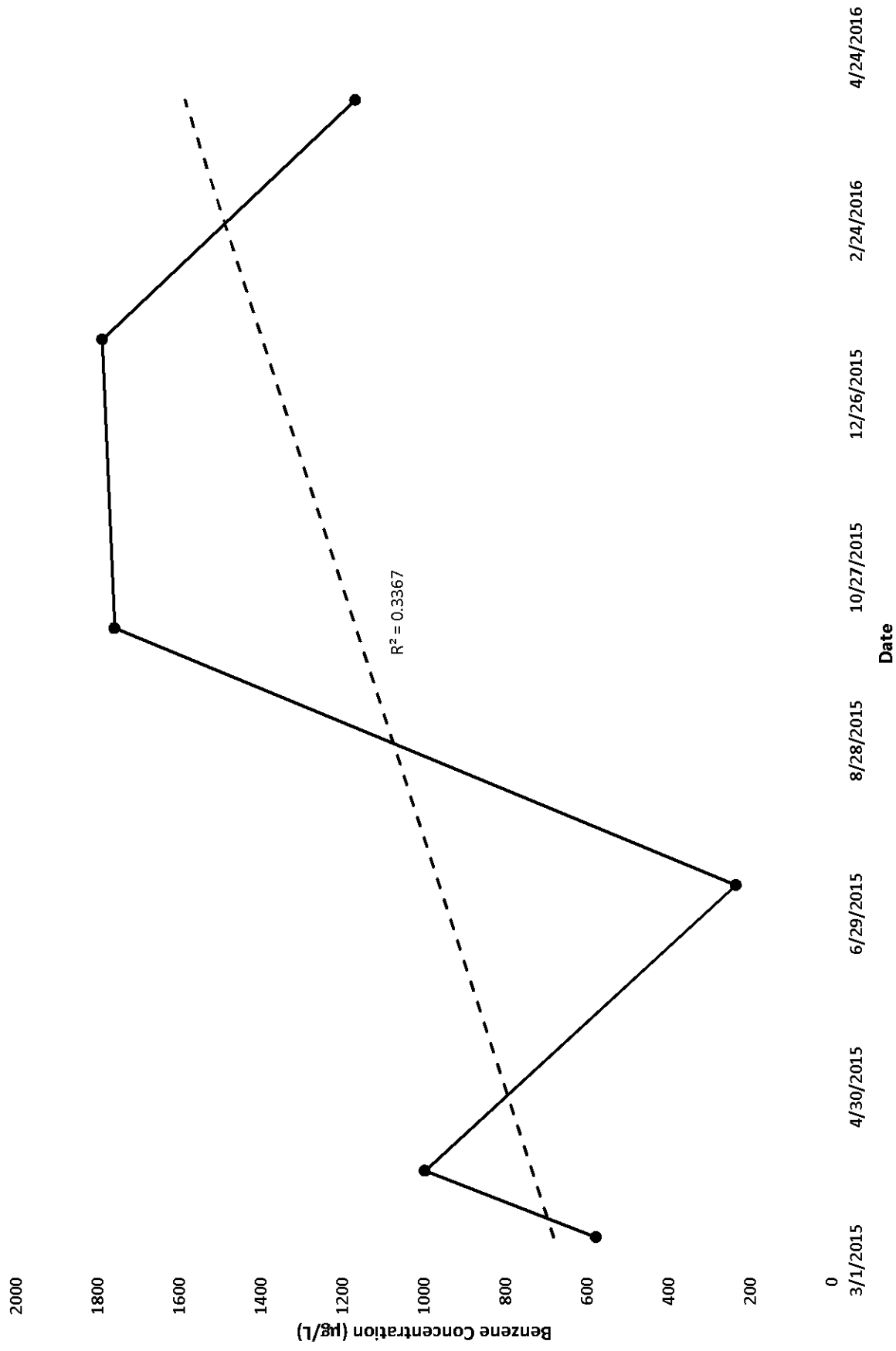
MW-3 1,3,5-TMB Concentrations vs Time



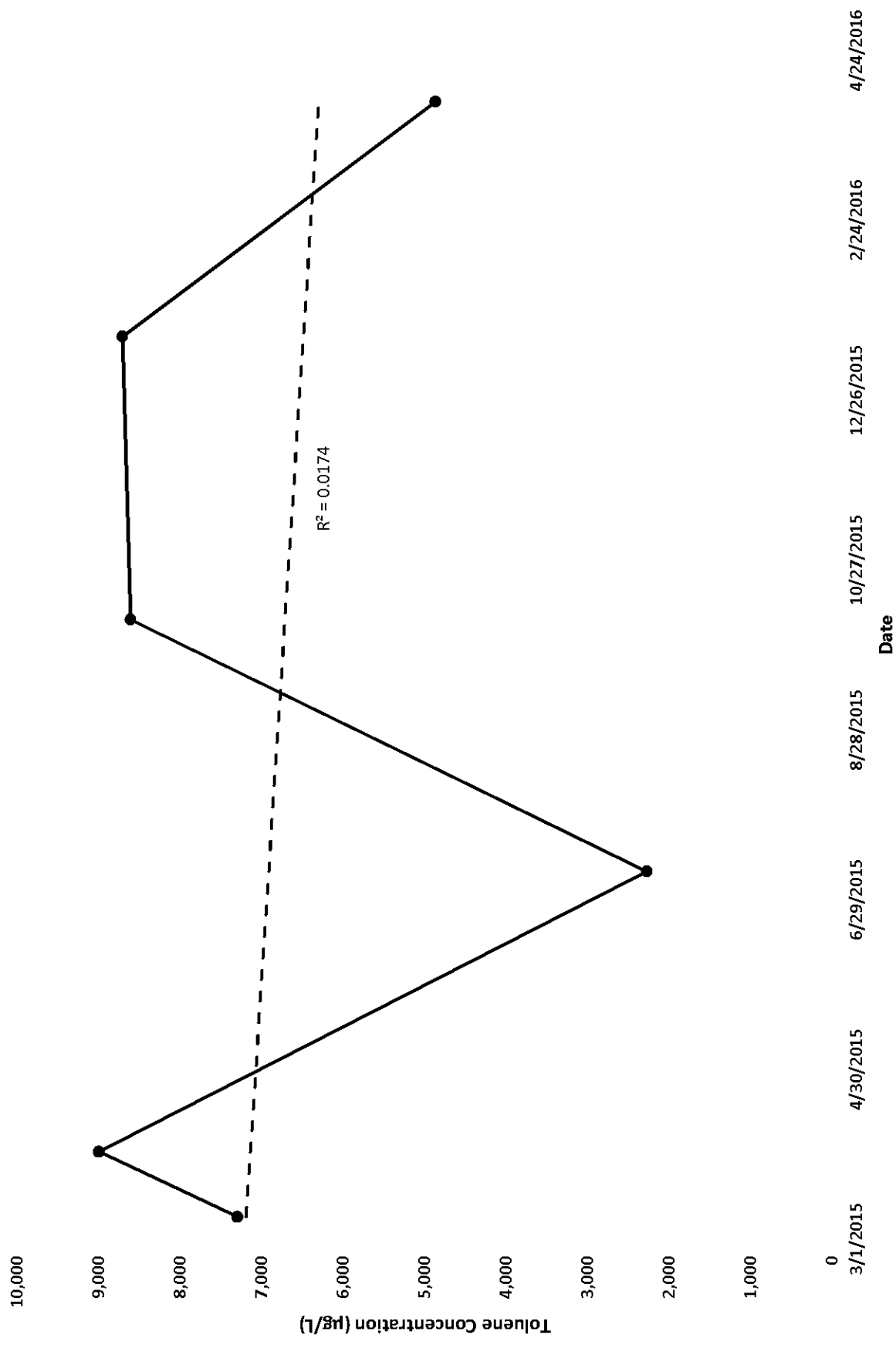
MW-3
Xylenes Concentrations vs Time



MW-4 Benzene Concentrations vs Time

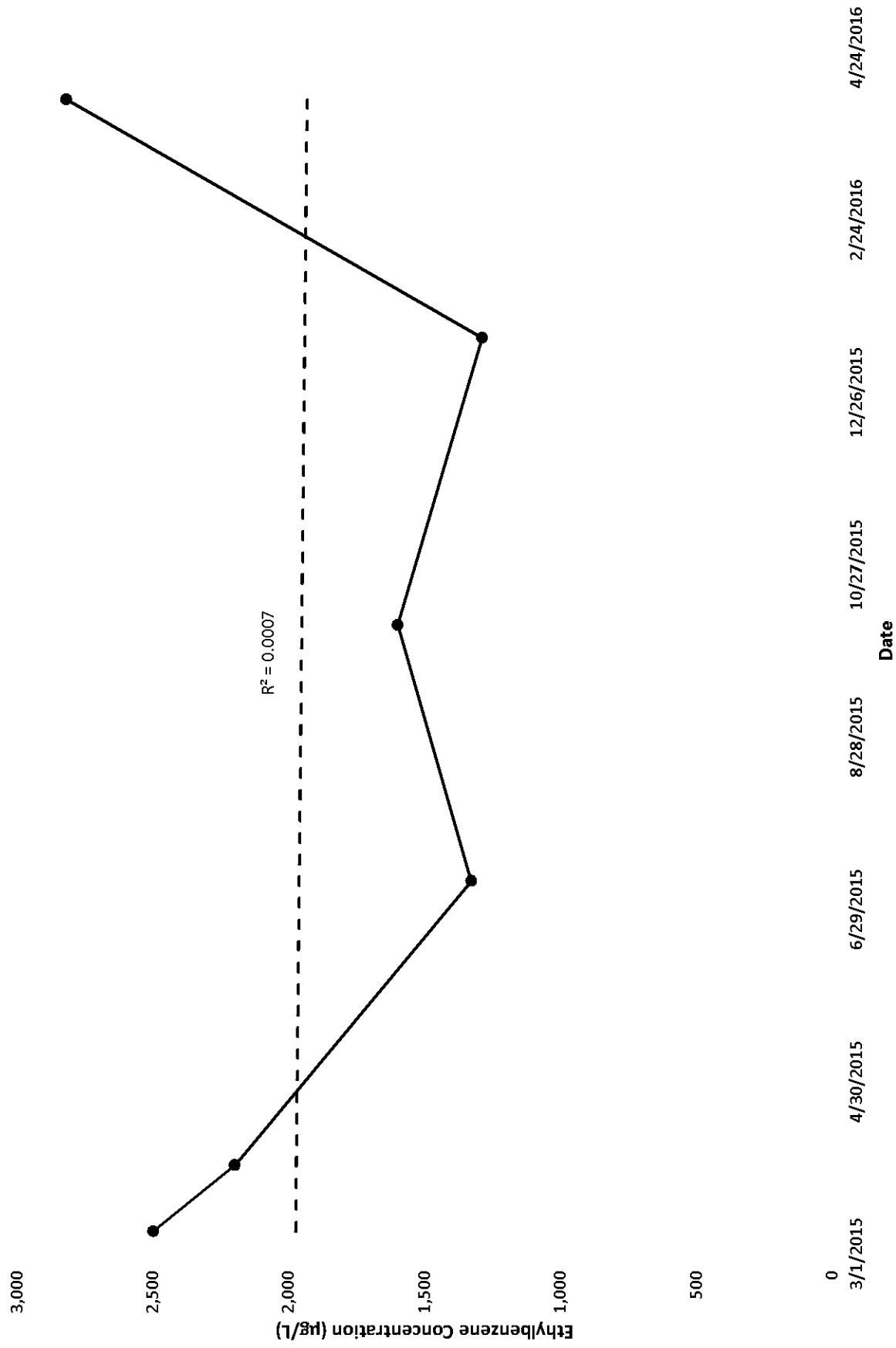


MW-4 Toluene Concentrations vs Time

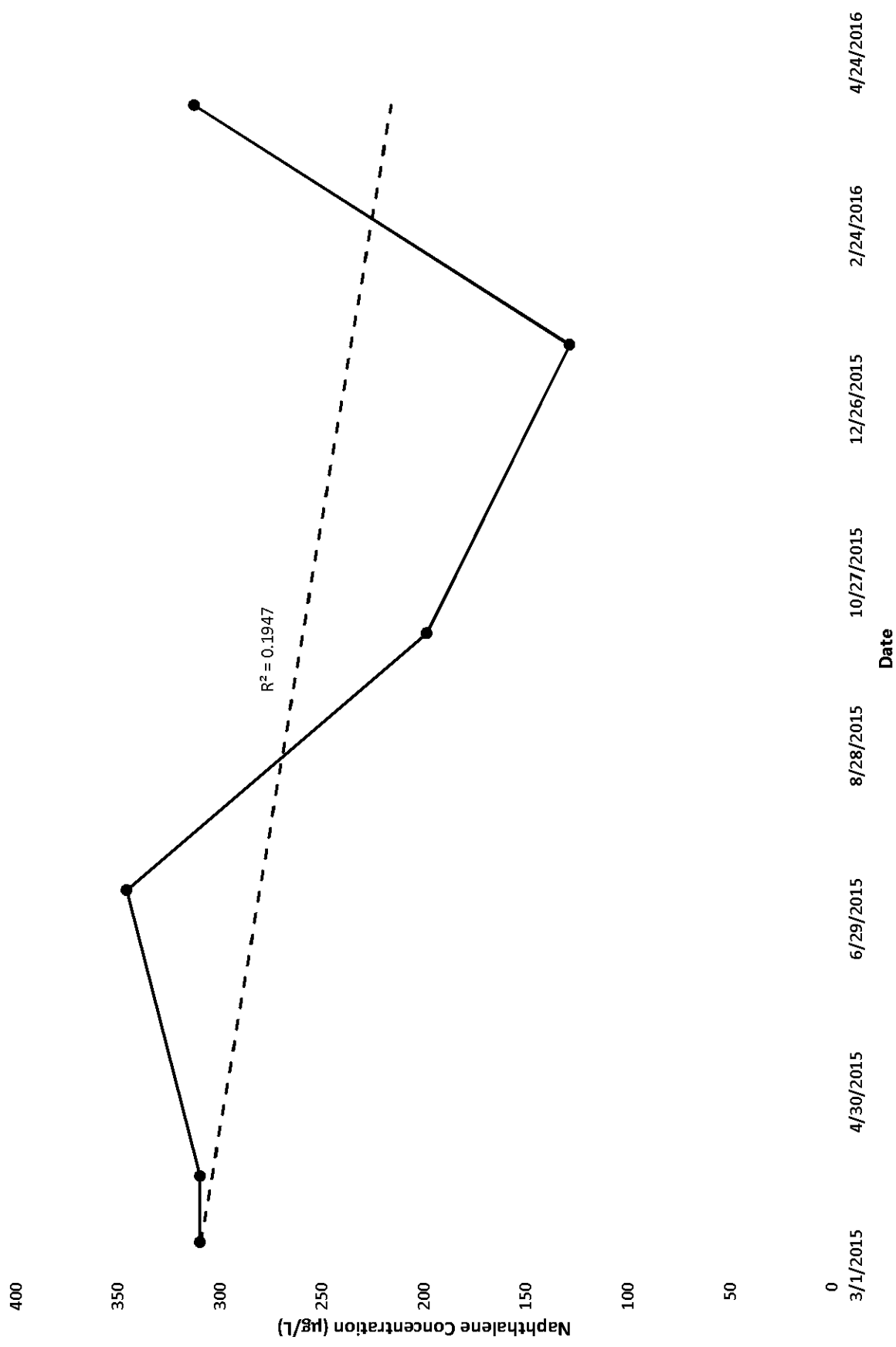


MW-4

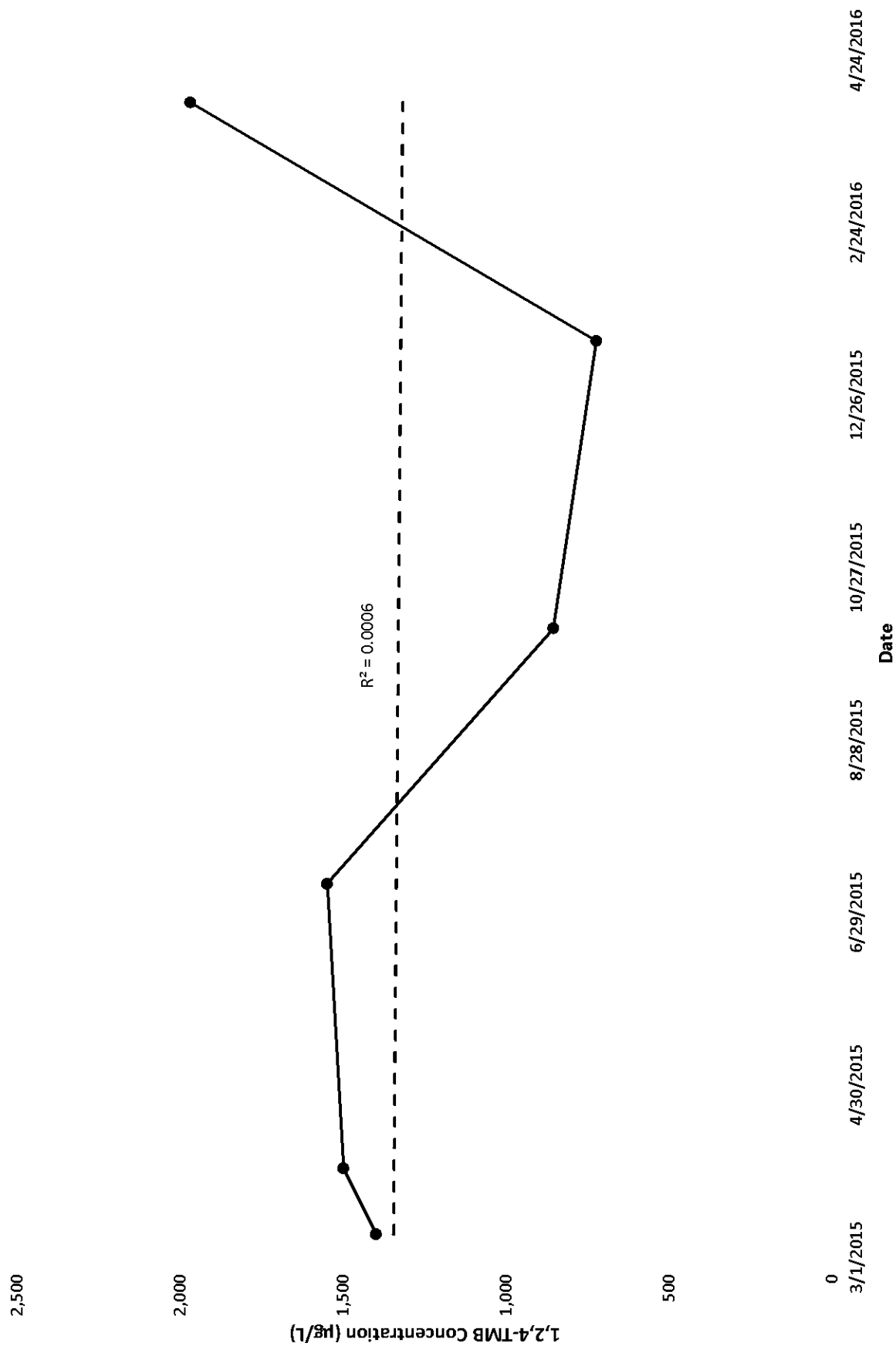
Ethylbenzene Concentrations vs Time



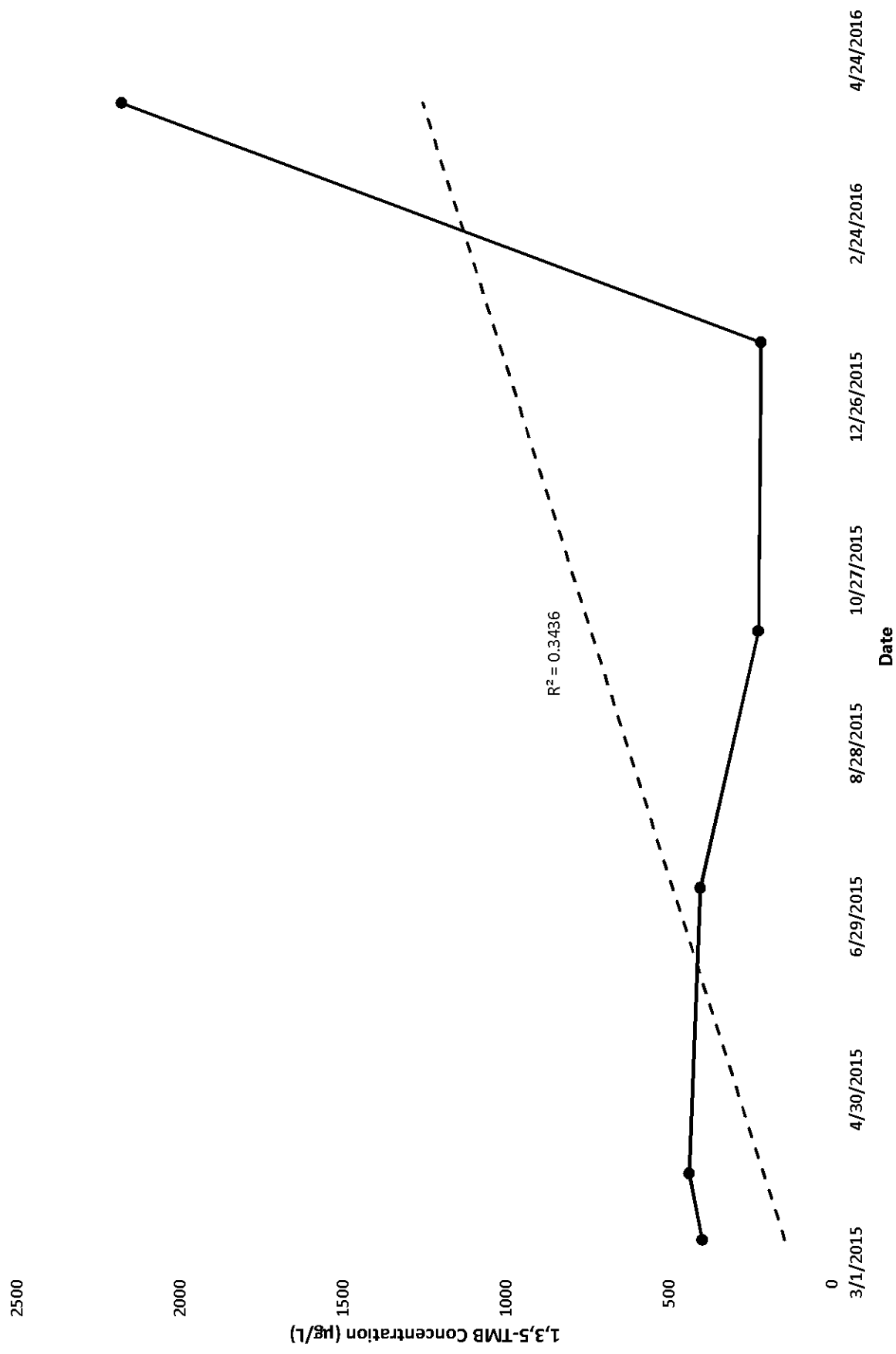
MW-4 Naphthalene Concentrations vs Time



MW-4 1,2,4-TMB Concentrations vs Time

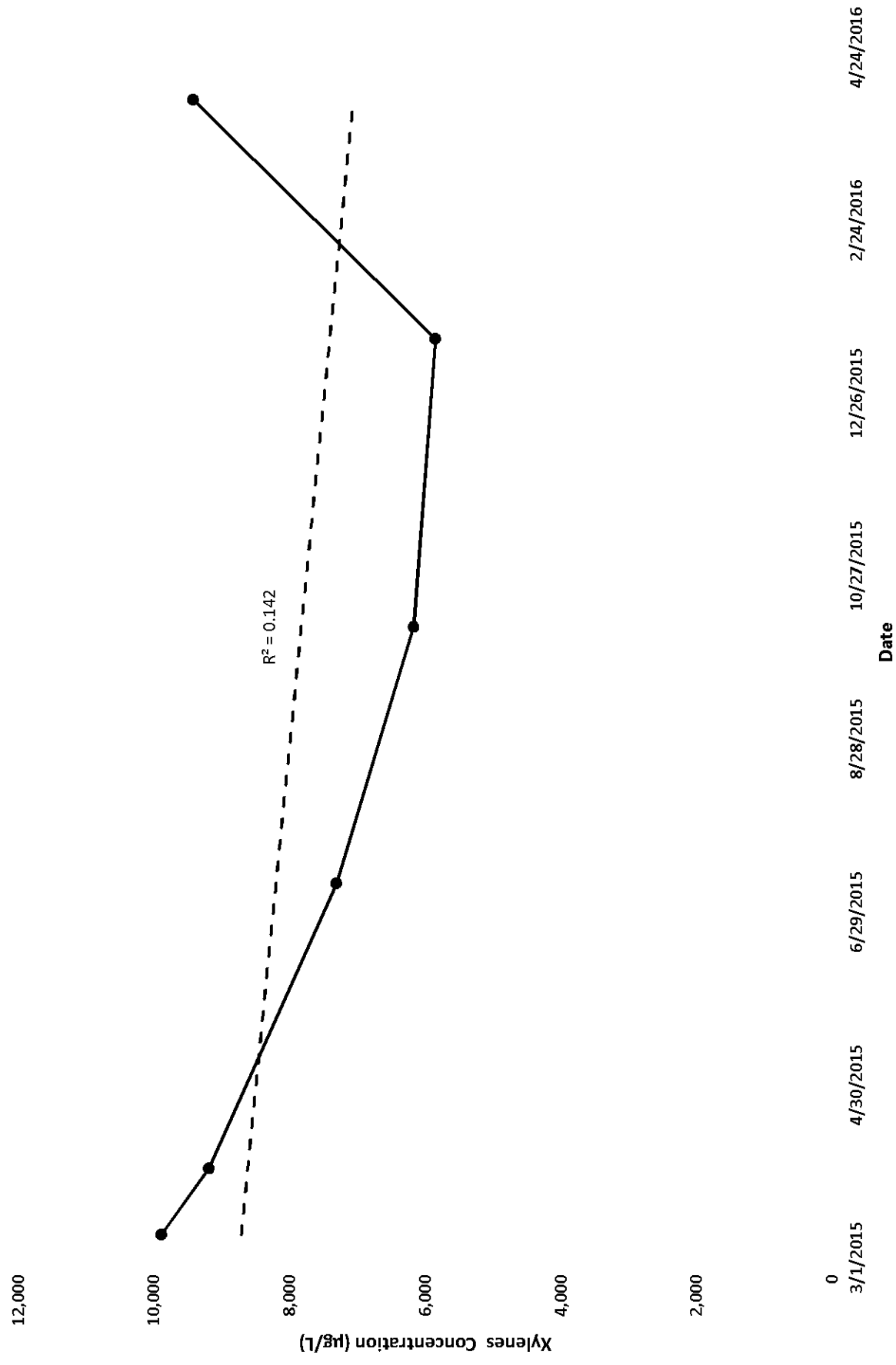


MW-4 1,3,5-TMB Concentrations vs Time

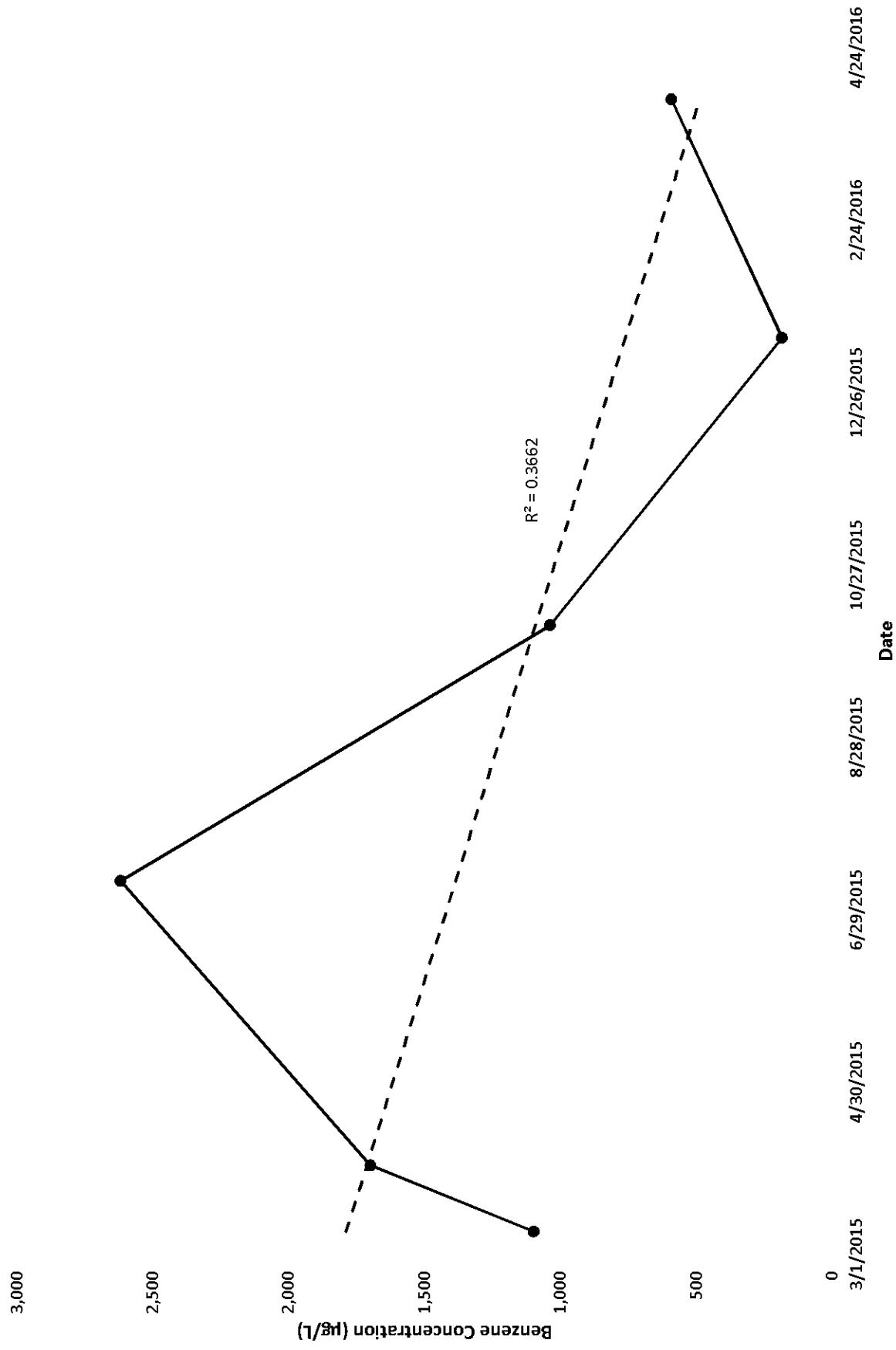


MW-4

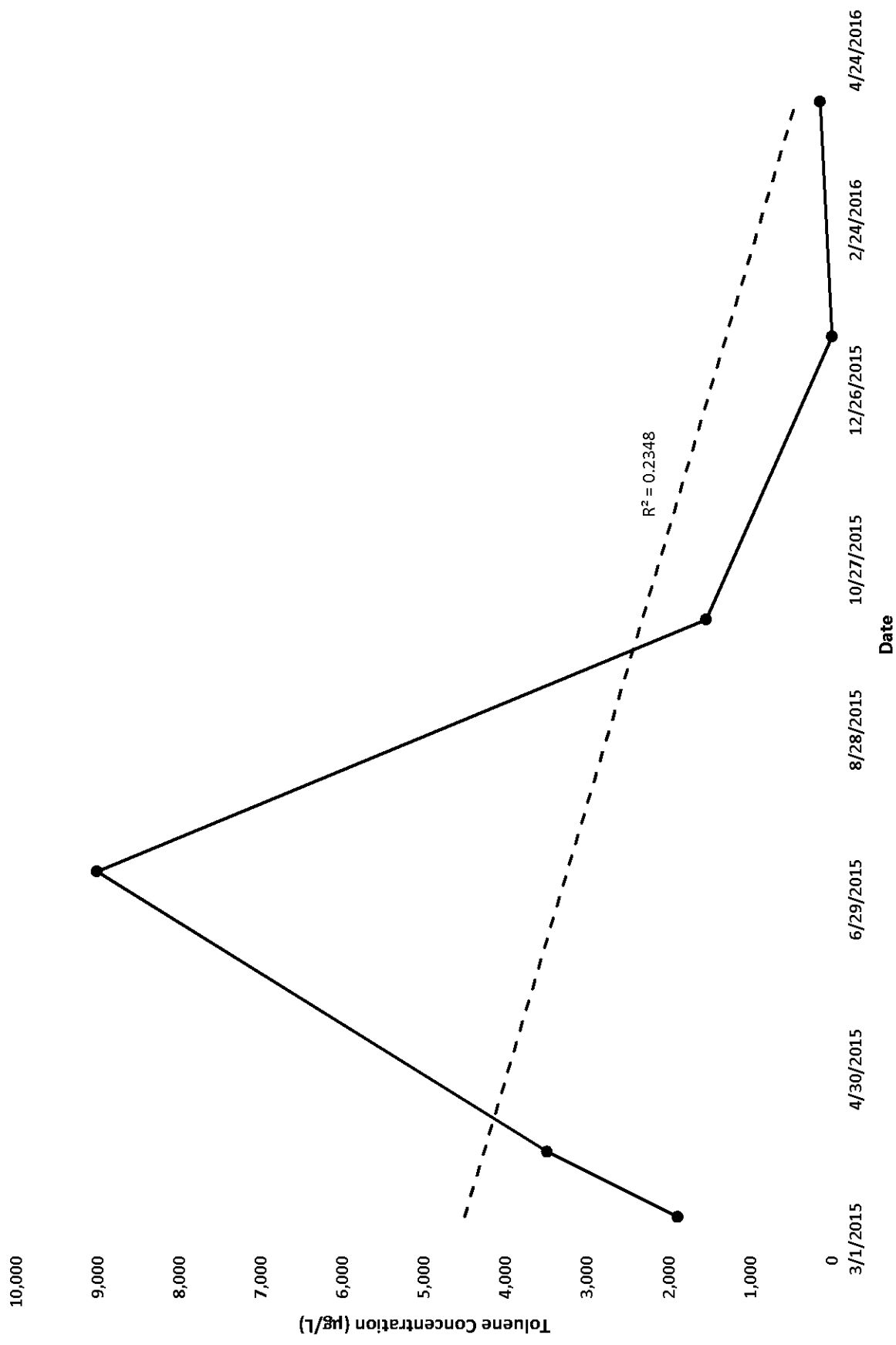
Xylenes Concentrations vs Time



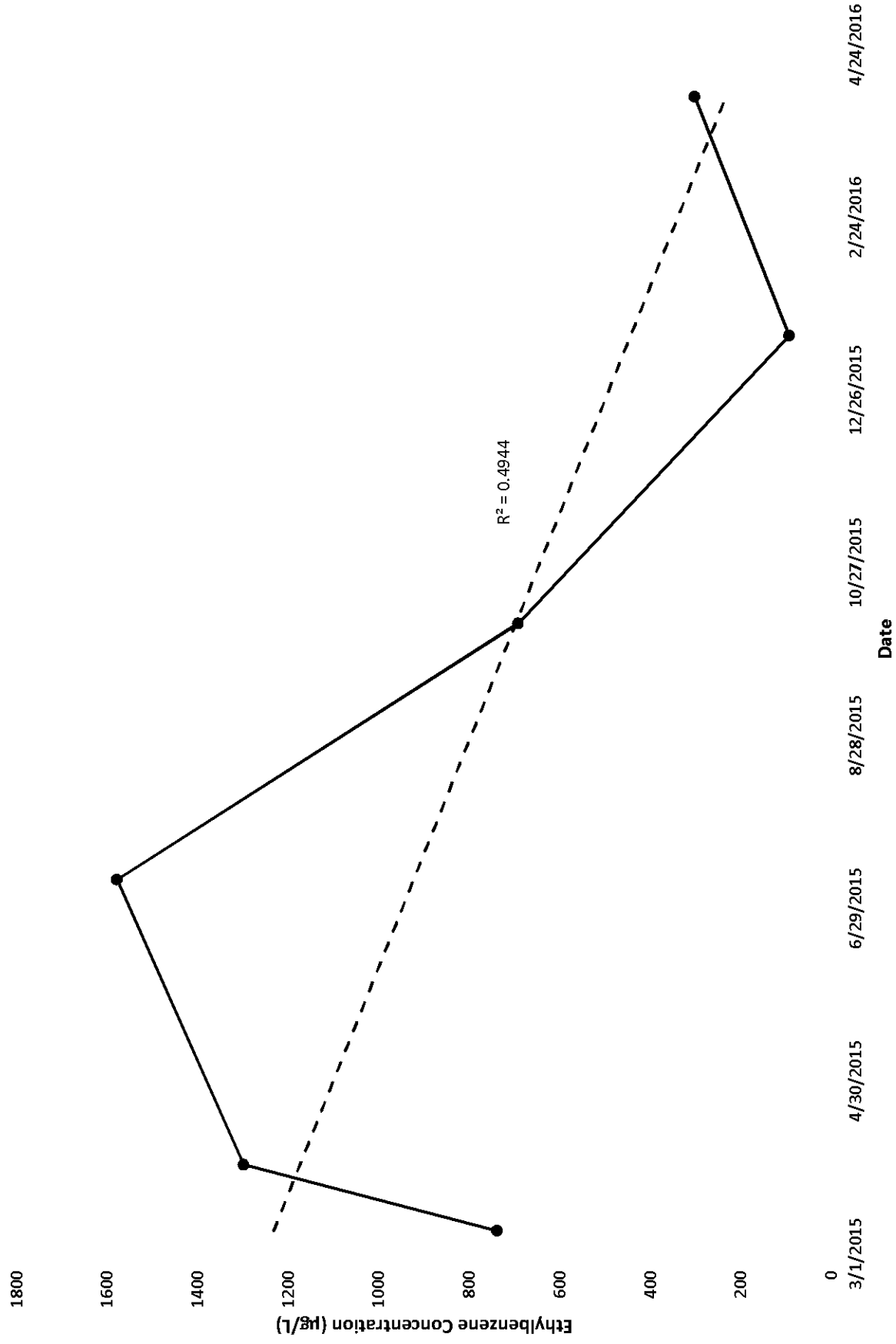
MW-5 Benzene Concentrations vs Time



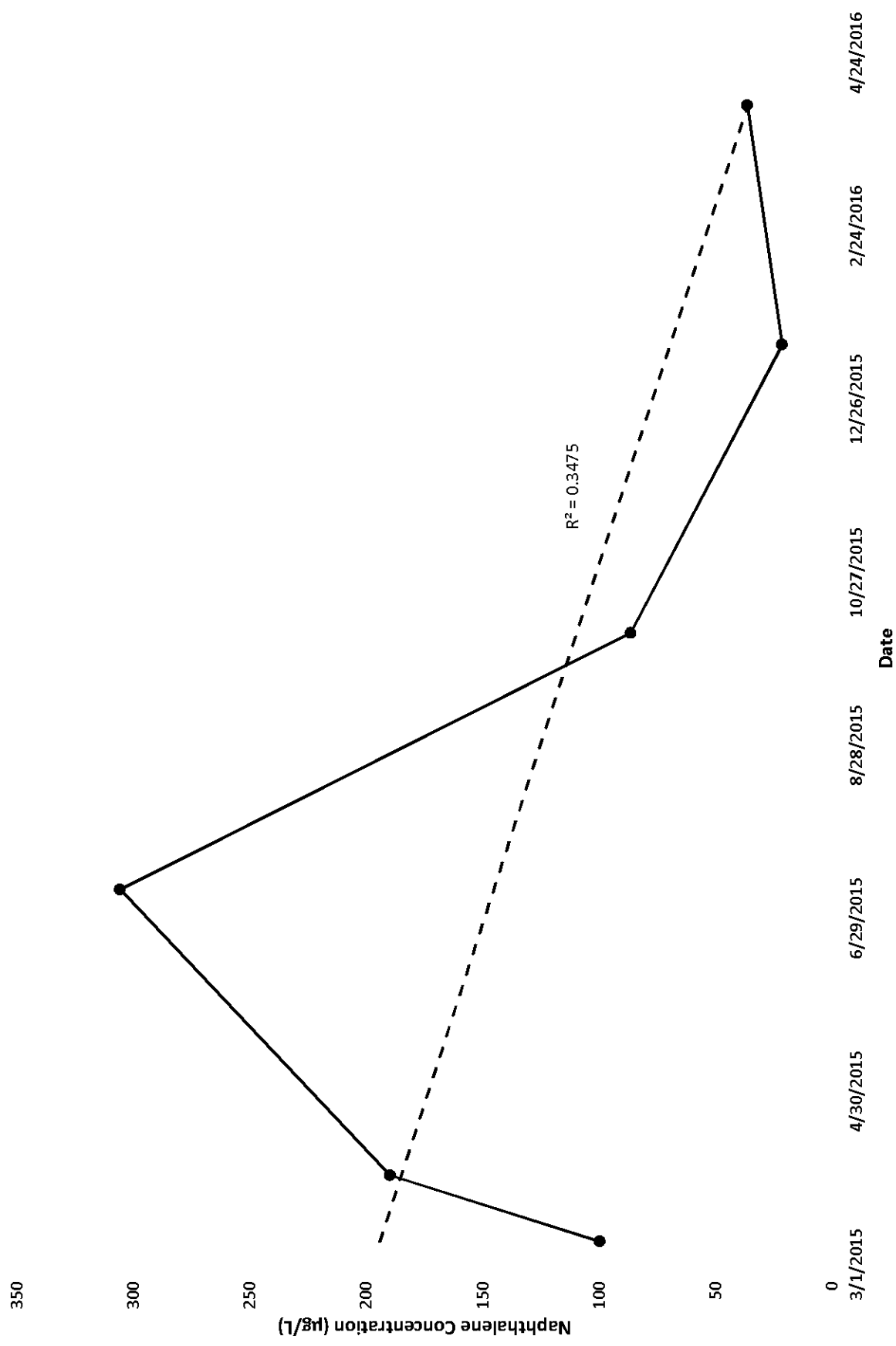
MW-5 Toluene Concentrations vs Time



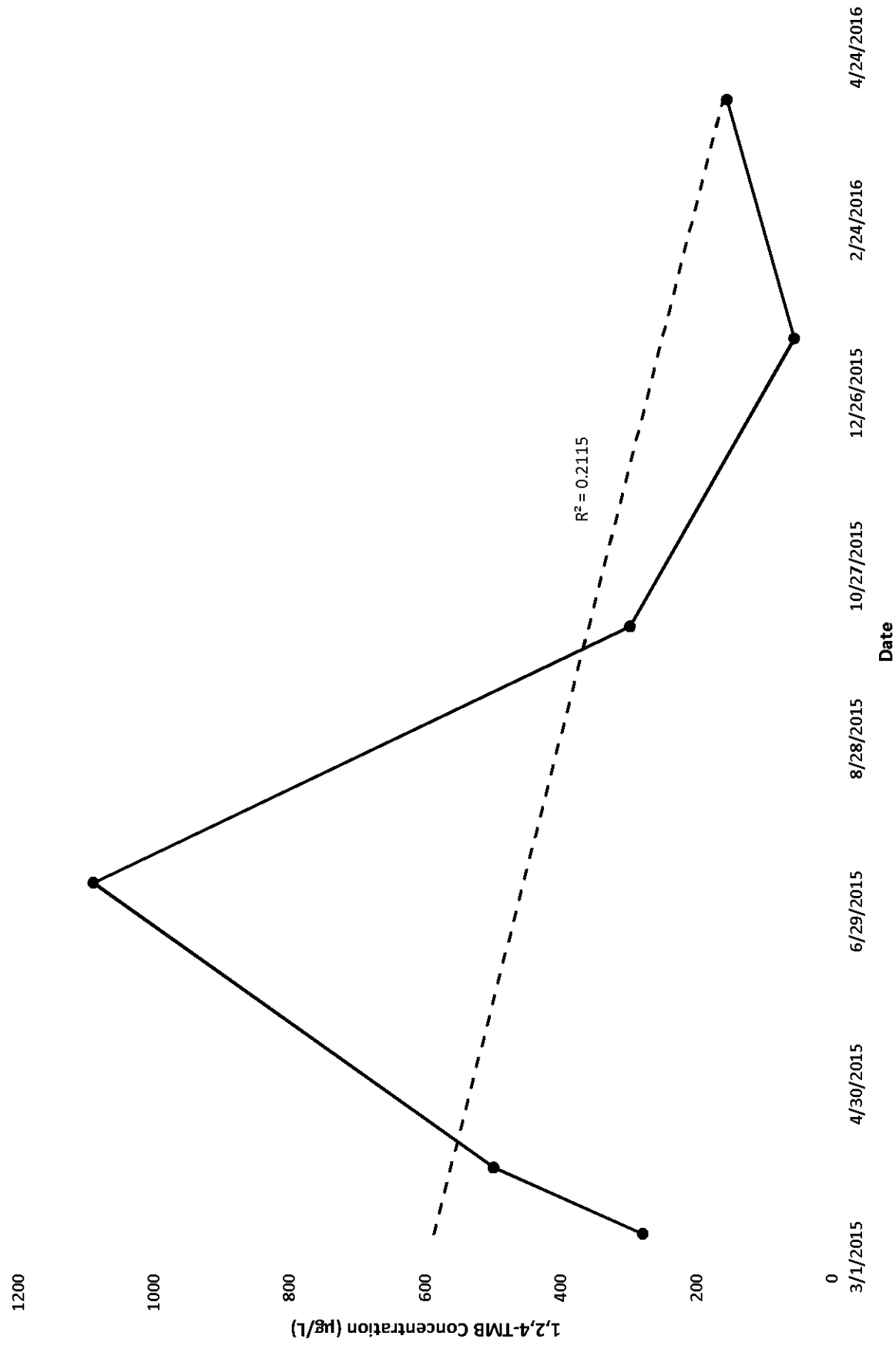
MW-5 Ethylbenzene Concentrations vs Time



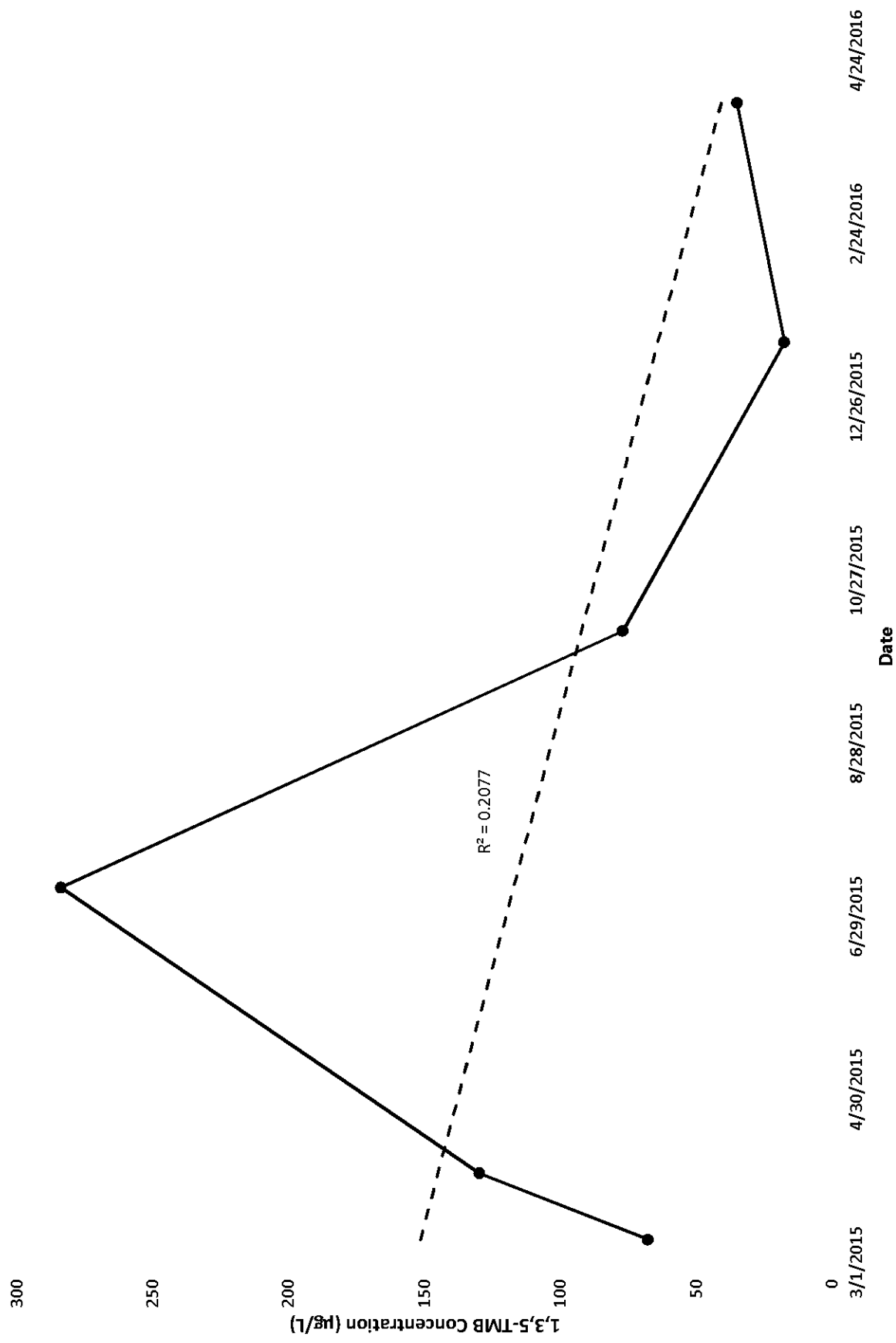
MW-5 Naphthalene Concentrations vs Time



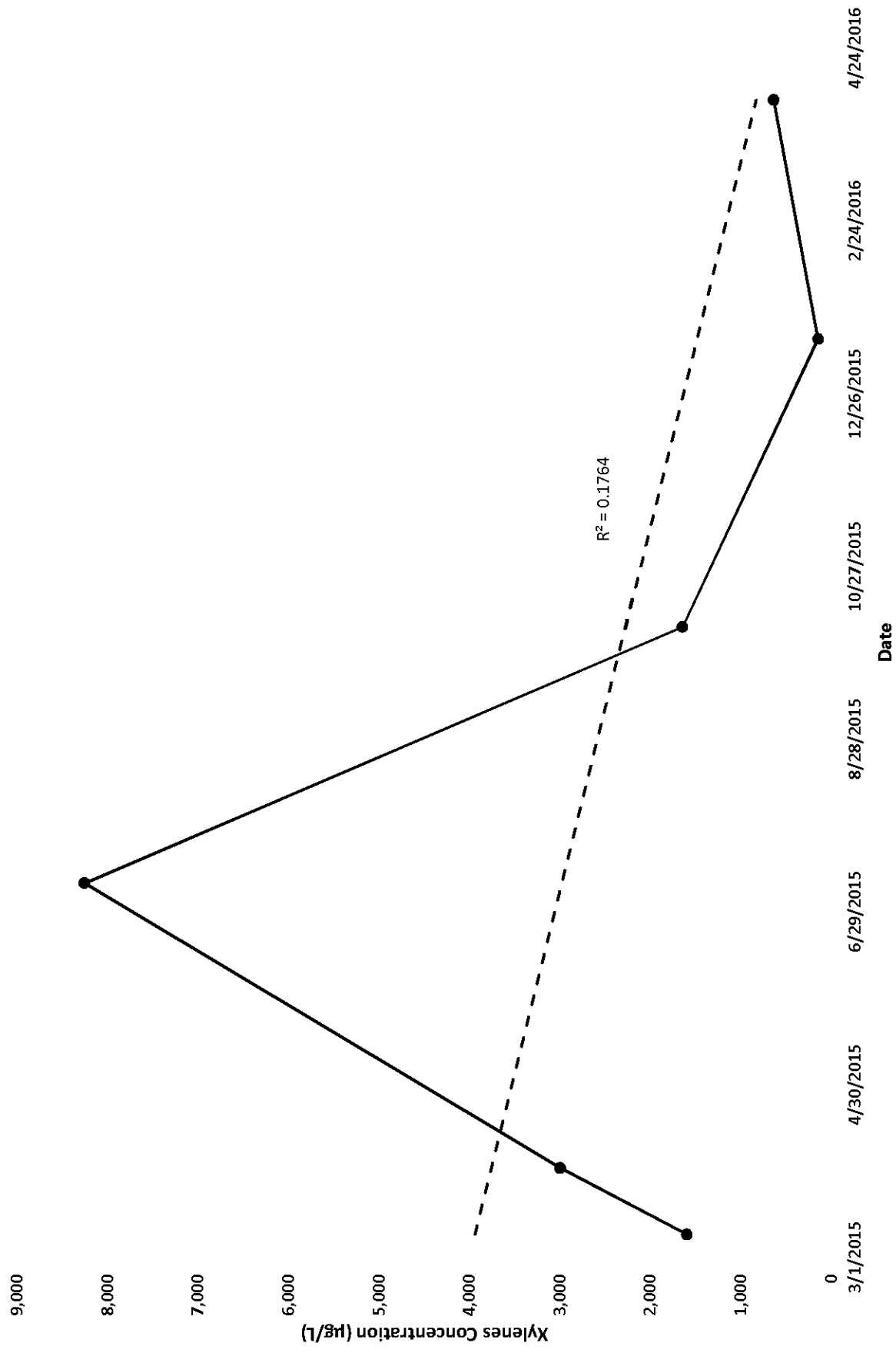
MW-5 1,2,4-TMB Concentrations vs Time



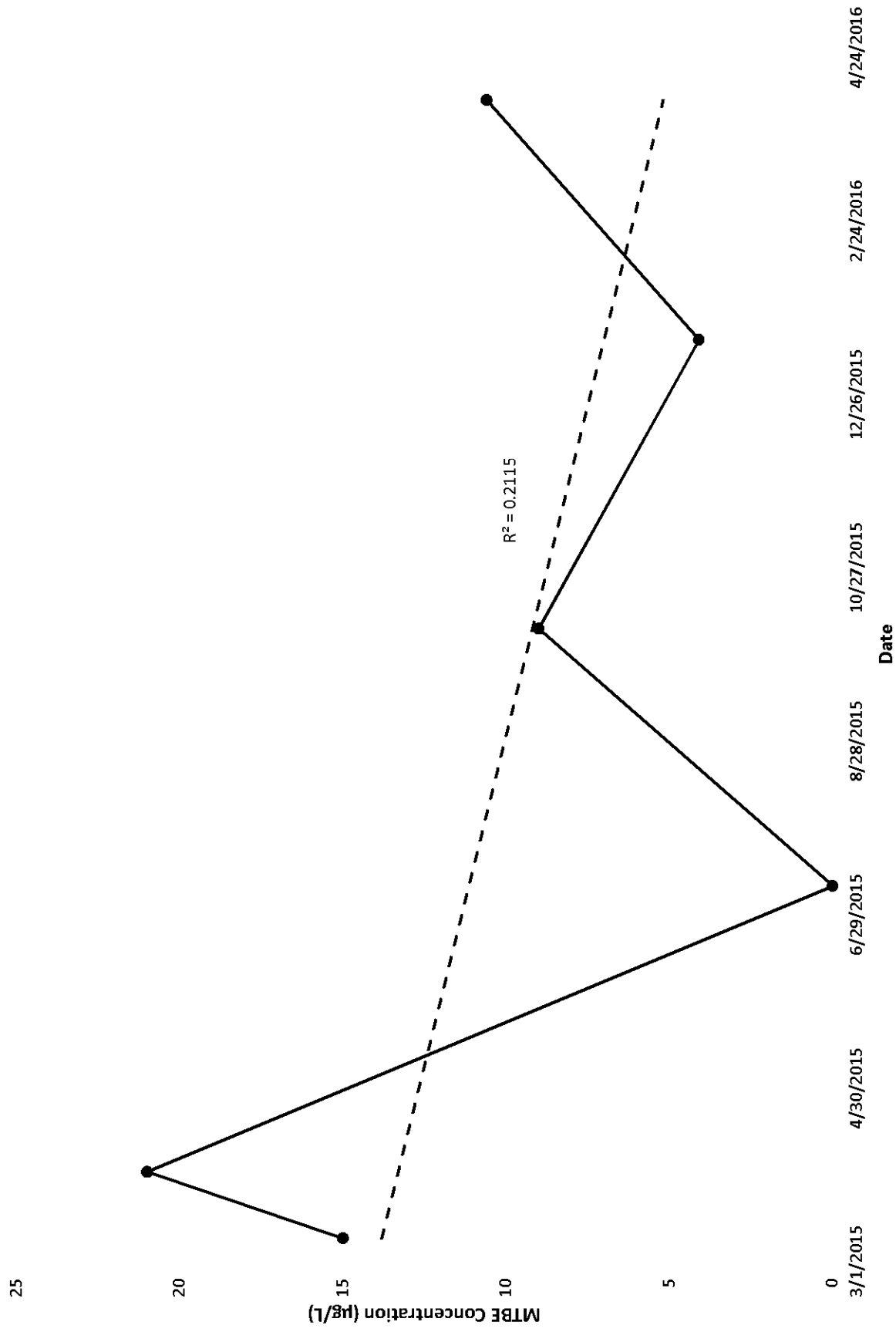
MW-5 1,3,5-TMB Concentrations vs Time



MW-5 Xylenes Concentrations vs Time

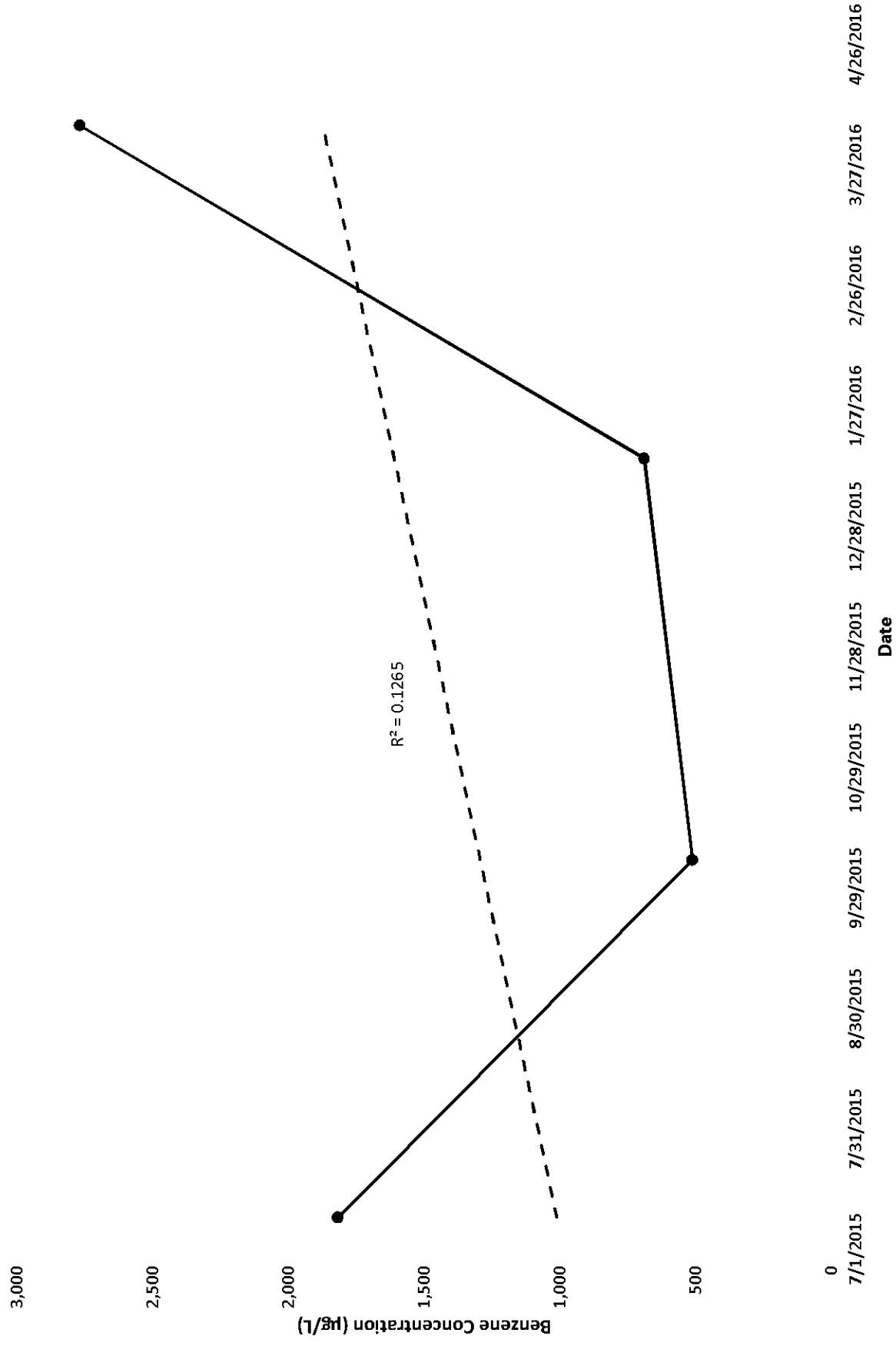


MW-5 MTBE Concentrations vs Time

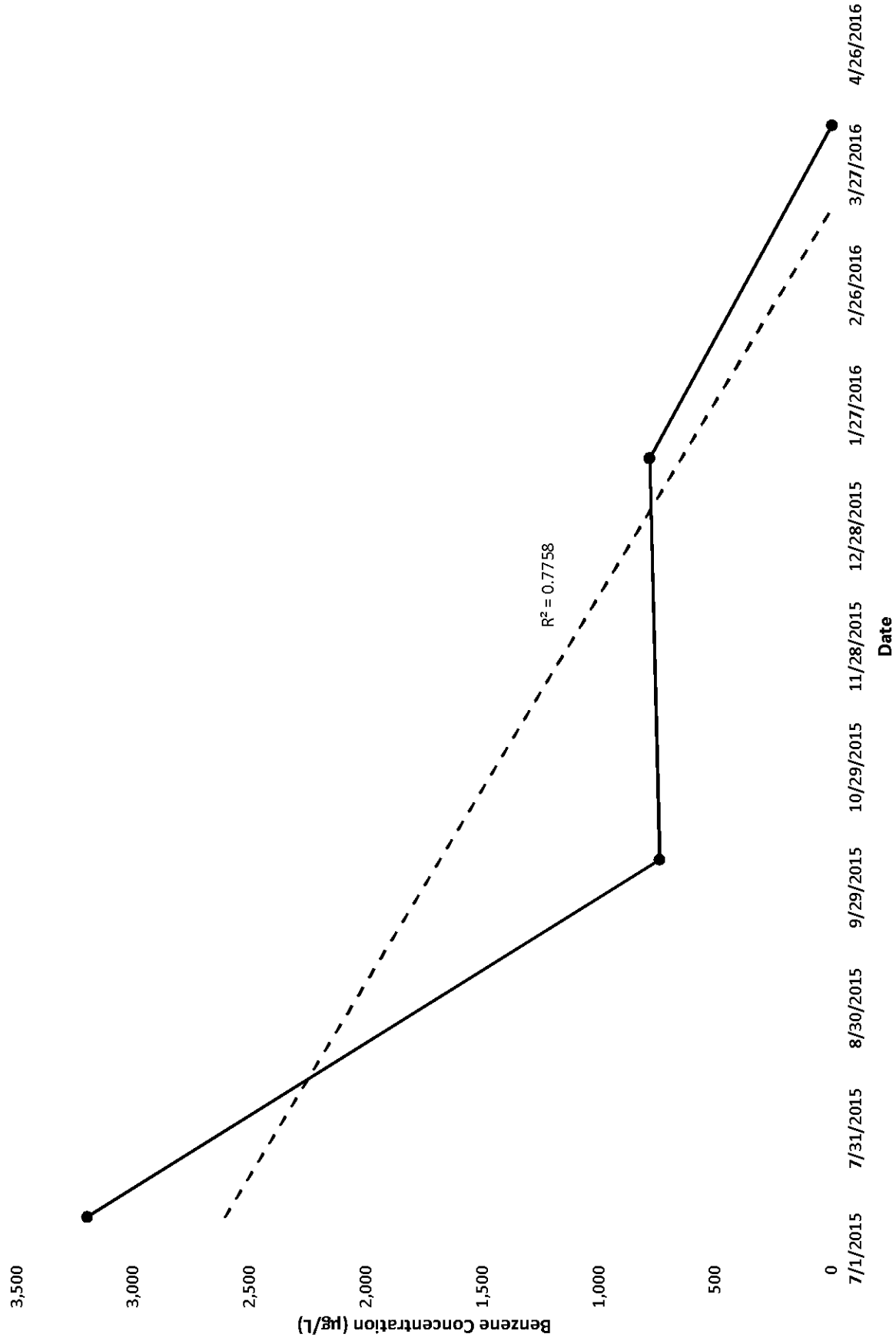


MW-7

Benzene Concentrations vs Time

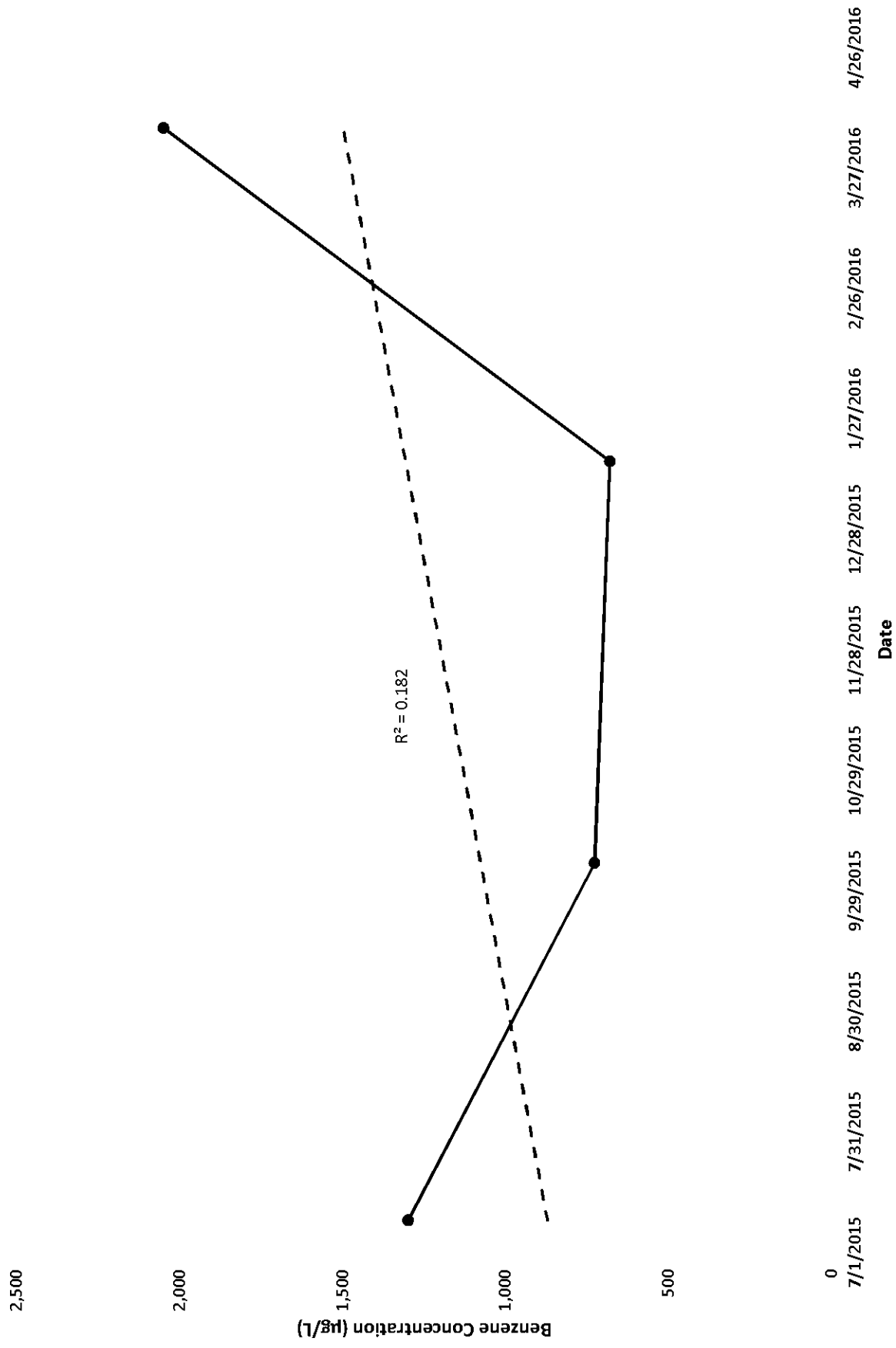


MW-7 Toluene Concentrations vs Time

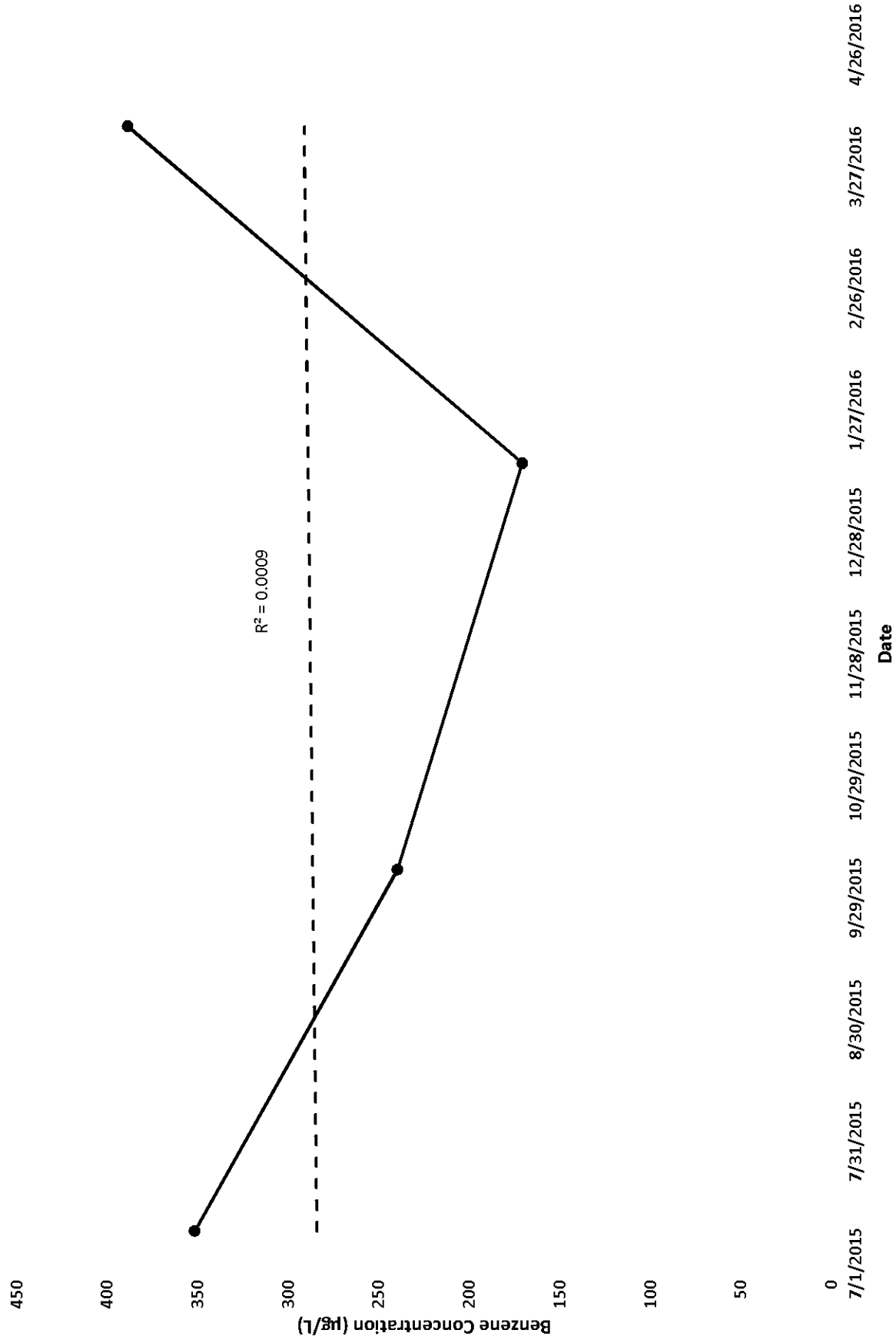


MW-7

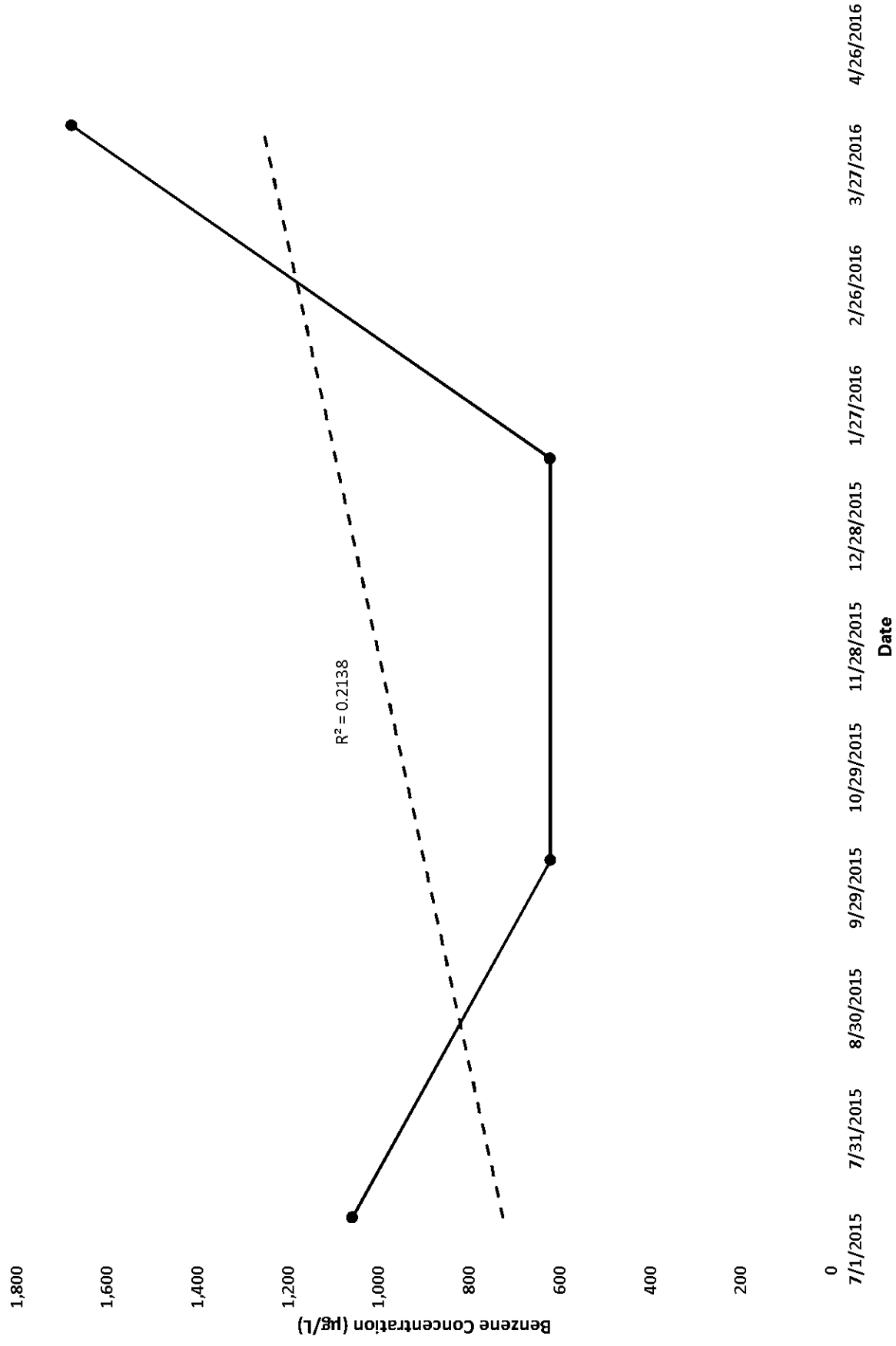
Ethylbenzene Concentrations vs Time



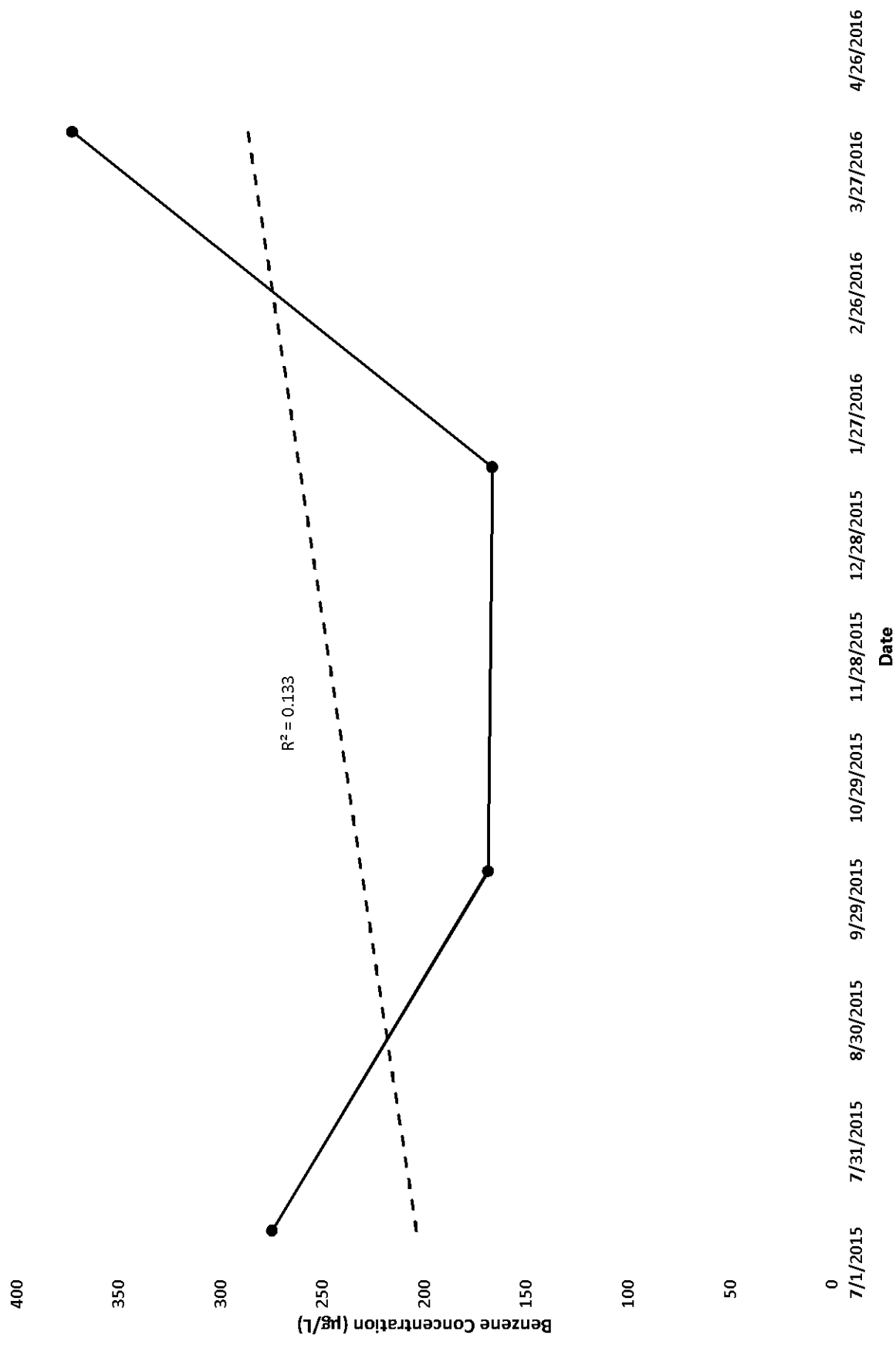
MW-7 Naphthalene Concentrations vs Time



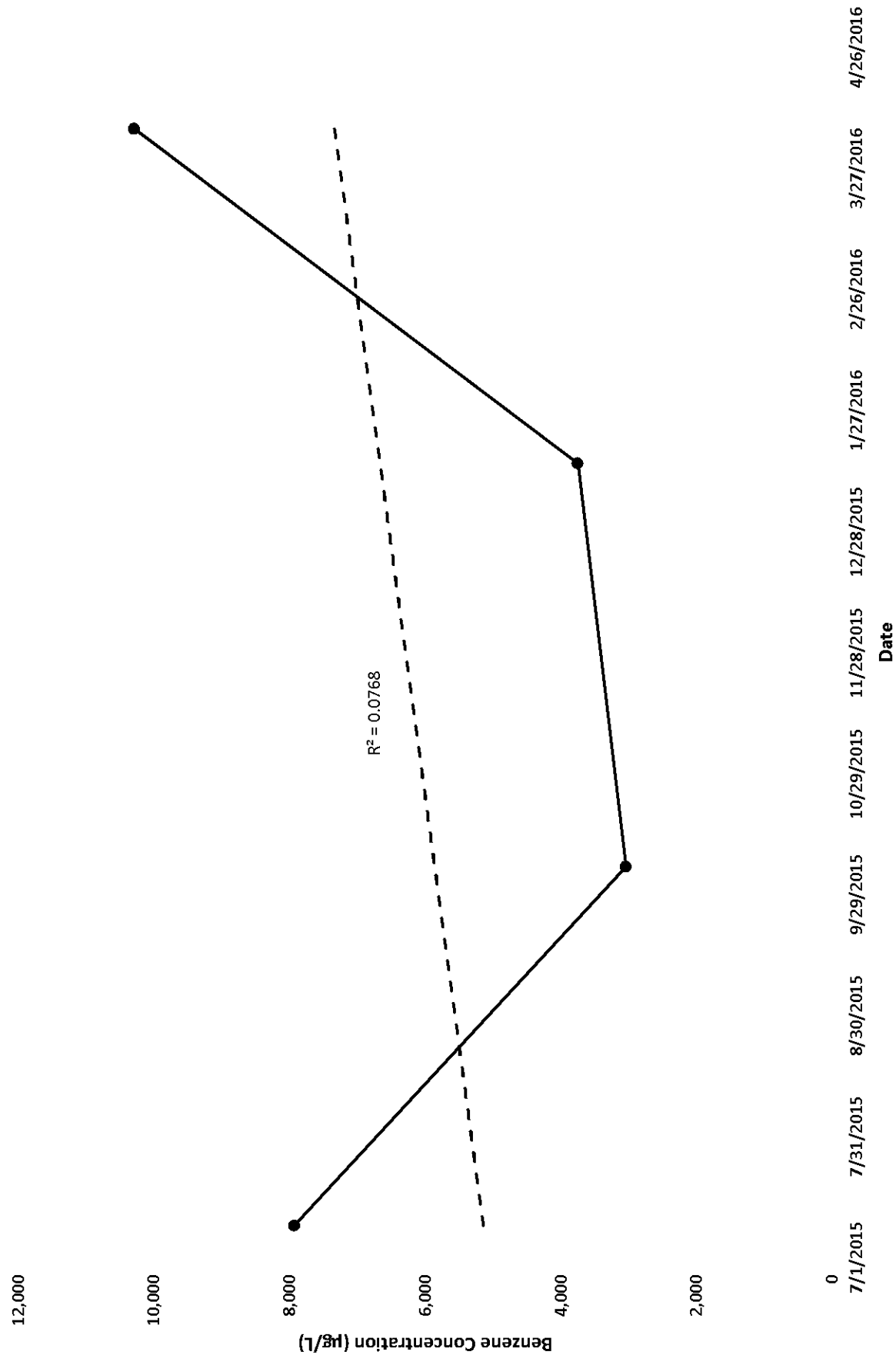
MW-7 1,2,4-TMB Concentrations vs Time



MW-7 1,3,5-TMB Concentrations vs Time

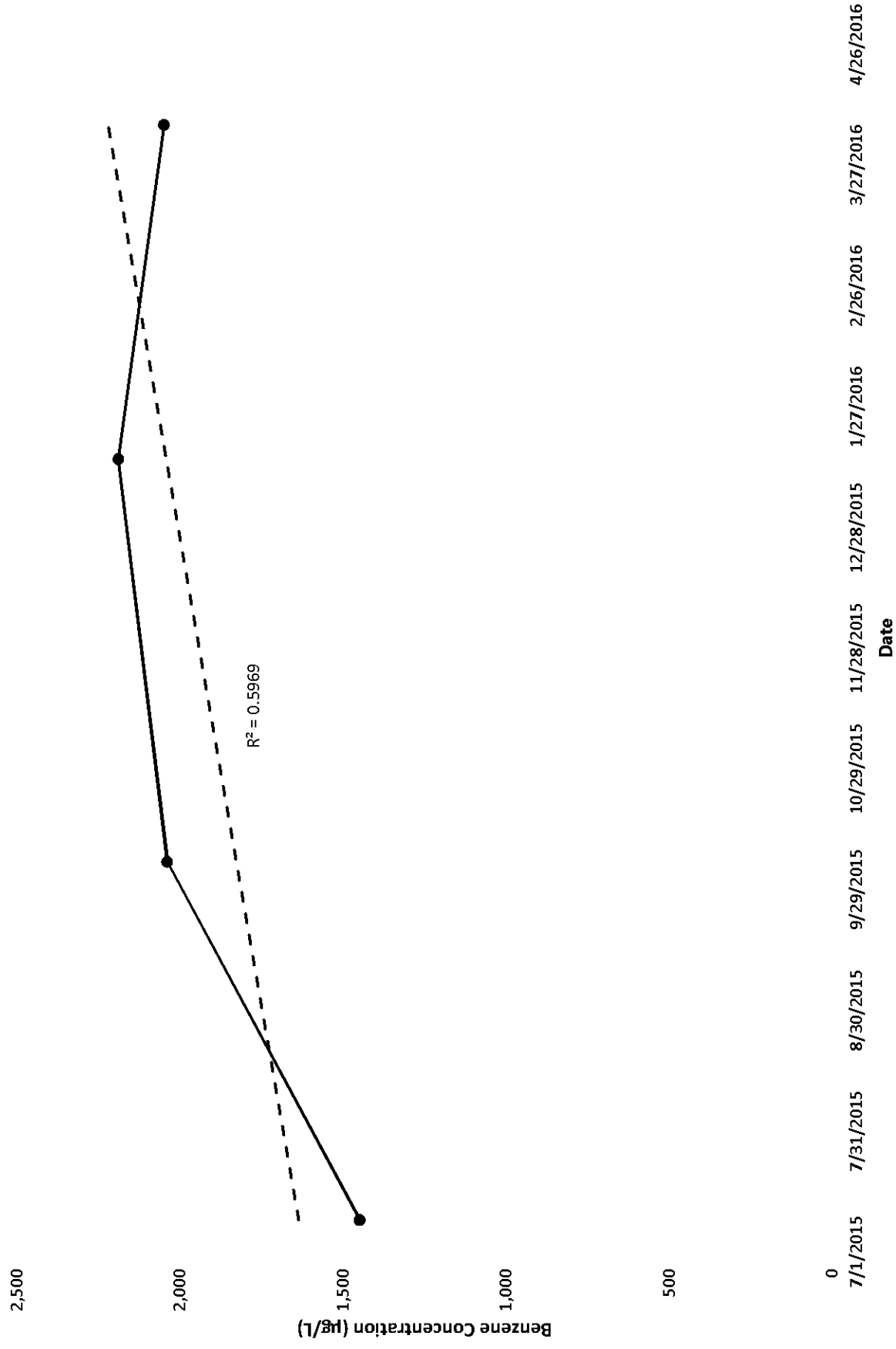


MW-7 Xylenes Concentrations vs Time

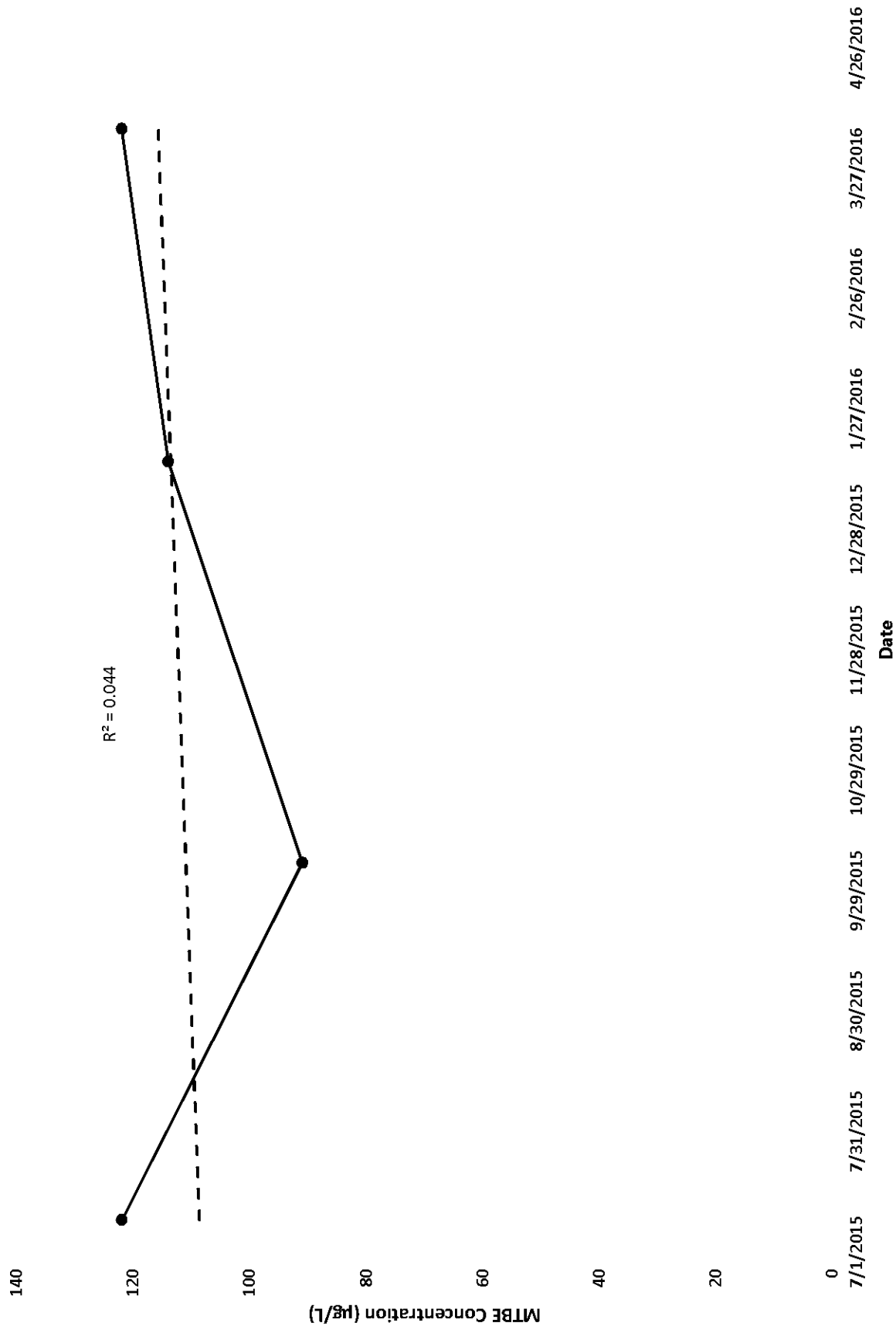


MW-10

Benzene Concentrations vs Time



MW-10 MTBE Concentrations vs Time



APPENDIX N
Quick Domenico Model Output

NEW QUICK DOMENICO

ADVECTIVE TRANSPORT WITH THREE DIMENSIONAL DISPERSION, 1ST ORDER DECAY and RETARDATION - WITH CALIBRATION TOOL											
Project:		Herr Foods, Inc.									
Date:		4/29/2016		Prepared by:		EGD					
				Contaminant:		Benzene Model 1					
SOURCE	Ax	Ay	Az	LAMBDA	SOURCE	SOURCE	Time (days)				
CONC	(ft)	(ft)	(ft)		WIDTH	THICKNESS	(days)				
(MG/L)			>= .001	day-1	(ft)	(ft)					
	2.419	3.00E+01	3.00E+00	1.00E-03	0	40	10	6888			
Hydraulic	Hydraulic		Soil Bulk		Frac.	Retard-	V				
Cond	Gradient	Porosity	Density	KOC	Org. Carb.	ation	V				
(ft/day)	(ft/ft)	(dec. frac.)	(g/cm ³)			(R)	(ft/day)				
	3.10E-01	0.018	0.08	1.788	58	1.18E-02	16.29634	0.004280102			
<div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>NEW QUICK_DOMENICO.XLS</p> <p>SPREADSHEET APPLICATION OF "AN ANALYTICAL MODEL FOR MULTIDIMENSIONAL TRANSPORT OF A DECAYING CONTAMINANT SPECIES" P.A. Domenico (1987) Modified to Include Retardation</p> </div>											
Point Concentration											
x(ft)	y(ft)	z(ft)									
	140	0									
	x(ft)	y(ft)		z(ft)							
Conc. At	140	0		0							
at	6888	days =									
				0.005							
				mg/l							
AREAL MODEL				CALCULATION DOMAIN							
Length (ft)				300							
Width (ft)				40							
	30	60	90	120	150	180	210	240	270	300	
40	0.081	0.082	0.034	0.008	0.001	0.000	0.000	0.000	0.000	0.000	
20	0.597	0.273	0.083	0.016	0.002	0.000	0.000	0.000	0.000	0.000	
0	1.035	0.401	0.111	0.021	0.002	0.000	0.000	0.000	0.000	0.000	
-20	0.597	0.273	0.083	0.016	0.002	0.000	0.000	0.000	0.000	0.000	
-40	0.081	0.082	0.034	0.008	0.001	0.000	0.000	0.000	0.000	0.000	
Field Data:	Centerline C Concentration			2.419	1.933	0.01					
	Distance from Source			0	140	300					

Centerline Plot (linear)

Centerline Plot (log)

NEW QUICK DOMENICO

ADVECTIVE TRANSPORT WITH THREE DIMENSIONAL DISPERSION,1ST ORDER DECAY and RETARDATION - WITH CALIBRATION TOOL																																				
Project:	Herr Foods, Inc.																																			
Date:	4/29/2016	Prepared by:	EGD																																	
		Contaminant:	Benzene Model 2																																	
SOURCE	Ax	Ay	Az	LAMBDA	SOURCE	SOURCE	Time (days)																													
CONC	(ft)	(ft)	(ft)		WIDTH	THICKNESS	(days)																													
(MG/L)			>=.001	day-1	(ft)	(ft)																														
	2.419	3.00E+00	3.00E-01	1.00E-03	0	40	10	6888																												
Hydraulic	Hydraulic		Soil Bulk		Frac.	Retard-	V																													
Cond	Gradient	Porosity	Density	KOC	Org. Carb.	ation	(=K*i/n*R)																													
(ft/day)	(ft/ft)	(dec. frac.)	(g/cm ³)			(R)	(ft/day)																													
	3.10E-01	0.018	0.08	1.788	58	1.18E-02	16.29634	0.004280102																												
<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>Point Concentration</p> <table border="1"> <thead> <tr> <th>x(ft)</th> <th>y(ft)</th> <th>z(ft)</th> </tr> </thead> <tbody> <tr> <td>140</td> <td>0</td> <td>0</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>x(ft)</td> <td>y(ft)</td> </tr> <tr> <td>Conc. At</td> <td>140</td> <td>0</td> </tr> <tr> <td>at</td> <td>6888 days =</td> <td></td> </tr> <tr> <td></td> <td></td> <td>0.000</td> </tr> <tr> <td></td> <td></td> <td>mg/l</td> </tr> </tbody> </table> </div> <div style="width: 35%;"> <p>Centerline Plot (linear)</p> </div> <div style="width: 30%;"> <p>Centerline Plot (log)</p> </div> </div>													x(ft)	y(ft)	z(ft)	140	0	0					x(ft)	y(ft)	Conc. At	140	0	at	6888 days =				0.000			mg/l
x(ft)	y(ft)	z(ft)																																		
140	0	0																																		
	x(ft)	y(ft)																																		
Conc. At	140	0																																		
at	6888 days =																																			
		0.000																																		
		mg/l																																		
	AREAL	CALCULATION																																		
	MODEL	DOMAIN																																		
	Length (ft)	300																																		
	Width (ft)	40																																		
	30	60	90	120	150	180	210	240	270	300																										
40	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000																										
20	0.586	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000																										
0	1.172	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000																										
-20	0.586	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000																										
-40	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000																										
Field Data:	Centerline C Concentration			2.419	1.933	0.01																														
	Distance from Source			0	140	300																														

NEW QUICK DOMENICO

ADVECTIVE TRANSPORT WITH THREE DIMENSIONAL DISPERSION, 1ST ORDER DECAY and RETARDATION - WITH CALIBRATION TOOL																															
Project:	Herr Foods, Inc.																														
Date:	4/29/2016	Prepared by:	EGD																												
		Contaminant:	Benzene Model 3																												
SOURCE	Ax	Ay	Az	LAMBDA	SOURCE	SOURCE	Time (days)																								
CONC	(ft)	(ft)	(ft)		WIDTH	THICKNESS	(days)																								
(MG/L)			>=.001	day-1	(ft)	(ft)																									
2.419	1.50E+02	1.50E+01	1.00E-03	0	40	10	6888																								
Hydraulic	Hydraulic		Soil Bulk		Frac.	Retard-	V																								
Cond	Gradient	Porosity	Density	KOC	Org. Carb.	ation	($=K*i/n*R$)																								
(ft/day)	(ft/ft)	(dec. frac.)	(g/cm³)			(R)	(ft/day)																								
3.10E-01	0.018	0.08	1.788	58	1.18E-02	16.29634	0.004280102																								
<div> <div> <div>Point Concentration</div> <table> <tr> <th>x(ft)</th> <th>y(ft)</th> <th>z(ft)</th> </tr> <tr> <td>140</td> <td>0</td> <td>0</td> </tr> </table> </div> <div> <table> <tr> <th></th> <th>x(ft)</th> <th>y(ft)</th> <th>z(ft)</th> </tr> <tr> <td>Conc. At</td> <td>140</td> <td>0</td> <td>0</td> </tr> <tr> <td>at</td> <td>6888</td> <td>days =</td> <td>0.070</td> </tr> <tr> <td></td> <td></td> <td></td> <td>mg/l</td> </tr> </table> </div> </div>										x(ft)	y(ft)	z(ft)	140	0	0		x(ft)	y(ft)	z(ft)	Conc. At	140	0	0	at	6888	days =	0.070				mg/l
x(ft)	y(ft)	z(ft)																													
140	0	0																													
	x(ft)	y(ft)	z(ft)																												
Conc. At	140	0	0																												
at	6888	days =	0.070																												
			mg/l																												
<div> <div>AREAL</div> <div>MODEL</div> <div>Length (ft)</div> <div>Width (ft)</div> <div>30</div> <div>60</div> <div>90</div> <div>120</div> <div>150</div> <div>180</div> <div>210</div> <div>240</div> <div>270</div> <div>300</div> </div> <div> <div>CALCULATION</div> <div>DOMAIN</div> <div>300</div> <div>40</div> </div>																															
40	0.277	0.216	0.142	0.086	0.048	0.025	0.012	0.005	0.002																						
20	0.492	0.295	0.176	0.101	0.054	0.027	0.013	0.006	0.002																						
0	0.596	0.327	0.188	0.106	0.057	0.028	0.013	0.006	0.002																						
-20	0.492	0.295	0.176	0.101	0.054	0.027	0.013	0.006	0.002																						
-40	0.277	0.216	0.142	0.086	0.048	0.025	0.012	0.005	0.002																						
Field Data:	Centerline C Concentration			2.419	1.933	0.01																									
	Distance from Source			0	140	300																									

NEW QUICK DOMENICO

ADVECTIVE TRANSPORT WITH THREE DIMENSIONAL DISPERSION, 1ST ORDER DECAY and RETARDATION - WITH CALIBRATION TOOL										
Project:		Herr Foods, Inc.								
Date:		4/29/2016		Prepared by:		EGD				
				Contaminant:		Benzene Model 4				
SOURCE	Ax	Ay	Az	LAMBDA	SOURCE	SOURCE	Time (days)			
CONC	(ft)	(ft)	(ft)		WIDTH	THICKNESS	(days)			
(MG/L)			>= .001	day-1	(ft)	(ft)				
	2.419	3.00E+01	3.00E+00	1.00E-03	0	40	10	6888		
Hydraulic	Hydraulic		Soil Bulk		Frac.	Retard-	V			
Cond	Gradient	Porosity	Density	KOC	Org. Carb.	ation	($=K*i/n*R$)			
(ft/day)	(ft/ft)	(dec. frac.)	(g/cm ³)			(R)	(ft/day)			
	3.10E-02	0.018	0.08	1.788	58	1.18E-02	16.29634	0.00042801		
Point Concentration										
x(ft)	y(ft)	z(ft)								
	140	0								
	x(ft)	y(ft)								
		140								
Conc. At		0								
at		6888 days =								
		0.000								
		mg/l								
AREAL		CALCULATION								
MODEL		DOMAIN								
Length (ft)		300								
Width (ft)		40								
	30	60	90	120	150	180	210	240	270	300
40	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.044	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
-20	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
-40	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Field Data:	Centerline C Concentration			2.419	1.933	0.01				
	Distance from Source			0	140	300				

NEW QUICK_DOMENICO.XLS

SPREADSHEET APPLICATION OF
"AN ANALYTICAL MODEL FOR
MULTIDIMENSIONAL TRANSPORT OF A
DECAYING CONTAMINANT SPECIES"
P.A. Domenico (1987)
Modified to Include Retardation

Centerline Plot (linear)

Centerline Plot (log)

NEW QUICK DOMENICO

ADVECTIVE TRANSPORT WITH THREE DIMENSIONAL DISPERSION, 1ST ORDER DECAY and RETARDATION - WITH CALIBRATION TOOL											
Project:		Herr Foods, Inc.									
Date:		4/29/2016		Prepared by:		EGD					
				Contaminant:		Benzene Model 5					
SOURCE	Ax	Ay	Az	LAMBDA	SOURCE	SOURCE	Time (days)				
CONC	(ft)	(ft)	(ft)		WIDTH	THICKNESS	(days)				
(MG/L)			>= .001	day-1	(ft)	(ft)					
	2.419	3.00E+00	3.00E-01	1.00E-03	0	40	10	6888			
Hydraulic	Hydraulic		Soil Bulk		Frac.	Retard-	V				
Cond	Gradient	Porosity	Density	KOC	Org. Carb.	ation	V				
(ft/day)	(ft/ft)	(dec. frac.)	(g/cm ³)			(R)	(ft/day)				
	3.10E-02	0.018	0.08	1.788	58	1.18E-02	16.29634	0.00042801			
Point Concentration											
x(ft)	y(ft)	z(ft)									
140	0	0									
Conc. At	x(ft)	y(ft)	z(ft)								
at	140	0	0								
	6888	days =									
			0.000								
			mg/l								
AREAL		CALCULATION									
MODEL		DOMAIN									
Length (ft)		300									
Width (ft)		40									
	30	60	90	120	150	180	210	240	270	300	
40	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
-20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
-40	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Field Data:	Centerline C Concentration			2.419	1.933	0.01					
	Distance from Source			0	140	300					

NEW QUICK_DOMENICO.XLS

SPREADSHEET APPLICATION OF
"AN ANALYTICAL MODEL FOR
MULTIDIMENSIONAL TRANSPORT OF A
DECAYING CONTAMINANT SPECIES"
P.A. Domenico (1987)
Modified to Include Retardation

Centerline Plot (linear)

Centerline Plot (log)

NEW QUICK DOMENICO

ADVECTIVE TRANSPORT WITH THREE DIMENSIONAL DISPERSION, 1ST ORDER DECAY and RETARDATION - WITH CALIBRATION TOOL																																																																																																																														
Project:	Herr Foods, Inc.																																																																																																																													
Date:	4/29/2016	Prepared by: EGD																																																																																																																												
		Contaminant: Benzene Model 6																																																																																																																												
SOURCE	Ax	Ay	Az	LAMBDA	SOURCE	SOURCE	Time (days)																																																																																																																							
CONC	(ft)	(ft)	(ft)		WIDTH	THICKNESS	(days)																																																																																																																							
(MG/L)			>=.001	day-1	(ft)	(ft)																																																																																																																								
	2.419	1.50E+02	1.50E+01	1.00E-03	0	40	10	6888																																																																																																																						
Hydraulic	Hydraulic		Soil Bulk		Frac.	Retard-	V																																																																																																																							
Cond	Gradient	Porosity	Density	KOC	Org. Carb.	ation	(=K*i/n*R)																																																																																																																							
(ft/day)	(ft/ft)	(dec. frac.)	(g/cm ³)			(R)	(ft/day)																																																																																																																							
	3.10E-02	0.018	0.08	1.788	58	1.18E-02	16.29634	0.00042801																																																																																																																						
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NEW QUICK DOMENICO

ADVECTIVE TRANSPORT WITH THREE DIMENSIONAL DISPERSION, 1ST ORDER DECAY and RETARDATION - WITH CALIBRATION TOOL											
Project:		Herr Foods, Inc.									
Date:		4/29/2016		Prepared by:		EGD					
				Contaminant:		Benzene Model 7					
SOURCE	Ax	Ay	Az	LAMBDA	SOURCE	SOURCE	Time (days)				
CONC	(ft)	(ft)	(ft)		WIDTH	THICKNESS	(days)				
(MG/L)			>= .001	day-1	(ft)	(ft)					
	2.419	3.00E+01	3.00E+00	1.00E-03	0	40	10	6888			
Hydraulic	Hydraulic		Soil Bulk		Frac.	Retard-	V				
Cond	Gradient	Porosity	Density	KOC	Org. Carb.	ation	V				
(ft/day)	(ft/ft)	(dec. frac.)	(g/cm ³)			(R)	(=K*i/n*R)				
	3.10E+00	0.018	0.08	1.788	58	1.18E-02	16.29634	0.042801022			
Point Concentration											
x(ft)	y(ft)	z(ft)									
140	0	0									
Conc. At	x(ft)	y(ft)	z(ft)								
at	140	0	0								
	6888	days =									
			1.083								
			mg/l								
AREAL		CALCULATION									
MODEL		DOMAIN									
Length (ft)		300									
Width (ft)		40									
	30	60	90	120	150	180	210	240	270	300	
40	0.161	0.337	0.431	0.472	0.479	0.463	0.430	0.387	0.335	0.281	
20	1.178	1.122	1.038	0.946	0.852	0.757	0.661	0.565	0.472	0.383	
0	2.041	1.647	1.386	1.192	1.032	0.891	0.762	0.641	0.529	0.425	
-20	1.178	1.122	1.038	0.946	0.852	0.757	0.661	0.565	0.472	0.383	
-40	0.161	0.337	0.431	0.472	0.479	0.463	0.430	0.387	0.335	0.281	
Field Data:	Centerline C Concentration			2.419	1.933	0.01					
	Distance from Source			0	140	300					

NEW QUICK_DOMENICO.XLS

SPREADSHEET APPLICATION OF
"AN ANALYTICAL MODEL FOR
MULTIDIMENSIONAL TRANSPORT OF A
DECAYING CONTAMINANT SPECIES"
P.A. Domenico (1987)
Modified to Include Retardation

Centerline Plot (linear)

Centerline Plot (log)

NEW QUICK DOMENICO

ADVECTIVE TRANSPORT WITH THREE DIMENSIONAL DISPERSION, 1ST ORDER DECAY AND RETARDATION - WITH CALIBRATION TOOL										
Project:	Herr Foods, Inc.									
Date:	4/29/2016	Prepared by:	EGD							
		Contaminant:	Benzene Model 8							
SOURCE	Ax	Ay	Az	LAMBDA	SOURCE	SOURCE	<div style="text-align: center;"> <p>NEW QUICK_DOMENICO.XLS</p> <p>SPREADSHEET APPLICATION OF "AN ANALYTICAL MODEL FOR MULTIDIMENSIONAL TRANSPORT OF A DECAYING CONTAMINANT SPECIES" P.A. Domenico (1987) Modified to Include Retardation</p> </div>			
CONC	(ft)	(ft)	(ft)		WIDTH	THICKNESS				
(MG/L)			>=.001	day-1	(ft)	(ft)				
	2.419	3.00E+00	3.00E-01	1.00E-03	0.00006	40	10	6888		
Hydraulic	Hydraulic		Soil Bulk		Frac.	Retard-				
Cond	Gradient	Porosity	Density	KOC	Org. Carb.	ation	V			
(ft/day)	(ft/ft)	(dec. frac.)	(g/cm ³)			(R)	(=K*/n*R) (ft/day)			
	3.10E+00	0.018	0.08	1.788	58	1.18E-02	16.29634	0.042801022		
Point Concentration										
x(ft)	y(ft)	z(ft)								
140	0	0								
	x(ft)	y(ft)	z(ft)							
Conc. At	140	0	0							
at	6888 days =				1.931					
					mg/l					
	AREAL	CALCULATION								
	MODEL	DOMAIN								
	Length (ft)	300								
	Width (ft)	40								
	30	60	90	120	150	180	210	240	270	300
40	0.000	0.001	0.007	0.019	0.034	0.051	0.066	0.076	0.071	0.051
20	1.160	1.112	1.067	1.023	0.981	0.938	0.885	0.790	0.614	0.376
0	2.320	2.223	2.120	2.008	1.893	1.775	1.638	1.429	1.088	0.652
-20	1.160	1.112	1.067	1.023	0.981	0.938	0.885	0.790	0.614	0.376
-40	0.000	0.001	0.007	0.019	0.034	0.051	0.066	0.076	0.071	0.051
Field Data:	Centerline C Concentration			2.419	1.933	0.01				
	Distance from Source			0	140	300				

NEW QUICK DOMENICO

ADVECTIVE TRANSPORT WITH THREE DIMENSIONAL DISPERSION, 1ST ORDER DECAY and RETARDATION - WITH CALIBRATION TOOL											
Project:		Herr Foods, Inc.									
Date:		4/29/2016		Prepared by:		EGD					
				Contaminant:		Benzene Model 9					
SOURCE	Ax	Ay	Az	LAMBDA	SOURCE	SOURCE	Time (days)				
CONC	(ft)	(ft)	(ft)		WIDTH	THICKNESS	(days)				
(MG/L)			>= .001	day-1	(ft)	(ft)					
	2.419	1.50E+02	1.50E+01	1.00E-03	0	40	10	6888			
Hydraulic	Hydraulic		Soil Bulk		Frac.	Retard-	V				
Cond	Gradient	Porosity	Density	KOC	Org. Carb.	ation	(=K*i/n*R)				
(ft/day)	(ft/ft)	(dec. frac.)	(g/cm ³)			(R)	(ft/day)				
	3.10E+00	0.018	0.08	1.788	58	1.18E-02	16.29634	0.042801022			
<div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>NEW QUICK_DOMENICO.XLS</p> <p>SPREADSHEET APPLICATION OF</p> <p>"AN ANALYTICAL MODEL FOR</p> <p>MULTIDIMENSIONAL TRANSPORT OF A</p> <p>DECAYING CONTAMINANT SPECIES"</p> <p>P.A. Domenico (1987)</p> <p>Modified to Include Retardation</p> </div>											
Point Concentration											
x(ft)	y(ft)	z(ft)									
	140	0									
	x(ft)	y(ft)		z(ft)							
Conc. At	140	0		0							
at	6888	days =									
				0.410							
				mg/l							
AREAL MODEL				CALCULATION DOMAIN							
Length (ft)				300							
Width (ft)				40							
	30	60	90	120	150	180	210	240	270	300	
40	0.452	0.456	0.413	0.368	0.328	0.292	0.260	0.232	0.206	0.182	
20	0.804	0.621	0.510	0.432	0.373	0.325	0.286	0.251	0.221	0.195	
0	0.974	0.689	0.547	0.456	0.389	0.337	0.295	0.258	0.227	0.199	
-20	0.804	0.621	0.510	0.432	0.373	0.325	0.286	0.251	0.221	0.195	
-40	0.452	0.456	0.413	0.368	0.328	0.292	0.260	0.232	0.206	0.182	
Field Data:	Centerline C Concentration			2.419	1.933	0.01					
	Distance from Source			0	140	300					

Centerline Plot (linear)

Centerline Plot (log)

NEW QUICK DOMENICO

ADVECTIVE TRANSPORT WITH THREE DIMENSIONAL DISPERSION, 1ST ORDER DECAY and RETARDATION - WITH CALIBRATION TOOL							
Project:	Herr Foods, Inc.						
Date:	4/29/2016	Prepared by:	EGD				
		Contaminant:	Benzene Model 10				
SOURCE	Ax	Ay	Az	LAMBDA	SOURCE	SOURCE	Time (days)
CONC	(ft)	(ft)	(ft)		WIDTH	THICKNESS	(days)
(MG/L)			>= .001	day-1	(ft)	(ft)	
	2.419	3.00E+00	3.00E-01	1.00E-03	0.00006	40	10
6888							
Hydraulic	Hydraulic		Soil Bulk		Frac.	Retard-	V
Cond	Gradient	Porosity	Density	KOC	Org. Carb.	ation	(=K*i/n*R)
(ft/day)	(ft/ft)	(dec. frac.)	(g/cm ³)			(R)	(ft/day)
	2.46E+00	0.018	0.08	1.788	58	1.18E-02	16.29634
							0.033964682
<div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>NEW QUICK_DOMENICO.XLS</p> <p>SPREADSHEET APPLICATION OF</p> <p>"AN ANALYTICAL MODEL FOR</p> <p>MULTIDIMENSIONAL TRANSPORT OF A</p> <p>DECAYING CONTAMINANT SPECIES"</p> <p>P.A. Domenico (1987)</p> <p>Modified to Include Retardation</p> </div>							
Point Concentration							
x(ft)	y(ft)	z(ft)					
140	0	0					
	x(ft)	y(ft)	z(ft)				
Conc. At	140	0	0				
at	6888	days =					
			1.827				
			mg/l				
AREAL MODEL DOMAIN							
Length (ft)	300						
Width (ft)	40						
	30	60	90	120	150	180	210
40	0.000	0.001	0.007	0.018	0.032	0.045	0.048
20	1.147	1.088	1.033	0.979	0.919	0.823	0.635
0	2.295	2.175	2.052	1.921	1.775	1.557	1.175
-20	1.147	1.088	1.033	0.979	0.919	0.823	0.635
-40	0.000	0.001	0.007	0.018	0.032	0.045	0.048
Field Data:	Centerline C Concentration		2.419	1.933	0.01		
	Distance from Source		0	140	300		

Centerline Plot (linear)

Centerline Plot (log)

NEW QUICK DOMENICO

ADVECTIVE TRANSPORT WITH THREE DIMENSIONAL DISPERSION, 1ST ORDER DECAY and RETARDATION - WITH CALIBRATION TOOL																																																																													
Project:		Herr Foods, Inc.																																																																											
Date:		4/29/2016		Prepared by:		EGD																																																																							
				Contaminant:		Benzene Model 10 @ 21 Years																																																																							
SOURCE	Ax	Ay	Az	LAMBDA	SOURCE	SOURCE	Time (days)																																																																						
CONC	(ft)	(ft)	(ft)		WIDTH	THICKNESS	(days)																																																																						
(MG/L)			>= .001	day-1	(ft)	(ft)																																																																							
	2.419	3.00E+00	3.00E-01	1.00E-03	0.00006	40	10																																																																						
7670																																																																													
Hydraulic	Hydraulic		Soil Bulk		Frac.	Retard-	V																																																																						
Cond	Gradient	Porosity	Density	KOC	Org. Carb.	ation	(=K*i/n*R)																																																																						
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40	0.000	0.001	0.007	0.018	0.032	0.047	0.057	0.055	0.038	0.017																																																																			
20	1.147	1.088	1.033	0.979	0.927	0.866	0.762	0.572	0.325	0.126																																																																			
0	2.295	2.175	2.052	1.923	1.790	1.638	1.410	1.036	0.575	0.218																																																																			
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NEW QUICK DOMENICO

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Date:	4/29/2016				Prepared by:	EGD																																																																																																																											
					Contaminant:	Benzene Model 10 @ 30 Years																																																																																																																											
SOURCE	Ax	Ay	Az	LAMBDA	SOURCE	SOURCE	Time (days)																																																																																																																										
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NEW QUICK DOMENICO

ADVECTIVE TRANSPORT WITH THREE DIMENSIONAL DISPERSION,1ST ORDER DECAY and RETARDATION - WITH CALIBRATION TOOL															
Project:		Herr Foods, Inc.													
Date:		4/29/2016		Prepared by:		EGD									
				Contaminant:		Benzene Model 10 @ 32 Years									
SOURCE	Ax	Ay	Az	LAMBDA	SOURCE	SOURCE	Time (days)								
CONC	(ft)	(ft)	(ft)		WIDTH	THICKNESS	(days)								
(MG/L)			>=.001	day-1	(ft)	(ft)									
2.419	3.00E+00	3.00E-01	1.00E-03	0.00006	40	10	11689								
Hydraulic	Hydraulic		Soil Bulk		Frac.	Retard-	V								
Cond	Gradient	Porosity	Density	KOC	Org. Carb.	ation	(=K*i/n*R)								
(ft/day)	(ft/ft)	(dec. frac.)	(g/cm ³)			(R)	(ft/day)								
2.46E+00	0.018	0.08	1.788	58	1.18E-02	16.29634	0.033964682								
Point Concentration															
x(ft)	y(ft)	z(ft)													
300	0	0													
	x(ft)	y(ft)		z(ft)											
Conc. At	300	0		0											
at	11689 days =	1.210													
		mg/l													
AREAL MODEL		CALCULATION DOMAIN													
Length (ft)		300													
Width (ft)		40													
	30	60	90	120	150	180	210	240	270	300					
40	0.000	0.001	0.007	0.018	0.033	0.048	0.063	0.076	0.087	0.095					
20	1.147	1.088	1.033	0.980	0.929	0.881	0.836	0.792	0.749	0.698					
0	2.295	2.175	2.052	1.923	1.793	1.667	1.547	1.434	1.326	1.210					
-20	1.147	1.088	1.033	0.980	0.929	0.881	0.836	0.792	0.749	0.698					
-40	0.000	0.001	0.007	0.018	0.033	0.048	0.063	0.076	0.087	0.095					
Field Data:	Centerline C Concentration			2.419	1.933	0.01									
	Distance from Source			0	140	300									

NEW QUICK DOMENICO

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		Contaminant:	Benzene Model 10 @ 38 Years																																																																																																																																																																																						
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<div style="float: right; width: 20%; padding-left: 10px;"> <p>NEW QUICK_DOMENICO.XLS</p> <p>SPREADSHEET APPLICATION OF "AN ANALYTICAL MODEL FOR MULTIDIMENSIONAL TRANSPORT OF A DECAYING CONTAMINANT SPECIES" P.A. Domenico (1987) Modified to Include Retardation</p> </div>																																																																																																																																																																																									
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Date:	4/29/2016	Prepared by:		EGD																													
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SOURCE	Ax	Ay	Az	LAMBDA	SOURCE	SOURCE	Time (days)																										
CONC	(ft)	(ft)	(ft)		WIDTH	THICKNESS	(days)																										
(MG/L)			>=.001	day-1	(ft)	(ft)																											
	0.2	3.00E+01	3.00E+00	1.00E-03	0	40	10	6888																									
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(ft/day)	(ft/ft)	(dec. frac.)	(g/cm ³)			(R)	(ft/day)																										
	3.10E-01	0.018	0.08	1.788	12	1.18E-02	4.16476	0.016747664																									
<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>Point Concentration</p> <table border="1"> <thead> <tr> <th>x(ft)</th> <th>y(ft)</th> <th>z(ft)</th> </tr> </thead> <tbody> <tr> <td>140</td> <td>0</td> <td>0</td> </tr> <tr> <td></td> <td>x(ft)</td> <td>y(ft)</td> </tr> <tr> <td>Conc. At</td> <td>140</td> <td>0</td> </tr> <tr> <td>at</td> <td>6888</td> <td>days =</td> </tr> <tr> <td></td> <td></td> <td>0.039</td> </tr> <tr> <td></td> <td></td> <td>mg/l</td> </tr> </tbody> </table> </div> <div style="width: 35%;"> <p>Centerline Plot (linear)</p> </div> <div style="width: 35%;"> <p>Centerline Plot (log)</p> </div> </div>													x(ft)	y(ft)	z(ft)	140	0	0		x(ft)	y(ft)	Conc. At	140	0	at	6888	days =			0.039			mg/l
x(ft)	y(ft)	z(ft)																															
140	0	0																															
	x(ft)	y(ft)																															
Conc. At	140	0																															
at	6888	days =																															
		0.039																															
		mg/l																															
		AREAL MODEL		CALCULATION DOMAIN																													
		Length (ft)		300																													
		Width (ft)		40																													
		30	60		90	120	150	180	210	240	270	300																					
40	0.012	0.022	0.024	0.021	0.016	0.010	0.006	0.003	0.002	0.001																							
20	0.085	0.072	0.057	0.041	0.028	0.017	0.009	0.005	0.002	0.001																							
0	0.146	0.106	0.076	0.052	0.034	0.020	0.011	0.005	0.002	0.001																							
-20	0.085	0.072	0.057	0.041	0.028	0.017	0.009	0.005	0.002	0.001																							
-40	0.012	0.022	0.024	0.021	0.016	0.010	0.006	0.003	0.002	0.001																							
Field Data:	Centerline C Concentration				0.2	0.122	0.078																										
	Distance from Source				0	140	300																										

NEW QUICK DOMENICO

ADVECTIVE TRANSPORT WITH THREE DIMENSIONAL DISPERSION, 1ST ORDER DECAY and RETARDATION - WITH CALIBRATION TOOL										
Project:		Herr Foods, Inc.								
Date:		4/29/2016		Prepared by:		EGD				
				Contaminant:		MTBE Model 2				
SOURCE	Ax	Ay	Az	LAMBDA	SOURCE	SOURCE	Time (days)			
CONC	(ft)	(ft)	(ft)		WIDTH	THICKNESS	(days)			
(MG/L)			>=.001	day-1	(ft)	(ft)				
	0.2	3.00E+00	3.00E-01	1.00E-03	0	40	10	6888		
Hydraulic	Hydraulic		Soil Bulk		Frac.	Retard-	V			
Cond	Gradient	Porosity	Density	KOC	Org. Carb.	ation	($=K*i/n*R$)			
(ft/day)	(ft/ft)	(dec. frac.)	(g/cm ³)			(R)	(ft/day)			
	3.10E-01	0.018	0.08	1.788	12	1.18E-02	4.16476	0.016747664		
<div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>NEW QUICK_DOMENICO.XLS</p> <p>SPREADSHEET APPLICATION OF</p> <p>"AN ANALYTICAL MODEL FOR</p> <p>MULTIDIMENSIONAL TRANSPORT OF A</p> <p>DECAYING CONTAMINANT SPECIES"</p> <p>P.A. Domenico (1987)</p> <p>Modified to Include Retardation</p> </div>										
Point Concentration										
x(ft)	y(ft)	z(ft)								
140	0	0								
			x(ft)	y(ft)	z(ft)					
Conc. At	140	0	0							
at	6888	days =	0.034							
			mg/l							
AREAL MODEL DOMAIN										
Length (ft)				300						
Width (ft)				40						
	30	60	90	120	150	180	210	240	270	300
40	0.000	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000
20	0.100	0.098	0.083	0.043	0.009	0.001	0.000	0.000	0.000	0.000
0	0.200	0.196	0.165	0.084	0.018	0.001	0.000	0.000	0.000	0.000
-20	0.100	0.098	0.083	0.043	0.009	0.001	0.000	0.000	0.000	0.000
-40	0.000	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000
Field Data:	Centerline C Concentration			0.2	0.122	0.078				
	Distance from Source			0	140	300				

Centerline Plot (linear)

Centerline Plot (log)

NEW QUICK DOMENICO

ADVECTIVE TRANSPORT WITH THREE DIMENSIONAL DISPERSION, 1ST ORDER DECAY and RETARDATION - WITH CALIBRATION TOOL										
Project:		Herr Foods, Inc.								
Date:		4/29/2016		Prepared by:		EGD				
				Contaminant:		MTBE Model 3				
SOURCE	Ax	Ay	Az	LAMBDA	SOURCE	SOURCE	Time (days)			
CONC	(ft)	(ft)	(ft)		WIDTH	THICKNESS	(days)			
(MG/L)			>=.001	day-1	(ft)	(ft)				
	0.2	1.50E+02	1.50E+01	1.00E-03	0	40	10	6888		
Hydraulic	Hydraulic		Soil Bulk		Frac.	Retard-	V			
Cond	Gradient	Porosity	Density	KOC	Org. Carb.	ation	V			
(ft/day)	(ft/ft)	(dec. frac.)	(g/cm ³)			(R)	(=K*i/n*R)			
	3.10E-01	0.018	0.08	1.788	12	1.18E-02	4.16476	0.016747664		
<div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>NEW QUICK_DOMENICO.XLS</p> <p>SPREADSHEET APPLICATION OF</p> <p>"AN ANALYTICAL MODEL FOR</p> <p>MULTIDIMENSIONAL TRANSPORT OF A</p> <p>DECAYING CONTAMINANT SPECIES"</p> <p>P.A. Domenico (1987)</p> <p>Modified to Include Retardation</p> </div>										
Point Concentration										
x(ft)	y(ft)	z(ft)								
140	0	0								
	x(ft)	y(ft)		z(ft)						
Conc. At	140	0		0						
at	6888	days =		0.022						
				mg/l						
AREAL				CALCULATION						
MODEL				DOMAIN						
Length (ft)				300						
Width (ft)				40						
	30	60	90	120	150	180	210	240	270	300
40	0.031	0.030	0.025	0.021	0.017	0.014	0.011	0.008	0.006	0.005
20	0.055	0.040	0.031	0.024	0.019	0.015	0.012	0.009	0.007	0.005
0	0.067	0.045	0.033	0.026	0.020	0.016	0.012	0.009	0.007	0.005
-20	0.055	0.040	0.031	0.024	0.019	0.015	0.012	0.009	0.007	0.005
-40	0.031	0.030	0.025	0.021	0.017	0.014	0.011	0.008	0.006	0.005
Field Data:	Centerline C Concentration			0.2	0.122	0.078				
	Distance from Source			0	140	300				

Centerline Plot (linear)

Centerline Plot (log)

NEW QUICK DOMENICO

ADVECTIVE TRANSPORT WITH THREE DIMENSIONAL DISPERSION, 1ST ORDER DECAY and RETARDATION - WITH CALIBRATION TOOL																																
Project:	Herr Foods, Inc.																															
Date:	4/29/2016	Prepared by:	EGD																													
		Contaminant:	MTBE Model 4																													
SOURCE	Ax	Ay	Az	LAMBDA	SOURCE	SOURCE	Time (days)																									
CONC	(ft)	(ft)	(ft)		WIDTH	THICKNESS	(days)																									
(MG/L)			>=.001	day-1	(ft)	(ft)																										
	0.2	3.00E+01	3.00E+00	1.00E-03	0	40	10	6888																								
Hydraulic	Hydraulic		Soil Bulk		Frac.	Retard-	V																									
Cond	Gradient	Porosity	Density	KOC	Org. Carb.	ation	V																									
(ft/day)	(ft/ft)	(dec. frac.)	(g/cm ³)			(R)	(ft/day)																									
	3.10E-02	0.018	0.08	1.788	12	1.18E-02	4.16476	0.001674766																								
<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>Point Concentration</p> <table border="1"> <thead> <tr> <th>x(ft)</th> <th>y(ft)</th> <th>z(ft)</th> </tr> </thead> <tbody> <tr> <td>140</td> <td>0</td> <td>0</td> </tr> <tr> <td></td> <td>x(ft)</td> <td>y(ft)</td> </tr> <tr> <td>Conc. At</td> <td>140</td> <td>0</td> </tr> <tr> <td>at</td> <td>6888</td> <td>days =</td> </tr> <tr> <td></td> <td></td> <td>0.000</td> </tr> <tr> <td></td> <td></td> <td>mg/l</td> </tr> </tbody> </table> </div> <div style="width: 35%;"> <p>Centerline Plot (linear)</p> </div> <div style="width: 30%;"> <p>Centerline Plot (log)</p> </div> </div>												x(ft)	y(ft)	z(ft)	140	0	0		x(ft)	y(ft)	Conc. At	140	0	at	6888	days =			0.000			mg/l
x(ft)	y(ft)	z(ft)																														
140	0	0																														
	x(ft)	y(ft)																														
Conc. At	140	0																														
at	6888	days =																														
		0.000																														
		mg/l																														
	AREAL MODEL		CALCULATION DOMAIN																													
	Length (ft)		300																													
	Width (ft)		40																													
	30	60	90	120	150	180	210	240	270	300																						
40	0.003	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000																						
20	0.024	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000																						
0	0.042	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000																						
-20	0.024	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000																						
-40	0.003	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000																						
Field Data:	Centerline C Concentration			0.2	0.122	0.078																										
	Distance from Source			0	140	300																										

NEW QUICK DOMENICO

ADVECTIVE TRANSPORT WITH THREE DIMENSIONAL DISPERSION, 1ST ORDER DECAY and RETARDATION - WITH CALIBRATION TOOL										
Project:		Herr Foods, Inc.								
Date:		4/29/2016		Prepared by:		EGD				
				Contaminant:		MTBE Model 5				
SOURCE	Ax	Ay	Az	LAMBDA	SOURCE	SOURCE	Time (days)			
CONC	(ft)	(ft)	(ft)		WIDTH	THICKNESS	(days)			
(MG/L)			>=.001	day-1	(ft)	(ft)				
	0.2	3.00E+00	3.00E-01	1.00E-03	0	40	10	6888		
Hydraulic	Hydraulic		Soil Bulk		Frac.	Retard-	V			
Cond	Gradient	Porosity	Density	KOC	Org. Carb.	ation	($=K*i/n*R$)			
(ft/day)	(ft/ft)	(dec. frac.)	(g/cm ³)			(R)	(ft/day)			
	3.10E-02	0.018	0.08	1.788	12	1.18E-02	4.16476	0.001674766		
Point Concentration										
x(ft)	y(ft)	z(ft)								
140	0	0								
		x(ft)		y(ft)		z(ft)				
Conc. At	140	0		0		0				
at	6888	days =		0.000						
		mg/l								
AREAL		CALCULATION								
MODEL		DOMAIN								
Length (ft)		300								
Width (ft)		40								
	30	60	90	120	150	180	210	240	270	300
40	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
-20	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
-40	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Field Data:	Centerline C Concentration			0.2	0.122	0.078				
	Distance from Source			0	140	300				

NEW QUICK_DOMENICO.XLS

SPREADSHEET APPLICATION OF
"AN ANALYTICAL MODEL FOR
MULTIDIMENSIONAL TRANSPORT OF A
DECAYING CONTAMINANT SPECIES"
P.A. Domenico (1987)
Modified to Include Retardation

Centerline Plot (linear)

Centerline Plot (log)

NEW QUICK DOMENICO

ADVECTIVE TRANSPORT WITH THREE DIMENSIONAL DISPERSION, 1ST ORDER DECAY and RETARDATION - WITH CALIBRATION TOOL										
Project:		Herr Foods, Inc.								
Date:		4/29/2016		Prepared by:		EGD				
				Contaminant:		MTBE Model 6				
SOURCE	Ax	Ay	Az	LAMBDA	SOURCE	SOURCE	Time (days)			
CONC	(ft)	(ft)	(ft)		WIDTH	THICKNESS	(days)			
(MG/L)			>=.001	day-1	(ft)	(ft)				
	0.2	1.50E+02	1.50E+01	1.00E-03	0	40	10	6888		
Hydraulic	Hydraulic		Soil Bulk		Frac.	Retard-	V			
Cond	Gradient	Porosity	Density	KOC	Org. Carb.	ation	(=K*i/n*R)			
(ft/day)	(ft/ft)	(dec. frac.)	(g/cm ³)			(R)	(ft/day)			
	3.10E-02	0.018	0.08	1.788	12	1.18E-02	4.16476	0.001674766		
<div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>NEW QUICK_DOMENICO.XLS</p> <p>SPREADSHEET APPLICATION OF</p> <p>"AN ANALYTICAL MODEL FOR</p> <p>MULTIDIMENSIONAL TRANSPORT OF A</p> <p>DECAYING CONTAMINANT SPECIES"</p> <p>P.A. Domenico (1987)</p> <p>Modified to Include Retardation</p> </div>										
Point Concentration										
x(ft)	y(ft)	z(ft)								
140	0	0								
	x(ft)	y(ft)		z(ft)						
Conc. At	140	0		0						
at	6888	days =		0.001						
				mg/l						
AREAL				CALCULATION						
MODEL				DOMAIN						
Length (ft)				300						
Width (ft)				40						
	30	60	90	120	150	180	210	240	270	300
40	0.017	0.010	0.004	0.001	0.000	0.000	0.000	0.000	0.000	0.000
20	0.031	0.013	0.005	0.002	0.000	0.000	0.000	0.000	0.000	0.000
0	0.037	0.015	0.005	0.002	0.000	0.000	0.000	0.000	0.000	0.000
-20	0.031	0.013	0.005	0.002	0.000	0.000	0.000	0.000	0.000	0.000
-40	0.017	0.010	0.004	0.001	0.000	0.000	0.000	0.000	0.000	0.000
Field Data:	Centerline C Concentration			0.2	0.122	0.078				
	Distance from Source			0	140	300				

Centerline Plot (linear)

Centerline Plot (log)

NEW QUICK DOMENICO

ADVECTIVE TRANSPORT WITH THREE DIMENSIONAL DISPERSION, 1ST ORDER DECAY and RETARDATION - WITH CALIBRATION TOOL																																									
Project:	Herr Foods, Inc.																																								
Date:	4/29/2016	Prepared by:		EGD																																					
		Contaminant:		MTBE Model 7																																					
SOURCE	Ax	Ay	Az	LAMBDA	SOURCE	SOURCE	Time (days)																																		
CONC	(ft)	(ft)	(ft)		WIDTH	THICKNESS	(days)																																		
(MG/L)			>=.001	day-1	(ft)	(ft)																																			
	0.2	3.00E+01	3.00E+00	1.00E-03	0	40	10	6888																																	
Hydraulic	Hydraulic		Soil Bulk		Frac.	Retard-	V																																		
Cond	Gradient	Porosity	Density	KOC	Org. Carb.	ation	V																																		
(ft/day)	(ft/ft)	(dec. frac.)	(g/cm ³)			(R)	(ft/day)																																		
	3.10E+00	0.018	0.08	1.788	12	1.18E-02	4.16476	0.167476637																																	
<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>Point Concentration</p> <table border="1"> <thead> <tr> <th>x(ft)</th> <th>y(ft)</th> <th>z(ft)</th> </tr> </thead> <tbody> <tr> <td>140</td> <td>0</td> <td>0</td> </tr> <tr> <td colspan="3"> <table border="1"> <thead> <tr> <th></th> <th>x(ft)</th> <th>y(ft)</th> <th>z(ft)</th> </tr> </thead> <tbody> <tr> <td>Conc. At</td> <td>140</td> <td>0</td> <td>0</td> </tr> <tr> <td>at</td> <td>6888</td> <td>days =</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>0.102</td> </tr> <tr> <td></td> <td></td> <td></td> <td>mg/l</td> </tr> </tbody> </table> </td> </tr> </tbody> </table> </div> <div style="width: 35%;"> <p>Centerline Plot (linear)</p> </div> <div style="width: 35%;"> <p>Centerline Plot (log)</p> </div> </div>													x(ft)	y(ft)	z(ft)	140	0	0	<table border="1"> <thead> <tr> <th></th> <th>x(ft)</th> <th>y(ft)</th> <th>z(ft)</th> </tr> </thead> <tbody> <tr> <td>Conc. At</td> <td>140</td> <td>0</td> <td>0</td> </tr> <tr> <td>at</td> <td>6888</td> <td>days =</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>0.102</td> </tr> <tr> <td></td> <td></td> <td></td> <td>mg/l</td> </tr> </tbody> </table>				x(ft)	y(ft)	z(ft)	Conc. At	140	0	0	at	6888	days =					0.102				mg/l
x(ft)	y(ft)	z(ft)																																							
140	0	0																																							
<table border="1"> <thead> <tr> <th></th> <th>x(ft)</th> <th>y(ft)</th> <th>z(ft)</th> </tr> </thead> <tbody> <tr> <td>Conc. At</td> <td>140</td> <td>0</td> <td>0</td> </tr> <tr> <td>at</td> <td>6888</td> <td>days =</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>0.102</td> </tr> <tr> <td></td> <td></td> <td></td> <td>mg/l</td> </tr> </tbody> </table>				x(ft)	y(ft)	z(ft)	Conc. At	140	0	0	at	6888	days =					0.102				mg/l																			
	x(ft)	y(ft)	z(ft)																																						
Conc. At	140	0	0																																						
at	6888	days =																																							
			0.102																																						
			mg/l																																						
	AREAL MODEL		CALCULATION DOMAIN																																						
	Length (ft)		300																																						
	Width (ft)		40																																						
	30	60	90	120	150	180	210	240	270	300																															
40	0.014	0.029	0.038	0.043	0.046	0.047	0.048	0.048	0.048	0.048																															
20	0.100	0.096	0.091	0.086	0.082	0.078	0.074	0.071	0.068	0.065																															
0	0.173	0.142	0.122	0.109	0.099	0.091	0.085	0.080	0.076	0.072																															
-20	0.100	0.096	0.091	0.086	0.082	0.078	0.074	0.071	0.068	0.065																															
-40	0.014	0.029	0.038	0.043	0.046	0.047	0.048	0.048	0.048	0.048																															
Field Data:	Centerline C Concentration				0.2	0.122	0.078																																		
	Distance from Source				0	140	300																																		

NEW QUICK DOMENICO

ADVECTIVE TRANSPORT WITH THREE DIMENSIONAL DISPERSION, 1ST ORDER DECAY and RETARDATION - WITH CALIBRATION TOOL										
Project:		Herr Foods, Inc.								
Date:		4/29/2016		Prepared by:		EGD				
				Contaminant:		MTBE Model 8				
SOURCE	Ax	Ay	Az	LAMBDA	SOURCE	SOURCE	Time (days)			
CONC	(ft)	(ft)	(ft)		WIDTH	THICKNESS	(days)			
(MG/L)			>=.001	day-1	(ft)	(ft)				
	0.2	3.00E+00	3.00E-01	1.00E-03	0.00056	40	10	6888		
Hydraulic	Hydraulic		Soil Bulk		Frac.	Retard-	V			
Cond	Gradient	Porosity	Density	KOC	Org. Carb.	ation	(=K*i/n*R)			
(ft/day)	(ft/ft)	(dec. frac.)	(g/cm ³)			(R)	(ft/day)			
	3.10E+00	0.018	0.08	1.788	12	1.18E-02	4.16476	0.167476637		
Point Concentration										
x(ft)	y(ft)	z(ft)								
	140	0								
	x(ft)	y(ft)								
		140								
Conc. At		0								
at		6888 days =								
		0.122								
		mg/l								
AREAL		CALCULATION								
MODEL		DOMAIN								
Length (ft)		300								
Width (ft)		40								
	30	60	90	120	150	180	210	240	270	300
40	0.000	0.000	0.000	0.001	0.002	0.003	0.004	0.004	0.005	0.005
20	0.091	0.082	0.074	0.067	0.061	0.055	0.050	0.045	0.041	0.037
0	0.181	0.164	0.147	0.132	0.117	0.104	0.092	0.082	0.072	0.064
-20	0.091	0.082	0.074	0.067	0.061	0.055	0.050	0.045	0.041	0.037
-40	0.000	0.000	0.000	0.001	0.002	0.003	0.004	0.004	0.005	0.005
Field Data:	Centerline C Concentration			0.2	0.122	0.078				
	Distance from Source			0	140	300				

NEW QUICK_DOMENICO.XLS

SPREADSHEET APPLICATION OF
"AN ANALYTICAL MODEL FOR
MULTIDIMENSIONAL TRANSPORT OF A
DECAYING CONTAMINANT SPECIES"
P.A. Domenico (1987)
Modified to Include Retardation

Centerline Plot (linear)

Centerline Plot (log)

NEW QUICK DOMENICO

ADVECTIVE TRANSPORT WITH THREE DIMENSIONAL DISPERSION, 1ST ORDER DECAY and RETARDATION - WITH CALIBRATION TOOL											
Project:		Herr Foods, Inc.									
Date:		4/29/2016		Prepared by:		EGD					
				Contaminant:		MTBE Model 9					
SOURCE	Ax	Ay	Az	LAMBDA	SOURCE	SOURCE	Time (days)				
CONC	(ft)	(ft)	(ft)		WIDTH	THICKNESS	(days)				
(MG/L)			>=.001	day-1	(ft)	(ft)					
	0.2	1.50E+02	1.50E+01	1.00E-03	0	40	10	6888			
Hydraulic	Hydraulic		Soil Bulk		Frac.	Retard-	V				
Cond	Gradient	Porosity	Density	KOC	Org. Carb.	ation	(=K*i/n*R)				
(ft/day)	(ft/ft)	(dec. frac.)	(g/cm ³)			(R)	(ft/day)				
	3.10E+00	0.018	0.08	1.788	12	1.18E-02	4.16476	0.167476637			
<div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>NEW QUICK_DOMENICO.XLS</p> <p>SPREADSHEET APPLICATION OF</p> <p>"AN ANALYTICAL MODEL FOR</p> <p>MULTIDIMENSIONAL TRANSPORT OF A</p> <p>DECAYING CONTAMINANT SPECIES"</p> <p>P.A. Domenico (1987)</p> <p>Modified to Include Retardation</p> </div>											
Point Concentration											
x(ft)	y(ft)	z(ft)									
	140	0									
	x(ft)	y(ft)		z(ft)							
Conc. At	140	0		0							
at	6888	days =									
				0.046							
				mg/l							
AREAL MODEL				CALCULATION DOMAIN							
Length (ft)				300							
Width (ft)				40							
	30	60	90	120	150	180	210	240	270	300	
40	0.045	0.046	0.044	0.040	0.038	0.035	0.033	0.031	0.030	0.028	
20	0.079	0.063	0.054	0.048	0.043	0.039	0.036	0.034	0.032	0.030	
0	0.096	0.070	0.058	0.050	0.045	0.041	0.038	0.035	0.033	0.031	
-20	0.079	0.063	0.054	0.048	0.043	0.039	0.036	0.034	0.032	0.030	
-40	0.045	0.046	0.044	0.040	0.038	0.035	0.033	0.031	0.030	0.028	
Field Data:	Centerline C Concentration			0.2	0.122	0.078					
	Distance from Source			0	140	300					

Centerline Plot (linear)

Centerline Plot (log)

NEW QUICK DOMENICO

ADVECTIVE TRANSPORT WITH THREE DIMENSIONAL DISPERSION,1ST ORDER DECAY and RETARDATION - WITH CALIBRATION TOOL																																									
Project:	Herr Foods, Inc.																																								
Date:	4/29/2016	Prepared by: EGD																																							
		Contaminant: MTBE Model 10																																							
SOURCE	Ax	Ay	Az	LAMBDA	SOURCE	SOURCE	Time (days)																																		
CONC	(ft)	(ft)	(ft)		WIDTH	THICKNESS	(days)																																		
(MG/L)			>=.001	day-1	(ft)	(ft)																																			
	0.16	3.00E+00	3.00E-01	1.00E-03	0.00025	40	10	6888																																	
Hydraulic	Hydraulic		Soil Bulk		Frac.	Retard-	V																																		
Cond	Gradient	Porosity	Density	KOC	Org. Carb.	ation	V																																		
(ft/day)	(ft/ft)	(dec. frac.)	(g/cm ³)			(R)	(ft/day)																																		
	2.46E+00	0.018	0.08	1.788	12	1.18E-02	4.16476	0.132900815																																	
<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>Point Concentration</p> <table border="1"> <thead> <tr> <th>x(ft)</th> <th>y(ft)</th> <th>z(ft)</th> </tr> </thead> <tbody> <tr> <td>140</td> <td>0</td> <td>0</td> </tr> <tr> <td colspan="3"> <table border="1"> <thead> <tr> <th></th> <th>x(ft)</th> <th>y(ft)</th> <th>z(ft)</th> </tr> </thead> <tbody> <tr> <td>Conc. At</td> <td>140</td> <td>0</td> <td>0</td> </tr> <tr> <td>at</td> <td>6888</td> <td>days =</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>0.120</td> </tr> <tr> <td></td> <td></td> <td></td> <td>mg/l</td> </tr> </tbody> </table> </td> </tr> </tbody> </table> </div> <div style="width: 35%;"> <p>Centerline Plot (linear)</p> </div> <div style="width: 35%;"> <p>Centerline Plot (log)</p> </div> </div>													x(ft)	y(ft)	z(ft)	140	0	0	<table border="1"> <thead> <tr> <th></th> <th>x(ft)</th> <th>y(ft)</th> <th>z(ft)</th> </tr> </thead> <tbody> <tr> <td>Conc. At</td> <td>140</td> <td>0</td> <td>0</td> </tr> <tr> <td>at</td> <td>6888</td> <td>days =</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>0.120</td> </tr> <tr> <td></td> <td></td> <td></td> <td>mg/l</td> </tr> </tbody> </table>				x(ft)	y(ft)	z(ft)	Conc. At	140	0	0	at	6888	days =					0.120				mg/l
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	MODEL		DOMAIN																																						
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Field Data:	Centerline C Concentration				0.16	0.122	0.078																																		
	Distance from Source				0	140	300																																		

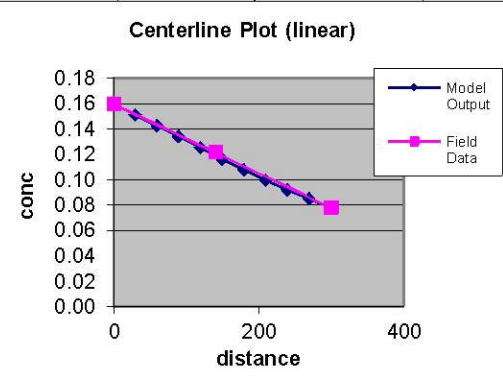
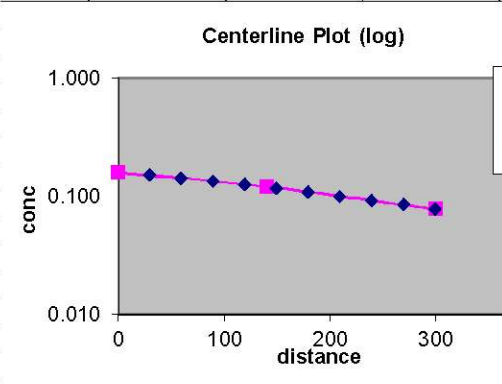
NEW QUICK DOMENICO

ADVECTIVE TRANSPORT WITH THREE DIMENSIONAL DISPERSION, 1ST ORDER DECAY AND RETARDATION - WITH CALIBRATION TOOL										
Project:	Herr Foods, Inc.									
Date:	4/29/2016	Prepared by:	EGD							
		Contaminant:	MTBE Model 10 @ 21 Years							
SOURCE	Ax	Ay	Az	LAMBDA	SOURCE	SOURCE	Time (days)			
CONC	(ft)	(ft)	(ft)		WIDTH	THICKNESS	(days)			
(MG/L)			>=.001	day-1	(ft)	(ft)				
0.16	3.00E+00	3.00E-01	1.00E-03	0.00025	40	10	7670			
Hydraulic	Hydraulic		Soil Bulk		Frac.	Retard-	V			
Cond	Gradient	Porosity	Density	KOC	Org. Carb.	ation	(=K*i/n*R)			
(ft/day)	(ft/ft)	(dec. frac.)	(g/cm ³)			(R)	(ft/day)			
2.46E+00	0.018	0.08	1.788	12	1.18E-02	4.16476	0.132900815			
NEW QUICK_DOMENICO.XLS SPREADSHEET APPLICATION OF "AN ANALYTICAL MODEL FOR MULTIDIMENSIONAL TRANSPORT OF A DECAYING CONTAMINANT SPECIES" P.A. Domenico (1987) Modified to Include Retardation										
Point Concentration										
x(ft)	y(ft)	z(ft)								
300	0	0								
			x(ft)	y(ft)	z(ft)					
Conc. At			300	0	0					
at			7670 days =	0.079						
			mg/l							
AREAL CALCULATION										
MODEL DOMAIN										
Length (ft)			300							
Width (ft)			40							
	30	60	90	120	150	180	210	240	270	300
40	0.000	0.000	0.000	0.001	0.002	0.003	0.004	0.005	0.006	0.006
20	0.076	0.072	0.068	0.064	0.060	0.057	0.054	0.051	0.048	0.046
0	0.151	0.143	0.134	0.125	0.117	0.108	0.100	0.092	0.085	0.079
-20	0.076	0.072	0.068	0.064	0.060	0.057	0.054	0.051	0.048	0.046
-40	0.000	0.000	0.000	0.001	0.002	0.003	0.004	0.005	0.006	0.006
Field Data:	Centerline C Concentration			0.16	0.122	0.078				
	Distance from Source			0	140	300				

NEW QUICK DOMENICO

ADVECTIVE TRANSPORT WITH THREE DIMENSIONAL DISPERSION,1ST ORDER DECAY and RETARDATION - WITH CALIBRATION TOOL																																												
Project:	Herr Foods, Inc.																																											
Date:	4/29/2016	Prepared by:	EGD																																									
		Contaminant:	MTBE Model 10 @ 30 Years																																									
SOURCE	Ax	Ay	Az	LAMBDA	SOURCE	SOURCE	Time (days)																																					
CONC	(ft)	(ft)	(ft)		WIDTH	THICKNESS	(days)																																					
(MG/L)			>=.001	day-1	(ft)	(ft)																																						
	0.16	3.00E+00	3.00E-01	1.00E-03	0.00025	40	10	10958																																				
Hydraulic	Hydraulic		Soil Bulk		Frac.	Retard-	V																																					
Cond	Gradient	Porosity	Density	KOC	Org. Carb.	ation	(=K*/n*R)																																					
(ft/day)	(ft/ft)	(dec. frac.)	(g/cm ³)			(R)	(ft/day)																																					
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	Length (ft)	300																																										
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	Distance from Source				0	140	300																																					

NEW QUICK DOMENICO

ADVECTIVE TRANSPORT WITH THREE DIMENSIONAL DISPERSION, 1ST ORDER DECAY AND RETARDATION - WITH CALIBRATION TOOL																																				
Project:	Herr Foods, Inc.																																			
Date:	4/29/2016	Prepared by:	EGD																																	
		Contaminant:	MTBE Model 10 @ 32 Years																																	
SOURCE	Ax	Ay	Az	LAMBDA	SOURCE	SOURCE	Time (days)																													
CONC	(ft)	(ft)	(ft)		WIDTH	THICKNESS	(days)																													
(MG/L)			>=.001	day-1	(ft)	(ft)																														
0.16	3.00E+00	3.00E-01	1.00E-03	0.00025	40	10	11689																													
Hydraulic	Hydraulic		Soil Bulk		Frac.	Retard-	V																													
Cond	Gradient	Porosity	Density	KOC	Org. Carb.	ation	(=K*i/n*R)																													
(ft/day)	(ft/ft)	(dec. frac.)	(g/cm ³)			(R)	(ft/day)																													
2.46E+00	0.018	0.08	1.788	12	1.18E-02	4.16476	0.132900815																													
<div style="float: right; width: 30%; padding-left: 10px;"> <p align="center">NEW QUICK_DOMENICO.XLS</p> <p align="center">SPREADSHEET APPLICATION OF "AN ANALYTICAL MODEL FOR MULTIDIMENSIONAL TRANSPORT OF A DECAYING CONTAMINANT SPECIES" P.A. Domenico (1987) Modified to Include Retardation</p> </div>																																				
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NEW QUICK DOMENICO

ADVECTIVE TRANSPORT WITH THREE DIMENSIONAL DISPERSION,1ST ORDER DECAY and RETARDATION - WITH CALIBRATION TOOL																																							
Project:	Herr Foods, Inc.																																						
Date:	4/29/2016	Prepared by:		EGD																																			
		Contaminant:		MTBE Model 10 @ 38 Years																																			
SOURCE	Ax	Ay	Az	LAMBDA	SOURCE	SOURCE	Time (days)																																
CONC	(ft)	(ft)	(ft)		WIDTH	THICKNESS	(days)																																
(MG/L)			>=.001	day-1	(ft)	(ft)																																	
	0.16	3.00E+00	3.00E-01	1.00E-03	0.00025	40	10	14000																															
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Field Data:	Centerline C Concentration			0.16	0.122	0.078																																	
	Distance from Source			0	140	300																																	

APPENDIX O
SWLOAD5 Model Output

[illegible]

METHOD FOR ESTIMATING FLOW, AVERAGE CONCENTRATION AND MASS LOADING TO SURFACE WATER FROM GROUNDWATER																					
Project:	Herr Foods, Inc.																				
Date:	5/5/2016																				
Contaminant:	MTBE				Prepared by:	EGD				PA DEPARTMENT OF ENVIRONMENTAL PROTECTION SWLOAD5B.XLS A METHOD FOR ESTIMATING COMTAMINANT LOADING TO SURFACE WATER based on P.A. Domenico (1987) Modified to Include Retardation											
SOURCE					SOURCE	SOURCE															
CONC	Ax	Ay	Az	LAMBDA	WIDTH	THICKNESS	Time														
(units)	(ft)	(ft)	(ft)		(ft)	(ft)	(days)														
ug/l	>.0001	>.0001	>=.0001	day-1																	
160	3	0.3	1.00E-05	0.00025	40	10	1.00E+99														
Hydraulic Cond	Hydraulic Gradient	Porosity	Soil Bulk Density	KOC	Frac. Org. Carb.	Retard-ation	V														
(ft/day)	(ft/ft)	(dec. frac.)	(g/cm ³)			(R)	(=K*/n*R) (ft/day)														
2.46E+00	0.018	0.08	1.788	12	1.18E-02	4.16476	0.1329008														

APPENDIX P
PENTOXSD Model Output

PENTOXSD

Modeling Input Data

Stream Code	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope	PWS With (mgd)				Apply FC					
6840	1.44	495.00	0.04	0.00000	0.00				<input checked="" type="checkbox"/>					
Stream Data														
LFY	Trib Flow	Stream Flow	WD Ratio	Rch Width	Rch Depth	Rch Velocity	Rch Trav Time	Tributary		Stream		Analysis		
(cfsm)	(cfs)	(cfs)		(ft)	(ft)	(fps)	(days)	Hard	pH	Hard	pH	Hard	pH	
								(mg/L)		(mg/L)		(mg/L)		
Q7-10	0.1	0	0.00116	0	1.5	0	0	0	100	7	0	0	0	0
Qh		0	0.0083	0	3.3	0	0	0	100	7	0	0	0	0
Discharge Data														
Name	Permit Number	Existing Disc Flow	Permitted Disc Flow	Design Disc Flow	Reserve Factor	AFC PMF	CFC PMF	THH PMF	CRL PMF	Disc Hard	Disc pH			
		(mgd)	(mgd)	(mgd)								(mg/L)		
GW Discharge	01	3.5E-05	0	0	0	0	0	0	0	100	7			
Parameter Data														
Parameter Name		Disc Conc	Trib Conc	Disc Daily CV	Disc Hourly CV	Steam Conc	Stream CV	Fate Coef	FOS	Crit Mod	Max Disc Conc			
		(µg/L)	(µg/L)			(µg/L)					(µg/L)			
BENZENE		421.223	0	0.5	0.5	0	0	0	0	1	0			
MTBE*		47.8504	0	0.5	0.5	0	0	0	0	1	0			

Stream Code	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope	PWS With (mgd)	Apply FC
6840	0.00	390.00	0.98	0.00000	0.00	<input checked="" type="checkbox"/>

Stream Data													
LFY	Trib Flow	Stream Flow	WD Ratio	Rch Width	Rch Depth	Rch Velocity	Rch Trav Time	Tributary		Stream		Analysis	
	(cfs)	(cfs)		(ft)	(ft)	(fps)	(days)	Hard	pH	Hard	pH	Hard	pH
	(cfs)	(cfs)		(ft)	(ft)	(fps)	(days)	(mg/L)		(mg/L)		(mg/L)	
Q7-10	0.1	0	0.00592	0	3	0	0	100	7	0	0	0	0
Qh		0	0.29	0	6	0	0	100	7	0	0	0	0

Discharge Data													
Name	Permit Number	Existing Disc Flow	Permitted Disc Flow	Design Disc Flow	Reserve Factor	AFC PMF	CFC PMF	THH PMF	CRL PMF	Disc Hard	Disc pH		
		(mgd)	(mgd)	(mgd)						(mg/L)			
		0	0	0	0	0	0	0	0	100	7		

Parameter Data											
Parameter Name		Disc Conc	Trib Conc	Disc Daily CV	Disc Hourly CV	Stream Conc	Stream CV	Fate Coef	FOS	Crit Mod	Max Disc Conc
		(µg/L)	(µg/L)			(µg/L)					(µg/L)
BENZENE		0	0	0.5	0.5	0	0	0	0	1	0
MTBE*		0	0	0.5	0.5	0	0	0	0	1	0

PENTOXSD Analysis Results

Recommended Effluent Limitations

SWP Basin

07K

Stream Code:

6840

Stream Name:

NORTHEAST CREEK

RMI	Name	Permit Number	Disc Flow (mgd)
1.44	GW Discharge	01	0.0000

Parameter	Effluent Limit (µg/L)	Governing Criterion	Max. Daily Limit (µg/L)	Most Stringent	
				WQBEL (µg/L)	WQBEL Criterion
BENZENE	185.15	CRL	288.865	185.15	CRL
MTBE*	47.85	INPUT	74.654	448.479	THH

PENTOXSD Analysis Results

Hydrodynamics

<u>SWP Basin</u>		<u>Stream Code:</u>		<u>Stream Name:</u>							
07K		6840		NORTHEAST CREEK							
RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope	Depth (ft)	Width (ft)	WD Ratio	Velocity (fps)	Reach Trav Time (days)	CMT (min)
Q7-10 Hydrodynamics											
1.440	0.0012	0	0.0012	0.00005	0.0138	0.0736	1.5	20.389	0.0110	7.9983	1.2
0.000	0.0059	0	0.0059	NA	0	0	0	0	0	0	NA
Qh Hydrodynamics											
1.440	0.0083	0	0.0083	0.00005	0.0138	0.0781	3.3	42.236	0.0324	2.716	5.74
0.000	0.29	0	0.29	NA	0	0	0	0	0	0	NA

PENTOXSD Analysis Results

Wasteload Allocations

RMI	Name	Permit Number							
1.44	GW Discharge	01							
AFC									
Q7-10:	CCT (min)	1.2	PMF	1	Analysis pH	7	Analysis Hardness	100	
	Parameter		Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)
	BENZENE		0	0	0	0	640	640	14351.33
	MTBE*		0	0	0	0	NA	NA	NA
CFC									
Q7-10:	CCT (min)	1.2	PMF	1	Analysis pH	7	Analysis Hardness	100	
	Parameter		Stream Conc. (µg/L)	Stream CV	Trib Conc. (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)
	BENZENE		0	0	0	0	130	130	2915.114
	MTBE*		0	0	0	0	NA	NA	NA
THH									
Q7-10:	CCT (min)	1.2	PMF	NA	Analysis pH	NA	Analysis Hardness	NA	
	Parameter		Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)
	BENZENE		0	0	0	0	NA	NA	NA
	MTBE*		0	0	0	0	20	20	448.479
CRL									
Qh:	CCT (min)	5.74	PMF	1					
	Parameter		Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)
	BENZENE		0	0	0	0	1.2	1.2	185.15
	MTBE*		0	0	0	0	NA	NA	NA

StreamStats Version 3.0**Flow Statistics Ungaged Site Report**

Date: Tues Feb 16, 2016 4:41:11 PM GMT-5

Study Area: Pennsylvania

NAD 1983 Latitude: 39.7449 (39 44 42)

NAD 1983 Longitude: -76.0189 (-76 01 08)

Drainage Area: 0.0369 mi²

2001 NLCD Impervious: 11.0 percent

Low Flow Basin Characteristics			
100% Low Flow Region 1 (0.0369 mi ²)			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	0.0369 (below min value 4.78)	4.78	1150
Mean Basin Slope degrees (degrees)	2.1	1.7	6.4
Depth to Rock (feet)	5.1	4.13	5.21
Percent Urban (percent)	6.0	0	89

Warning: Some parameters are outside the suggested range. Estimates will be extrapolations with unknown errors.

Mean/Base-flow Basin Characteristics			
100% Statewide Mean and Base Flow (0.0369 mi ²)			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	0.0369 (below min value 2.26)	2.26	1720
Mean Basin Elevation (feet)	531.8	130	2700
Mean Annual Precipitation (inches)	45.0	33.1	50.4
Percent Carbonate (percent)	0.0	0	99
Percent Forest (percent)	25.0	5.1	100
Percent Urban (percent)	6.0	0	89

Warning: Some parameters are outside the suggested range. Estimates will be extrapolations with unknown errors.

Peak Flow Basin Characteristics			
100% Peak Flow Region 2 (0.0369 mi ²)			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	0.0369 (below min value 2.02)	2.02	1150
Mean Basin Elevation (feet)	531.8	113	901
Percent Carbonate (percent)	0.0	0	67
Percent Urban (percent)	6.0	0	94
Percent Storage (percent)	0.0	0	3.6

Warning: Some parameters are outside the suggested range. Estimates will be extrapolations with unknown errors.

Low Flow Statistics						
Statistic	Value	Unit	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
					Min	Max
M7D2Y	0.00391	ft ³ /s				
M30D2Y	0.00604	ft ³ /s				
M7D10Y	0.00116	ft ³ /s				
M30D10Y	0.00195	ft ³ /s				
M90D10Y	0.00464	ft ³ /s				

<http://pubs.usgs.gov/sir/2006/5130/> (<http://pubs.usgs.gov/sir/2006/5130/>)
Stuckey_M.H._ 2006_ Low-flow_ base-flow_ and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130_ 84 p.

Mean/Base-flow Statistics						
Statistic	Value	Unit	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
					Min	Max
QA	0.0486	ft3/s				
QAH	0.0083	ft3/s				
BF10YR	0.0167	ft3/s				
BF25YR	0.0144	ft3/s				
BF50YR	0.0132	ft3/s				

<http://pubs.usgs.gov/sir/2006/5130/> (<http://pubs.usgs.gov/sir/2006/5130/>)
Stuckey_M.H._ 2006_ Low-flow_ base-flow_ and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130_ 84 p.

Peak Flow Statistics						
Statistic	Value	Unit	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
					Min	Max
PK2	16.8	ft3/s				
PK5	37.2	ft3/s				
PK10	56.1	ft3/s				
PK50	113	ft3/s				
PK100	145	ft3/s				
PK500	242	ft3/s				

<http://pubs.usgs.gov/sir/2008/5102/> (<http://pubs.usgs.gov/sir/2008/5102/>)
Roland_M.A._ and Stuckey_M.H._ 2008_ Regression equations for estimating flood flows at selected recurrence intervals for ungaged streams in Pennsylvania: U.S. Geological Survey Scientific Investigations Report 2008-5102_ 57p.

StreamStats Version 3.0**Flow Statistics Ungaged Site Report**

Date: Tues Feb 16, 2016 4:28:03 PM GMT-5

Study Area: Pennsylvania

NAD 1983 Latitude: 39.7315 (39 43 53)

NAD 1983 Longitude: -76.0035 (-76 00 13)

Drainage Area: 0.98 mi²

2001 NLCD Impervious: 4.0 percent

Low Flow Basin Characteristics			
100% Low Flow Region 1 (0.98 mi ²)			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	0.98 (below min value 4.78)	4.78	1150
Mean Basin Slope degrees (degrees)	2.0	1.7	6.4
Depth to Rock (feet)	3.7 (below min value 4.13)	4.13	5.21
Percent Urban (percent)	3.0	0	89

Warning: Some parameters are outside the suggested range. Estimates will be extrapolations with unknown errors.

Mean/Base-flow Basin Characteristics			
100% Statewide Mean and Base Flow (0.98 mi ²)			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	0.98 (below min value 2.26)	2.26	1720
Mean Basin Elevation (feet)	474.2	130	2700
Mean Annual Precipitation (inches)	45.0	33.1	50.4
Percent Carbonate (percent)	0.0	0	99
Percent Forest (percent)	38.0	5.1	100
Percent Urban (percent)	3.0	0	89

Warning: Some parameters are outside the suggested range. Estimates will be extrapolations with unknown errors.

Peak Flow Basin Characteristics			
100% Peak Flow Region 2 (0.98 mi ²)			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	0.98 (below min value 2.02)	2.02	1150
Mean Basin Elevation (feet)	474.2	113	901
Percent Carbonate (percent)	0.0	0	67
Percent Urban (percent)	3.0	0	94
Percent Storage (percent)	0.0	0	3.6

Warning: Some parameters are outside the suggested range. Estimates will be extrapolations with unknown errors.

Low Flow Statistics						
Statistic	Value	Unit	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
					Min	Max
M7D2Y	0.024	ft ³ /s				
M30D2Y	0.0441	ft ³ /s				
M7D10Y	0.00592	ft ³ /s				
M30D10Y	0.012	ft ³ /s				
M90D10Y	0.0347	ft ³ /s				

<http://pubs.usgs.gov/sir/2006/5130/> (<http://pubs.usgs.gov/sir/2006/5130/>)
Stuckey_M.H._ 2006_ Low-flow_ base-flow_ and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130_ 84 p.

Mean/Base-flow Statistics						
Statistic	Value	Unit	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
					Min	Max
QA	1.34	ft3/s				
QAH	0.29	ft3/s				
BF10YR	0.5	ft3/s				
BF25YR	0.44	ft3/s				
BF50YR	0.4	ft3/s				

<http://pubs.usgs.gov/sir/2006/5130/> (<http://pubs.usgs.gov/sir/2006/5130/>)
Stuckey_M.H._ 2006_ Low-flow_ base-flow_ and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130_ 84 p.

Peak Flow Statistics						
Statistic	Value	Unit	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
					Min	Max
PK2	162	ft3/s				
PK5	323	ft3/s				
PK10	465	ft3/s				
PK50	876	ft3/s				
PK100	1100	ft3/s				
PK500	1760	ft3/s				

<http://pubs.usgs.gov/sir/2008/5102/> (<http://pubs.usgs.gov/sir/2008/5102/>)
Roland_M.A._ and Stuckey_M.H._ 2008_ Regression equations for estimating flood flows at selected recurrence intervals for ungaged streams in Pennsylvania: U.S. Geological Survey Scientific Investigations Report 2008-5102_ 57p.

APPENDIX Q
PaGWIS Well Data



PA STATE AGENCIES

ONLINE SERVICES

Search PA

Tom Wolf, Governor

Cindy Adams Dunn, Acting Secretary

[DCNR Home](#) : [Geological Survey](#) : [Groundwater](#) : [PaGWIS](#) : [Records](#)

PaGWIS Records

Geological Survey

About the Survey

Classroom

Collecting

Economic Resources

Geology of PA

Geologic Hazards

Groundwater

Library

Web-Mapping Application

Publications and Digital Data

GeoLinks

Contact the Survey

Radial Search

This retrieval approximates a radial search around a fixed location. the results will include wells in the "corners" of this figure.

Enter the coordinates of the center in decimal-degree format and the radius of the search in miles. All fields must be filled in to perform the search. The longitude must be a negative number.

☐ Multiple Criteria ☐ Polygon Search ☒ Radial Search

Longitude :

Latitude :

Radius in Miles :

[Preview List](#)
[Create List](#)
[Clear Selections](#)

"Preview List" creates a list which contains links to individual well information.

You can choose to create a comma separated list from the preview.

"Create List" creates a comma separated list without viewing the selection first.

If you choose to open the file it may open in Excel if you have Microsoft Office installed.

Total Records Returned : 13 Records [Click on the column headers to sort the Search Results.](#)

PA Well ID	Driller	Driller Ref	Date Drilled	Owner	County	Municipality	Image
479728	BROWN BROS DRILLING INC	200890	11/3/2008	UNION FIRE COMPANY	CHESTER	WEST NOTTINGHAM TWP.	
114278	K.L. MADRON WELL DRILLING, LLC		3/1/1982	CHEN K	CHESTER	WEST NOTTINGHAM TWP.	
114285	R WALTER SLAUCH & SONS		2/8/1979	PORTER W	CHESTER	WEST NOTTINGHAM TWP.	
114284	R WALTER SLAUCH & SONS		9/1/1978	NOTTINGHAM CANNING	CHESTER	WEST NOTTINGHAM TWP.	
114355	BROWN BROS DRILLING INC		1/1/1971	SCARFO DOMONIC	CHESTER	WEST NOTTINGHAM TWP.	
8738	R WALTER SLAUCH & SONS		2/7/1968	HERR'S POTATO CHIPS	CHESTER	WEST NOTTINGHAM TWP.	
114347	R WALTER SLAUCH & SONS		1/1/1968	HERR POTATO INC	CHESTER	WEST NOTTINGHAM TWP.	
8748	R WALTER SLAUCH & SONS		11/30/1967	HERR'S POTATO CHIPS	CHESTER	WEST NOTTINGHAM TWP.	
8746	R WALTER SLAUCH & SONS		10/30/1967	HERR'S POTATO CHIPS	CHESTER	WEST NOTTINGHAM TWP.	
114348	R WALTER SLAUCH & SONS		1/1/1967	HERR POTATO INC	CHESTER	WEST NOTTINGHAM TWP.	
114349	R WALTER SLAUCH & SONS		1/1/1967	HERR POTATO INC	CHESTER	WEST NOTTINGHAM TWP.	
8736	R WALTER SLAUCH & SONS		7/28/1966	BOULDEN, J A	CHESTER	WEST NOTTINGHAM TWP.	
114350	R WALTER SLAUCH & SONS		1/1/1966	BOULDEN JOHN	CHESTER	WEST NOTTINGHAM TWP.	



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DEPARTMENT OF CONSERVATION & NATURAL RESOURCES
BUREAU OF TOPOGRAPHIC AND GEOLOGIC SURVEY
WATER WELL LICENSING/WATER WELL INVENTORY SECTION
3240 Schoolhouse Rd
Middletown, PA 17057
717-702-2017

WATER WELL DETAILS

Well Driller: **R WALTER SLAUCH & SONS** PA Well ID: **8738**
Driller License: **0176** Driller Well ID:
Type of Activity: Local Permit #:
Original Well By: **UNKNOWN**
Date Drilled: **2/7/1968** Drilling Method: **CABLE TOOL**

Owner: **HERR'S POTATO CHIPS**
Address of Well: Zipcode:
County: **CHESTER**
Municipality: **WEST NOTTINGHAM TWP.**
Coordinate Method:
Quadrangle: **RISING SUN** Latitude: **39.74583** Longitude: **-76.01944**

Well Depth (ft): **246** Well Finish: **OPEN HOLE**
Depth to Bedrock (ft): Did Not Encounter Bedrock:
Well Yield (gpm): **50** Yield Measure Method:
Static Water Level: **0** Water level after yield test: **60**
(ft below land surface) (ft below land surface)
Length of Yield Test: **8** Saltwater Zone (ft):
(minutes)
Use of Well: **WITHDRAWAL** Use of Water: **INDUSTRIAL**

DRILLER'S LOG

<u>UNIT TOP</u>	<u>UNIT BOTTOM</u>	<u>DESCRIPTION OF UNITS PENETRATED</u>
-----------------	--------------------	--

BOREHOLE

CASING

Casing 1:

Top: **0** Bottom: **70** Diameter: **6** Material: **UNKNOWN**

Seal(Grout) 1:		
Top:	Bottom:	Type:

SCREEN/SLOT

WELL LINER

PACKER

WATER BEARING ZONE				
Zone 1:	Top:	220	Bottom:	Yield:
Zone 2:	Top:	246	Bottom:	Yield:

DEPARTMENT OF CONSERVATION & NATURAL RESOURCES
BUREAU OF TOPOGRAPHIC AND GEOLOGIC SURVEY
WATER WELL LICENSING/WATER WELL INVENTORY SECTION
3240 Schoolhouse Rd
Middletown, PA 17057
717-702-2017

WATER WELL DETAILS

Well Driller: **R WALTER SLAUCH & SONS**

PA Well ID: **114347**

Driller License: **0176**

Driller Well ID:

Type of Activity: **New Well**

Local Permit #:

Original Well By: **UNKNOWN**

Date Drilled: **1/1/1968**

Drilling Method:

Owner: **HERR POTATO INC**

Address of Well:

Zipcode:

County: **CHESTER**

Municipality: **WEST NOTTINGHAM TWP.**

Coordinate Method:

Quadrangle: **RISING SUN**

Latitude: **39.74444**

Longitude: **-76.02**

Well Depth (ft): **246**

Well Finish:

Depth to Bedrock (ft): **60**

Did Not Encounter Bedrock:

Well Yield (gpm): **50**

Yield Measure Method:

Static Water Level:
(ft below land surface)

Water level after yield test:
(ft below land surface)

Length of Yield Test: **8**
(minutes)

Saltwater Zone (ft):

Use of Well: **WITHDRAWAL**

Use of Water: **INDUSTRIAL**

DRILLER'S LOG

<u>UNIT TOP</u>	<u>UNIT BOTTOM</u>	<u>DESCRIPTION OF UNITS PENETRATED</u>
-----------------	--------------------	--

BOREHOLE

CASING

Casing 1:

Top:	0	Bottom:	70	Diameter:	6	Material:
------	----------	---------	-----------	-----------	----------	-----------

Seal(Grout) 1:		
Top:	Bottom:	Type:

SCREEN/SLOT

WELL LINER

PACKER

WATER BEARING ZONE				
Zone 1:	Top:	10	Bottom:	Yield:
Zone 2:	Top:	70	Bottom:	Yield:
Zone 3:	Top:	220	Bottom:	Yield:

DEPARTMENT OF CONSERVATION & NATURAL RESOURCES
BUREAU OF TOPOGRAPHIC AND GEOLOGIC SURVEY
WATER WELL LICENSING/WATER WELL INVENTORY SECTION
3240 Schoolhouse Rd
Middletown, PA 17057
717-702-2017

WATER WELL DETAILS

Well Driller: **R WALTER SLAUCH & SONS**

PA Well ID: **8748**

Driller License: **0176**

Driller Well ID:

Type of Activity:

Local Permit #:

Original Well By: **UNKNOWN**

Date Drilled: **11/30/1967**

Drilling Method: **CABLE TOOL**

Owner: **HERR'S POTATO CHIPS**

Address of Well:

Zipcode:

County: **CHESTER**

Municipality: **WEST NOTTINGHAM TWP.**

Coordinate Method:

Quadrangle: **RISING SUN**

Latitude: **39.74806**

Longitude: **-76.01861**

Well Depth (ft): **225**

Well Finish: **OPEN HOLE**

Depth to Bedrock (ft):

Did Not Encounter Bedrock:

Well Yield (gpm): **10**

Yield Measure Method: **REPORTED, METHOD NOT KNOWN**

Static Water Level: **30**
(ft below land surface)

Water level after yield test:
(ft below land surface)

Length of Yield Test:
(minutes)

Saltwater Zone (ft):

Use of Well: **WITHDRAWAL**

Use of Water: **INDUSTRIAL**

DRILLER'S LOG

<u>UNIT TOP</u>	<u>UNIT BOTTOM</u>	<u>DESCRIPTION OF UNITS PENETRATED</u>
-----------------	--------------------	--

BOREHOLE

CASING

Casing 1:

Top: 0	Bottom: 119	Diameter: 6	Material: UNKNOWN
---------------	--------------------	--------------------	--------------------------

Seal(Grout) 1:			
Top:	Bottom:	Type:	

SCREEN/SLOT

WELL LINER

PACKER

WATER BEARING ZONE				
Zone 1:	Top:	200	Bottom:	Yield:
Zone 2:	Top:	225	Bottom:	Yield:

DEPARTMENT OF CONSERVATION & NATURAL RESOURCES
BUREAU OF TOPOGRAPHIC AND GEOLOGIC SURVEY
WATER WELL LICENSING/WATER WELL INVENTORY SECTION
3240 Schoolhouse Rd
Middletown, PA 17057
717-702-2017

WATER WELL DETAILS

Well Driller: **R WALTER SLAUCH & SONS**

PA Well ID: **8746**

Driller License: **0176**

Driller Well ID:

Type of Activity:

Local Permit #:

Original Well By: **UNKNOWN**

Date Drilled: **10/30/1967**

Drilling Method: **CABLE TOOL**

Owner: **HERR'S POTATO CHIPS**

Address of Well:

Zipcode:

County: **CHESTER**

Municipality: **WEST NOTTINGHAM TWP.**

Coordinate Method:

Quadrangle: **RISING SUN**

Latitude: **39.74778**

Longitude: **-76.01917**

Well Depth (ft): **283**

Well Finish: **OPEN HOLE**

Depth to Bedrock (ft):

Did Not Encounter Bedrock:

Well Yield (gpm): **8**

Yield Measure Method:

Static Water Level: **-1**
(ft below land surface)

Water level after yield test: **199**
(ft below land surface)

Length of Yield Test: **4**
(minutes)

Saltwater Zone (ft):

Use of Well: **WITHDRAWAL**

Use of Water: **INDUSTRIAL**

DRILLER'S LOG

<u>UNIT TOP</u>	<u>UNIT BOTTOM</u>	<u>DESCRIPTION OF UNITS PENETRATED</u>
-----------------	--------------------	--

BOREHOLE

CASING

Casing 1:

Top: 0	Bottom: 67	Diameter: 6	Material: UNKNOWN
---------------	-------------------	--------------------	--------------------------

Seal(Grout) 1:			
Top:	Bottom:	Type:	

SCREEN/SLOT

WELL LINER

PACKER

WATER BEARING ZONE				
Zone 1:	Top:	250	Bottom:	Yield:
Zone 2:	Top:	283	Bottom:	Yield:

DEPARTMENT OF CONSERVATION & NATURAL RESOURCES
BUREAU OF TOPOGRAPHIC AND GEOLOGIC SURVEY
WATER WELL LICENSING/WATER WELL INVENTORY SECTION
3240 Schoolhouse Rd
Middletown, PA 17057
717-702-2017

WATER WELL DETAILS

Well Driller: **R WALTER SLAUCH & SONS**

PA Well ID: **114348**

Driller License: **0176**

Driller Well ID:

Type of Activity: **New Well**

Local Permit #:

Original Well By: **UNKNOWN**

Date Drilled: **1/1/1967**

Drilling Method:

Owner: **HERR POTATO INC**

Address of Well:

Zipcode:

County: **CHESTER**

Municipality: **WEST NOTTINGHAM TWP.**

Coordinate Method:

Quadrangle: **RISING SUN**

Latitude: **39.74556**

Longitude: **-76.02**

Well Depth (ft): **283**

Well Finish:

Depth to Bedrock (ft): **60**

Did Not Encounter Bedrock:

Well Yield (gpm): **8**

Yield Measure Method:

Static Water Level: **1**
(ft below land surface)

Water level after yield test:
(ft below land surface)

Length of Yield Test: **4**
(minutes)

Saltwater Zone (ft):

Use of Well: **WITHDRAWAL**

Use of Water: **INDUSTRIAL**

DRILLER'S LOG

<u>UNIT TOP</u>	<u>UNIT BOTTOM</u>	<u>DESCRIPTION OF UNITS PENETRATED</u>
-----------------	--------------------	--

BOREHOLE

CASING

Casing 1:

Top:	0	Bottom:	67	Diameter:	6	Material:
------	----------	---------	-----------	-----------	----------	-----------

Seal(Grout) 1:			
Top:	Bottom:	Type:	

SCREEN/SLOT

WELL LINER

PACKER

WATER BEARING ZONE				
Zone 1:	Top:	60	Bottom:	Yield:
Zone 2:	Top:	250	Bottom:	Yield:

DEPARTMENT OF CONSERVATION & NATURAL RESOURCES
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WATER WELL DETAILS

Well Driller: **R WALTER SLAUCH & SONS**

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Driller License: **0176**

Driller Well ID:

Type of Activity: **New Well**

Local Permit #:

Original Well By: **UNKNOWN**

Date Drilled: **1/1/1967**

Drilling Method:

Owner: **HERR POTATO INC**

Address of Well:

Zipcode:

County: **CHESTER**

Municipality: **WEST NOTTINGHAM TWP.**

Coordinate Method:

Quadrangle: **RISING SUN**

Latitude: **39.74778**

Longitude: **-76.01861**

Well Depth (ft): **225**

Well Finish:

Depth to Bedrock (ft): **115**

Did Not Encounter Bedrock:

Well Yield (gpm): **10**

Yield Measure Method:

Static Water Level: **30**
(ft below land surface)

Water level after yield test:
(ft below land surface)

Length of Yield Test: **5**
(minutes)

Saltwater Zone (ft):

Use of Well: **WITHDRAWAL**

Use of Water: **INDUSTRIAL**

DRILLER'S LOG

<u>UNIT TOP</u>	<u>UNIT BOTTOM</u>	<u>DESCRIPTION OF UNITS PENETRATED</u>
-----------------	--------------------	--

BOREHOLE

CASING

Casing 1:

Top: **0**

Bottom: **119**

Diameter: **6**

Material:

Seal(Grout) 1:			
Top:	Bottom:	Type:	

SCREEN/SLOT

WELL LINER

PACKER

WATER BEARING ZONE				
Zone 1:	Top:	70	Bottom:	Yield:
Zone 2:	Top:	200	Bottom:	Yield:

APPENDIX R
Ecological Risk Assessment

MEMORANDUM

TO: Herr Foods, Inc.
FROM: Thomas R. Eby, RETTEW Associates, Inc.
DATE: June 10, 2016
PROJECT NAME: Herr Foods, Inc. - Ecological Risk Assessment **PROJECT NO.** 101722001
SUBJECT: Ecological Risk Assessment

INTRODUCTION

This Ecological Risk Assessment was prepared to evaluate the potential effects of a petroleum release on ecological receptors at the Herr Foods, Inc. (Herr's) manufacturing facility, located at 273 Old Baltimore Pike in West Nottingham Township, Chester County, Pennsylvania. The 13.8-acre property is owned and operated by Herr's and appears on the Rising Sun, MD-PA United States Geological Survey (USGS) 7.5-minute quadrangle (**Attachment A, Figure 1**). The property has been used historically for snack food manufacturing since the 1950s.

The petroleum release occurred at the facility truck garage, located on the southern portion of the property. The truck garage was constructed in 1978 and remains in use for the maintenance and fueling of Herr's fleet vehicles. An underground storage tank (UST) system installed during construction in 1978 was used for the storage of diesel fuel and unleaded gasoline. During UST system closure in 1997, a subsurface release of diesel fuel and unleaded gasoline was discovered that impacted soil and groundwater at the property.

Site characterization was conducted by RETTEW during 2015 and 2016 to delineate the extent of soil and groundwater impacts resulting from the release. Site characterization findings indicated that groundwater discharges to surface water downgradient of the subject property on an adjacent, separate parcel owned by Herr's. Discharging groundwater supports a wetland, which forms the headwater to an unnamed tributary (UNT) to North East Creek. Benzene and MTBE have been detected in surface water and sediment in the northern portion of the wetland area. Benzene is classified as a compound of potential ecological concern (CPEC) by the Pennsylvania Department of Environmental Protection (PADEP).

Fate and transport analysis showed that surface water will continue to be impacted by dissolved benzene and MTBE in groundwater into the future as described in the Revised Site Characterization Report (SCR). Applicable surface water quality standards were developed for benzene and MTBE using the PADEP's PENTOXSD model. The maximum average MTBE concentration at steady state (47.9 µg/L) is not expected to exceed applicable water quality criteria; however, the maximum average benzene concentration at steady state (421.2 µg/L) is expected to exceed the calculated Cancer Risk Level (CRL) waste load allocation (WLA, or 185 µg/L) for the UNT to North East Creek (185 µg/L). Steady state discharge of benzene is expected to meet the calculated Acute Fish Criteria (AFC) WLA (2,915 µg/L) and Chronic Fish Criteria (CFC) WLA (14,351 µg/L) water quality criteria protective of fish and aquatic life that may live in the UNT to North East Creek.

Herr's proposes to remediate the release to meet the Site-Specific Standard for groundwater under Act 2. As a condition of remediation standard attainment, a site-specific ecological risk assessment was performed in accordance with the process outlined in the PADEP Act 2 Technical Guidance Manual (TGM) Section IV.H and the PADEP Statewide Ecological Screening Process to evaluate eco-exposure to groundwater and substances (benzene and MTBE) addressed by Herr's under the Act 2 Site-Specific standard.



INVESTIGATIVE METHODS

The evaluation included field identification of wetlands, habitat types and vegetation present in the area of plume discharge (MW-11) and surrounding areas within a 1,000-foot radius of MW-11, comprising the Ecological Risk Study Area. A search of the Pennsylvania Natural Diversity Inventory (PNDI) was also conducted to identify species and habitats of concern within the study area. The northern portion of the wetland area, where petroleum impacted surface water and sediment were identified, was compared to a reference area on the southern portion of the wetland area to assess whether “substantial impact” has resulted from the release. Substantial impact is defined by the TGM as a difference of greater than 20 percent in the density of species of concern, or greater than 50 percent difference in the diversity or the extent of habitats of concern. The evaluation also included a bog turtle habitat screening, since the property is located in Chester County where bog turtle populations and habitat are known to occur.

An on-site evaluation was conducted on May 11 and May 12, 2016 by qualified wetland biologists. The presence/absence wetland investigation followed the protocols described in the 2012 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region (Version 2.0)* and the 1987 *Corps of Engineers Wetland Delineation Manual*. This methodology is based on a three parameter approach involving indicators of hydrophytic vegetation, hydric soils, and wetland hydrology to identify and delineate wetlands.

INVESTIGATIVE FINDINGS

RETTEW’s review of existing documentation and field investigation identified three wetland areas, one pond, and two watercourses among the various upland habitats within the Ecological Risk Study Area. Refer to **Figure 2** located in **Attachment A** for the location of these resources. **Attachment B** contains photo documentation of all the habitats identified in the Ecological Risk Study Area.

Wetlands

Three wetland areas and one pond were identified within the Ecological Risk Study Area. The two wetlands east of the railroad were palustrine emergent (PEM) wetlands, and the wetland west of the railroad was a complex consisting of PEM, palustrine scrub-shrub (PSS), and palustrine unconsolidated bottom (PUB) wetlands. The pond is a manmade farm pond located along the eastern edge of the study area. The PEM wetland located in the cattle pasture east of the railroad was located outside the riparian corridor to the northeast. This wetland’s hydrology was primarily fed by groundwater discharging from the base of the railroad grade and the dominant vegetation consisted of *Eleocharis* sp. (spike-rush), *Juncus effusus* (lamp rush), and *Agrostis gigantea* (black bent). The PEM wetland located within the riparian corridor, east of the railroad, drained to the UNT to North East Creek to the south. This wetland’s hydrology was primarily fed by groundwater and the dominant vegetation consisted of *Symplocarpus foetidus* (skunk cabbage), *Phalaris arundinacea* (reed canary grass), and *Impatiens capensis* (spotted touch-me-not).

The wetland complex located west of the railroad is where the PEM wetland of potential concern and reference PEM wetland is located, in addition to the PSS and PUB portions. As previously mentioned, the area of plume discharge containing MTBE and benzene is located in the northern, downgradient portion of this wetland complex and is referenced as the PEM wetland of potential concern for the purpose of this report. The reference portion of this wetland is the PEM portion directly south and upgradient of the PEM wetland of potential concern, and is not affected by the contaminated groundwater discharge. This wetland complex is primarily fed by groundwater



and the dominant vegetation consists of *S. foetidus*, *Impatiens capensis*, *Carex* sp. (sedge), and *Viburnum dentatum* (southern arrowwood). This wetland complex drains north to the UNT to North East Creek.

Streams

Two regulated stream channels were identified within the Ecological Risk Study Area. Both stream channels are UNT's to North East Creek. The main stem of this UNT starts west of the railroad grade in the center of the Ecological Risk Study Area and is fed by the wetland complex to the south and a culvert from the north, which conveys stormwater runoff. This stream channel flows southeast through the Ecological Risk Study Area. The second stream channel flows south along the eastern border of the study area, eventually flowing into the main stem UNT. These UNT's to North East Creek have an assigned Pennsylvania Code, Title 25, Chapter 93, Water Quality Standard designation of Trout Stocking, Migratory Fishes (TSF, MF). The Pennsylvania Fish and Boat Commission (PFBC) does not list these UNTs to North East Creek as streams known to support naturally reproducing trout.

The main stem of the UNT to North East Creek is a perennial stream with a moderate to low gradient. The water flow during the site investigation was approximately four feet wide and three inches deep. The streambed consisted primarily of gravel and silt with some cobbles and sand present. The streambanks were well vegetated with some areas showing signs of erosion.

Upland Habitats

A variety of upland habitats are located throughout the Ecological Risk Study Area including upland forest, a scrub-shrub/forested riparian corridor, cattle pasture, and maintained lawns. Herr's facilities, including paved parking lots and buildings, and a railroad right-of-way which bisects the site, are also located in the study area.

The upland forest is a mixed hardwood deciduous forest with dominant vegetative species including *Liriodendron tulipifera* (tuliptree), *Acer rubrum* (red maple), *Fagus grandifolia* (American beech), and *Quercus alba* (northern white oak) in the tree stratum, *Lindera benzoin* (northern spicebush) and *Viburnum* sp. in the shrub stratum, and *Dennstaedtia punctilobula* (hay-scented fern) in the herbaceous stratum.

The scrub-shrub/forested riparian corridor did contain some small fringe PEM wetlands along the banks of the UNT to North East Creek, but mainly consisted of upland habitat. A variety of vegetation species were present in this habitat type, and the dominant vegetative species included *Salix nigra* (black willow), *Juglans nigra* (black walnut), and *Quercus palustris* (pin oak) in the tree stratum, *Rosa multiflora* (rambler rose) and *Rubus allegheniensis* (common blackberry) in the shrub stratum, and *P. arundinacea* and *Alliaria petiolata* (garlic mustard) in the herbaceous stratum.

The cattle pastures are located in the southeastern portion of the study area and the dominant vegetative species included *Lolium perenne* (perennial rye grass) and *Festuca* sp. (fescue grass). The maintained lawn areas dominant vegetative species included *Poa pratensis* (Kentucky blue grass). The location of these habitats throughout the Ecological Risk Study Area are depicted on the aerial basemap (**Attachement A, Figure 2**).

PNDI Results

In order to identify species and habitats of potential concern within the Ecological Risk Study Area, a PNDI online search was completed by RETTEW on May 16, 2016 (Project Search ID: PNDI-603772). The PNDI Review Receipt indicated further review was necessary to determine potential impacts to a variety of special concern species



under the jurisdiction of the PA Department of Conservation and Natural Resources (DCNR) and an endangered species under the jurisdiction of the PA Fish and Boat Commission (PFBC). Shortly after the PNDI online search was completed, DCNR sent RETTEW a clearance letter with a conclusion of “no impact anticipated” regarding this project, dated May 16, 2016.

Additional information regarding the project was submitted to the PFBC for review and comment regarding the endangered species under their jurisdiction, which could potentially include fish, amphibians, and aquatic life. As previously stated, surface water is expected to meet the calculated AFC WLA and CFC WLA water quality criteria protective of fish and aquatic life. The PFBC response can be provided under separate cover upon receipt.

The PNDI results indicate that no species or habitats of concern were identified in the Ecological Risk Study Area. The PNDI receipt and agency clearance letters are provided in **Attachment C**.

Although no potential impacts were identified on the PNDI search receipt for species under the jurisdiction of the U.S. Fish and Wildlife Service (USFWS), Chester County is known to host the threatened bog turtle (*Glyptemys muhlenbergii*) and its habitat. As part of the Ecological Risk Assessment, Jeremy Hite, a RETTEW qualified bog turtle surveyor, investigated the Ecological Risk Study Area for bog turtle habitat on May 12, 2016. All three wetland areas within the study area contain the parameters necessary for bog turtle habitat (hydrology, mucky soils, and vegetation) and were considered suitable habitat for bog turtles. However, no bog turtles were found during the investigation.

Wetland of Potential Concern

The PEM wetland where the groundwater plume discharge containing MTBE and benzene is located is depicted on **Figure 2** in **Attachment A** as the “PEM Wetland of Potential Concern”. This wetland did experience recent disturbance during the installation of groundwater monitoring wells. Disrupted sediment and vegetation from the drill rig were still present during the time of the investigation. It was noted that this ecological disturbance was not a result of the contaminated groundwater discharge into the wetland and was disregarded during the investigation.

The vegetation within the wetland of potential concern did not show signs of stress, discoloration, stunted growth, deformities, or death. The vegetation appeared to be in a similar growth stage when compared to the vegetation in the PEM reference wetland, directly south and upgradient of the contaminated groundwater discharge. The only non-native soil and sediment materials observed were a result of the recent drill rig disturbance. *Typha angustifolia* (narrow leaf cattail) is the only invasive species observed during the investigation. It was present in the wetland of potential concern and not the reference wetland; however, it did not appear to be crowding out the other vegetation at the time of the investigation. The aerial vegetative percent cover between the wetlands were very similar. However, the wetland of potential concern had a greater abundance of different species when compared to the reference wetland. Seven different species had a significant presence in the wetland of potential concern, compared to only four species observed in the reference wetland.

The ecological value of the wetland of potential concern is similar to the reference wetland. The only observed ecological benefit that the reference wetland contained over the wetland of potential concern was through its surrounding habitat. Since the reference wetland is surrounded by forest, the tree canopy provides additional cover and shade to the wetland resulting in cooler surface water and sediment temperatures, which could be a benefit for fauna activity. Since the wetland of potential concern is located closer to the Herr’s facilities and directly adjacent to developed maintained lawn and parking areas, it is not surrounded by forest and doesn’t receive this ecological benefit.



CONTAMINANT FATE AND TRANSPORT

As described in the Revised SCR, surface water and sediment is affected by the diffuse flow of groundwater to off-site wetland areas. Because benzene and MTBE have relatively low partitioning coefficients, they tend to partition into water easily and have a low affinity to sorb to soil. This suggests that the benzene and MTBE detected in sediment are more indicative of impacts to pore water. In addition, the source area is covered by buildings (the truck garage) and impervious paving as described in the Revised SCR; therefore, the sediment impacts are not likely the result of source erosion. It appears that the primary ecological risk associated with the release is exposure to discharging groundwater at the surface water interface, and surface water.

Benzene does not undergo significant partitioning or accumulate in sediment, nor does it bioaccumulate in plants or animals¹. Benzene is known to biodegrade in the environment. Once in groundwater, MTBE resists degradation compared to other gasoline components like benzene. In surface water, MTBE is not expected to bioaccumulate in aquatic organisms². Because benzene and MTBE do not bioaccumulate, they are not known to have an adverse effect on the food chain or present a food-chain exposure hazard. A list of compounds that EPA Region 3 considers to be bioaccumulative is presented on Table 4-2 in the guidance document *Bioaccumulative Testing and Interpretation for the Purpose of Sediment Quality Assessment, Status and Needs*, EPA-823-R-00-001, February 2000. Benzene and MTBE are not listed as bioaccumulative in this document.

PRELIMINARY EXPOSURE PATHWAY ANALYSIS

Present and future exposure pathways to surface water and sediment were evaluated for ecological receptors. Currently, there are no proposed plans to modify or redevelop the Herr's property. Land use is not expected to change in the future; therefore, current ecological exposure pathways are anticipated to remain unchanged into the near future.

The ecological exposure pathway is characterized by diffuse groundwater discharge at the surface water interface with associated loading of dissolved benzene and MTBE to surface water. Dissolved benzene and MTBE are migrating with groundwater flow from the source area (the area of the petroleum release) to the final exposure pathway (groundwater-surface water interface and surface water) and to the receptors (terrestrial and aquatic ecological receptors).

Surface water impacts resulting from groundwater discharge were evaluated in the Revised SCR using PENTOXSD. Steady state discharge of benzene is expected to meet the calculated AFC WLA (2,915 µg/L) and CFC WLA (14,351 µg/L) water quality criteria for fish and aquatic life in the UNT to North East Creek. The water quality standards calculated for benzene and MTBE using PENTOXSD for aquatic life and aquatic habitat (AFC and CFC) are met, which are protective of fish. Because the AFC and CFC are met under steady state conditions, the exposure pathway for aquatic ecological receptors is acceptable.

The exposure pathway is complete for terrestrial ecological receptors. Terrestrial receptors are potentially exposed to the release via dermal contact, ingestion and root uptake. Ecotoxicity for terrestrial receptors is evaluated in the following section.

¹ 2009, Benzene TEACH Chemical Summary, U.S. EPA Toxicity and Exposure Assessments for Children's Health, TEACH Database Archive Document.

² Occurrence of the Gasoline Additive MTBE in Shallow Ground Water in Urban and Agricultural Areas, USGS Fact Sheet, Available online at <http://sd.water.usgs.gov/nawqa/pubs/factsheet/fs114.95/fact.html>, Accessed May 17, 2016.



PRELIMINARY ECOTOXICITY EVALUATION

As noted in the previous section, the AFC and CFC are met under steady state conditions for benzene and MTBE; therefore, the exposure pathway for aquatic ecological receptors is acceptable, and the ecological risk assessment for aquatic ecological receptors is satisfied. Terrestrial ecological receptors are the primary focus for further evaluation.

EPA Region 3 freshwater sediment screening ecotoxicological benchmarks were reviewed to assess ecological risk to terrestrial ecological receptors. Currently, EPA Region 3 does not have sediment screening benchmarks for benzene and MTBE. EPA Region 3 selected equilibrium partitioning values for contaminants with oil-water partitioning coefficients (K_{ow}) that fall into a specific range ($2.0 < \log K_{ow} < 6.0$). Benzene and MTBE generally fall outside of this range with low $\log K_{ow}$ values of 2.13 and 1.20, respectively. Substances that have low partitioning coefficients generally prefer to remain in solution and have a low affinity to sorb to soil and sediment particles. As an alternative, the National Oceanic and Atmospheric Administration (NOAA) Screening Quick Reference Tables (SQiRTs) sediment screening values were reviewed for organic substances in sediment and compared to detected benzene and MTBE concentrations in sediment as summarized in the following table.

Substance	Max. Detected Conc. in Sediment	Dutch Target Conc.	Dutch Intervention Conc.	EPA EcoTox Conc.
Benzene	38 µg/kg	10 µg/kg	1,000 µg/kg	57 µg/kg
MTBE	160 µg/kg	NA	100,000 µg/kg	NA

Notes:

1. Dutch Target and Intervention Values set forth in Ministry of Housing, Spatial Planning and the Environment (VROM), Lower House of Parliament, parliamentary proceedings 1988-1989, 21 137, No. 5.
2. EPA EcoUpdate EcoTox Thresholds.
3. NA = Not applicable.

The maximum detected benzene concentration in sediment is below the screening values for intervention and ecological toxicity, and is slightly above the target concentration (1/100 of the intervention value or risk limit). The maximum detected MTBE concentration in sediment is below the only applicable screening value. The EPA EcoTox Thresholds have been set at concentrations above which there is sufficient concern regarding adverse ecological effects to warrant further site investigation. As previously stated, benzene and MTBE detected in sediment are more indicative of impacts to pore water and are not the result of source erosion. Based on the above comparison, the ecological risk associated with the maximum detected concentrations of benzene and MTBE in sediment (i.e., pore water) is characterized as low. It is noted that the benzene plume has not reached steady state and that benzene concentrations in discharging groundwater (and sediment) are expected to increase; however, the source will be remediated to meet the most stringent surface water quality standard (CRL WLA), thereby protecting terrestrial ecological receptors.

CONCLUSIONS

The findings of the Ecological Risk Assessment indicate that there is no substantial ecological risk associated with the release. The findings are summarized as follows:

- No species of concern were identified.
- No evidence of stressed, discolored or deformed vegetation was observed.
- Benzene and MTBE are not known to bioaccumulate and are not known to have a adverse effect on the food chain or present a food-chain exposure hazard.



- The wetland of potential concern compared closely to the reference wetland with respect to the abundance and diversity of species present. No substantial ecological impacts were identified.
- The surface water quality standards presented in the Revised SCR are met and are protective of aquatic ecological receptors.
- Published sediment screening values indicate that the potential adverse effect of the release on terrestrial ecological receptors is low.
- No additional ecological risk assessment is warranted.

The results of the field investigation identified three wetland areas that contain suitable bog turtle habitat within the Ecological Risk Study Area. It is noted that bog turtles were not observed during the field investigation. Potential impacts of remediation on bog turtle habitat will be considered during the development of a Remedial Action Plan.

Prepared by: Thomas R. Eby
Thomas R. Eby, Senior Environmental Scientist

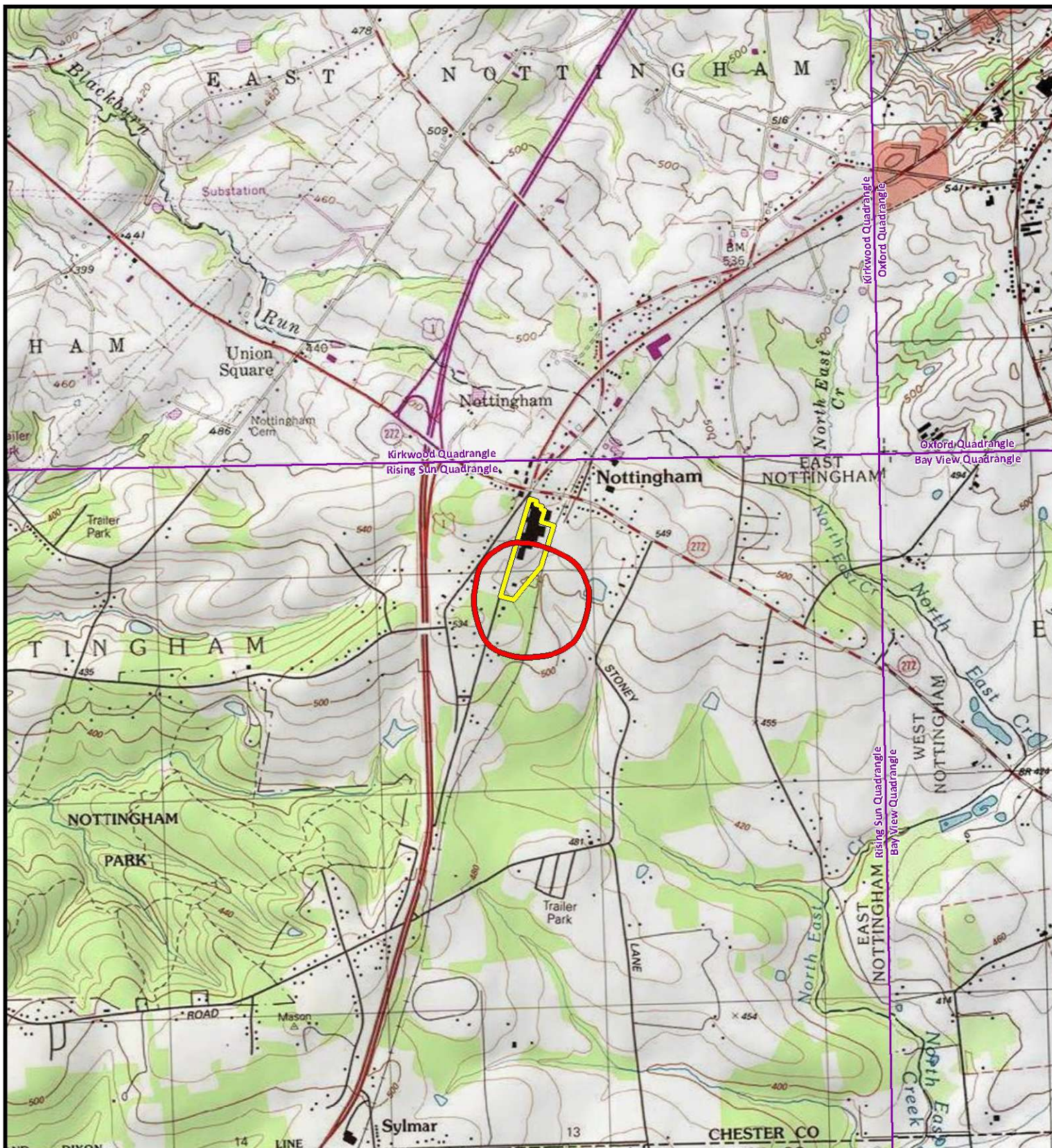
Reviewed by: Thomas J. Stich
Thomas J. Stich, Senior Environmental Scientist

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ATTACHMENT A

SITE MAPPING



Ecological Risk Study Area



Herr Foods Inc. Manufacturing Facility

Herr Foods, Inc

Ecological Risk Assessment

Figure 1 - Topographic Basemap

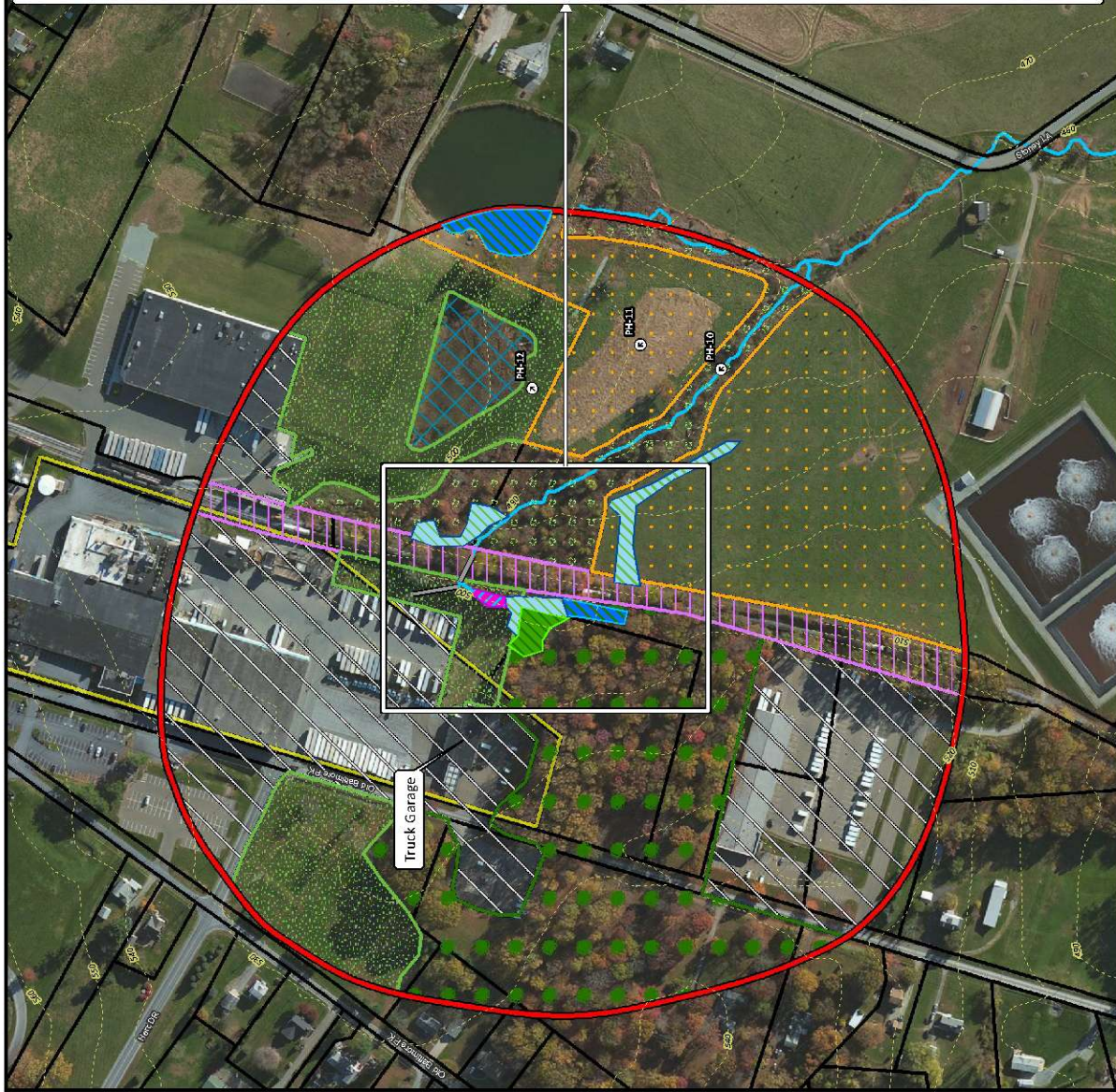
West Nottingham Township, Chester County, PA
Project No. 101722001



0 1,000 2,000
Feet
1 inch = 2,000 feet

Service Layer Credits: Copyright © 2013 National Geographic
Society, I-cubed

RETTEW



Herr Foods, Inc.
Ecological Risk Assessment
Figure 2 - Aerial Basemap
 West Nottingham Township, Chester County, PA
 Project No. 101722001

5/26/2016
 Drawn By: JDD

Photo Location & Orientation

- Camera
- Contour (10 ft interval)
- UNT to Northeast Creek
- PEM Wetland

PEM Wetland of Potential Concern

- PSS Wetland
- PUA Wetland
- Ecological Risk Study Area
- Cattle Pasture

Herr Foods Facilities

- Maintained Lawn
- Railroad Right-of-Way
- Retention Basin
- Scrub-Shrub / Forested Riparian Corridor

Upland Forest

- Herr Foods Inc. Manufacturing Facility
- Parcel Boundary

Scale

0 1 inch = 250 feet

0 250 feet

North Arrow

1 inch = 75 feet

ATTACHMENT B

SITE PHOTOGRAPHS

RETTEW Associates, Inc.
Photo Documentation

Client: Herr Foods, Inc.

Project Name: Ecological Risk
Assessment

Site Location: West
Nottingham Township,
Chester County, PA

Project Number:
101722001

Photo 1

Date Taken:
May 11, 2016

Photo Direction:
West

Comments:
View of truck garage
on the Herr Foods,
Inc. manufacturing
facility and source of
the underground
storage tank
petroleum release.



Photo 2

Date Taken:
May 11, 2016

Photo Direction:
Southeast

Comments:
View of stream
flowing out of the
PEM wetland of
potential concern
and culvert under the
railroad grade.



RETTEW Associates, Inc.
Photo Documentation

Client: Herr Foods, Inc.

Project Name: Ecological Risk
Assessment

Site Location: West
Nottingham Township,
Chester County, PA

Project Number:
101722001

Photo 3

Date Taken:
May 11, 2016

Photo Direction:
South

Comments:
View of PEM wetland
of potential concern.
This is the area
where the
groundwater
discharges to surface
water and feeds the
PEM wetland.



Photo 4

Date Taken:
May 11, 2016

Photo Direction:
Northeast

Comments:
Another view of the
PEM wetland of
potential concern.



RETTEW Associates, Inc.
Photo Documentation

Client: Herr Foods, Inc.

Project Name: Ecological Risk
Assessment

Site Location: West
Nottingham Township,
Chester County, PA

Project Number:
101722001

Photo 5

Date Taken:
May 11, 2016

Photo Direction:
North

Comments:
View of the upland
forested habitat,
south of the truck
garage.



Photo 6

Date Taken:
May 11, 2016

Photo Direction:
North

Comments:
View of the PUB
wetland adjacent to
the railroad grade
and surrounded by
upland forest.



RETTEW Associates, Inc.
Photo Documentation

Client: Herr Foods, Inc.

Project Name: Ecological Risk
Assessment

Site Location: West
Nottingham Township,
Chester County, PA

Project Number:
101722001

Photo 7

Date Taken:
May 11, 2016

Photo Direction:
Northeast

Comments:
View of the reference
PEM wetland that is
upgradient and
directly south of the
PEM wetland of
potential concern.
This wetland does
not receive the
contaminated
groundwater
discharge.



Photo 8

Date Taken:
May 11, 2016

Photo Direction:
North

Comments:
View of the PSS
wetland adjacent to
the reference PEM
wetland and
surrounded by
upland forest.



RETTEW Associates, Inc.
Photo Documentation

Client: Herr Foods, Inc.

Project Name: Ecological Risk
Assessment

Site Location: West
Nottingham Township,
Chester County, PA

Project Number:
101722001

Photo 9

Date Taken:
May 11, 2016

Photo Direction:
Southeast

Comments:
View of the PEM
wetland within a
cattle pasture, just
east of the railroad
and south of the UNT
to Northeast Creek.



Photo 10

Date Taken:
May 11, 2016

Photo Direction:
Northwest

Comments:
Upstream view of the
UNT to Northeast
Creek and the scrub-
shrub riparian
corridor in the
southeastern portion
of the study area.



RETTEW Associates, Inc.
Photo Documentation

Client: Herr Foods, Inc.

Project Name: Ecological Risk
Assessment

Site Location: West
Nottingham Township,
Chester County, PA

Project Number:
101722001

Photo 11

Date Taken:
May 11, 2016

Photo Direction:
Northwest

Comments:
View of the cattle
pasture north of the
UNT to Northeast
Creek.



Photo 12

Date Taken:
May 11, 2016

Photo Direction:
Northeast

Comments:
View of the retention
basin in the eastern
portion of the study
area.



RETTEW Associates, Inc.
Photo Documentation

Client: Herr Foods, Inc.

Project Name: Ecological Risk
Assessment

Site Location: West
Nottingham Township,
Chester County, PA

Project Number:
101722001

Photo 13

Date Taken:
May 11, 2016

Photo Direction:
Southwest

Comments:
View of the scrub-
shrub/forested
riparian corridor east
of the UNT to
Northeast Creek.



Photo 14

Date Taken:
May 11, 2016

Photo Direction:
Southeast

Comments:
View of PEM wetland
east of the railroad
grade and northeast
of the UNT to
Northeast Creek.



RETTEW Associates, Inc.
Photo Documentation

Client: Herr Foods, Inc.

Project Name: Ecological Risk
Assessment

Site Location: West
Nottingham Township,
Chester County, PA

Project Number:
101722001

Photo 15

Date Taken:
May 11, 2016

Photo Direction:
Northwest

Comments:
Upstream view of the
UNT to Northeast
Creek, just
downstream of the
culvert and railroad
grade.



ATTACHMENT C

PNDI SEARCH RECIEPT AND AGENCY RESPONSES

1. PROJECT INFORMATION

Project Name: **Herr Foods**

Date of Review: **5/16/2016 10:06:43 AM**

Project Category: **Hazardous Waste Clean-up, Site Remediation, and Reclamation, Other**

Project Area: **73.22 acres**

County(s): **Chester**

Township/Municipality(s): **WEST NOTTINGHAM**

ZIP Code: **19362**

Quadrangle Name(s): **RISING SUN**

Watersheds HUC 8: **Chester-Sassafras; Lower Susquehanna**

Watersheds HUC 12: **North East Creek; Tweed Creek-Octoraro Creek**

Decimal Degrees: **39.744832, -76.019582**

Degrees Minutes Seconds: **39° 44' 41.3955" N, 76° 1' 10.4943" W**

2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	Potential Impact	FURTHER REVIEW IS REQUIRED, See Agency Response
PA Fish and Boat Commission	Potential Impact	FURTHER REVIEW IS REQUIRED, See Agency Response
U.S. Fish and Wildlife Service	No Known Impact	No Further Review Required

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate there may be potential impacts to threatened and endangered and/or special concern species and resources within the project area. If the response above indicates "No Further Review Required" no additional communication with the respective agency is required. If the response is "Further Review Required" or "See Agency Response," refer to the appropriate agency comments below. Please see the DEP Information Section of this receipt if a PA Department of Environmental Protection Permit is required.

Note that regardless of PNDI search results, projects requiring a Chapter 105 DEP individual permit or GP 5, 6, 7, 8, 9 or 11 in certain counties (Adams, Berks, Bucks, Carbon, Chester, Cumberland, Delaware, Lancaster, Lebanon, Lehigh, Monroe, Montgomery, Northampton, Schuylkill and York) must comply with the bog turtle habitat screening requirements of the PASPGP.

Herr Foods

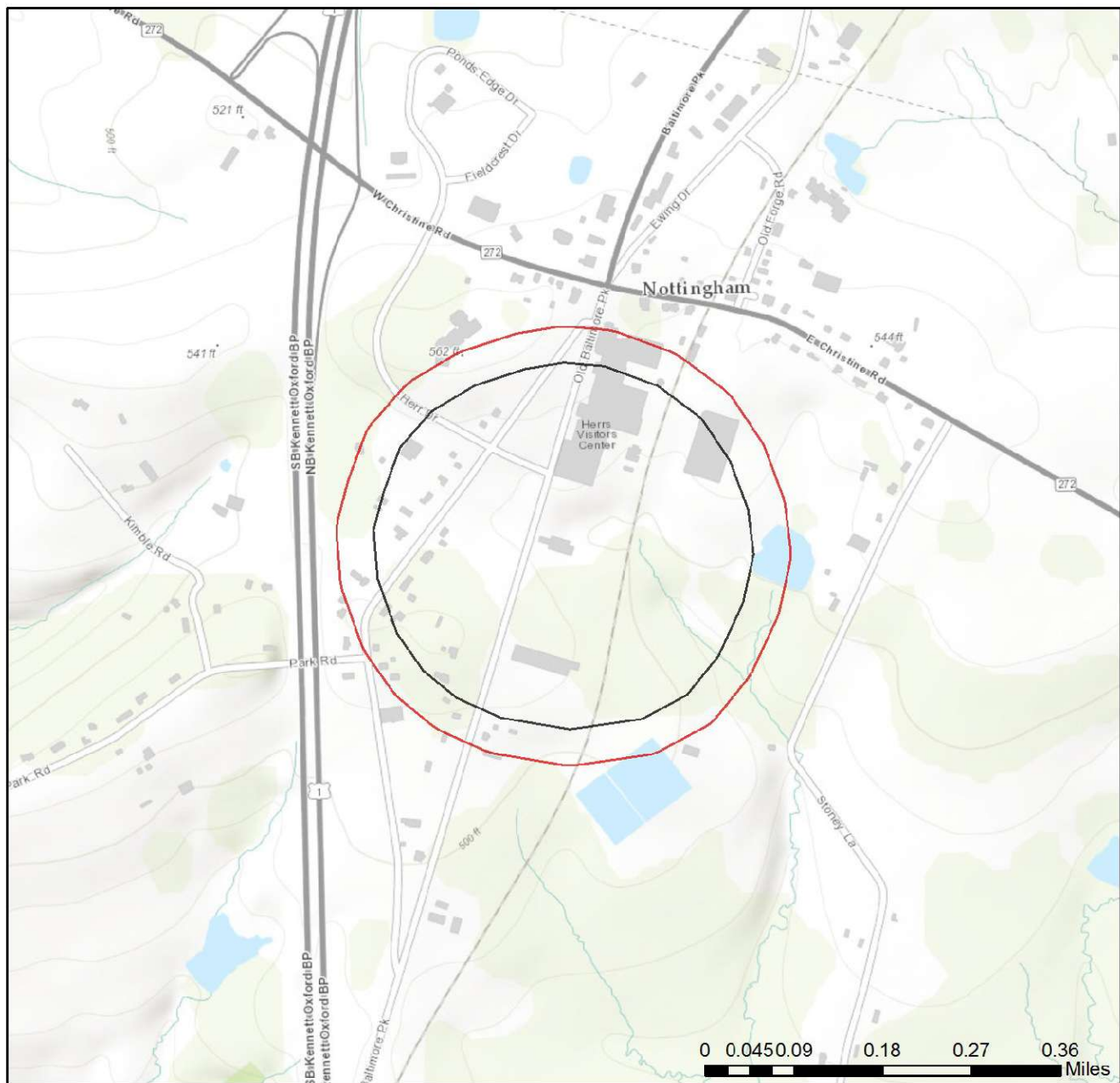




- ☐ Project Boundary
- ☐ Buffered Project Boundary



Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA,

Herr Foods



-  Project Boundary
-  Buffered Project Boundary

Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community



RESPONSE TO QUESTION(S) ASKED

Q1: Will the entire project occur within an existing building, parking lot, driveway, road, street, or maintained (periodically mowed) lawn?

Your answer is: Unknown

3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jurisdictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

PA Game Commission

RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Department of Conservation and Natural Resources

RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

DCNR Species: (Note: The Pennsylvania Conservation Explorer tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below. After desktop review, if a botanical survey is required by DCNR, we recommend the DCNR Botanical Survey Protocols, available here: http://www.gis.dcnr.state.pa.us/hgis-er/PNDI_DCNR.aspx.)

Scientific Name	Common Name	Current Status	Proposed Status	Survey Window
Amblyscirtes vialis	Common Roadside Skipper	Special Concern Species*	Special Concern Species*	One brood from March-July; a partial second brood up to September in the south.
Apodrepanulatrix liberaria	a geometrid moth	Special Concern Species*	Special Concern Species*	
Artace cribraria	Dot-lined White Moth	Special Concern Species*	Special Concern Species*	
Atrytonopsis hianna	Dusted Skipper	Special Concern Species*	Special Concern Species*	adults in flight May to early June
Caripeta aretaria	Southern Pine Looper Moth	Special Concern Species*	Special Concern Species*	

Scientific Name	Common Name	Current Status	Proposed Status	Survey Window
Catocala umbrosa		Special Concern Species*	Special Concern Species*	Catocala umbrosa flies as a single generation with moths on the wing from early April in the southern portions (peak flight in June) of its range through to August in the North (peak flight mid to late July).
Erastria coloraria	Broad-lined Erastria Moth	Special Concern Species*	Special Concern Species*	
Hemileuca maia	Barrens Buckmoth	Special Concern Species*	Special Concern Species*	One brood from September-December
Hypagyrtis esther	Esther Moth	Special Concern Species*	Special Concern Species*	
Lagoa crispata	Black-waved Flannel Moth	Special Concern Species*	Special Concern Species*	May-October
Xestia elimata	Southern Variable Dart Moth	Special Concern Species*	Special Concern Species*	Fall?
Zale curema	A Zale Moth	Special Concern Species*	Special Concern Species*	
Zale submediana	A Zale Moth	Special Concern Species*	Special Concern Species*	May to August

PA Fish and Boat Commission

RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

PFBC Species: (Note: The Pennsylvania Conservation Explorer tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below.)

Scientific Name	Common Name	Current Status
Sensitive Species**		Endangered

U.S. Fish and Wildlife Service

RESPONSE:

No impacts to **federally** listed or proposed species are anticipated. Therefore, no further consultation/coordination under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq. is required. Because no take of federally listed species is anticipated, none is authorized. This response does not reflect potential Fish and Wildlife Service concerns under the Fish and Wildlife Coordination Act or other authorities.

* Special Concern Species or Resource - Plant or animal species classified as rare, tentatively undetermined or candidate as well as other taxa of conservation concern, significant natural communities, special concern populations (plants or animals) and unique geologic features.

** Sensitive Species - Species identified by the jurisdictional agency as collectible, having economic value, or being susceptible to decline as a result of visitation.

WHAT TO SEND TO JURISDICTIONAL AGENCIES

If project information was requested by one or more of the agencies above, upload* or email* the following information to the agency(s). Instructions for uploading project materials can be found [here](#). This option provides the applicant with the convenience of sending project materials to a single location accessible to all three state agencies. Alternatively, applicants may email or mail their project materials (see AGENCY CONTACT INFORMATION).

***Note:** U.S.Fish and Wildlife Service requires applicants to mail project materials to the USFWS PA field office (see AGENCY CONTACT INFORMATION). USFWS will not accept project materials submitted electronically (by upload or email).

Check-list of Minimum Materials to be submitted:

____ Project narrative with a description of the overall project, the work to be performed, current physical characteristics of the site and acreage to be impacted.

____ A map with the project boundary and/or a basic site plan (particularly showing the relationship of the project to the physical features such as wetlands, streams, ponds, rock outcrops, etc.)

In addition to the materials listed above, USFWS REQUIRES the following

____ **SIGNED** copy of a Final Project Environmental Review Receipt

The inclusion of the following information may expedite the review process.

____ Color photos keyed to the basic site plan (i.e. showing on the site plan where and in what direction each photo was taken and the date of the photos)

____ Information about the presence and location of wetlands in the project area, and how this was determined (e.g., by a qualified wetlands biologist), if wetlands are present in the project area, provide project plans showing the location of all project features, as well as wetlands and streams.

4. DEP INFORMATION

The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. Two review options are available to permit applicants for handling PNDI coordination in conjunction with DEP's permit review process involving either T&E Species or species of special concern. Under sequential review, the permit applicant performs a PNDI screening and completes all coordination with the appropriate jurisdictional agencies prior to submitting the permit application. The applicant will include with its application, both a PNDI receipt and/or a clearance letter from the jurisdictional agency if the PNDI Receipt shows a Potential Impact to a species or the applicant chooses to obtain letters directly from the jurisdictional agencies. Under concurrent review, DEP, where feasible, will allow technical review of the permit to occur concurrently with the T&E species consultation with the jurisdictional agency. The applicant must still supply a copy of the PNDI Receipt with its permit application. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. The applicant and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at <https://conservationexplorer.dcnr.pa.gov/content/resources>.

5. ADDITIONAL INFORMATION

The PNDI environmental review website is a preliminary screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page (www.naturalheritage.state.pa.us). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

6. AGENCY CONTACT INFORMATION

PA Department of Conservation and Natural Resources

Bureau of Forestry, Ecological Services Section
400 Market Street, PO Box 8552
Harrisburg, PA 17105-8552
Email: RA-HeritageReview@pa.gov
Fax: (717) 772-0271

PA Fish and Boat Commission

Division of Environmental Services
450 Robinson Lane, Bellefonte, PA 16823
Email: RA-FBPACENOTIFY@pa.gov

U.S. Fish and Wildlife Service

Pennsylvania Field Office
Endangered Species Section
110 Radnor Rd; Suite 101
State College, PA 16801
NO Faxes Please

PA Game Commission

Bureau of Wildlife Habitat Management
Division of Environmental Planning and Habitat Protection
2001 Elmerton Avenue, Harrisburg, PA 17110-9797
Email: RA-PGC_PNDI@pa.gov
NO Faxes Please

7. PROJECT CONTACT INFORMATION

Name: Thomas Eby
Company/Business Name: Rettew Associates, Inc.
Address: 3020 Columbia Ave.
City, State, Zip: Lancaster, PA 17603
Phone: (717) 207-7359 Fax: (717) 394-1063
Email: teby@rettew.com

8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.

Thomas R. Eby
applicant/project proponent signature

5/16/2016
date

BUREAU OF FORESTRY

May 16, 2016

PNDI Number: PNDI-603772

Thomas Eby
Rettew, Inc.
3020 Columbia Avenue
Lancaster, PA 37212
Email: teby@rettew.com (hard copy not to follow)

Re: Herr Foods
West Nottingham Township, Chester County, PA

Dear Mr. Eby,

Thank you for the submission of the Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Environmental Review Receipt Number **PNDI-603772** for review. PA Department of Conservation and Natural Resources screened this project for potential impacts to species and resources of concern under DCNR's responsibility, which includes plants, terrestrial invertebrates, natural communities, and geologic features only.

No Impact Anticipated

PNDI records indicate species or resources under DCNR's jurisdiction located in the vicinity of the project. However, based on the photos that you have submitted, the information you submitted concerning the nature of the project, the immediate location, and our detailed resource information, DCNR has determined that no impact is likely. No further coordination with our agency is needed for this project.


DCNR also recommends the following steps to help prevent the spread of invasive plant species and to encourage the use of native plants:

- Avoid using seed mixes that include invasive plant species if the project requires re-vegetating the area (<http://www.ernstseed.com/seed-mixes/>). Please also attempt to use weed-free straw or hay mixes when possible. A complete list of all Pennsylvania invasive plant species can be found here: http://www.dcnr.state.pa.us/cs/groups/public/documents/document/dcnr_20026634.pdf.
- The area of disturbance should be minimized to the fullest extent that would allow for this project; this will help to lessen the area of indirect disturbance to nearby natural areas.

This response represents the most up-to-date review of the PNDI data files and is valid for two (2) years only. If project plans change or more information on listed or proposed species becomes available, our determination may be reconsidered. Should the proposed work continue beyond the period covered by this letter, please resubmit the project to this agency as an "Update" (including an updated PNDI receipt, project narrative and accurate map). As a reminder, this finding applies to potential impacts under DCNR's jurisdiction only. Visit the PNHP website for directions on contacting the Commonwealth's other resource agencies for environmental review.

Should you have any questions or concerns, please contact Frederick Sechler, Jr., Ecological Information Specialist, by phone (717-705-2819) or via email (c-frsechle@pa.gov).

Sincerely,



Greg Podnieszinski, Section Chief
Natural Heritage Section, DCNR Bureau of Forestry

conserve

sustain

enjoy

P.O. Box 8552, Harrisburg, PA 17015-8552 717-787-3444 (fax) 717-772-0271

ATTACHMENT E

PROFESSIONAL QUALIFICATIONS

Jeremy T. Hite – Mr. Hite has a bachelor's degree in Wildlife and Fisheries Science from the Pennsylvania State University. He is currently involved in developing a Bog Turtle (*Glyptemys muhlenbergii*) Habitat Conservation Plan in Lancaster County, PA and New Castle County, DE. He is a qualified bog turtle surveyor for the state of PA and has six years of experience in searching and assessing different wetland environments for bog turtles as a technician for the Penn State University and as an environmental consultant. Through his employment as Research Technician at the Penn State Cooperative Wetlands Center he has been trained in and has helped development various protocols in assessing stream, wetlands, and riparian areas across the Mid-Atlantic Region. This research also included the sampling of streams and wetlands for macroinvertebrates and other herpetofauna. Some of these projects include Bog Turtle (*Gleptemys muhlenbergii*), Wood Turtle (*Gleptemys insculpta*), Eastern Massasauga (*Sistrurus catenatus catenatus*), Stream-sided salamanders (*Plethodon* spp.), benthic macroinvertebrates, and River Otter (*Lutra canadensis*) surveys. His responsibilities include leading field crews, field data collection, data management, filling out permits, meeting coordination, and landowner contacts.

Thomas R. Eby, Senior Environmental Scientist – Mr. Eby has a bachelor's degree in biology from York College of Pennsylvania and has over eight years of experience in field ecology and wetland biology. He has completed several vegetation and wetland certification courses at Rutgers University. He has received training to delineate wetlands with the procedures described in the 1987 *Corps of Engineers Wetland Delineation Manual* and the regional supplements. Since with RETTEW, Mr. Eby's primary role has been to manage phases within the Natural Sciences service area for various natural gas clients in both the Marcellus and Utica Shale regions. Some of his experience includes midstream pipeline projects, water sourcing projects, managing field crews, PADEP Ch. 105 compliance, USACE Nationwide Permit compliance, agency coordination, threatened and endangered species coordination/surveys, wetland delineation, and aquatic resources reporting.

Thomas J. Stich – Mr. Stich has a bachelor's degree in biology from Mansfield University and a master's degree in applied ecology and conservation biology from Frostburg State University. He has received training to delineate wetlands utilizing the *U.S. Army Corps of Engineers Wetland Delineation Manual* and the *2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*. Mr. Stich has over 15 years of experience delineating tidal and non-tidal wetlands in Pennsylvania, Maryland, and Virginia, and has certification as a forest stand delineator and forest conservation planner in Maryland.