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December 28, 2012

Michael Edillon
Remediation Division - Land
Maryland Department of the Environment
1800 Washington Blvd.
Baltimore, MD 21230-1719

VIA CERTIFIED MAIL
#7011 1570 0000 1098 9513

RE: LIMITED SUBSURFACE INVESTIGATION REPORT OF RESULTS
H&J BP Subway Facility
738 Crain Highway
Gambrills, MD 21054
MDE Case #: 2012-0067-AA
BPE Project #: H&J-101-01

Dear Mike:

BP Environmental, Inc. (BPE), on behalf of our client H&J Amoco, Inc., has enclosed three bound copies and one cd of the Limited Subsurface Investigation Report of Results based on the Work Plan approved by the Maryland Department of the Environment on September 7, 2012. Please feel free to contact me with any questions or concerns.

Sincerely,

BP Environmental, Inc.

Gary Lasako (LAP)

Gary Lasako
Geologist

Enclosures: (3) Limited Subsurface Investigation Report of Results and (1) cd

cc: H&J Amoco, Inc.
BPE Files

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LIMITED SUBSURFACE INVESTIGATION REPORT OF RESULTS

MDE CASE NO. 2012-0067-AA
MDE FID NO. 11762

H&J-101-01

H&J BP SUBWAY FACILITY
738 CRAIN HIGHWAY
GAMBRILLS, MD 21054

DECEMBER 2012

Prepared For:

H&J AMOCO, INC.
738 CRAIN HIGHWAY
GAMBRILLS, MD 21054

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1.0 INTRODUCTION

BP Environmental, Inc. (BPE) was retained by H&J Amoco, Inc. (H&J Amoco) to conduct a Limited Subsurface Investigation (LSI) for the property known as H&J BP Subway located at 738 Crain Highway, Gambrills, Anne Arundel County, Maryland, 21054 (SITE). The SITE comprises approximately two acres and includes Parcel 12 on Anne Arundel County Tax Map 37 and a portion of Parcel 54 on Anne Arundel County Tax Map 37. The purpose of the LSI was to satisfy a request made by the Maryland Department of the Environment (MDE) to perform an LSI in response to the observation of Liquid Phase Hydrocarbons (LPH) in select dispenser sumps and in the two tank field monitoring pipes (TFMP) during inspections at the facility in May and June 2012.

1.1 Topography and Hydrology

The SITE is located in the Western Shore Uplands region of the Embayed section, Coastal Plain physiographic province. A review of the United States Geological Survey (USGS) 7.5 Minute Series Odenton, MD Topographic Quadrangle (2011) indicates that the elevation of the SITE is between 100 - 140 feet referenced to the North American Vertical Datum of 1988 (NAVD88). The SITE slopes gently to the west toward an unnamed tributary of Towsers Branch. The nearest navigable water is Towsers Branch, a tributary of the Little Patapsco River, located approximately 0.7 miles southwest of the SITE. Based on the topography and the location/elevation of nearby surface water, groundwater is expected to flow to the west or southwest toward Towsers Branch and be moderately deep relative to the ground surface (approximately 30 feet below ground surface [bgs]). **Figure 1**, a Topographic Map, illustrates the location of the SITE and local topographic features.

1.2 Geology and Hydrogeology

According to the United States Department of Agriculture – Natural Resources Conservation Service (USDA - NRCS), the dominant soil type in the general area of the SITE is Collington-

Wist complex. The Collington-Wist complex is described as very deep, well drained, moderately high to highly permeable soils that developed in glauconite bearing loamy fluviomarine deposits. Depth to both the water table and bedrock tends to be more than 80 inches.

A review of the 1968 Geologic Map of Maryland produced by the Maryland Geological Survey (MGS) indicates that the shallow soils on-site are underlain by Cretaceous-aged Matawan formation (Kma). Per the MGS, the Matawan formation is composed of dark gray micaceous, glauconitic, argillaceous, fine-grained sand and silt. The thickness of the formation varies between 0 – 70 feet.

1.3 Background

The SITE is located along Crain Highway (MD Route 3) approximately 300 feet north of the intersection of Crain Highway and West Churchview Road. The SITE consists of approximately two acres and is developed with an approximate 6,750 square-foot convenience store and canopied gasoline and diesel dispensing islands. Groundcover consists primarily of buildings, asphalt, concrete, and grass. Entrances along the western and eastern SITE boundaries provide access from Crain Highway. **Figure 2**, a SITE Map, shows the location of SITE improvements.

Based on reports supplied by the current property occupant and observations by BPE of the SITE, the following statements summarize the environmental conditions at the SITE:

- The SITE is supplied by a potable water well (Well Tag # AA-94-0521). Sampling and analysis of the potable water well on June 4, 2012 revealed non-detectable concentrations of all petroleum-related constituents. Results of the June 4, 2012 laboratory analysis were submitted to MDE previously under separate cover;
- Sanitary waste is directed to an on-site septic system;

- The surface of the SITE above and adjacent to the petroleum distribution system (underground storage tank [UST] tank, lines and dispensers) is sealed from surface water infiltration via a competent asphalt and concrete cap;
- The UST system consists of one 12,000-gallon composite (steel with fiberglass reinforced plastic [FRP]) regular gasoline UST, one 12,000-gallon composite (steel with FRP) super gasoline UST, one 10,000-gallon composite (steel with FRP) diesel UST, double-walled pressurized product lines, and gasoline and diesel dispensers;
- There are two TFMPs in the existing UST field. TFMPs are not monitoring wells (MWs) and provide information solely on the conditions within the tank field and not actual groundwater conditions.
- Periodic gauging of the TFMPs since July 2012 by BPE personnel revealed apparent product thicknesses (APT) of as much as 0.05′ indicating a small layer of petroleum sitting atop the water that has collected in permeable pea gravel backfill of the tank pit;
- In May and June 2012, MDE personnel reportedly observed LPH in the sumps beneath both diesel dispensers. LPH was also reportedly observed in the sump beneath gasoline dispensers #11/#12. Test boot entry fittings were reportedly pulled back in some or all of the sumps noted above, allowing LPH to enter the corrugated chase pipe for the product lines. MDE also gauged up to 0.05′ of LPH in the TFMPs;
- The closest perennial surface water is located approximately 0.7 miles southwest of SITE. Based on the elevation of this surface water and its proximity to the SITE, groundwater is expected to be encountered within 10’ and 20’ bgs at the SITE;
- No soil quality data were available for the SITE prior to the completion of the LSI; and
- No groundwater quality data were available for the SITE prior to the completion of the LSI.

BPE submitted an LSI Work Plan to MDE on July 27, 2012. The scope of the LSI Work Plan included the completion of an Enhanced Fluid Recovery Event (EFR), a soil evaluation, and a groundwater evaluation. MDE approved the LSI Work Plan on September 7, 2012, contingent

upon several minor modifications. In addition, an LSI report deadline extension to December 30, 2012 was granted by MDE.

1.4 Underground Utilities

Public utilities were marked to the SITE property line by Miss Utility prior to conducting field activity. Private utilities were marked by Underground Detective, Inc. Care was taken to avoid private, on-site utilities during the field work; however, a premium gasoline product line was struck in a soil boring (SB) location cleared by Underground Detective, Inc. during the drilling activity (further description provided in *Section 2.4* below).

1.5 Limitations and Exceptions of Assessment

BPE professional services have been performed and our conclusions were prepared according to customary principles and practices in the fields of environmental science. This warranty is in lieu of all other warranties either expressed or implied. Information and interpretation presented herein is for the sole use of H&J Amoco; a third party should not rely upon the information and interpretation contained in this document. BPE is not responsible for the independent conclusions, opinions, or recommendations made by others based on the data presented in this report.

This LSI is not an exhaustive assessment of subsurface conditions at the SITE. There is a point at which the cost of information obtained and the time required to obtain it outweigh the benefit of the information and, in the context of private transactions and contractual responsibilities, may become a material detriment to the orderly conduct of business. If the presence of target analytes is confirmed on a property, the extent of further assessment is a function of the degree of confidence required and the degree of uncertainty acceptable in relation to the objectives of the assessment.

2.0 SUBSURFACE INVESTIGATION

BPE performed the LSI in accordance with the July 27, 2012 LSI Work Plan, subsequently approved by MDE on September 7, 2012.

2.1 Enhanced Fluid Recovery Event

An EFR event was conducted on the TFMPs at the SITE on October 4, 2012 to remove separate-phase (i.e. LPH), dissolved-phase, and vapor-phase petroleum mass that had accumulated in the tank pit. Prior to conducting the EFR, the TFMPs were gauged revealing 0.01′ APT in each TFMP. See **Table 1** for a summary of liquid level gauging data. Stingers were installed in both TFMPs to a depth of approximately 1″ - 2″ below the top of the liquid surface. A vacuum ranging from 6″ to 10″ Hg was induced by a vacuum truck operated by Clean Venture, Inc. to simultaneously recover mass at both TFMPs. The EFR event was conducted for four hours. A total of 629 gallons of liquid, including an unknown volume of emulsified LPH, was recovered and transported to Water Depot, Inc. in New Windsor, MD. A copy of the bill of lading for the recovered liquid is included as **Appendix A**. Post-EFR gauging conducted of the TFMPs on October 4, 2012 revealed no measureable (i.e. ≥ 0.01′) APTs in either well (see **Table 1**).

2.2 Soil Boring Installation and Soil Sampling

BPE and Green Services, Inc. (Green's), a Maryland-licensed well driller, mobilized to the SITE on November 8, 2012 to evaluate subsurface conditions using a Geoprobe® 7820 DT track-mounted hydraulic drill rig. A total of four soil borings (SB-01 through SB-04) and one temporary well (TW-01) were installed across the SITE. Soil boring locations were sited around and/or adjacent to locations at which LPH had been observed by MDE and/or tank contractors (e.g. tankfield, diesel dispenser sumps, etc.). See **Figure 3** for a Site Map with soil boring and temporary well (TW) locations.

Soil borings were installed to depths ranging from 10 feet to 43.5 feet bgs, with total depth limited by refusal or by obstructing objects. Soil cores were extracted in new five foot length

acetate liners via a Dual Tube sampling system. A Rae Systems MiniRae 2000 photoionization detector (PID) was used to screen the soil for volatile content. Prior to use, a two-point field calibration was performed on the PID, which included both a fresh air (zero calibration) and a span calibration using a 100 parts per million by volume (ppmv) isobutylene standard. The soil cores were logged for lithology and screened for visual and olfactory indicators of impact. Apparent water saturation was not noted in any SBs, except for isolated seams of saturated media. PID readings are recorded on the **Soil Boring Logs** provided in **Appendix B.**

Soil samples were collected from SBs in which soil exhibited visual/olfactory evidence of impact or had significant PID screening results above background. As the uppermost water bearing zone was not reached in any SB due to refusal, a soil sample was also collected from the bottom of soil borings SB-01, SB-03, and SB-04. A total of five soil samples were collected from the SBs. Soil samples were collected by a BPE field technician donning new, nitrile gloves and were placed into laboratory-supplied clean glass bottles. Soil samples obtained for volatile organic compound (VOC) analysis was collected using Environmental Protection Agency (EPA) SW-846 Method 5035 '*Closed-System Purge-and-Trap and Extraction for Volatile Organics in Soil and Waste Samples*.' Bottles were immediately packaged in a cooler on ice and were shipped next-day under appropriate chain of custody (COC) protocol to Environmental Science Corp. (ESC) located in Mount Juliet, TN. Soil samples were analyzed for:

- VOCs including fuel oxygenates following EPA Method 8260B;
- Total Petroleum Hydrocarbons – Gasoline Range Organics (TPH-GRO) following EPA Method 8015; and
- Total Petroleum Hydrocarbons – Diesel Range Organics (TPH-DRO) following EPA Method 8015.

Results of the laboratory analysis of soil are summarized in **Table 2** and provided in **Appendix C.** Soil cuttings were drummed in properly labeled and sealed 55-gallon drums. Soil borings

were sealed at the end of the soil and groundwater investigation using bentonite and like-surface material (e.g. asphalt patch).

2.3 Temporary Well Installation and Groundwater Sampling

On November 8, 2012 BPE oversaw the installation of two polyvinyl chloride (PVC) temporary wells (TW-01 and TW-03) to evaluate groundwater quality in water-saturated seams perched above the uppermost water bearing zone (see **Soil Boring Logs** in **Appendix B**). See **Figure 3** for a Site Map showing the locations of temporary wells TW-01 and TW-03. The TWs were constructed using 10 feet of 1-inch diameter 0.010-inch (10-slot) slotted PVC screen capped at the bottom and an appropriate length of 1-inch diameter PVC riser pipe. Each TW was screened at the bottom of the borehole. The annular space between the TW screen and borehole wall generally remained open, allowing water to accumulate in the bottom of the borehole if not retained by the geologic media. Gauging of the TWs multiple hours after their installation revealed that approximately 2′ of water had accumulated in temporary well TW-01, whereas temporary well TW-03 contained no water and, therefore, was not sampled (see **Table 1** for a summary of liquid level gauging data).

A check valve and an appropriate length of designated, disposable polyethylene tubing were used to collect water from temporary well TW-01 for laboratory analysis. The groundwater sample was collected by a BPE technician donning new, nitrile gloves and was placed into laboratory-supplied, clean glass bottles. Bottles were immediately packaged in a cooler on ice, and shipped to ESC in Mount Juliet, TN under appropriate COC protocols for laboratory analysis. The groundwater sample collected from temporary well TW-01 was analyzed for:

- VOCs including fuel oxygenates following EPA Method 8260B;
- TPH-GRO following EPA Method 8015; and
- TPH-DRO following EPA Method 8015.

Results of the laboratory analysis of groundwater are summarized in **Table 3A** and provided in **Appendix C**. After gauging and sampling the TWs, all well material was removed and the SBs sealed with bentonite and like-surface material.

On November 12, 2012, a BPE technician collected liquid samples from both TFMPs as required by MDE. Samples were collected using a peristaltic pump and an appropriate length of designated, disposable polyethylene tubing. Samples collected for volatile constituents were collected at flow rates of less than 250 milliliters per minute (mL/min.). Bottles were immediately packaged in a cooler on ice, and shipped to ESC in Mount Juliet, TN under appropriate COC protocols for laboratory analysis. The water sample collected from TFMP-01 and TFMP-02 was analyzed for:

- VOCs including fuel oxygenates following EPA Method 8260B;
- TPH-GRO following EPA Method 8015; and
- TPH-DRO following EPA Method 8015.

Results of the laboratory analysis of water from the tank pit are summarized in **Table 3B** and provided in **Appendix D**.

2.4 Post-Excavation Product Line Sampling

During the installation of soil boring SB-02, a premium product line was struck at approximately 2′ bgs. The fueling system was immediately shut down following the observation of product piping material in the first core withdrawn from SB-02. No fueling was observed to occur between the period when the product line was struck and when the fueling system was shut-down. Per the November 8, 2012 MDE directive, primary and secondary tightness testing was performed on the gasoline product lines, which revealed failing results for the primary premium lines. Tyree Services, Inc. (Tyree) was retained to replace the damaged premium product line, repair the chase line, perform tightness testing on the replaced premium product lines, and return the mid-grade and premium dispensing systems to service. Repairs and tightness testing were

completed on November 14, 2012, the results of which were submitted by Tyree under separate cover to MDE. The mid-grade and premium dispensing systems were later returned to service.

On November 12, 2012, during the unearthing and excavation of the damaged product line, BPE collected a soil sample below where the product line was struck. The soil sample was collected at the interface of the pea gravel fill in which the product line was bedded and the underlying native soil. The soil sample was collected by a BPE field technician donning new, nitrile gloves and was placed into laboratory-supplied clean glass bottles. Soil samples obtained for VOC analysis was collected using EPA SW-846 Method 5035 '*Closed-System Purge-and-Trap and Extraction for Volatile Organics in Soil and Waste Samples.*' Bottles were immediately packaged in a cooler on ice and were shipped next-day under appropriate COC protocol to ESC located in Mount Juliet, TN. Soil samples were analyzed for:

- VOCs including fuel oxygenates following EPA Method 8260B;
- TPH-GRO following EPA Method 8015; and
- TPH-DRO following EPA Method 8015.

Results of the laboratory analysis of soil are summarized in **Table 2** and provided in **Appendix D**. As the PID screening level of the native soil was below 100 ppmv, no soil was removed during the product line repair activity.

2.5 Quality Assurance/Quality Control

2.5.1 Soil Sampling

Prior to field screening soil, a two-point calibration was conducted in the field on the PID. The two-point calibration consisted of 1) a fresh air (zero) calibration; and 2) a span calibration using a 100 ppmv concentration of isobutylene. Sampling equipment, including spoons and bowls were decontaminated with a Liquinox solution and distilled water prior to and following sample collection. New disposable, nitrile gloves were used to collect each sample. Soil samples obtained for analysis of volatile constituents were collected using EPA SW-846 Method 5035

procedures. All soil samples were placed into the appropriate, laboratory-supplied, sterile containers upon collection and were immediately packaged on ice. The soil samples were subsequently delivered to the laboratory under appropriate COC protocols. Contaminant and analytical method specific holding times were met for all soil samples.

2.5.2 Groundwater and Tank Pit Water Sampling

Prior to groundwater sample collection, TWs and TFMPs were purged of a volume of water. Following purging, water samples were collected using a check valve and new designated, disposable polyethylene tubing or with a peristaltic pump and new designated, disposable polyethylene tubing. New, disposable, nitrile gloves were used to collect each sample. Sample flow rates for all parameters were less than 500 mL/min., whereas the sample flow rate for volatile parameters was less than 250 mL/min. All water samples were placed into the appropriate, laboratory-supplied, sterile containers upon collection and immediately packaged on ice. The water samples were subsequently shipped to the laboratory under appropriate COC protocols. Contaminant and analytical method specific holding times were met for all water samples. The TWs were sealed in accordance with industry standards.

3.0 WATER WELL RECORD REVIEW

BPE completed a water well survey consisting of a record review of water well information maintained by the Anne Arundel County Department of Health – Division of Environmental Health for parcels located adjacent to the SITE, as per the July 27, 2012 LSI Work Plan. Results of the water well survey are provided in **Table 4**. See **Appendix E** for Well Completion Reports.

4.0 SUMMARY OF RESULTS

The LSI results are summarized as follows:

- The SITE, currently occupied by H&J Amoco, is utilized as a petroleum station with convenience store.
- The ground cover at the SITE is largely composed of impervious surfaces including asphalt, concrete, buildings, and fueling canopies.
- LPH was reportedly observed at the SITE in select dispenser sumps and in the TFMPs during inspections that occurred in May and June 2012 by MDE.
- The SITE is served by supply private well (AA-94-0521). The well was drilled to total depth of 206′ bgs and is screened from 199′ – 206 bgs′. A review of the well completion log for the SITE well, included in **Appendix E**, indicates that a low permeability layer comprised of red and white clay overlies the more permeable brown and white sand in which the well is screened. The grout seal reportedly extends into the low permeability layer composed of red and white clay. Sanitary waste is directed to an on-site septic system.
- Four SBs and two TWs were installed to assess soil and groundwater impacts at the SITE. In addition, the water contained in the permeable tank pit fill material was assessed through sampling of the TFMPs.
- **Soil Boring Logs** indicate that the SITE is primarily underlain by less permeable soils with textures ranging from sandy clay loams to fine, poorly-sorted sands to a depth of at least 32′ bgs (see **Soil Boring Logs** in **Appendix A**). These soils are underlain by fine-coarse, varicolored, generally well-sorted, sands.
- The uppermost water-bearing (true groundwater) zone was not encountered in any SB, with the deepest SB (SB-01) extending to a depth of 43.5′ bgs. A 2″ (thickness) water-saturated seam was observed in SB-01 at a depth of approximately 33.5′ bgs. It is

expected that this seam largely contributed the water that accumulated in temporary well TW-01. Temporary well TW-03, installed in soil boring SB-03, remained dry during the investigation and was subsequently abandoned.

- Two soil samples were collected from SBs that exhibited intervals with elevated PID readings: SB-01 15′-17′ and SB-03 11′-13′. Three soil samples were collected from the bottom of soil borings SB-01, SB-03, and SB-04 to assess whether any shallow vadose zone impacts, if present, attenuated with depth: SB-01 41′-43′, SB-03 34′-36′, and SB-04 34′-36′. All soil samples were analyzed for the VOCs, TPH-GRO, and TPH-DRO. Soil quality results from the five samples noted above show concentrations of TPH-GRO, TPH-DRO and VOCs above their respective practical quantitation limits (PQLs) in each sample; however, all detected concentrations are below MDE Generic Numeric Cleanup Standards for non-residential soil (hereinafter referred to as MDE non-residential soil cleanup standards).

- A soil sample was collected below the damaged premium product pipe line (Product Pipe Line Ex 2.75′) and analyzed for VOCs, TPH-GRO, and TPH-DRO. The results of the laboratory analysis reveal detectable concentrations of VOCs and TPH-GRO, but all detected levels are well below MDE non-residential soil cleanup standards. See **Table 2** for a tabular summary of soil quality results compared to the MDE non-residential soil cleanup standards. **Figure 4** is a Site Map showing no soil exceedances.

- A groundwater sample was collected from temporary well TW-01 and water from the tank pit was collected from both TFMPs as requested by MDE. Note that liquid obtained from these sampling locations is representative of perched layers (tank field and liquid-saturated seam) located above the uppermost water bearing zone. Water samples were analyzed for the full-suite of VOCs, TPH-GRO, and TPH-DRO. Water quality data indicate concentrations of TPH-GRO and VOCs in excess of the MDE Generic Numeric Cleanup Standards for Groundwater in Type I and II Aquifers (hereinafter referred to as

MDE groundwater cleanup standards) for all groundwater samples. In addition, both TFMPs contained concentrations of TPH-DRO in excess of the MDE groundwater cleanup standards. See **Table 3A** for a tabular summary of groundwater quality results from TW-01 compared to the MDE groundwater cleanup standards and **Table 3B** for a tabular summary of water quality results from TFMP-01 and TFMP-02 compared to the MDE groundwater cleanup standards. **Figure 5A** is a Site Map showing groundwater quality exceedances and **Figure 5B** is a Site Map showing water quality exceedances of the tank pit fluids compared to MDE groundwater cleanup standards.

- A groundwater sample could not be collected from temporary well TW-03, as it did not contain liquid within several hours after installation.

5.0 RISK DETERMINATION

BPE completed a Risk Determination using the 7 risk factors in the Maryland Environmental Assessment Technology (MEAT) for Leaking Underground Storage Tanks (LUSTs).

Liquid Phase Hydrocarbons – LPH was detected in the TFMPs prior to the completion of the EFR event in October 2012. This LPH measurement is only representative of a thin layer of petroleum on the water contained in the tank pit, not on the groundwater. No LPH has been detected in the TFMPs since the October 2012 EFR event. No LPH was observed in any of the SBs or TWs installed at the SITE.

Current and Future Use of Impacted Water – The SITE and several of the adjacent parcels are served by domestic water wells (see **Table 4**). The SITE well is drawing groundwater from a screened interval nearly 200' below grade and is sealed from grade to 160' below grade. The nearest water supply well beyond the SITE boundary is 70' away and is drawing water from 200' below grade with a 150' sealed interval. The potential of several of these water wells to be affected by the dissolved-phase hydrocarbons detected in the perched water at the SITE is unknown but appears to be unlikely given the water well specifications (depth of sealed interval and depth of screened interval)

Migration of Contamination – Several constituents analyzed in the temporary well TW-01 exceeded the MDE groundwater cleanup standards (see **Table 3A**) and the water from the tank pit was also impacted with dissolved petroleum compounds (see **Table 3B**). The stability or migration of the noted contamination in these perched zones is unknown based upon the data collected to date.

Human Exposure – The SITE is an active service station located in a mixed use area in Gambrills, MD. There are no known completed exposure pathways based on the limited SITE data collected to date.

Environmental, Ecological Exposure – No species or habitats of concern were found to exist at the SITE or on adjacent properties.

Impact to Utilities or Other Buried Structures – Underground utilities located in the vicinity of the SITE include septic systems, water, electric, and telecommunication lines. LPH appears to be confined to the permeable fill of the tankfield, in which liquid appears to be sitting in the very permeable tank pit fill material and perched by the underlying less permeable native soil. Accordingly, residual LPH in the tankfield is not expected to impact utilities or other buried structures. Further, there have been no reports of nuisance vapors in any of the underground utilities at the SITE.

Other Sensitive Receptors – The closest schools are the Newbury School located approximately one mile southwest of the SITE and Millersville Elementary School located approximately 1.25 miles northeast of the SITE. The closest churches are the Our Lady of the Fields Roman Catholic Church located approximately 0.5 miles east of the SITE and the Makkah Learning Center and Calvary Temple, both located approximately 0.5 miles south of the SITE. Other potentially sensitive receptors include the Design in Motion Dance Center located approximately 200’ east of the SITE. There are no known hospitals or historic landmarks located within 0.5 miles of the SITE.

6.0 CONCLUSIONS

Based on *Section 4.0 Summary of Results* and *Section 5.0 Risk Determination*, the following conclusions and recommendations are offered:

- The results of the LSI indicate a minor mass of petroleum-related adsorbed-phase compounds in the immediate vicinity of the USTs at the SITE. The magnitude of the adsorbed-phase concentrations appears to decrease with depth, given the data obtained from the soil samples collected at multiple, discrete vertical intervals within soil borings SB-01 and SB-03. Accordingly, the deeper vadose zone soil (e.g. >25′ bgs) is expected to provide a relatively clean soil sorption surface for the shallow vadose zone soil impacts that are transported downward via infiltration of surface water and percolation through the soil column.

- The adsorbed-phase concentrations of petroleum-related compounds for all soil samples, including the sample collected during the product line repair activity (Product Line Ex – 2.75′) are below the MDE non-residential soil cleanup standards. Given the competent impervious cap across much of the SITE and the relatively clean soil in the deeper portion of the vadose zone, the noted adsorbed-phase petroleum impacts are not expected to be a significantly degrade groundwater quality in the uppermost water bearing zone.

- Sampling and analysis of water perched in the TFMPs and within a water-saturated seam in the vadose zone (TW-01) revealed concentrations of petroleum-related constituents in excess of the MDE groundwater cleanup standards. The water sample from the tank pit is not indicative of the shallow groundwater quality, rather shows that a minor mass of petroleum contained within the permeable fill of the tank pit.

- The horizontal and vertical distribution of the perched dissolved-phase impacts has not been fully defined. The magnitude and extent of dissolved-phase petroleum impacts to the uppermost water bearing zone are undefined, as refusal with the large Geoprobe rig was encountered above the top of the uppermost water bearing zone in soil borings SB-01, SB-03, and SB-04.

7.0 RECOMMENDATIONS

Based on the results of the LSI and the Risk Determination provided in *Section 5.0*, additional investigation at the SITE is warranted to assess impacts to the uppermost water bearing zone and to complete the exposure pathway evaluation. The scope of the Supplemental Site Investigation is provided below:

- Gauge liquid levels and LPH thicknesses in both TFMPs at least once every month in accordance with the MDE Report of Observations dated November 9, 2012.
- Hand-bail LPH from the TFMPs if the APT in either of the TFMPs exceeds 0.05′. Alternatively, an auto-bailer can be installed for more continuous removal of the small mass of SPH in the tank pit.
- Install three permanent groundwater MWs at the SITE to evaluate the magnitude and extent of petroleum impacts in the uppermost water bearing zone. Soil boring locations will be soft-dug using vacuum excavation prior to initiating drilling activity. BPE will provide MDE five days notice of the drilling activity. At least one soil sample will be collected during the installation of each MW and analyzed for TPH-GRO/TPH-DRO following EPA Method 8015 and for VOCs following EPA Method 8260B. The permanent MWs will be installed using a truck mounted air rotary rig and will be constructed per the following specification:
    - An approximate 6-inch diameter borehole will be drilled to a depth extending approximately 5′ to 10′ into the uppermost water bearing zone. The MWs will be screened with 10-feet to 15-feet of 2-inch inner diameter (ID), 0.010-inch slotted schedule 40 PVC, with 2-inch ID schedule 40 PVC casing extending to the surface, more or less. An artificial filter pack of #2 morie sand (or equivalent) will be emplaced from the base of the borehole to approximately 2′ above the top of the screened interval. A low permeability seal of pure sodium bentonite (montmorillonite) pellets or high-solids bentonite slurry will extend from the top of

the artificial filter pack to approximately 1′ to 2′ bgs to ensure an effective seal annular seal. All MWs will be completed with locking well caps. The MWs will be secured with flush-mount manways (protective casings) and approximate 2-foot by 2-foot concrete surface seals.

- Develop all permanent MWs by surging and purging discrete intervals within the water-saturated portion of the well screens in accordance with industry standards.
- Sample groundwater from the permanent MWs per industry standards and analyze for TPH-GRO/TPH-DRO following EPA Method 8015 and VOCs following EPA Method 8260.
- If any of the MWs contain concentrations of TPH-GRO, TPH-DRO, or VOCs in excess of the MDE groundwater cleanup standards, a ¼ mile water well survey will be conducted that consists of both a field survey of water wells and a public record review of water wells located within 0.25 miles of the SITE.
- Submit a Supplemental Site Investigation Report to MDE within 120 days of MDE approval of the scope of the additional investigation.

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TABLES

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Table 1
Liquid Level Gauging Data
H+J-101-01

WELL NO.	TFMP-01			TFMP-02			TW-01			TW-03		
ID (in.)	4.00			4.00			1.00			1.00		
WELL DEPTH (ft.)	12.6			12.0			43.4			36.5		
SCREEN LENGTH (ft.)	Unknown			Unknown			10.00			10.00		
DATE	DTP	DTW	APT	DTP	DTW	APT	DTP	DTW	APT	DTP	DTW	APT
07/11/12	10.75	10.80	**0.05**	10.08	10.12	**0.04**	Not Installed			Not Installed		
09/28/12	10.59	10.60	**0.01**	9.92	9.95	**0.03**	Not Installed			Not Installed		
10/4/2012[1]	10.63	10.64	**0.01**	9.98	9.99	**0.01**	Not Installed			Not Installed		
10/4/2012[2]	--	10.66	NMT	--	10.02	NMT	Not Installed			Not Installed		
11/08/12	--	NG	--	--	NG	--	--	41.11	NMT	--	NW	--
11/12/12	--	8.34	NMT	--	7.68	NMT	Abandoned			Abandoned		
12/06/12	--	8.25	NMT	--	7.56	NMT	Abandoned			Abandoned		

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Table 1
Liquid Level Gauging Data
H+J-101-01
Legend

ID	=	Inner Diameter
TOC	=	Top of Casing
DTP	=	Depth to Product (ft. below TOC)
DTW	=	Depth to Water (ft. below TOC)
APT	=	Apparent Product Thickness (ft.)
NA	=	Not Applicable
NG	=	Well Not Guaged
NMT	=	No Measureable Thickness
NW	=	No Water

1	=	Liquid levels gauged prior to the performance of an Enhanced Fluid Recovery Event
2	=	Liquid levels gauged following the performance of an Enhanced Fluid Recovery Event

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Table 2
Summary of Soil Quality Results
H+J-101-01

Lab Sample ID					L605622-01	L605622-02	L605622-03
Client Sample ID					SB-01 15-17 FT	SB-01 41-43 FT	SB-03 11-13 FT
Collect Date					11/8/2012	11/8/2012	11/8/2012
Method	Parameter	Units	T1 - Non Res Soil*	T2 - S Non Res**	Value	Value	Value
8015	TPH (GC/FID) Low Fraction	mg/kg		620	180	<0.10	290
8015	TPH (GC/FID) High Fraction	mg/kg		620	50	<4.0	110
8260B	Acetone	mg/kg	92000		<1.1	<0.050	2.0
8260B	Acrylonitrile	mg/kg			<0.22	<0.010	<0.26
8260B	Benzene	mg/kg	52		2.6	<0.0010	3.2
8260B	Bromobenzene	mg/kg			<0.022	<0.0010	<0.026
8260B	Bromodichloromethane	mg/kg	46		<0.022	<0.0010	<0.026
8260B	Bromoform	mg/kg	360		<0.022	<0.0010	<0.026
8260B	Bromomethane	mg/kg	140		<0.11	<0.0050	<0.13
8260B	n-Butylbenzene	mg/kg			0.35	<0.0010	1.3
8260B	sec-Butylbenzene	mg/kg			0.084	<0.0010	0.56
8260B	tert-Butylbenzene	mg/kg			<0.022	<0.0010	<0.026
8260B	Carbon tetrachloride	mg/kg	22		<0.022	<0.0010	<0.026
8260B	Chlorobenzene	mg/kg	2000		<0.022	<0.0010	<0.026
8260B	Chlorodibromomethane	mg/kg	34		<0.022	<0.0010	<0.026
8260B	Chloroethane	mg/kg	990		<0.11	<0.0050	<0.13
8260B	2-Chloroethyl vinyl ether	mg/kg			<1.1	<0.050	<1.3
8260B	Chloroform	mg/kg	1000		<0.11	<0.0050	<0.13
8260B	Chloromethane	mg/kg			<0.054	<0.0025	<0.064
8260B	2-Chlorotoluene	mg/kg			<0.022	<0.0010	<0.026
8260B	4-Chlorotoluene	mg/kg			<0.022	<0.0010	<0.026
8260B	1,2-Dibromo-3-Chloropropane	mg/kg	3.6		<0.11	<0.0050	<0.13
8260B	1,2-Dibromoethane	mg/kg	1.4		<0.022	<0.0010	<0.026
8260B	Dibromomethane	mg/kg			<0.022	<0.0010	<0.026
8260B	1,2-Dichlorobenzene	mg/kg	9200		<0.022	<0.0010	<0.026

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Table 2
Summary of Soil Quality Results
H+J-101-01

Lab Sample ID					L605622-01	L605622-02	L605622-03
Client Sample ID					SB-01 15-17 FT	SB-01 41-43 FT	SB-03 11-13 FT
Collect Date					11/8/2012	11/8/2012	11/8/2012
Method	Parameter	Units	T1 - Non Res Soil*	T2 - S Non Res**	Value	Value	Value
8260B	1,3-Dichlorobenzene	mg/kg	310		<0.022	<0.0010	<0.026
8260B	1,4-Dichlorobenzene	mg/kg	120		<0.022	<0.0010	<0.026
8260B	Dichlorodifluoromethane	mg/kg			<0.11	<0.0050	<0.13
8260B	1,1-Dichloroethane	mg/kg	20000		<0.022	<0.0010	<0.026
8260B	1,2-Dichloroethane	mg/kg	31		<0.022	<0.0010	<0.026
8260B	1,1-Dichloroethene	mg/kg	5100		<0.022	<0.0010	<0.026
8260B	cis-1,2-Dichloroethene	mg/kg	1000		<0.022	<0.0010	<0.026
8260B	trans-1,2-Dichloroethene	mg/kg	2000		<0.022	<0.0010	<0.026
8260B	1,2-Dichloropropane	mg/kg	42		<0.022	<0.0010	<0.026
8260B	1,1-Dichloropropene	mg/kg			<0.022	<0.0010	<0.026
8260B	1,3-Dichloropropane	mg/kg			<0.022	<0.0010	<0.026
8260B	cis-1,3-Dichloropropene	mg/kg	29		<0.022	<0.0010	<0.026
8260B	trans-1,3-Dichloropropene	mg/kg	29		<0.022	<0.0010	<0.026
8260B	2,2-Dichloropropane	mg/kg			<0.022	<0.0010	<0.026
8260B	Di-isopropyl ether	mg/kg			0.14	<0.0010	0.085
8260B	Ethylbenzene	mg/kg	10000		4.6	<0.0010	16
8260B	Hexachloro-1,3-butadiene	mg/kg	37		<0.022	<0.0010	<0.026
8260B	Isopropylbenzene	mg/kg	10000		0.31	<0.0010	2.4
8260B	p-Isopropyltoluene	mg/kg			0.049	<0.0010	0.29
8260B	2-Butanone (MEK)	mg/kg	61000		<0.22	<0.010	<0.26
8260B	Methylene Chloride	mg/kg	380		<0.11	<0.0050	<0.13
8260B	4-Methyl-2-pentanone	mg/kg			<0.22	<0.010	<0.26
8260B	Methyl tert-butyl ether	mg/kg	720		<0.022	0.013	<0.51
8260B	Naphthalene	mg/kg	2000		1.9	<0.0050	4.1
8260B	n-Propylbenzene	mg/kg			1.2	<0.0010	7.3

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Table 2
Summary of Soil Quality Results
H+J-101-01

Lab Sample ID					L605622-01	L605622-02	L605622-03
Client Sample ID					SB-01 15-17 FT	SB-01 41-43 FT	SB-03 11-13 FT
Collect Date					11/8/2012	11/8/2012	11/8/2012
Method	Parameter	Units	T1 - Non Res Soil*	T2 - S Non Res**	Value	Value	Value
8260B	Styrene	mg/kg	20000		0.031	<0.0010	<0.026
8260B	1,1,1,2-Tetrachloroethane	mg/kg			<0.022	<0.0010	<0.026
8260B	1,1,2,2-Tetrachloroethane	mg/kg	14		<0.022	<0.0010	<0.026
8260B	1,1,2-Trichlorotrifluoroethane	mg/kg			<0.022	<0.0010	<0.026
8260B	Tetrachloroethene	mg/kg	5.3		<0.022	<0.0010	<0.026
8260B	Toluene	mg/kg	8200		20	<0.0050	66
8260B	1,2,3-Trichlorobenzene	mg/kg			<0.022	<0.0010	<0.026
8260B	1,2,4-Trichlorobenzene	mg/kg	1000		<0.022	<0.0010	<0.026
8260B	1,1,1-Trichloroethane	mg/kg	200000		<0.022	<0.0010	<0.026
8260B	1,1,2-Trichloroethane	mg/kg	50		<0.022	<0.0010	<0.026
8260B	Trichloroethene	mg/kg	7.2		<0.022	<0.0010	<0.026
8260B	Trichlorofluoromethane	mg/kg			<0.11	<0.0050	<0.13
8260B	1,2,3-Trichloropropane	mg/kg			<0.054	<0.0025	<0.064
8260B	1,2,4-Trimethylbenzene	mg/kg			8.4	<0.0010	44
8260B	1,2,3-Trimethylbenzene	mg/kg			2.1	<0.0010	9.8
8260B	1,3,5-Trimethylbenzene	mg/kg			2.0	<0.0010	13
8260B	Vinyl chloride	mg/kg	4		<0.022	<0.0010	<0.026
8260B	Xylenes, Total	mg/kg	20000		20	<0.0030	75
8260B	Ethanol	mg/kg			<2.2	<0.10	<2.6
8260B	Ethyl tert-butyl ether	mg/kg			<0.022	<0.0010	<0.026
8260B	t-Amyl Alcohol	mg/kg			<22	<0.050	2.0
8260B	tert-Butyl alcohol	mg/kg			<0.11	0.041	<0.13
8260B	tert-Amyl Methyl Ether	mg/kg			<0.022	<0.0010	<0.026

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Table 2
Summary of Soil Quality Results
H+J-101-01

Lab Sample ID					L605622-04	L605622-05	L606271-01
Client Sample ID					SB-03 34-36 FT	SB-04 34-36 FT	PRODUCT LINE EX 2.75 FT
Collect Date					11/8/2012	11/8/2012	11/12/2012
Method	Parameter	Units	T1 - Non Res Soil*	T2 - S Non Res**	Value	Value	Value
8015	TPH (GC/FID) Low Fraction	mg/kg		620	<0.10	<0.10	0.8
8015	TPH (GC/FID) High Fraction	mg/kg		620	<4.0	<4.0	<4.0
8260B	Acetone	mg/kg	92000		<0.050	<0.050	<0.050
8260B	Acrylonitrile	mg/kg			<0.010	<0.010	<0.010
8260B	Benzene	mg/kg	52		<0.0010	<0.0010	0.0014
8260B	Bromobenzene	mg/kg			<0.0010	<0.0010	<0.0010
8260B	Bromodichloromethane	mg/kg	46		<0.0010	<0.0010	<0.0010
8260B	Bromoform	mg/kg	360		<0.0010	<0.0010	<0.0010
8260B	Bromomethane	mg/kg	140		<0.0050	<0.0050	<0.0050
8260B	n-Butylbenzene	mg/kg			<0.0010	<0.0010	<0.0010
8260B	sec-Butylbenzene	mg/kg			<0.0010	<0.0010	<0.0010
8260B	tert-Butylbenzene	mg/kg			<0.0010	<0.0010	<0.0010
8260B	Carbon tetrachloride	mg/kg	22		<0.0010	<0.0010	<0.0010
8260B	Chlorobenzene	mg/kg	2000		<0.0010	<0.0010	<0.0010
8260B	Chlorodibromomethane	mg/kg	34		<0.0010	<0.0010	<0.0010
8260B	Chloroethane	mg/kg	990		<0.0050	<0.0050	<0.0050
8260B	2-Chloroethyl vinyl ether	mg/kg			<0.050	<0.050	<0.050
8260B	Chloroform	mg/kg	1000		<0.0050	<0.0050	<0.0050
8260B	Chloromethane	mg/kg			<0.0025	<0.0025	<0.0025
8260B	2-Chlorotoluene	mg/kg			<0.0010	<0.0010	<0.0010
8260B	4-Chlorotoluene	mg/kg			<0.0010	<0.0010	<0.0010
8260B	1,2-Dibromo-3-Chloropropane	mg/kg	3.6		<0.0050	<0.0050	<0.0050
8260B	1,2-Dibromoethane	mg/kg	1.4		<0.0010	<0.0010	<0.0010
8260B	Dibromomethane	mg/kg			<0.0010	<0.0010	<0.0010
8260B	1,2-Dichlorobenzene	mg/kg	9200		<0.0010	<0.0010	<0.0010

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Table 2
Summary of Soil Quality Results
H+J-101-01

Lab Sample ID					L605622-04	L605622-05	L606271-01
Client Sample ID					SB-03 34-36 FT	SB-04 34-36 FT	PRODUCT LINE EX 2.75 FT
Collect Date					11/8/2012	11/8/2012	11/12/2012
Method	Parameter	Units	T1 - Non Res Soil*	T2 - S Non Res**	Value	Value	Value
8260B	1,3-Dichlorobenzene	mg/kg	310		<0.0010	<0.0010	<0.0010
8260B	1,4-Dichlorobenzene	mg/kg	120		<0.0010	<0.0010	<0.0010
8260B	Dichlorodifluoromethane	mg/kg			<0.0050	<0.0050	<0.0050
8260B	1,1-Dichloroethane	mg/kg	20000		<0.0010	<0.0010	<0.0010
8260B	1,2-Dichloroethane	mg/kg	31		<0.0010	<0.0010	<0.0010
8260B	1,1-Dichloroethene	mg/kg	5100		<0.0010	<0.0010	<0.0010
8260B	cis-1,2-Dichloroethene	mg/kg	1000		<0.0010	<0.0010	<0.0010
8260B	trans-1,2-Dichloroethene	mg/kg	2000		<0.0010	<0.0010	<0.0010
8260B	1,2-Dichloropropane	mg/kg	42		<0.0010	<0.0010	<0.0010
8260B	1,1-Dichloropropene	mg/kg			<0.0010	<0.0010	<0.0010
8260B	1,3-Dichloropropane	mg/kg			<0.0010	<0.0010	<0.0010
8260B	cis-1,3-Dichloropropene	mg/kg	29		<0.0010	<0.0010	<0.0010
8260B	trans-1,3-Dichloropropene	mg/kg	29		<0.0010	<0.0010	<0.0010
8260B	2,2-Dichloropropane	mg/kg			<0.0010	<0.0010	<0.0010
8260B	Di-isopropyl ether	mg/kg			<0.0010	<0.0010	<0.0010
8260B	Ethylbenzene	mg/kg	10000		<0.0010	<0.0010	<0.0010
8260B	Hexachloro-1,3-butadiene	mg/kg	37		<0.0010	<0.0010	<0.0010
8260B	Isopropylbenzene	mg/kg	10000		<0.0010	<0.0010	<0.0010
8260B	p-Isopropyltoluene	mg/kg			<0.0010	<0.0010	0.0021
8260B	2-Butanone (MEK)	mg/kg	61000		<0.010	<0.010	<0.010
8260B	Methylene Chloride	mg/kg	380		<0.0050	<0.0050	<0.0050
8260B	4-Methyl-2-pentanone	mg/kg			<0.010	<0.010	<0.010
8260B	Methyl tert-butyl ether	mg/kg	720		0.02	0.036	<0.0010
8260B	Naphthalene	mg/kg	2000		<0.0050	<0.0050	0.0085
8260B	n-Propylbenzene	mg/kg			<0.0010	<0.0010	<0.0010

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Table 2
Summary of Soil Quality Results
H+J-101-01

Lab Sample ID					L605622-04	L605622-05	L606271-01
Client Sample ID					SB-03 34-36 FT	SB-04 34-36 FT	PRODUCT LINE EX 2.75 FT
Collect Date					11/8/2012	11/8/2012	11/12/2012
Method	Parameter	Units	T1 - Non Res Soil*	T2 - S Non Res**	Value	Value	Value
8260B	Styrene	mg/kg	20000		<0.0010	<0.0010	<0.0010
8260B	1,1,1,2-Tetrachloroethane	mg/kg			<0.0010	<0.0010	<0.0010
8260B	1,1,2,2-Tetrachloroethane	mg/kg	14		<0.0010	<0.0010	<0.0010
8260B	1,1,2-Trichlorotrifluoroethane	mg/kg			<0.0010	<0.0010	<0.0010
8260B	Tetrachloroethene	mg/kg	5.3		<0.0010	<0.0010	<0.0010
8260B	Toluene	mg/kg	8200		<0.0050	<0.0050	<0.0050
8260B	1,2,3-Trichlorobenzene	mg/kg			<0.0010	<0.0010	<0.0010
8260B	1,2,4-Trichlorobenzene	mg/kg	1000		<0.0010	<0.0010	<0.0010
8260B	1,1,1-Trichloroethane	mg/kg	200000		<0.0010	<0.0010	<0.0010
8260B	1,1,2-Trichloroethane	mg/kg	50		<0.0010	<0.0010	<0.0010
8260B	Trichloroethene	mg/kg	7.2		<0.0010	<0.0010	<0.0010
8260B	Trichlorofluoromethane	mg/kg			<0.0050	<0.0050	<0.0050
8260B	1,2,3-Trichloropropane	mg/kg			<0.0025	<0.0025	<0.0025
8260B	1,2,4-Trimethylbenzene	mg/kg			<0.0010	<0.0010	0.017
8260B	1,2,3-Trimethylbenzene	mg/kg			<0.0010	<0.0010	0.012
8260B	1,3,5-Trimethylbenzene	mg/kg			<0.0010	<0.0010	0.011
8260B	Vinyl chloride	mg/kg	4		<0.0010	<0.0010	<0.0010
8260B	Xylenes, Total	mg/kg	20000		<0.0030	<0.0030	0.009
8260B	Ethanol	mg/kg			<0.10	<0.10	<0.10
8260B	Ethyl tert-butyl ether	mg/kg			<0.0010	<0.0010	<0.0010
8260B	t-Amyl Alcohol	mg/kg			<0.050	<0.050	<0.050
8260B	tert-Butyl alcohol	mg/kg			<0.0050	<0.0050	0.024
8260B	tert-Amyl Methyl Ether	mg/kg			<0.0010	<0.0010	<0.0010

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Table 2
Summary of Soil Quality Results
H+J-101-01
Legend

Bolded values	=	Concentrations exceeded soil standards
mg/kg	=	milligrams per kilogram
NA	=	Not analyzed
*	=	MD Table 1 Non Residential Soil Standards, March 2008
**	=	MD Table 2 MDE Soil Non Residential Cleanup Standards

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Table 3A
Summary of Groundwater Quality Results
H+J-101-01

Lab Sample ID					**L605622-06**
Client Sample ID					**TW-01**
Collect Date					**11/8/2012**
Method	**Parameter**	**Units**	**T1 - GW Tier I and II***	**T2 - GW TI and II Aq****	**Value**
8015	TPH (GC/FID) Low Fraction	mg/l		0.047	**1.9**
8015	TPH (GC/FID) High Fraction	mg/l		0.047	<0.10
8260B	Acetone	mg/l	0.55		0.14
8260B	Acrolein	mg/l			<0.050
8260B	Acrylonitrile	mg/l			<0.010
8260B	Benzene	mg/l	0.005		**0.039**
8260B	Bromobenzene	mg/l			<0.0010
8260B	Bromochloromethane	mg/l			<0.0010
8260B	Bromodichloromethane	mg/l	0.08		<0.0010
8260B	Bromoform	mg/l	0.08		<0.0010
8260B	Bromomethane	mg/l	0.00085		<0.0050
8260B	n-Butylbenzene	mg/l			<0.0010
8260B	sec-Butylbenzene	mg/l			<0.0010
8260B	tert-Butylbenzene	mg/l			<0.0010
8260B	Carbon disulfide	mg/l	0.1		0.0077
8260B	Carbon tetrachloride	mg/l	0.005		<0.0010
8260B	Chlorobenzene	mg/l	0.1		<0.0010
8260B	Chlorodibromomethane	mg/l	0.08		<0.0010
8260B	Chloroethane	mg/l	0.0036		<0.0050

Lab Sample ID					**L605622-06**
Client Sample ID					**TW-01**
Collect Date					**11/8/2012**
Method	**Parameter**	**Units**	**T1 - GW Tier I and II***	**T2 - GW TI and II Aq****	**Value**
8260B	2-Chloroethyl vinyl ether	mg/l			<0.050
8260B	Chloroform	mg/l	0.08		<0.0050
8260B	Chloromethane	mg/l	0.019		<0.0025
8260B	2-Chlorotoluene	mg/l			<0.0010
8260B	4-Chlorotoluene	mg/l			<0.0010
8260B	1,2-Dibromo-3-Chloropropane	mg/l	0.0002		<0.0050
8260B	1,2-Dibromoethane	mg/l	0.00005		<0.0010
8260B	Dibromomethane	mg/l			<0.0010
8260B	1,2-Dichlorobenzene	mg/l	0.6		<0.0010
8260B	1,3-Dichlorobenzene	mg/l	0.0018		<0.0010
8260B	1,4-Dichlorobenzene	mg/l	0.075		<0.0010
8260B	Dichlorodifluoromethane	mg/l			<0.0050
8260B	1,1-Dichloroethane	mg/l	0.09		<0.0010
8260B	1,2-Dichloroethane	mg/l	0.005		<0.0010
8260B	1,1-Dichloroethene	mg/l	0.007		<0.0010
8260B	cis-1,2-Dichloroethene	mg/l	0.07		<0.0010
8260B	trans-1,2-Dichloroethene	mg/l	0.1		<0.0010
8260B	1,2-Dichloropropane	mg/l	0.005		<0.0010
8260B	1,1-Dichloropropene	mg/l			<0.0010
8260B	1,3-Dichloropropane	mg/l			<0.0010

Lab Sample ID					**L605622-06**
Client Sample ID					**TW-01**
Collect Date					**11/8/2012**
Method	**Parameter**	**Units**	**T1 - GW Tier I and II***	**T2 - GW TI and II Aq****	**Value**
8260B	cis-1,3-Dichloropropene	mg/l	0.00044		<0.0010
8260B	trans-1,3-Dichloropropene	mg/l	0.00044		<0.0010
8260B	2,2-Dichloropropane	mg/l			<0.0010
8260B	Ethylbenzene	mg/l	0.7		0.016
8260B	Hexachloro-1,3-butadiene	mg/l	0.00086		<0.0010
8260B	Isopropylbenzene	mg/l	0.066		0.00083J
8260B	p-Isopropyltoluene	mg/l			<0.0010
8260B	2-Butanone (MEK)	mg/l	0.7		0.045
8260B	Methylene Chloride	mg/l	0.005		<0.0050
8260B	4-Methyl-2-pentanone (MIBK)	mg/l	0.63		<0.010
8260B	Naphthalene	mg/l	0.00065		**0.0033J**
8260B	n-Propylbenzene	mg/l			0.0018
8260B	Styrene	mg/l	0.1		<0.0010
8260B	1,1,1,2-Tetrachloroethane	mg/l			<0.0010
8260B	1,1,2,2-Tetrachloroethane	mg/l	0.000053		<0.0010
8260B	1,1,2-Trichlorotrifluoroethane	mg/l			<0.0010
8260B	Tetrachloroethene	mg/l	0.005		<0.0010
8260B	Toluene	mg/l	1		0.15
8260B	1,2,3-Trichlorobenzene	mg/l			<0.0010
8260B	1,2,4-Trichlorobenzene	mg/l	0.07		<0.0010

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Table 3A
Summary of Groundwater Quality Results
H+J-101-01

Lab Sample ID					**L605622-06**
Client Sample ID					**TW-01**
Collect Date					**11/8/2012**
Method	**Parameter**	**Units**	**T1 - GW Tier I and II***	**T2 - GW TI and II Aq****	**Value**
8260B	1,1,1-Trichloroethane	mg/l	0.2		<0.0010
8260B	1,1,2-Trichloroethane	mg/l	0.005		<0.0010
8260B	Trichloroethene	mg/l	0.005		<0.0010
8260B	Trichlorofluoromethane	mg/l			<0.0050
8260B	1,2,3-Trichloropropane	mg/l			<0.0025
8260B	1,2,4-Trimethylbenzene	mg/l			0.017
8260B	1,2,3-Trimethylbenzene	mg/l			0.0059
8260B	1,3,5-Trimethylbenzene	mg/l			0.0052
8260B	Vinyl chloride	mg/l	0.002		<0.0010
8260B	Xylenes, Total	mg/l	10		0.075
8260B	Di-isopropyl ether	mg/l			0.019
8260B	Ethanol	mg/l			1.1
8260B	Ethyl tert-butyl ether	mg/l			0.0015
8260B	Methyl tert-butyl ether	mg/l	0.02		**3.1**
8260B	t-Amyl Alcohol	mg/l			2.6
8260B	tert-Butyl alcohol	mg/l			1.4
8260B	tert-Amyl Methyl Ether	mg/l			0.072

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Table 3A
Summary of Groundwater Quality Results
H+J-101-01
Legend

Bold values	=	Concentrations exceeded groundwater standards.
J	=	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
mg/l	=	milligrams per liter
*	=	MD Table 1 Groundwater Tier I and II Aquifer Standards, March 2008
**	=	MD Table 2 MDE Groundwater Type I and II Aquifers

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Table 3B
Summary of Water Quality Results
H+J-101-01

Lab Sample ID					**L606271-02**	**L606271-03**
Client Sample ID					**TFMP-01**	**TFMP-02**
Collect Date					**11/12/2012**	**11/12/2012**
Method	**Parameter**	**Units**	**T1 - GW Tier I and II***	**T2 - GW TI and II Aq****	**Value**	**Value**
8015	TPH (GC/FID) Low Fraction	mg/l		0.047	**120**	**75**
8015	TPH (GC/FID) High Fraction	mg/l		0.047	**14**	**18, B, V9**
8260B	Acetone	mg/l	0.55		<5.0	<5.0
8260B	Acrolein	mg/l			<5.0	<5.0
8260B	Acrylonitrile	mg/l			<1.0	<1.0
8260B	Benzene	mg/l	0.005		**4.5**	**1.3**
8260B	Bromobenzene	mg/l			<0.10	<0.10
8260B	Bromochloromethane	mg/l			<0.10	<0.10
8260B	Bromodichloromethane	mg/l	0.08		<0.10	<0.10
8260B	Bromoform	mg/l	0.08		<0.10	<0.10
8260B	Bromomethane	mg/l	0.00085		<0.50	<0.50
8260B	n-Butylbenzene	mg/l			<0.10	<0.10
8260B	sec-Butylbenzene	mg/l			<0.10	<0.10
8260B	tert-Butylbenzene	mg/l			<0.10	<0.10
8260B	Carbon disulfide	mg/l	0.1		<0.10	<0.10
8260B	Carbon tetrachloride	mg/l	0.005		<0.10	<0.10
8260B	Chlorobenzene	mg/l	0.1		<0.10	<0.10
8260B	Chlorodibromomethane	mg/l	0.08		<0.10	<0.10
8260B	Chloroethane	mg/l	0.0036		<0.50	<0.50

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Table 3B
Summary of Water Quality Results
H+J-101-01

Lab Sample ID					L606271-02	L606271-03
Client Sample ID					TFMP-01	TFMP-02
Collect Date					11/12/2012	11/12/2012
Method	Parameter	Units	T1 - GW Tier I and II*	T2 - GW TI and II Aq**	Value	Value
8260B	2-Chloroethyl vinyl ether	mg/l			<5.0	<5.0
8260B	Chloroform	mg/l	0.08		<0.50	<0.50
8260B	Chloromethane	mg/l	0.019		<0.25	<0.25
8260B	2-Chlorotoluene	mg/l			<0.10	<0.10
8260B	4-Chlorotoluene	mg/l			<0.10	<0.10
8260B	1,2-Dibromo-3-Chloropropane	mg/l	0.0002		<0.50	<0.50
8260B	1,2-Dibromoethane	mg/l	0.00005		<0.10	<0.10
8260B	Dibromomethane	mg/l			<0.10	<0.10
8260B	1,2-Dichlorobenzene	mg/l	0.6		<0.10	<0.10
8260B	1,3-Dichlorobenzene	mg/l	0.0018		<0.10	<0.10
8260B	1,4-Dichlorobenzene	mg/l	0.075		<0.10	<0.10
8260B	Dichlorodifluoromethane	mg/l			<0.50	<0.50
8260B	1,1-Dichloroethane	mg/l	0.09		<0.10	<0.10
8260B	1,2-Dichloroethane	mg/l	0.005		<0.10	<0.10
8260B	1,1-Dichloroethene	mg/l	0.007		<0.10	<0.10
8260B	cis-1,2-Dichloroethene	mg/l	0.07		<0.10	<0.10
8260B	trans-1,2-Dichloroethene	mg/l	0.1		<0.10	<0.10
8260B	1,2-Dichloropropane	mg/l	0.005		<0.10	<0.10
8260B	1,1-Dichloropropene	mg/l			<0.10	<0.10
8260B	1,3-Dichloropropane	mg/l			<0.10	<0.10

BP Environmental, Inc.
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Table 3B
Summary of Water Quality Results
H+J-101-01

Lab Sample ID					**L606271-02**	**L606271-03**
Client Sample ID					**TFMP-01**	**TFMP-02**
Collect Date					**11/12/2012**	**11/12/2012**
Method	**Parameter**	**Units**	**T1 - GW Tier I and II***	**T2 - GW TI and II Aq****	**Value**	**Value**
8260B	cis-1,3-Dichloropropene	mg/l	0.00044		<0.10	<0.10
8260B	trans-1,3-Dichloropropene	mg/l	0.00044		<0.10	<0.10
8260B	2,2-Dichloropropane	mg/l			<0.10	<0.10
8260B	Ethylbenzene	mg/l	0.7		**2.6**	**2.3**
8260B	Hexachloro-1,3-butadiene	mg/l	0.00086		<0.10	<0.10
8260B	Isopropylbenzene	mg/l	0.066		**0.13**	**0.15**
8260B	p-Isopropyltoluene	mg/l			<0.10	<0.10
8260B	2-Butanone (MEK)	mg/l	0.7		<1.0	<1.0
8260B	Methylene Chloride	mg/l	0.005		<0.50	<0.50
8260B	(MIBK)	mg/l	0.63		<1.0	<1.0
8260B	Naphthalene	mg/l	0.00065		**0.36J**	**0.39J**
8260B	n-Propylbenzene	mg/l			0.23	0.26
8260B	Styrene	mg/l	0.1		0.033J	<0.10
8260B	1,1,1,2-Tetrachloroethane	mg/l			<0.10	<0.10
8260B	1,1,2,2-Tetrachloroethane	mg/l	0.000053		<0.10	<0.10
8260B	1,1,2-Trichlorotrifluoroethane	mg/l			<0.10	<0.10
8260B	Tetrachloroethene	mg/l	0.005		<0.10	<0.10
8260B	Toluene	mg/l	1		**37**	**17**
8260B	1,2,3-Trichlorobenzene	mg/l			<0.10	<0.10
8260B	1,2,4-Trichlorobenzene	mg/l	0.07		<0.10	<0.10

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Table 3B
Summary of Water Quality Results
H+J-101-01

Lab Sample ID					**L606271-02**	**L606271-03**
Client Sample ID					**TFMP-01**	**TFMP-02**
Collect Date					**11/12/2012**	**11/12/2012**
Method	**Parameter**	**Units**	**T1 - GW Tier I and II***	**T2 - GW TI and II Aq****	**Value**	**Value**
8260B	1,1,1-Trichloroethane	mg/l	0.2		<0.10	<0.10
8260B	1,1,2-Trichloroethane	mg/l	0.005		<0.10	<0.10
8260B	Trichloroethene	mg/l	0.005		<0.10	<0.10
8260B	Trichlorofluoromethane	mg/l			<0.50	<0.50
8260B	1,2,3-Trichloropropane	mg/l			<0.25	<0.25
8260B	1,2,4-Trimethylbenzene	mg/l			1.9	2.1
8260B	1,2,3-Trimethylbenzene	mg/l			0.46	0.52
8260B	1,3,5-Trimethylbenzene	mg/l			0.45	0.49
8260B	Vinyl chloride	mg/l	0.002		<0.10	<0.10
8260B	Xylenes, Total	mg/l	10		**12**	**11**
8260B	Di-isopropyl ether	mg/l			0.07J	<0.10
8260B	Ethanol	mg/l			<10	<10
8260B	Ethyl tert-butyl ether	mg/l			0.028J	<0.10
8260B	Methyl tert-butyl ether	mg/l	0.02		**0.16**	**0.058J**
8260B	t-Amyl Alcohol	mg/l			1.2J	0.9J
8260B	tert-Butyl alcohol	mg/l			<0.50	<0.50
8260B	tert-Amyl Methyl Ether	mg/l			0.028J	<0.10

BP Environmental, Inc.
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Table 3B
Summary of Water Quality Results
H+J-101-01
Legend

Bold values	=	Concentrations exceeded groundwater standards.
B	=	(EPA) - The indicated compound was found in the associated method blank as well as the laboratory sample.
J	=	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
mg/l	=	milligrams per liter
V9	=	(ESC) - Additional QC Info: Please refer to the Case Narrative provided with the report.
*	=	MD Table 1 Groundwater Tier I and II Aquifer Standards, March 2008
**	=	MD Table 2 MDE Groundwater Type I and II Aquifers

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Table 4
Water Well Information
H+J-101-01

State Well ID Number[1]	Distance from known extent of contamination to property line (feet)[2]	Physical Address of Well	Tax Map & Parcel No.	Well Type[3]	Total Depth (feet)[4]	Screened Interval (feet)[4]	Sealed Interval (feet)[4]	Private Drinking Water Well (Yes or No)[4]	Affected or Potentially Affected (Yes or No)
AA-94-0521[a]	SITE well	738 MD Route 3 N, Gambrills, MD (**SITE**)	AA Tax Map 0037, Grid 0002, Parcel 0012	PRV	206	199 - 206	3 - 160	Yes	No[b]
AA-94-6525	70	745 MD Route 3 S, Gambrills, MD	AA Tax Map 0037, Grid 0002, Parcel 0011	U	206	199 - 206	3 - 150	Unknown	No[b]
AA-81-5178	220	743 MD Route 3 N, Gambrills, MD	AA Tax Map 0037, Grid 0003, Parcel 0045	U	110	100 - 110	0 - 20	Unknown	Yes[c]
AA-94-7975	250	729 MD Route 3 N, Gambrills, MD	AA Tax Map 0037, Grid 0003, Parcel 0211	U	360	332 - 342	3 - 300	Yes	No[b]
AA-92-1914	430	727 MD Route 3 S, Gambrills, MD	AA Tax Map 0037, Grid 0002, Parcel 0178	U	200	193 - 200	0 - 140	Unknown	No[b]

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Table 4
Water Well Information
H+J-101-01
Legend

1 = County Well ID number provided if available.
2 = Water wells organized from those nearest to the SITE to those furthest from the SITE.
3 = Private - "PRV", Irrigation - "I", Injection - "J", Industrial - "N", Public Supply - "P", Unknown - "U".
4 = "Unknown" is entered if insufficient or no data are available.

a = SITE well. Laboratory analysis of a sample collected on June 4, 2012 revealed non-detectable concentrations for all analyzed petroleum related compounds.
b = Due to the depth of screening, grouted interval above the screen, and/or presence of low permeability layers above the screened intervals, the well is not expected to be potentially affected by the dissolved-phase hydrocarbons detected in perched water at the SITE.
c = Due to the proximity of the well to the known extent of contamination and the depth at which the well is screened, the well is potentially affected by the contamination detected in perched water at the SITE.

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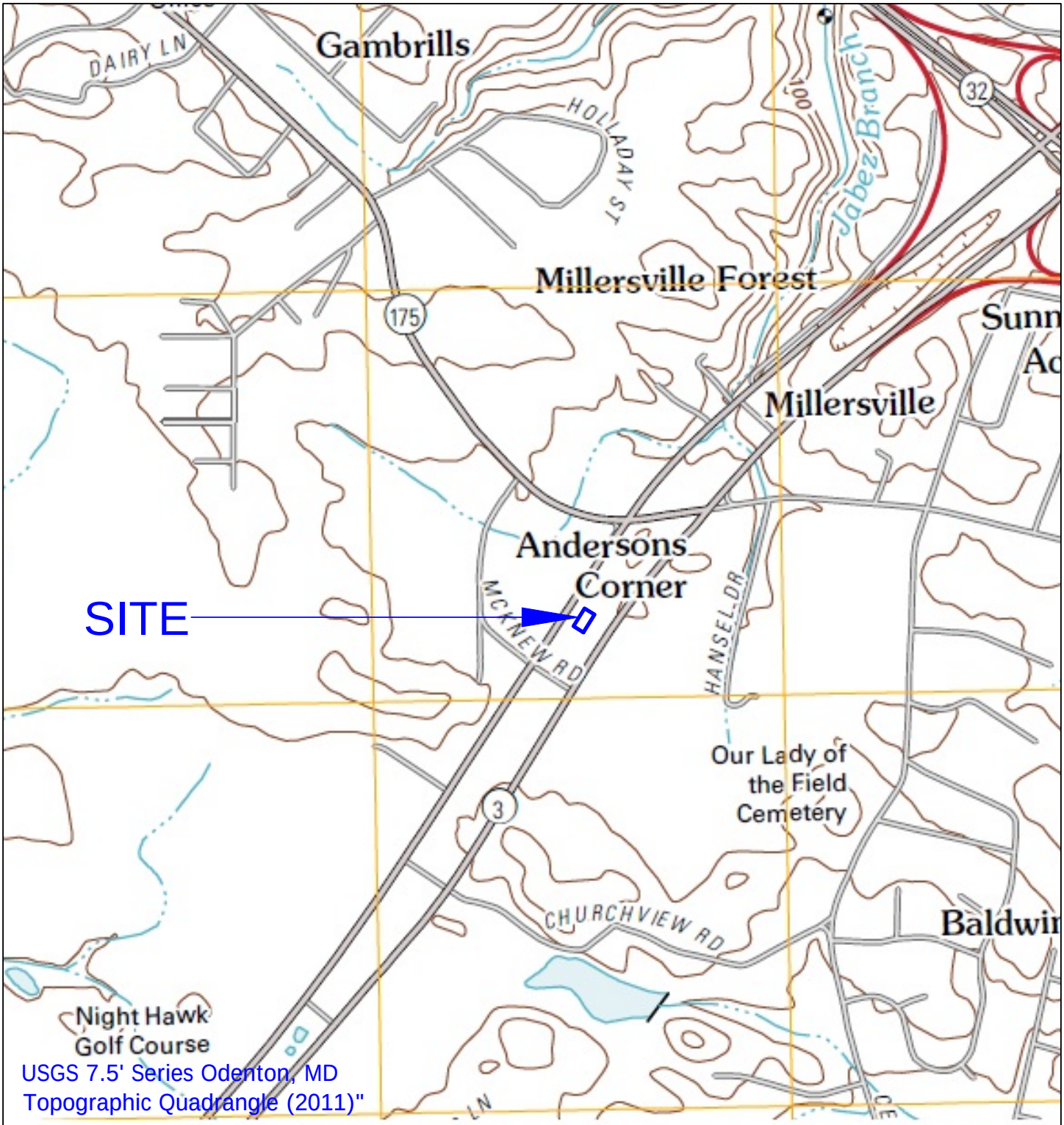
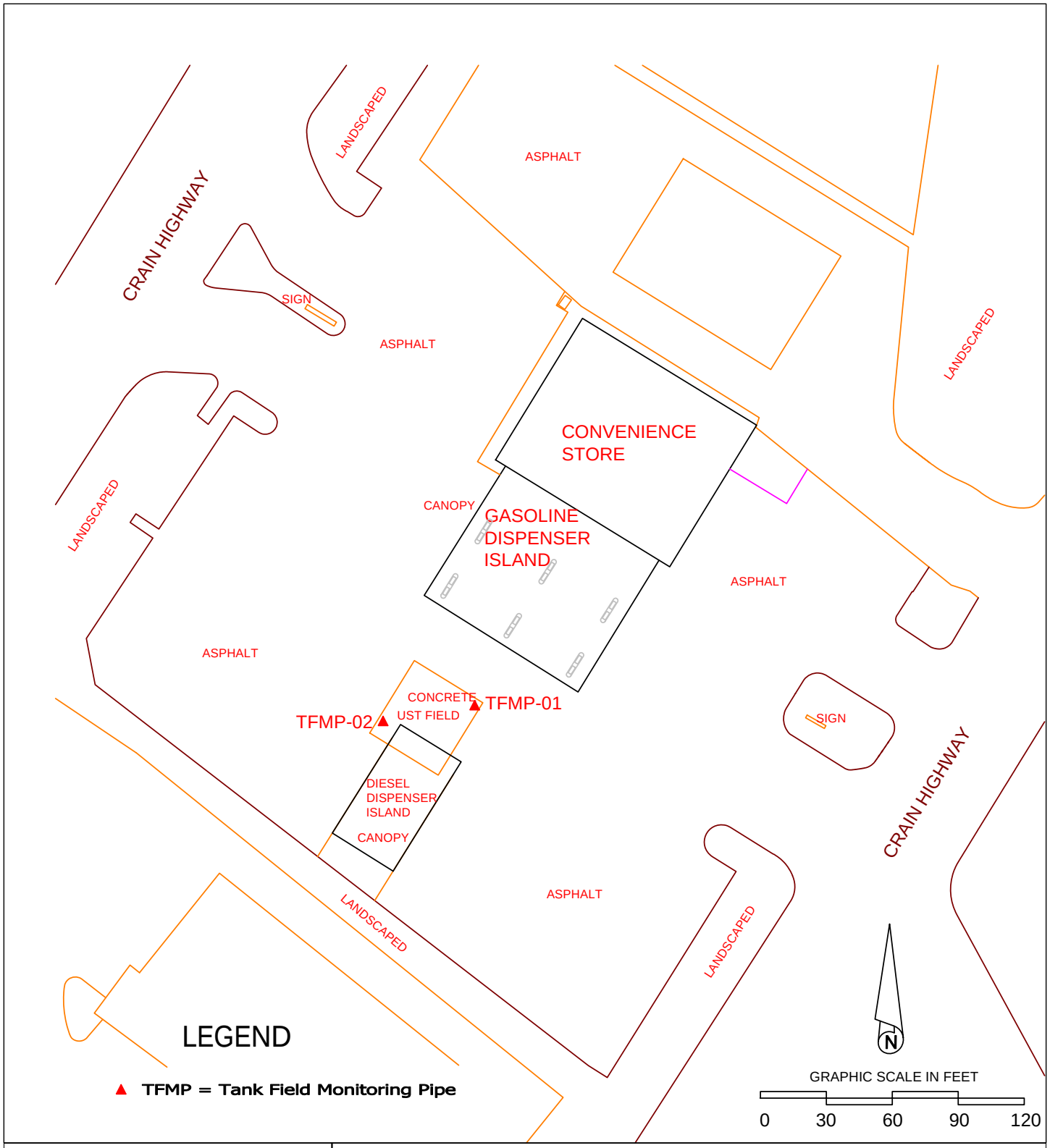
FIGURES



Prepared For: H&J AMOCO, INC. 738 CRAIN HIGHWAY GAMBRILLS, MD	BP Environmental, Inc. 8615 Commerce Drive, Unit One Easton, Maryland 21601	
Site: H&J BP SUBWAY 738 CRAIN HIGHWAY GAMBRILLS, MD	Date:07/17/12 Revision Date:12/26/12 Project:H&J-101-01 Drafted by FB	FIGURE 1 TOPOGRAPHIC MAP SCALE: 1" = 2000 FT



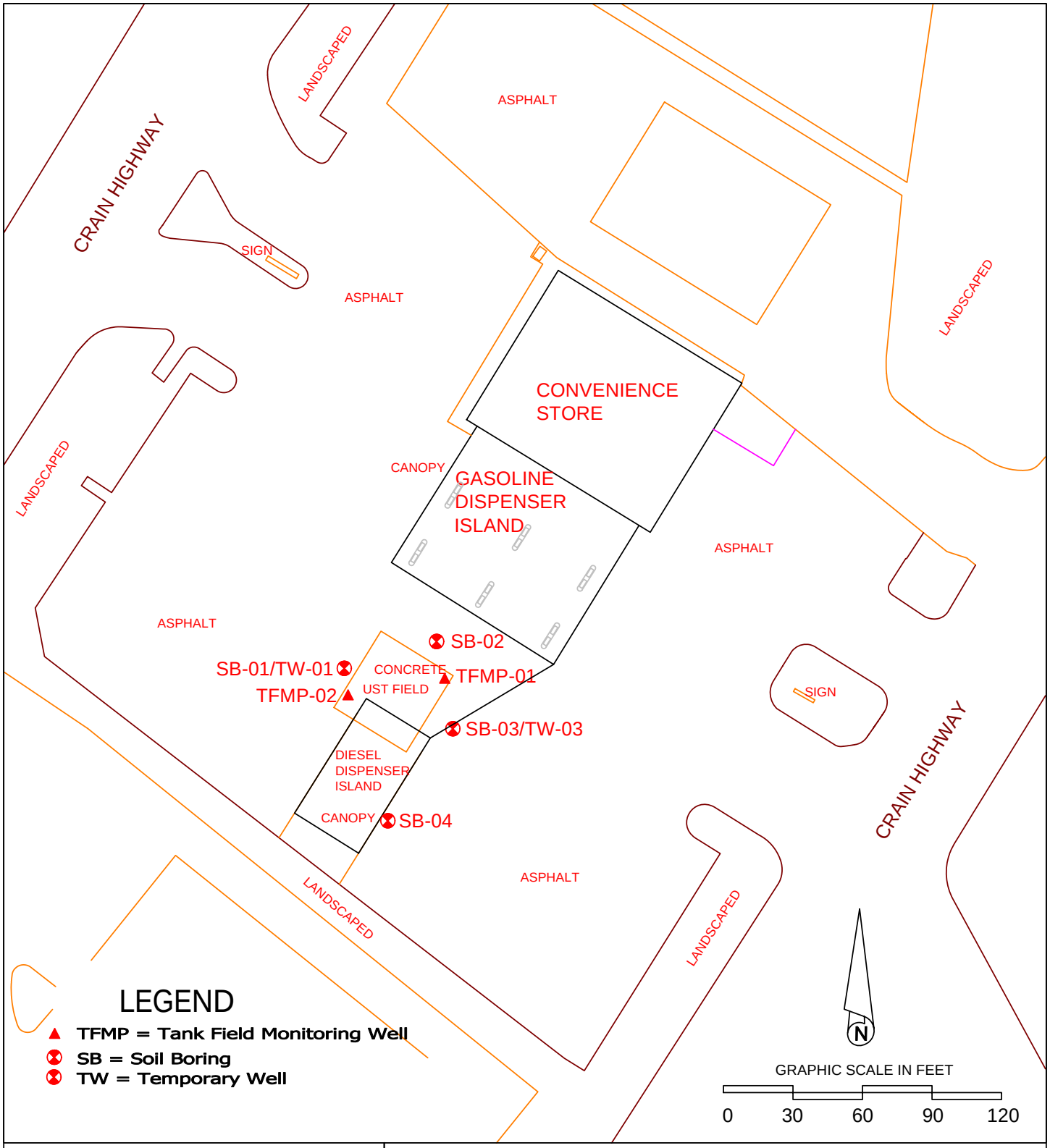
Prepared For:
H&J AMOCO, INC.
738 CRAIN HIGHWAY
GAMBRILLS, MD

BP Environmental, Inc.
8615 Commerce Drive, Unit One
Easton, Maryland 21601

Site:
H&J BP SUBWAY
738 CRAIN HIGHWAY
GAMBRILLS, MD

Date:07/17/12
Revision Date:12/10/12
Project:H&J-101-01
Drafted by:FB

FIGURE 2 - SITE MAP
SCALE 1" = 60 FT



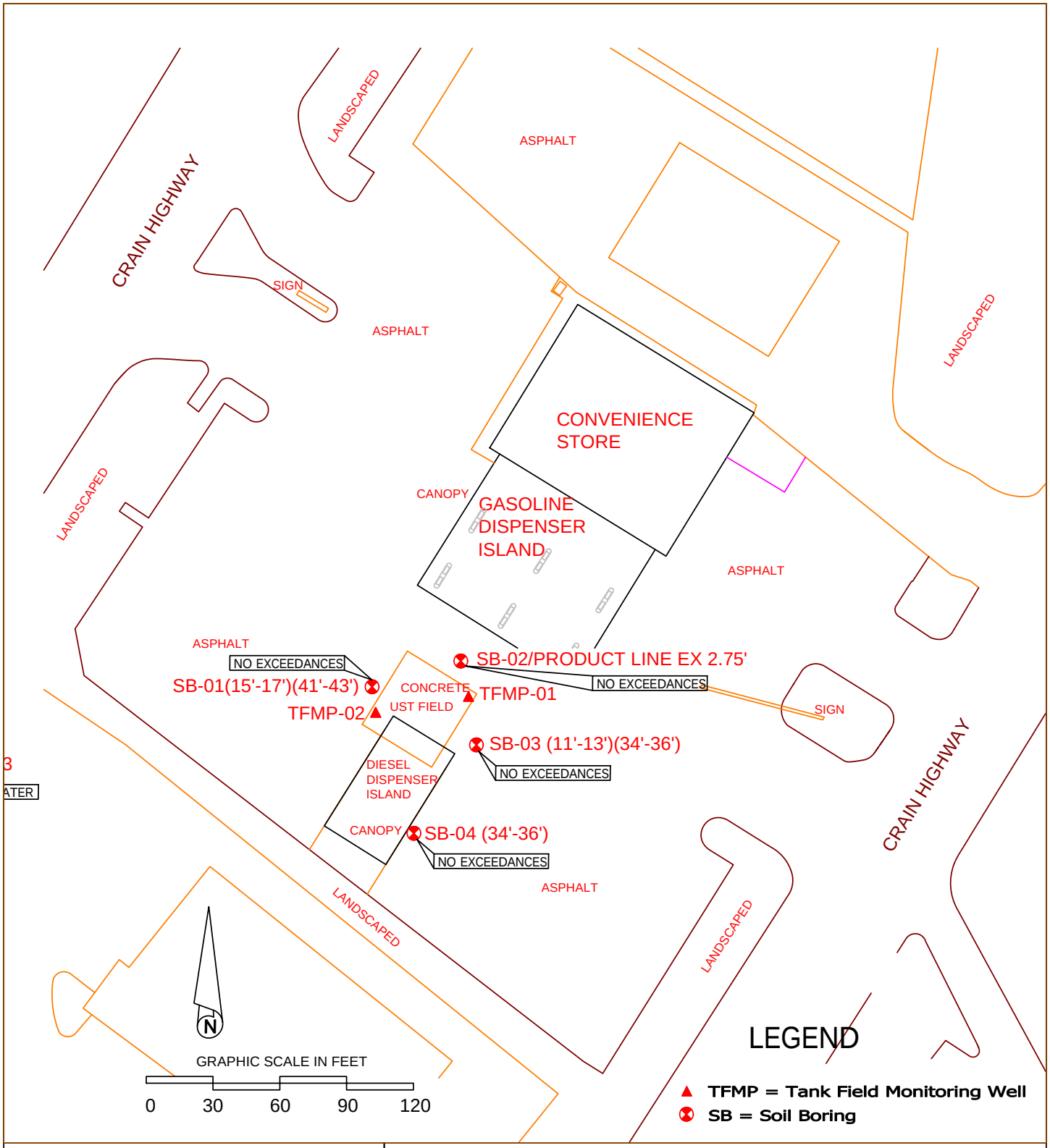
Prepared For:
H&J AMOCO, INC.
738 CRAIN HIGHWAY
GAMBRILLS, MD

BP Environmental, Inc.
8615 Commerce Drive, Unit One
Easton, Maryland 21601

Site:
H&J BP SUBWAY
738 CRAIN HIGHWAY
GAMBRILLS, MD

Date:07/17/12
Revision Date:12/26/12
Project:H&J-101-01
Drafted by:FB

FIGURE 3 - SITE MAP WITH SAMPLING LOCATIONS
SCALE 1" = 200 FT



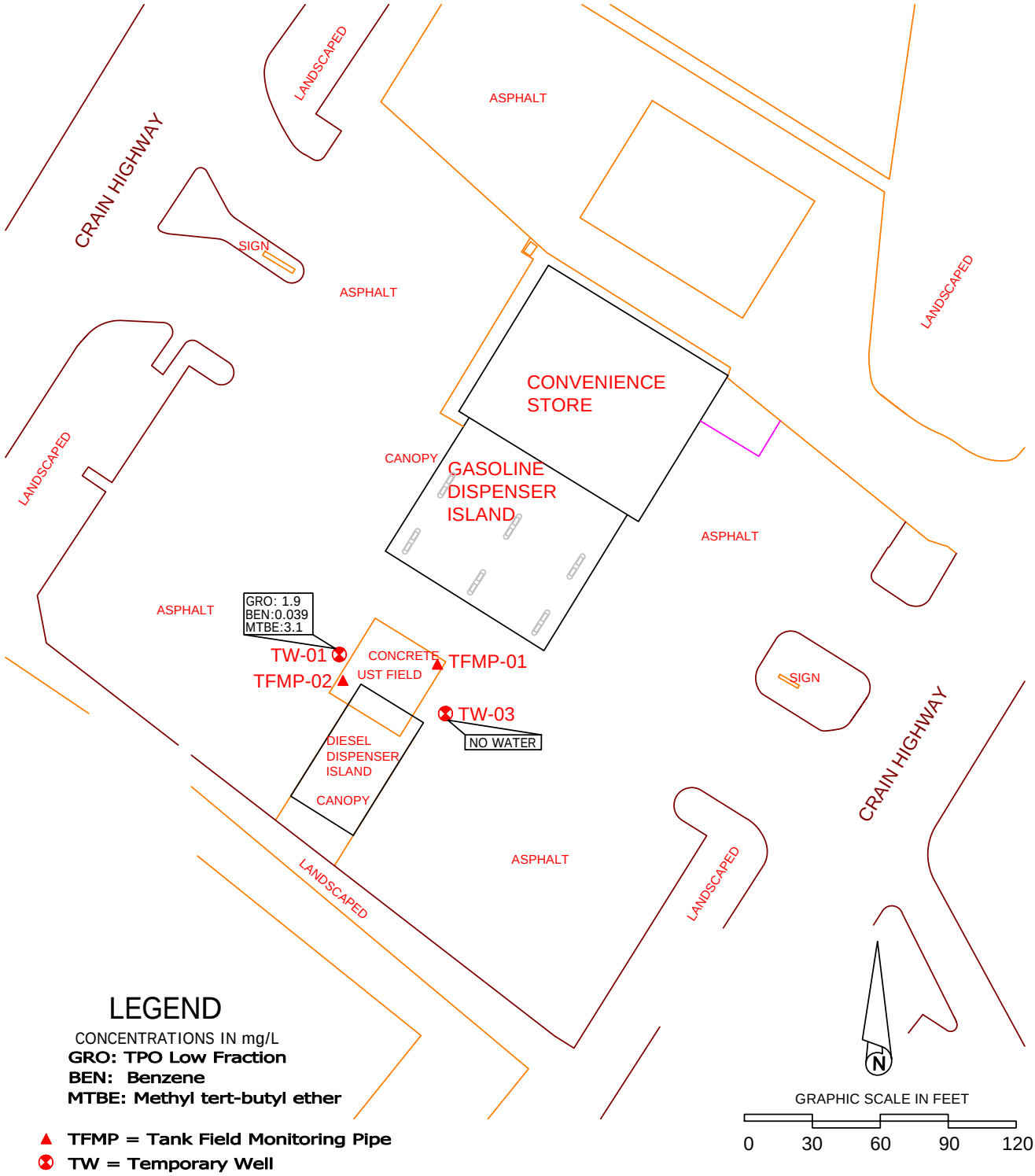
Prepared For:
H&J AMOCO, INC.
738 CRAIN HIGHWAY
GAMBRILLS, MD

BP Environmental, Inc.
8615 Commerce Drive, Unit One
Easton, Maryland 21601

Site:
H&J BP SUBWAY
738 CRAIN HIGHWAY
GAMBRILLS, MD

Date:07/17/12
Revision Date:12/5/12
Project:H&J-101-01
Drafted by:MK

FIGURE 4 - SITE MAP WITH SOIL QUALITY EXCEEDANCES
SCALE 1" = 200 FT



LEGEND

CONCENTRATIONS IN mg/L

GRO: TPO Low Fraction
BEN: Benzene
MTBE: Methyl tert-butyl ether

▲ **TFMP = Tank Field Monitoring Pipe**
⊗ **TW = Temporary Well**

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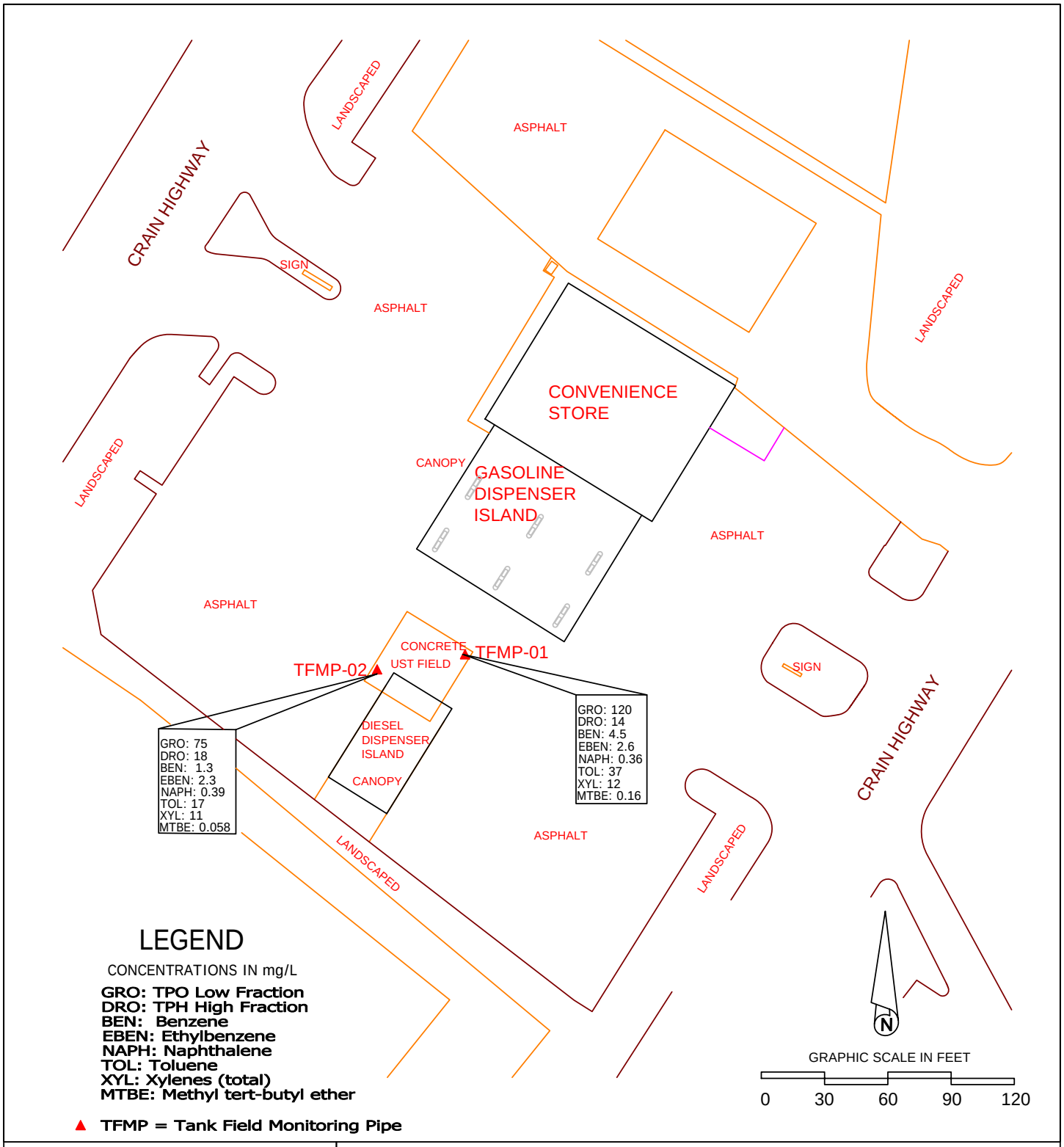
Site: H&J BP SUBWAY 738 CRAIN HIGHWAY GAMBRILLS, MD	Date:07/17/12 Revision Date:12/26/12 Project:H&J-101-01 Drafted by:MK	FIGURE 5A - SITE MAP WITH GROUNDWATER QUALITY EXCEEDANCES SCALE 1" = 200 FT



LEGEND

CONCENTRATIONS IN mg/L

GRO: TPO Low Fraction
DRO: TPH High Fraction
BEN: Benzene
EBEN: Ethylbenzene
NAPH: Naphthalene
TOL: Toluene
XYL: Xylenes (total)
MTBE: Methyl tert-butyl ether

▲ **TFMP = Tank Field Monitoring Pipe**

Prepared For: H&J AMOCO, INC. 738 CRAIN HIGHWAY GAMBRILLS, MD	BP Environmental, Inc. 8615 Commerce Drive, Unit One Easton, Maryland 21601	
Site: H&J BP SUBWAY 738 CRAIN HIGHWAY GAMBRILLS, MD	Date:07/17/12 Revision Date:12/26/12 Project:H&J-101-01 Drafted by:MK	FIGURE 5B - SITE MAP WITH WATER QUALITY EXCEEDANCES SCALE 1" = 200 FT

APPENDICES

BP Environmental, Inc.
P: 410.819.0919 / 302.629.6505
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APPENDIX A

CleanVenture/CycleChem

H+S-101-01
CVCC 174182

NON-HAZARDOUS SOLID WASTE

The Environmental Services Source

BILL OF LADING

Generator's Name and Mailing Address: BP Environmental, 538 Baltimore Hwy, Gambrills MD

Generator's Phone ( )

BOL 174182

Transporter 1 Company Name: Clean Venture Inc

State Trans. ID-NJDEPE

Transporter 2 Company Name

Decal No.-

Transporter's Phone ( )

Designated Facility Name and Site Address: CWDI, 1301 Avondale Rd, New Windsor MD

10. US EPA ID Number

State Trans. ID-NJDEPE

Decal No.-

Transporter's Phone ( )

Facility's Phone ( )

GENERATOR

	US DOT Description (Including Proper Shipping Name, Hazard Class or Division, ID Number and Packing Group)	Containers No.	Containers Type	Total Quantity	Unit Wt/Vol	Waste No.
a.	NON RCRA Non-DOT Liquid (Oily Water)	1	TT	629	G	
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above

a. c.

b. d.

CCI Generator # and Product Codes:

Job# 44942 - PO# 145204 Emergency # 410-368-9170

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and are non-hazardous by USEPA & applicable state regulations.

PLACARDS REQUIRED

PLACARDS SUPPLIED ☐ YES ☐ NO- FURNISHED BY CARRIER

GARY CASTRO

Printed/Typed Name | Signature | Month Day Year 10-4-12

TRANSPORTER

Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Marcie A. Stempf | Signature | Month Day Year 10-4-12

Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

FACILITY

Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest.

Printed/Typed Name | Signature | Month Day Year

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

COPY 1 - WHITE - GENERATOR COPY 2 - PINK - TRANSPORTER COPY 3 - BLUE - CycleChem COPY 4 - CANARY - FACILITY

BP Environmental, Inc.
P: 410.819.0919 / 302.629.6505
F: 410.819.6555 / 302.629.6722

APPENDIX B

BP Environmental, Inc.
8615 Commerce Drive, Unit One
Easton, MD 21601
Telephone: 410-819-0919
Fax: 410-819-6555

BORING NUMBER SB-01

CLIENT H&J Amoco, Inc.
PROJECT NAME H&J Amoco LSI
PROJECT NUMBER H&J-101-01
PROJECT LOCATION 738 Crain Highway, Gambrills, MD
DATE STARTED 11/8/12 **COMPLETED** 11/8/12
GROUND ELEVATION **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR Green Services, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY GKL **CHECKED BY**
AT END OF DRILLING 43.35 ft No water
NOTES
5hrs AFTER DRILLING 41.11 ft Sampled (TW-01)

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	Environmental Data	GRAPHIC LOG	MATERIAL DESCRIPTION	VOC Concentration (ppm) 500 1000 1500 2000 / LEL (%) 20 40 60 80	WELL DIAGRAM
0					0.5 Asphalt		
					1.0 Gray sandy gravel, dry		
			PID = 27.7		(SW) Tan fine sand, trace med - coarse, appreciable fines, loose, dry		
			PID = 23.6		5.5 (SM) Tan loamy fine sand, micaceous, medium dense, dry		
			PID = 43.9		7.5 (SM) Gray-orange loamy fine sand, dense, dry		
10			PID = 85				
			PID = 114		13.5 (SM) Orange-gray sandy loam, medium soft, moist		
			PID = 435				
	UD 1		PID = 1163		16.0 (SM) Dark gray loamy fine sand, appreciable fines, medium dense, moist		1-inch ID, Schedule 40 PVC Casing
			PID = 1296				
20			PID = 1251				
			PID = 675				
			PID = 91.5		24.5 (SM) Dark gray sandy loam, medium soft, slightly moist		
			PID = 17.9				
			PID = 20.4				
30			PID = 21.1				
			PID = 9.6		32.0 32.5 (SM) Dark gray sandy loam, medium soft, moist		
			PID = 7.3		(SP) Layered, varicolored (tan, red, gray) fine - coarse sand, trace fine - coarse subangular gravel, dense, slightly moist with 2" water-saturated layer at 33.5'		
			PID = 5.6		36.0 37.5 (SP) Orange fine sand, well-sorted, dense, dry		
			PID = 4.1				1-inch ID, 0.010-inch slotted, Schedule 40 PVC Screen
40			PID = 4.1		(SP) Orange to light gray medium to coarse sand, well-sorted, dense, dry		
	UD 1		PID = 5.1		42.0 42.4 43.4 (SP) Gray-orange fine sand, well-sorted, very dense, dry		Bottom Cap
					(SP) Red medium to coarse sand, trace fine subangular gravel, well-sorted, very dense, dry		

Refusal at 43.4 feet.
Bottom of borehole at 43.4 feet.

UD = Undisturbed sample

ENVIRONMENTAL BH PLOT - GINT STD US LAB.GDT - 12/20/12 07:48 - O:\GINT\PROJECTS\H&J-101-01_12.10.12_SBS.GPJ

BP Environmental, Inc.
8615 Commerce Drive, Unit One
Easton, MD 21601
Telephone: 410-819-0919
Fax: 410-819-6555

BORING NUMBER SB-02

CLIENT H&J Amoco, Inc.
PROJECT NAME H&J Amoco LSI
PROJECT NUMBER H&J-101-01
PROJECT LOCATION 738 Crain Highway, Gambrills, MD
DATE STARTED 11/8/12 **COMPLETED** 11/8/12
GROUND ELEVATION **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR Green Services, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY GKL **CHECKED BY**
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	Environmental Data	GRAPHIC LOG	MATERIAL DESCRIPTION	VOC Concentration (ppm) 500 1000 1500 2000 / LEL (%) 20 40 60 80	WELL DIAGRAM
0					0.5 Asphalt		
					1.5 (GW-GC) Brown gravelly loam, dry		
					2.0 (SM) Brown loamy coarse sand, soft, moist		
					2.8 (GM) Brown fine - coarse gravel, with appreciable fines, dry		
					Not logged		
10					10.0		

Bottom of borehole at 10.0 feet.

UD = Undisturbed sample

ENVIRONMENTAL BH PLOT - GINT STD US LAB.GDT - 12/20/12 07:48 - O:\GINT\PROJECTS\H&J-101-01_12.10.12_SBS.GPJ

BP Environmental, Inc.
8615 Commerce Drive, Unit One
Easton, MD 21601
Telephone: 410-819-0919
Fax: 410-819-6555

BORING NUMBER SB-03

CLIENT H&J Amoco, Inc.
PROJECT NAME H&J Amoco LSI
PROJECT NUMBER H&J-101-01
PROJECT LOCATION 738 Crain Highway, Gambrills, MD
DATE STARTED 11/8/12 **COMPLETED** 11/8/12
GROUND ELEVATION **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR Green Services, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY GKL **CHECKED BY**
AT END OF DRILLING 36.50 ft No water
NOTES
2.5hrs AFTER DRILLING 36.50 ft No water

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	Environmental Data	GRAPHIC LOG	MATERIAL DESCRIPTION	VOC Concentration (ppm) 500 1000 1500 2000 / LEL (%) 20 40 60 80	WELL DIAGRAM
0					0.5 Asphalt		
					1.5 Gray loamy gravel, dry		
			PID = 27.3		(SP) Brown fine sand, loose, dry		
			PID = 45.2		5.0		
			PID = 97.1		(SM) Brown loamy fine sand, medium dense, dry		
			PID = 43.2		9.0		
10			PID = 849		(SM) Gray-brown sandy loam, medium soft, slightly moist		
	UD 1		PID = 1654		11.5 (SC-SM) Dark gray sandy clay loam, soft, slightly moist		1-inch ID, Schedule 40 PVC
			PID = 529		14.0 (SM) Dark gray sandy loam, appreciable fines, medium soft, slightly moist		
			PID = 83.3		15.5 (SM) Dark gray loamy sand, medium dense, slightly moist		
			PID = 71.3		18.0 (SM) Dark gray sandy loam, appreciable fines, medium soft, moist		
20			PID = 38				
			PID = 11.5				
			PID = 67.8				
			PID = 31.6				
			PID = 2.7		29.0		
30			PID = 3.5		(SC-SM) Dark gray sandy clay loam, stiff, slightly moist		1-inch ID, 0.010-inch slotted, Schedule 40 PVC Screen with bottom cap
			PID = 4.6		33.5		
	UD 1		PID = 3.2		35.0 (SP) Layered, varicolored (tan, red, gray) fine - coarse sand, appreciable fine - coarse subangular gravel, very dense, slightly moist to dry		
					36.5 (SP) Tan fine sand, trace coarse sand, very dense, dry		Bottom Cap

Refusal at 36.5 feet.
Bottom of borehole at 36.5 feet.

UD = Undisturbed sample

ENVIRONMENTAL BH PLOT - GINT STD US LAB.GDT - 12/20/12 07:48 - O:\GINT\PROJECTS\H&J-101-01_12.10.12_SBS.GPJ

BP Environmental, Inc.
8615 Commerce Drive, Unit One
Easton, MD 21601
Telephone: 410-819-0919
Fax: 410-819-6555

BORING NUMBER SB-04

CLIENT H&J Amoco, Inc.
PROJECT NAME H&J Amoco LSI
PROJECT NUMBER H&J-101-01
PROJECT LOCATION 738 Crain Highway, Gambrills, MD
DATE STARTED 11/8/12 **COMPLETED** 11/8/12
GROUND ELEVATION **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR Green Services, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY GKL **CHECKED BY**
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	Environmental Data	GRAPHIC LOG	MATERIAL DESCRIPTION	VOC Concentration (ppm) 500 1000 1500 2000 / LEL (%) 20 40 60 80	WELL DIAGRAM
0					0.5 Asphalt		
					1.0 Gray loamy gravel, dry		
			PID = 8		(SM) Brown loamy fine sand, medium dense, dry		
			PID = 8.4				
			PID = 10.1		6.0 (SM) Brown sandy loam, medium soft, dry		
			PID = 9.6		9.0		
10			PID = 11.7		10.5 (SC-SM) Gray-brown sandy clay loam, medium soft, dry		
			PID = 5.8		11.5 (SC-SM) Brown-gray sandy clay loam, medium soft, slightly moist		
			PID = 8.2		14.0 (SC-SM) Dark gray sandy clay loam, medium soft, slightly mosit		
			PID = 3.3		(SM) Dark gray sandy loam, appreciable fines, medium soft, slightly moist		
20			PID = 2.3		(SM) Dark gray sandy loam, appreciable fines, medium soft, moist		
			PID = 2.1				
			PID = 2.3				
			PID = 3.1				
			PID = 3.2		29.0		
30					30.0 (SC-SM) Dark gray sandy clay loam, stiff, slightly moist		
			PID = 8.6		(CL) Dark gray sandy clay, stiff, moist 33.0		
	UD 1		PID = 7.1		33.5 (SP) Gray-orange medium - coarse sand, very dense, dry 36.0		

Refusal at 36.0 feet.
Bottom of borehole at 36.0 feet.

UD = Undisturbed sample

ENVIRONMENTAL BH PLOT - GINT STD US LAB.GDT - 12/20/12 07:48 - O:\GINT\PROJECTS\H&J-101-01_12.10.12_SBS.GPJ

C 1 05256 — SEQUENCE NO. (MDE USE ONLY)

1 2 3 6 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

STATE OF MARYLAND
WELL COMPLETION REPORT
FILL IN THIS FORM COMPLETELY
PLEASE TYPE

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

COUNTY NUMBER: 02

ST/CO USE ONLY — DATE Received MM DD YY (8–13)

DATE WELL COMPLETED: MM 11 DD 9 YY 12 (14–20)

Depth of Well: 40 (22–26) (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL": AA - 11 - 0628 (28–37)

OWNER: Wright - Maryland Rt 3 LLC (last name first name)

WELL SITE ADDRESS: 738 MD Rt 3 N (Crain Hwy) TOWN: Gambrills

SUBDIVISION: Dist 4 Acct # 00082200 SECTION: ____ LOT: ____

WELL LOG
Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	check if water bearing
Asphalt + base	0	1	
Brown Sand Little Silt	1	15	
black silt	15	30	
brown sand + silt / some gravel	30	40	

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED: yes [Y] no [N]

CIRCLE APPROPRIATE LETTER
- A — A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED
- E — ELECTRIC LOG OBTAINED
- P — TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO. MGD 120

DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO. ___ D ___

SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box): yes [Y] (44) no [N] (44)

TYPE OF GROUTING MATERIAL (Circle one): CEMENT [CM] (45–46) BENTONITE CLAY [BC] (45–46)

NO. OF BAGS ____ NO. OF POUNDS ____

GALLONS OF WATER ____

DEPTH OF GROUT SEAL (to nearest foot): from ____ ft. (48–52) TOP to ____ ft. (54–58) BOTTOM (enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below: [ST] STEEL [CO] CONCRETE [PL] PLASTIC [OT] OTHER

MAIN CASING TYPE: PL (60–61)

Nominal diameter top (main) casing (nearest inch): 1 (63–64)

Total depth of main casing (nearest foot): 30 (66–70)

EACH CASING — OTHER CASING (if used)

diameter inch	depth (feet) from	to

SCREEN RECORD
screen type or open hole — insert appropriate code below: [ST] STEEL [BR] BRASS BRONZE [HO] OPEN HOLE [PL] PLASTIC [OT] OTHER

C 2

EACH SCREEN	TYPE	DEPTH (nearest ft.)	
1	PL	30	40
2			
3			

SLOT SIZE 1 .010 2 ____ 3 ____

DIAMETER OF SCREEN 1 (56–60) (NEAREST INCH)

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68: from NA to NA (68)

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)

T	(E.R.O.S.)	W Q
70 ____	72 ____	74 75 76 ____
TELESCOPE CASING	LOG INDICATOR	OTHER DATA

C 3

PUMPING TEST
HOURS PUMPED (nearest hour): NA (8–9)

PUMPING RATE (gal. per min.): NA (11–15)

METHOD USED TO MEASURE PUMPING RATE: NA

WATER LEVEL (distance from land surface)

BEFORE PUMPING: NA (17–20) ft.

WHEN PUMPING: NA (22–25) ft.

TYPE OF PUMP USED (for test): [A] air [P] piston [T] turbine [C] centrifugal [R] rotary [O] other (describe below) [J] jet [S] submersible (27)

PUMP INSTALLED
DRILLER INSTALLED PUMP (CIRCLE) (YES or NO): YES NO

IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29: NA (29)

CAPACITY: GALLONS PER MINUTE (to nearest gallon): NA (31–35)

PUMP HORSE POWER: NA (37–41)

PUMP COLUMN LENGTH (nearest ft.): NA (43–47)

CASING HEIGHT (circle appropriate box and enter casing height): [+] above (49) [–] below (49) LAND SURFACE NA (nearest foot) (50–51)

LATITUDE 39.050287
LONGITUDE 76.662060
(DEFAULT COORD. WGS 84)

NOTES:

(4) temp borings for soil + gw samplings. Abandoned same day ⊗ Geoprobes

MDE/WMA/PER.071

ORIGINAL

MARYLAND DEPARTMENT OF THE ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION
1800 Washington Blvd., Baltimore, Maryland 21230 (410) 537-3784

****

WATER WELL ABANDONMENT-SEALING REPORT FORM

****

SUBMIT COPIES OF COMPLETED FORM TO:

- ★ COUNTY ENVIRONMENT AGENCY (contact MDE, WMA if address needed)
- ★ WELL OWNER
- ★ MDE, WATER MANAGEMENT ADMINISTRATION, WELL PROGRAM

DATE WELL ABANDONED: 11/9/12 (month/day/year)

★ PERMIT NUMBER OF ABANDONED WELL (if any): AA - 11 - 0628

★ PERMIT NUMBER OF REPLACEMENT WELL: NA - -

★ PERSON ABANDONING WELL: R Pumphrey

WELL DRILLERS LICENSE NUMBER: MaD 120

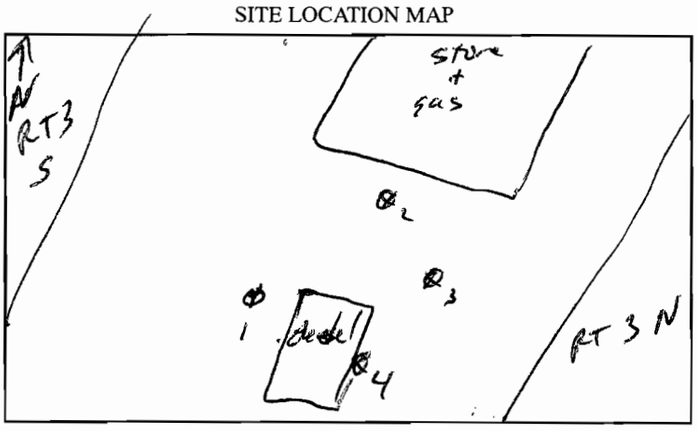
CIRCLE: MWD/MSD/(MGD)

★ OWNER'S NAME: Wright-Maryland RT 3 LLC

★ WELL LOCATION:
COUNTY: Anne Arundel
NEAREST TOWN: Gambrills
TAX MAP 0037 BLOCK _____ PARCEL 0012
SUBDIVISION: Acct# 00082900
SECTION: _____ LOT: _____
NEAREST ROAD: MD RT 3N - Crain Hwy

* 4 geoprobe borings for temp gw and soil sampling. abandoned same day as drilling.

SITE LOCATION MAP



★ TYPE OF WELL BEING ABANDONED:

_____ DRILLED _____ JETTED
_____ BORED/AUGERED _____ HAND DUG
✓ OTHER (specify) Geoprobe

★ USE CODE:

_____ DOMESTIC _____ MUNICIPAL/PUBLIC
_____ IRRIGATION _____ INDUSTRIAL
✓ TEST/OBSERVATION _____ GEOTHERMAL

★ TYPE OF CASING:

_____ STEEL ✓ PLASTIC
_____ CONCRETE _____ OTHER (specify)

★ SIZE OF CASING: 1 INCHES IN DIAMETER

★ DEPTH OF WELL: 40 FEET DEEP

★ WAS ANY CASING REMOVED? ✓ YES _____ NO
if yes, length removed, in feet: 40

★ WAS CASING RIPPED OR PERFORATED? _____ YES ✓ NO

LOG OF SEALING MATERIAL

MATERIAL	FEET FROM	FEET TO
bentonite	0	40

VOLUME OF MATERIAL USED: 50 lbs

R. M. Pumphrey — MaD 120 — MWD/MSD/(MGD) — 11/23/12
SIGNATURE-MASTER WELL DRILLER OR SUPERVISING SANITARIAN — LICENSE # — CIRCLE ONE — DATE

BP Environmental, Inc.
P: 410.819.0919 / 302.629.6505
F: 410.819.6555 / 302.629.6722

APPENDIX C

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Gary Lasako
BP Environmental
8615 Commerce Drive, Unit One
Easton, MD 21601

Report Summary

Wednesday December 12, 2012

Report Number: L605622
Samples Received: 11/10/12
Client Project: HJ-101-01

Description: LSI

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By: _____

Craig Cothron , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197, FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1, TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.
Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

This report may not be reproduced, except in full, without written approval from ESC Lab Sciences.
Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Gary Lasako
BP Environmental
8615 Commerce Drive, Unit One
Easton, MD 21601

December 12, 2012

ESC Sample # : L605622-01

Date Received : November 10, 2012
Description : LSI

Site ID : 11762

Sample ID : SB-01 15-17 FT

Project # : HJ-101-01

Collected By : Gary Lasako
Collection Date : 11/08/12 09:20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	77.1	0.100	%	2540G	11/15/12	1
TPH (GC/FID) Low Fraction	180	5.0	mg/kg	8015	11/16/12	50
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	97.6		% Rec.	8015	11/16/12	50
Volatiles - Oxygenates						
Acetone	BDL	1.1	mg/kg	8260B	11/13/12	21.5
Acrylonitrile	BDL	0.22	mg/kg	8260B	11/13/12	21.5
Benzene	2.6	0.022	mg/kg	8260B	11/13/12	21.5
Bromobenzene	BDL	0.022	mg/kg	8260B	11/13/12	21.5
Bromodichloromethane	BDL	0.022	mg/kg	8260B	11/13/12	21.5
Bromoform	BDL	0.022	mg/kg	8260B	11/13/12	21.5
Bromomethane	BDL	0.11	mg/kg	8260B	11/13/12	21.5
n-Butylbenzene	0.35	0.022	mg/kg	8260B	11/13/12	21.5
sec-Butylbenzene	0.084	0.022	mg/kg	8260B	11/13/12	21.5
tert-Butylbenzene	BDL	0.022	mg/kg	8260B	11/13/12	21.5
Carbon tetrachloride	BDL	0.022	mg/kg	8260B	11/13/12	21.5
Chlorobenzene	BDL	0.022	mg/kg	8260B	11/13/12	21.5
Chlorodibromomethane	BDL	0.022	mg/kg	8260B	11/13/12	21.5
Chloroethane	BDL	0.11	mg/kg	8260B	11/13/12	21.5
2-Chloroethyl vinyl ether	BDL	1.1	mg/kg	8260B	11/13/12	21.5
Chloroform	BDL	0.11	mg/kg	8260B	11/13/12	21.5
Chloromethane	BDL	0.054	mg/kg	8260B	11/13/12	21.5
2-Chlorotoluene	BDL	0.022	mg/kg	8260B	11/13/12	21.5
4-Chlorotoluene	BDL	0.022	mg/kg	8260B	11/13/12	21.5
1,2-Dibromo-3-Chloropropane	BDL	0.11	mg/kg	8260B	11/13/12	21.5
1,2-Dibromoethane	BDL	0.022	mg/kg	8260B	11/13/12	21.5
Dibromomethane	BDL	0.022	mg/kg	8260B	11/13/12	21.5
1,2-Dichlorobenzene	BDL	0.022	mg/kg	8260B	11/13/12	21.5
1,3-Dichlorobenzene	BDL	0.022	mg/kg	8260B	11/13/12	21.5
1,4-Dichlorobenzene	BDL	0.022	mg/kg	8260B	11/13/12	21.5
Dichlorodifluoromethane	BDL	0.11	mg/kg	8260B	11/13/12	21.5
1,1-Dichloroethane	BDL	0.022	mg/kg	8260B	11/13/12	21.5
1,2-Dichloroethane	BDL	0.022	mg/kg	8260B	11/13/12	21.5
1,1-Dichloroethene	BDL	0.022	mg/kg	8260B	11/13/12	21.5
cis-1,2-Dichloroethene	BDL	0.022	mg/kg	8260B	11/13/12	21.5
trans-1,2-Dichloroethene	BDL	0.022	mg/kg	8260B	11/13/12	21.5
1,2-Dichloropropane	BDL	0.022	mg/kg	8260B	11/13/12	21.5
1,1-Dichloropropene	BDL	0.022	mg/kg	8260B	11/13/12	21.5
1,3-Dichloropropane	BDL	0.022	mg/kg	8260B	11/13/12	21.5
cis-1,3-Dichloropropene	BDL	0.022	mg/kg	8260B	11/13/12	21.5
trans-1,3-Dichloropropene	BDL	0.022	mg/kg	8260B	11/13/12	21.5
2,2-Dichloropropane	BDL	0.022	mg/kg	8260B	11/13/12	21.5

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Gary Lasako
BP Environmental
8615 Commerce Drive, Unit One
Easton, MD 21601

December 12, 2012

ESC Sample # : L605622-01

Site ID : 11762

Project # : HJ-101-01

Date Received : November 10, 2012
Description : LSI

Sample ID : SB-01 15-17 FT

Collected By : Gary Lasako
Collection Date : 11/08/12 09:20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Di-isopropyl ether	0.14	0.022	mg/kg	8260B	11/13/12	21.5
Ethylbenzene	4.6	0.43	mg/kg	8260B	11/15/12	430
Hexachloro-1,3-butadiene	BDL	0.022	mg/kg	8260B	11/13/12	21.5
Isopropylbenzene	0.31	0.022	mg/kg	8260B	11/13/12	21.5
p-Isopropyltoluene	0.049	0.022	mg/kg	8260B	11/13/12	21.5
2-Butanone (MEK)	BDL	0.22	mg/kg	8260B	11/13/12	21.5
Methylene Chloride	BDL	0.11	mg/kg	8260B	11/13/12	21.5
4-Methyl-2-pentanone (MIBK)	BDL	0.22	mg/kg	8260B	11/13/12	21.5
Methyl tert-butyl ether	BDL	0.022	mg/kg	8260B	11/13/12	21.5
Naphthalene	1.9	0.11	mg/kg	8260B	11/13/12	21.5
n-Propylbenzene	1.2	0.022	mg/kg	8260B	11/13/12	21.5
Styrene	0.031	0.022	mg/kg	8260B	11/13/12	21.5
1,1,1,2-Tetrachloroethane	BDL	0.022	mg/kg	8260B	11/13/12	21.5
1,1,2,2-Tetrachloroethane	BDL	0.022	mg/kg	8260B	11/13/12	21.5
1,1,2-Trichlorotrifluoroethane	BDL	0.022	mg/kg	8260B	11/13/12	21.5
Tetrachloroethene	BDL	0.022	mg/kg	8260B	11/13/12	21.5
Toluene	20.	2.2	mg/kg	8260B	11/15/12	430
1,2,3-Trichlorobenzene	BDL	0.022	mg/kg	8260B	11/13/12	21.5
1,2,4-Trichlorobenzene	BDL	0.022	mg/kg	8260B	11/13/12	21.5
1,1,1-Trichloroethane	BDL	0.022	mg/kg	8260B	11/13/12	21.5
1,1,2-Trichloroethane	BDL	0.022	mg/kg	8260B	11/13/12	21.5
Trichloroethene	BDL	0.022	mg/kg	8260B	11/13/12	21.5
Trichlorofluoromethane	BDL	0.11	mg/kg	8260B	11/13/12	21.5
1,2,3-Trichloropropane	BDL	0.054	mg/kg	8260B	11/13/12	21.5
1,2,4-Trimethylbenzene	8.4	0.43	mg/kg	8260B	11/15/12	430
1,2,3-Trimethylbenzene	2.1	0.022	mg/kg	8260B	11/13/12	21.5
1,3,5-Trimethylbenzene	2.0	0.022	mg/kg	8260B	11/13/12	21.5
Vinyl chloride	BDL	0.022	mg/kg	8260B	11/13/12	21.5
Xylenes, Total	20.	1.3	mg/kg	8260B	11/15/12	430
Ethanol	BDL	2.2	mg/kg	8260B	11/13/12	21.5
Ethyl tert-butyl ether	BDL	0.022	mg/kg	8260B	11/13/12	21.5
t-Amyl Alcohol	BDL	22.	mg/kg	8260B	11/15/12	430
tert-Butyl alcohol	BDL	0.11	mg/kg	8260B	11/13/12	21.5
tert-Amyl Methyl Ether	BDL	0.022	mg/kg	8260B	11/13/12	21.5
Surrogate Recovery						
Toluene-d8	99.7		% Rec.	8260B	11/13/12	21.5
Dibromofluoromethane	92.6		% Rec.	8260B	11/13/12	21.5
4-Bromofluorobenzene	79.8		% Rec.	8260B	11/13/12	21.5
TPH (GC/FID) High Fraction	50.	4.0	mg/kg	3546/DRO	11/20/12	1
Surrogate recovery(%)						
o-Terphenyl	64.6		% Rec.	3546/DRO	11/20/12	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Gary Lasako
BP Environmental
8615 Commerce Drive, Unit One
Easton, MD 21601

December 12, 2012

ESC Sample # : L605622-02

Site ID : 11762

Project # : HJ-101-01

Date Received : November 10, 2012
Description : LSI

Sample ID : SB-01 41-43 FT

Collected By : Gary Lasako
Collection Date : 11/08/12 11:50

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	77.6	0.100	%	2540G	11/15/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/kg	8015	11/16/12	1
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	95.9		% Rec.	8015	11/16/12	1
Volatiles - Oxygenates						
Acetone	BDL	0.050	mg/kg	8260B	11/15/12	1
Acrylonitrile	BDL	0.010	mg/kg	8260B	11/15/12	1
Benzene	BDL	0.0010	mg/kg	8260B	11/15/12	1
Bromobenzene	BDL	0.0010	mg/kg	8260B	11/15/12	1
Bromodichloromethane	BDL	0.0010	mg/kg	8260B	11/15/12	1
Bromoform	BDL	0.0010	mg/kg	8260B	11/15/12	1
Bromomethane	BDL	0.0050	mg/kg	8260B	11/15/12	1
n-Butylbenzene	BDL	0.0010	mg/kg	8260B	11/15/12	1
sec-Butylbenzene	BDL	0.0010	mg/kg	8260B	11/15/12	1
tert-Butylbenzene	BDL	0.0010	mg/kg	8260B	11/15/12	1
Carbon tetrachloride	BDL	0.0010	mg/kg	8260B	11/15/12	1
Chlorobenzene	BDL	0.0010	mg/kg	8260B	11/15/12	1
Chlorodibromomethane	BDL	0.0010	mg/kg	8260B	11/15/12	1
Chloroethane	BDL	0.0050	mg/kg	8260B	11/15/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/kg	8260B	11/15/12	1
Chloroform	BDL	0.0050	mg/kg	8260B	11/15/12	1
Chloromethane	BDL	0.0025	mg/kg	8260B	11/15/12	1
2-Chlorotoluene	BDL	0.0010	mg/kg	8260B	11/15/12	1
4-Chlorotoluene	BDL	0.0010	mg/kg	8260B	11/15/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/kg	8260B	11/15/12	1
1,2-Dibromoethane	BDL	0.0010	mg/kg	8260B	11/15/12	1
Dibromomethane	BDL	0.0010	mg/kg	8260B	11/15/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/kg	8260B	11/15/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/kg	8260B	11/15/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/kg	8260B	11/15/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/kg	8260B	11/15/12	1
1,1-Dichloroethane	BDL	0.0010	mg/kg	8260B	11/15/12	1
1,2-Dichloroethane	BDL	0.0010	mg/kg	8260B	11/15/12	1
1,1-Dichloroethene	BDL	0.0010	mg/kg	8260B	11/15/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/kg	8260B	11/15/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/kg	8260B	11/15/12	1
1,2-Dichloropropane	BDL	0.0010	mg/kg	8260B	11/15/12	1
1,1-Dichloropropene	BDL	0.0010	mg/kg	8260B	11/15/12	1
1,3-Dichloropropane	BDL	0.0010	mg/kg	8260B	11/15/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/kg	8260B	11/15/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/kg	8260B	11/15/12	1
2,2-Dichloropropane	BDL	0.0010	mg/kg	8260B	11/15/12	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Gary Lasako
BP Environmental
8615 Commerce Drive, Unit One
Easton, MD 21601

December 12, 2012

ESC Sample # : L605622-02

Date Received : November 10, 2012
Description : LSI

Site ID : 11762

Sample ID : SB-01 41-43 FT

Project # : HJ-101-01

Collected By : Gary Lasako
Collection Date : 11/08/12 11:50

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Di-isopropyl ether	BDL	0.0010	mg/kg	8260B	11/15/12	1
Ethylbenzene	BDL	0.0010	mg/kg	8260B	11/15/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/kg	8260B	11/15/12	1
Isopropylbenzene	BDL	0.0010	mg/kg	8260B	11/15/12	1
p-Isopropyltoluene	BDL	0.0010	mg/kg	8260B	11/15/12	1
2-Butanone (MEK)	BDL	0.010	mg/kg	8260B	11/15/12	1
Methylene Chloride	BDL	0.0050	mg/kg	8260B	11/15/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/kg	8260B	11/15/12	1
Methyl tert-butyl ether	0.013	0.0010	mg/kg	8260B	11/15/12	1
Naphthalene	BDL	0.0050	mg/kg	8260B	11/15/12	1
n-Propylbenzene	BDL	0.0010	mg/kg	8260B	11/15/12	1
Styrene	BDL	0.0010	mg/kg	8260B	11/15/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/kg	8260B	11/15/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/kg	8260B	11/15/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/kg	8260B	11/15/12	1
Tetrachloroethene	BDL	0.0010	mg/kg	8260B	11/15/12	1
Toluene	BDL	0.0050	mg/kg	8260B	11/15/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/kg	8260B	11/15/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/kg	8260B	11/15/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/kg	8260B	11/15/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/kg	8260B	11/15/12	1
Trichloroethene	BDL	0.0010	mg/kg	8260B	11/15/12	1
Trichlorofluoromethane	BDL	0.0050	mg/kg	8260B	11/15/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/kg	8260B	11/15/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/kg	8260B	11/15/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/kg	8260B	11/15/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/kg	8260B	11/15/12	1
Vinyl chloride	BDL	0.0010	mg/kg	8260B	11/15/12	1
Xylenes, Total	BDL	0.0030	mg/kg	8260B	11/15/12	1
Ethanol	BDL	0.10	mg/kg	8260B	11/15/12	1
Ethyl tert-butyl ether	BDL	0.0010	mg/kg	8260B	11/15/12	1
t-Amyl Alcohol	BDL	0.050	mg/kg	8260B	11/15/12	1
tert-Butyl alcohol	0.041	0.0050	mg/kg	8260B	11/15/12	1
tert-Amyl Methyl Ether	BDL	0.0010	mg/kg	8260B	11/15/12	1
Surrogate Recovery						
Toluene-d8	99.1		% Rec.	8260B	11/15/12	1
Dibromofluoromethane	97.9		% Rec.	8260B	11/15/12	1
4-Bromofluorobenzene	102.		% Rec.	8260B	11/15/12	1
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	11/20/12	1
Surrogate recovery(%)						
o-Terphenyl	66.2		% Rec.	3546/DRO	11/20/12	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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REPORT OF ANALYSIS

Gary Lasako
BP Environmental
8615 Commerce Drive, Unit One
Easton, MD 21601

December 12, 2012

ESC Sample # : L605622-03

Date Received : November 10, 2012
Description : LSI

Site ID : 11762

Sample ID : SB-03 11-13 FT

Project # : HJ-101-01

Collected By : Gary Lasako
Collection Date : 11/08/12 14:50

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	76.4	0.100	%	2540G	11/15/12	1
TPH (GC/FID) Low Fraction	290	20.	mg/kg	8015	11/16/12	200
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	97.1		% Rec.	8015	11/16/12	200
Volatiles - Oxygenates						
Acetone	2.0	1.3	mg/kg	8260B	11/13/12	25.5
Acrylonitrile	BDL	0.26	mg/kg	8260B	11/13/12	25.5
Benzene	3.2	0.026	mg/kg	8260B	11/13/12	25.5
Bromobenzene	BDL	0.026	mg/kg	8260B	11/13/12	25.5
Bromodichloromethane	BDL	0.026	mg/kg	8260B	11/13/12	25.5
Bromoform	BDL	0.026	mg/kg	8260B	11/13/12	25.5
Bromomethane	BDL	0.13	mg/kg	8260B	11/13/12	25.5
n-Butylbenzene	1.3	0.026	mg/kg	8260B	11/13/12	25.5
sec-Butylbenzene	0.56	0.026	mg/kg	8260B	11/13/12	25.5
tert-Butylbenzene	BDL	0.026	mg/kg	8260B	11/13/12	25.5
Carbon tetrachloride	BDL	0.026	mg/kg	8260B	11/13/12	25.5
Chlorobenzene	BDL	0.026	mg/kg	8260B	11/13/12	25.5
Chlorodibromomethane	BDL	0.026	mg/kg	8260B	11/13/12	25.5
Chloroethane	BDL	0.13	mg/kg	8260B	11/13/12	25.5
2-Chloroethyl vinyl ether	BDL	1.3	mg/kg	8260B	11/13/12	25.5
Chloroform	BDL	0.13	mg/kg	8260B	11/13/12	25.5
Chloromethane	BDL	0.064	mg/kg	8260B	11/13/12	25.5
2-Chlorotoluene	BDL	0.026	mg/kg	8260B	11/13/12	25.5
4-Chlorotoluene	BDL	0.026	mg/kg	8260B	11/13/12	25.5
1,2-Dibromo-3-Chloropropane	BDL	0.13	mg/kg	8260B	11/13/12	25.5
1,2-Dibromoethane	BDL	0.026	mg/kg	8260B	11/13/12	25.5
Dibromomethane	BDL	0.026	mg/kg	8260B	11/13/12	25.5
1,2-Dichlorobenzene	BDL	0.026	mg/kg	8260B	11/13/12	25.5
1,3-Dichlorobenzene	BDL	0.026	mg/kg	8260B	11/13/12	25.5
1,4-Dichlorobenzene	BDL	0.026	mg/kg	8260B	11/13/12	25.5
Dichlorodifluoromethane	BDL	0.13	mg/kg	8260B	11/13/12	25.5
1,1-Dichloroethane	BDL	0.026	mg/kg	8260B	11/13/12	25.5
1,2-Dichloroethane	BDL	0.026	mg/kg	8260B	11/13/12	25.5
1,1-Dichloroethene	BDL	0.026	mg/kg	8260B	11/13/12	25.5
cis-1,2-Dichloroethene	BDL	0.026	mg/kg	8260B	11/13/12	25.5
trans-1,2-Dichloroethene	BDL	0.026	mg/kg	8260B	11/13/12	25.5
1,2-Dichloropropane	BDL	0.026	mg/kg	8260B	11/13/12	25.5
1,1-Dichloropropene	BDL	0.026	mg/kg	8260B	11/13/12	25.5
1,3-Dichloropropane	BDL	0.026	mg/kg	8260B	11/13/12	25.5
cis-1,3-Dichloropropene	BDL	0.026	mg/kg	8260B	11/13/12	25.5
trans-1,3-Dichloropropene	BDL	0.026	mg/kg	8260B	11/13/12	25.5
2,2-Dichloropropane	BDL	0.026	mg/kg	8260B	11/13/12	25.5

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Gary Lasako
BP Environmental
8615 Commerce Drive, Unit One
Easton, MD 21601

December 12, 2012

ESC Sample # : L605622-03

Date Received : November 10, 2012
Description : LSI

Site ID : 11762

Sample ID : SB-03 11-13 FT

Project # : HJ-101-01

Collected By : Gary Lasako
Collection Date : 11/08/12 14:50

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Di-isopropyl ether	0.085	0.026	mg/kg	8260B	11/13/12	25.5
Ethylbenzene	16.	0.51	mg/kg	8260B	11/15/12	510
Hexachloro-1,3-butadiene	BDL	0.026	mg/kg	8260B	11/13/12	25.5
Isopropylbenzene	2.4	0.026	mg/kg	8260B	11/13/12	25.5
p-Isopropyltoluene	0.29	0.026	mg/kg	8260B	11/13/12	25.5
2-Butanone (MEK)	BDL	0.26	mg/kg	8260B	11/13/12	25.5
Methylene Chloride	BDL	0.13	mg/kg	8260B	11/13/12	25.5
4-Methyl-2-pentanone (MIBK)	BDL	0.26	mg/kg	8260B	11/13/12	25.5
Methyl tert-butyl ether	BDL	0.51	mg/kg	8260B	11/15/12	510
Naphthalene	4.1	0.13	mg/kg	8260B	11/13/12	25.5
n-Propylbenzene	7.3	0.51	mg/kg	8260B	11/15/12	510
Styrene	BDL	0.026	mg/kg	8260B	11/13/12	25.5
1,1,1,2-Tetrachloroethane	BDL	0.026	mg/kg	8260B	11/13/12	25.5
1,1,2,2-Tetrachloroethane	BDL	0.026	mg/kg	8260B	11/13/12	25.5
1,1,2-Trichlorotrifluoroethane	BDL	0.026	mg/kg	8260B	11/13/12	25.5
Tetrachloroethene	BDL	0.026	mg/kg	8260B	11/13/12	25.5
Toluene	66.	2.6	mg/kg	8260B	11/15/12	510
1,2,3-Trichlorobenzene	BDL	0.026	mg/kg	8260B	11/13/12	25.5
1,2,4-Trichlorobenzene	BDL	0.026	mg/kg	8260B	11/13/12	25.5
1,1,1-Trichloroethane	BDL	0.026	mg/kg	8260B	11/13/12	25.5
1,1,2-Trichloroethane	BDL	0.026	mg/kg	8260B	11/13/12	25.5
Trichloroethene	BDL	0.026	mg/kg	8260B	11/13/12	25.5
Trichlorofluoromethane	BDL	0.13	mg/kg	8260B	11/13/12	25.5
1,2,3-Trichloropropane	BDL	0.064	mg/kg	8260B	11/13/12	25.5
1,2,4-Trimethylbenzene	44.	0.51	mg/kg	8260B	11/15/12	510
1,2,3-Trimethylbenzene	9.8	0.51	mg/kg	8260B	11/15/12	510
1,3,5-Trimethylbenzene	13.	0.51	mg/kg	8260B	11/15/12	510
Vinyl chloride	BDL	0.026	mg/kg	8260B	11/13/12	25.5
Xylenes, Total	75.	1.5	mg/kg	8260B	11/15/12	510
Ethanol	BDL	2.6	mg/kg	8260B	11/13/12	25.5
Ethyl tert-butyl ether	BDL	0.026	mg/kg	8260B	11/13/12	25.5
t-Amyl Alcohol	2.0	1.3	mg/kg	8260B	11/13/12	25.5
tert-Butyl alcohol	BDL	0.13	mg/kg	8260B	11/13/12	25.5
tert-Amyl Methyl Ether	BDL	0.026	mg/kg	8260B	11/13/12	25.5
Surrogate Recovery						
Toluene-d8	85.4		% Rec.	8260B	11/13/12	25.5
Dibromofluoromethane	93.6		% Rec.	8260B	11/13/12	25.5
4-Bromofluorobenzene	81.8		% Rec.	8260B	11/13/12	25.5
TPH (GC/FID) High Fraction	110	4.0	mg/kg	3546/DRO	11/20/12	1
Surrogate recovery(%)						
o-Terphenyl	70.0		% Rec.	3546/DRO	11/20/12	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Gary Lasako
BP Environmental
8615 Commerce Drive, Unit One
Easton, MD 21601

December 12, 2012

ESC Sample # : L605622-04

Date Received : November 10, 2012
Description : LSI

Site ID : 11762

Sample ID : SB-03 34-36 FT

Project # : HJ-101-01

Collected By : Gary Lasako
Collection Date : 11/08/12 15:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	87.4	0.100	%	2540G	11/15/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/kg	8015	11/16/12	1
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	95.9		% Rec.	8015	11/16/12	1
Volatiles - Oxygenates						
Acetone	BDL	0.050	mg/kg	8260B	11/13/12	1
Acrylonitrile	BDL	0.010	mg/kg	8260B	11/13/12	1
Benzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
Bromobenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
Bromodichloromethane	BDL	0.0010	mg/kg	8260B	11/13/12	1
Bromoform	BDL	0.0010	mg/kg	8260B	11/13/12	1
Bromomethane	BDL	0.0050	mg/kg	8260B	11/13/12	1
n-Butylbenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
sec-Butylbenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
tert-Butylbenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
Carbon tetrachloride	BDL	0.0010	mg/kg	8260B	11/13/12	1
Chlorobenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
Chlorodibromomethane	BDL	0.0010	mg/kg	8260B	11/13/12	1
Chloroethane	BDL	0.0050	mg/kg	8260B	11/13/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/kg	8260B	11/13/12	1
Chloroform	BDL	0.0050	mg/kg	8260B	11/13/12	1
Chloromethane	BDL	0.0025	mg/kg	8260B	11/13/12	1
2-Chlorotoluene	BDL	0.0010	mg/kg	8260B	11/13/12	1
4-Chlorotoluene	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/kg	8260B	11/13/12	1
1,2-Dibromoethane	BDL	0.0010	mg/kg	8260B	11/13/12	1
Dibromomethane	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/kg	8260B	11/13/12	1
1,1-Dichloroethane	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,2-Dichloroethane	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,1-Dichloroethene	BDL	0.0010	mg/kg	8260B	11/13/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/kg	8260B	11/13/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,2-Dichloropropane	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,1-Dichloropropene	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,3-Dichloropropane	BDL	0.0010	mg/kg	8260B	11/13/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/kg	8260B	11/13/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/kg	8260B	11/13/12	1
2,2-Dichloropropane	BDL	0.0010	mg/kg	8260B	11/13/12	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Gary Lasako
BP Environmental
8615 Commerce Drive, Unit One
Easton, MD 21601

December 12, 2012

ESC Sample # : L605622-04

Date Received : November 10, 2012
Description : LSI

Site ID : 11762

Sample ID : SB-03 34-36 FT

Project # : HJ-101-01

Collected By : Gary Lasako
Collection Date : 11/08/12 15:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Di-isopropyl ether	BDL	0.0010	mg/kg	8260B	11/13/12	1
Ethylbenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/kg	8260B	11/13/12	1
Isopropylbenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
p-Isopropyltoluene	BDL	0.0010	mg/kg	8260B	11/13/12	1
2-Butanone (MEK)	BDL	0.010	mg/kg	8260B	11/13/12	1
Methylene Chloride	BDL	0.0050	mg/kg	8260B	11/13/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/kg	8260B	11/13/12	1
Methyl tert-butyl ether	0.020	0.0010	mg/kg	8260B	11/13/12	1
Naphthalene	BDL	0.0050	mg/kg	8260B	11/13/12	1
n-Propylbenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
Styrene	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/kg	8260B	11/13/12	1
Tetrachloroethene	BDL	0.0010	mg/kg	8260B	11/13/12	1
Toluene	BDL	0.0050	mg/kg	8260B	11/13/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/kg	8260B	11/13/12	1
Trichloroethene	BDL	0.0010	mg/kg	8260B	11/13/12	1
Trichlorofluoromethane	BDL	0.0050	mg/kg	8260B	11/13/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/kg	8260B	11/13/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
Vinyl chloride	BDL	0.0010	mg/kg	8260B	11/13/12	1
Xylenes, Total	BDL	0.0030	mg/kg	8260B	11/13/12	1
Ethanol	BDL	0.10	mg/kg	8260B	11/13/12	1
Ethyl tert-butyl ether	BDL	0.0010	mg/kg	8260B	11/13/12	1
t-Amyl Alcohol	BDL	0.050	mg/kg	8260B	11/13/12	1
tert-Butyl alcohol	BDL	0.0050	mg/kg	8260B	11/13/12	1
tert-Amyl Methyl Ether	BDL	0.0010	mg/kg	8260B	11/13/12	1
Surrogate Recovery						
Toluene-d8	100.		% Rec.	8260B	11/13/12	1
Dibromofluoromethane	99.3		% Rec.	8260B	11/13/12	1
4-Bromofluorobenzene	104.		% Rec.	8260B	11/13/12	1
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	11/20/12	1
Surrogate recovery(%)						
o-Terphenyl	75.6		% Rec.	3546/DRO	11/20/12	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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REPORT OF ANALYSIS

Gary Lasako
BP Environmental
8615 Commerce Drive, Unit One
Easton, MD 21601

December 12, 2012

ESC Sample # : L605622-05

Site ID : 11762

Project # : HJ-101-01

Date Received : November 10, 2012
Description : LSI

Sample ID : SB-04 34-36 FT

Collected By : Gary Lasako
Collection Date : 11/08/12 16:30

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	80.1	0.100	%	2540G	11/15/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/kg	8015	11/16/12	1
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	96.1		% Rec.	8015	11/16/12	1
Volatiles - Oxygenates						
Acetone	BDL	0.050	mg/kg	8260B	11/13/12	1
Acrylonitrile	BDL	0.010	mg/kg	8260B	11/13/12	1
Benzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
Bromobenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
Bromodichloromethane	BDL	0.0010	mg/kg	8260B	11/13/12	1
Bromoform	BDL	0.0010	mg/kg	8260B	11/13/12	1
Bromomethane	BDL	0.0050	mg/kg	8260B	11/13/12	1
n-Butylbenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
sec-Butylbenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
tert-Butylbenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
Carbon tetrachloride	BDL	0.0010	mg/kg	8260B	11/13/12	1
Chlorobenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
Chlorodibromomethane	BDL	0.0010	mg/kg	8260B	11/13/12	1
Chloroethane	BDL	0.0050	mg/kg	8260B	11/13/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/kg	8260B	11/13/12	1
Chloroform	BDL	0.0050	mg/kg	8260B	11/13/12	1
Chloromethane	BDL	0.0025	mg/kg	8260B	11/13/12	1
2-Chlorotoluene	BDL	0.0010	mg/kg	8260B	11/13/12	1
4-Chlorotoluene	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/kg	8260B	11/13/12	1
1,2-Dibromoethane	BDL	0.0010	mg/kg	8260B	11/13/12	1
Dibromomethane	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/kg	8260B	11/13/12	1
1,1-Dichloroethane	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,2-Dichloroethane	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,1-Dichloroethene	BDL	0.0010	mg/kg	8260B	11/13/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/kg	8260B	11/13/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,2-Dichloropropane	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,1-Dichloropropene	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,3-Dichloropropane	BDL	0.0010	mg/kg	8260B	11/13/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/kg	8260B	11/13/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/kg	8260B	11/13/12	1
2,2-Dichloropropane	BDL	0.0010	mg/kg	8260B	11/13/12	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Gary Lasako
BP Environmental
8615 Commerce Drive, Unit One
Easton, MD 21601

December 12, 2012

ESC Sample # : L605622-05

Site ID : 11762

Project # : HJ-101-01

Date Received : November 10, 2012
Description : LSI

Sample ID : SB-04 34-36 FT

Collected By : Gary Lasako
Collection Date : 11/08/12 16:30

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Di-isopropyl ether	BDL	0.0010	mg/kg	8260B	11/13/12	1
Ethylbenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/kg	8260B	11/13/12	1
Isopropylbenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
p-Isopropyltoluene	BDL	0.0010	mg/kg	8260B	11/13/12	1
2-Butanone (MEK)	BDL	0.010	mg/kg	8260B	11/13/12	1
Methylene Chloride	BDL	0.0050	mg/kg	8260B	11/13/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/kg	8260B	11/13/12	1
Methyl tert-butyl ether	0.036	0.0010	mg/kg	8260B	11/13/12	1
Naphthalene	BDL	0.0050	mg/kg	8260B	11/13/12	1
n-Propylbenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
Styrene	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/kg	8260B	11/13/12	1
Tetrachloroethene	BDL	0.0010	mg/kg	8260B	11/13/12	1
Toluene	BDL	0.0050	mg/kg	8260B	11/13/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/kg	8260B	11/13/12	1
Trichloroethene	BDL	0.0010	mg/kg	8260B	11/13/12	1
Trichlorofluoromethane	BDL	0.0050	mg/kg	8260B	11/13/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/kg	8260B	11/13/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/kg	8260B	11/13/12	1
Vinyl chloride	BDL	0.0010	mg/kg	8260B	11/13/12	1
Xylenes, Total	BDL	0.0030	mg/kg	8260B	11/13/12	1
Ethanol	BDL	0.10	mg/kg	8260B	11/13/12	1
Ethyl tert-butyl ether	BDL	0.0010	mg/kg	8260B	11/13/12	1
t-Amyl Alcohol	BDL	0.050	mg/kg	8260B	11/13/12	1
tert-Butyl alcohol	BDL	0.0050	mg/kg	8260B	11/13/12	1
tert-Amyl Methyl Ether	BDL	0.0010	mg/kg	8260B	11/13/12	1
Surrogate Recovery						
Toluene-d8	102.		% Rec.	8260B	11/13/12	1
Dibromofluoromethane	102.		% Rec.	8260B	11/13/12	1
4-Bromofluorobenzene	101.		% Rec.	8260B	11/13/12	1
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	11/20/12	1
Surrogate recovery(%)						
o-Terphenyl	63.5		% Rec.	3546/DRO	11/20/12	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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REPORT OF ANALYSIS

Gary Lasako
BP Environmental
8615 Commerce Drive, Unit One
Easton, MD 21601

December 12, 2012

ESC Sample # : L605622-06

Site ID : 11762

Project # : HJ-101-01

Date Received : November 10, 2012
Description : LSI

Sample ID : TW-01

Collected By : Gary Lasako
Collection Date : 11/08/12 16:45

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	1.9	0.031	0.10	mg/l		8015	11/13/12	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	78.5			% Rec.		8015	11/13/12	1
Volatile Organics								
Acetone	0.14	0.0046	0.050	mg/l		8260B	11/13/12	1
Acrolein	U	0.0089	0.050	mg/l		8260B	11/13/12	1
Acrylonitrile	U	0.0019	0.010	mg/l		8260B	11/13/12	1
Benzene	0.039	0.00033	0.0010	mg/l		8260B	11/13/12	1
Bromobenzene	U	0.00035	0.0010	mg/l		8260B	11/13/12	1
Bromodichloromethane	U	0.00038	0.0010	mg/l		8260B	11/13/12	1
Bromoform	U	0.00047	0.0010	mg/l		8260B	11/13/12	1
Bromomethane	U	0.00087	0.0050	mg/l		8260B	11/13/12	1
n-Butylbenzene	U	0.00036	0.0010	mg/l		8260B	11/13/12	1
sec-Butylbenzene	U	0.00036	0.0010	mg/l		8260B	11/13/12	1
tert-Butylbenzene	U	0.00040	0.0010	mg/l		8260B	11/13/12	1
Carbon disulfide	0.0077	0.00028	0.0010	mg/l		8260B	11/13/12	1
Carbon tetrachloride	U	0.00038	0.0010	mg/l		8260B	11/13/12	1
Chlorobenzene	U	0.00035	0.0010	mg/l		8260B	11/13/12	1
Chlorodibromomethane	U	0.00033	0.0010	mg/l		8260B	11/13/12	1
Chloroethane	U	0.00045	0.0050	mg/l		8260B	11/13/12	1
2-Chloroethyl vinyl ether	U	0.0030	0.050	mg/l		8260B	11/13/12	1
Chloroform	U	0.00032	0.0050	mg/l		8260B	11/13/12	1
Chloromethane	U	0.00028	0.0025	mg/l		8260B	11/13/12	1
2-Chlorotoluene	U	0.00038	0.0010	mg/l		8260B	11/13/12	1
4-Chlorotoluene	U	0.00035	0.0010	mg/l		8260B	11/13/12	1
1,2-Dibromo-3-Chloropropane	U	0.0013	0.0050	mg/l		8260B	11/13/12	1
1,2-Dibromoethane	U	0.00038	0.0010	mg/l		8260B	11/13/12	1
Dibromomethane	U	0.00035	0.0010	mg/l		8260B	11/13/12	1
1,2-Dichlorobenzene	U	0.00035	0.0010	mg/l		8260B	11/13/12	1
1,3-Dichlorobenzene	U	0.00022	0.0010	mg/l		8260B	11/13/12	1
1,4-Dichlorobenzene	U	0.00027	0.0010	mg/l		8260B	11/13/12	1
Dichlorodifluoromethane	U	0.00055	0.0050	mg/l		8260B	11/13/12	1
1,1-Dichloroethane	U	0.00026	0.0010	mg/l		8260B	11/13/12	1
1,2-Dichloroethane	U	0.00036	0.0010	mg/l		8260B	11/13/12	1
1,1-Dichloroethene	U	0.00040	0.0010	mg/l		8260B	11/13/12	1
cis-1,2-Dichloroethene	U	0.00026	0.0010	mg/l		8260B	11/13/12	1
trans-1,2-Dichloroethene	U	0.00040	0.0010	mg/l		8260B	11/13/12	1
1,2-Dichloropropane	U	0.00031	0.0010	mg/l		8260B	11/13/12	1
1,1-Dichloropropene	U	0.00035	0.0010	mg/l		8260B	11/13/12	1
1,3-Dichloropropane	U	0.00037	0.0010	mg/l		8260B	11/13/12	1
cis-1,3-Dichloropropene	U	0.00042	0.0010	mg/l		8260B	11/13/12	1
trans-1,3-Dichloropropene	U	0.00042	0.0010	mg/l		8260B	11/13/12	1
2,2-Dichloropropane	U	0.00032	0.0010	mg/l		8260B	11/13/12	1

U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:
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Tax I.D. 62-0814289

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REPORT OF ANALYSIS

Gary Lasako
BP Environmental
8615 Commerce Drive, Unit One
Easton, MD 21601

December 12, 2012

ESC Sample # : L605622-06

Date Received : November 10, 2012
Description : LSI

Site ID : 11762

Sample ID : TW-01

Project # : HJ-101-01

Collected By : Gary Lasako
Collection Date : 11/08/12 16:45

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Ethylbenzene	0.016	0.00038	0.0010	mg/l		8260B	11/13/12	1
Hexachloro-1,3-butadiene	U	0.00026	0.0010	mg/l		8260B	11/13/12	1
Isopropylbenzene	0.00083	0.00033	0.0010	mg/l	J	8260B	11/13/12	1
p-Isopropyltoluene	U	0.00035	0.0010	mg/l		8260B	11/13/12	1
2-Butanone (MEK)	0.045	0.0039	0.010	mg/l		8260B	11/13/12	1
Methylene Chloride	U	0.00084	0.0050	mg/l		8260B	11/13/12	1
4-Methyl-2-pentanone (MIBK)	U	0.0021	0.010	mg/l		8260B	11/13/12	1
Naphthalene	0.0033	0.00059	0.0050	mg/l	J	8260B	11/13/12	1
n-Propylbenzene	0.0018	0.00035	0.0010	mg/l		8260B	11/13/12	1
Styrene	U	0.00031	0.0010	mg/l		8260B	11/13/12	1
1,1,1,2-Tetrachloroethane	U	0.00038	0.0010	mg/l		8260B	11/13/12	1
1,1,2,2-Tetrachloroethane	U	0.00058	0.0010	mg/l		8260B	11/13/12	1
1,1,2-Trichlorotrifluoroethane	U	0.00030	0.0010	mg/l		8260B	11/13/12	1
Tetrachloroethene	U	0.00037	0.0010	mg/l		8260B	11/13/12	1
Toluene	0.15	0.00078	0.0050	mg/l		8260B	11/13/12	1
1,2,3-Trichlorobenzene	U	0.00023	0.0010	mg/l		8260B	11/13/12	1
1,2,4-Trichlorobenzene	U	0.00021	0.0010	mg/l		8260B	11/13/12	1
1,1,1-Trichloroethane	U	0.00032	0.0010	mg/l		8260B	11/13/12	1
1,1,2-Trichloroethane	U	0.00038	0.0010	mg/l		8260B	11/13/12	1
Trichloroethene	U	0.00040	0.0010	mg/l		8260B	11/13/12	1
Trichlorofluoromethane	U	0.0012	0.0050	mg/l		8260B	11/13/12	1
1,2,3-Trichloropropane	U	0.00081	0.0025	mg/l		8260B	11/13/12	1
1,2,4-Trimethylbenzene	0.017	0.00037	0.0010	mg/l		8260B	11/13/12	1
1,2,3-Trimethylbenzene	0.0059	0.00032	0.0010	mg/l		8260B	11/13/12	1
1,3,5-Trimethylbenzene	0.0052	0.00039	0.0010	mg/l		8260B	11/13/12	1
Vinyl chloride	U	0.00026	0.0010	mg/l		8260B	11/13/12	1
Xylenes, Total	0.075	0.0011	0.0030	mg/l		8260B	11/13/12	1
Di-isopropyl ether	0.019	0.00032	0.0010	mg/l		8260B	11/13/12	1
Ethanol	1.1	0.042	0.10	mg/l		8260B	11/13/12	1
Ethyl tert-butyl ether	0.0015	0.00027	0.0010	mg/l		8260B	11/13/12	1
Methyl tert-butyl ether	3.1	0.018	0.050	mg/l		8260B	11/14/12	50
t-Amyl Alcohol	2.6	0.24	2.5	mg/l		8260B	11/14/12	50
tert-Butyl alcohol	1.4	0.12	0.25	mg/l		8260B	11/14/12	50
tert-Amyl Methyl Ether	0.072	0.013	0.050	mg/l		8260B	11/14/12	50
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	11/13/12	1
Dibromofluoromethane	111.			% Rec.		8260B	11/13/12	1
4-Bromofluorobenzene	106.			% Rec.		8260B	11/13/12	1
TPH (GC/FID) High Fraction	U	0.0091	0.10	mg/l		DRO	11/14/12	1
Surrogate recovery(%)								
o-Terphenyl	86.4			% Rec.		DRO	11/14/12	1

U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:
The reported analytical results relate only to the sample submitted.
This report shall not be reproduced, except in full, without the written approval from ESC.
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Reported: 12/12/12 13:56 Printed: 12/12/12 13:57

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L605622-03	WG622758	SAMP	Toluene-d8	R2441340	J2
L605622-06	WG622512	SAMP	Isopropylbenzene	R2442177	J
	WG622512	SAMP	Naphthalene	R2442177	J

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods,it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Differrence.

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

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Easton, MD 21601

Quality Assurance Report
Level II

L605622

December 12, 2012

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
TPH (GC/FID) Low Fraction	< .1	mg/l			WG622554	11/12/12 23:26
a,a,a-Trifluorotoluene(FID)		% Rec.	95.42	62-128	WG622554	11/12/12 23:26
1,1,1,2-Tetrachloroethane	< .001	mg/kg			WG622758	11/13/12 12:56
1,1,1-Trichloroethane	< .001	mg/kg			WG622758	11/13/12 12:56
1,1,2,2-Tetrachloroethane	< .001	mg/kg			WG622758	11/13/12 12:56
1,1,2-Trichloroethane	< .001	mg/kg			WG622758	11/13/12 12:56
1,1,2-Trichlorotrifluoroethane	< .001	mg/kg			WG622758	11/13/12 12:56
1,1-Dichloroethane	< .001	mg/kg			WG622758	11/13/12 12:56
1,1-Dichloroethene	< .001	mg/kg			WG622758	11/13/12 12:56
1,1-Dichloropropene	< .001	mg/kg			WG622758	11/13/12 12:56
1,2,3-Trichlorobenzene	< .001	mg/kg			WG622758	11/13/12 12:56
1,2,3-Trichloropropane	< .0025	mg/kg			WG622758	11/13/12 12:56
1,2,3-Trimethylbenzene	< .001	mg/kg			WG622758	11/13/12 12:56
1,2,4-Trichlorobenzene	< .001	mg/kg			WG622758	11/13/12 12:56
1,2,4-Trimethylbenzene	< .001	mg/kg			WG622758	11/13/12 12:56
1,2-Dibromo-3-Chloropropane	< .005	mg/kg			WG622758	11/13/12 12:56
1,2-Dibromoethane	< .001	mg/kg			WG622758	11/13/12 12:56
1,2-Dichlorobenzene	< .001	mg/kg			WG622758	11/13/12 12:56
1,2-Dichloroethane	< .001	mg/kg			WG622758	11/13/12 12:56
1,2-Dichloropropane	< .001	mg/kg			WG622758	11/13/12 12:56
1,3,5-Trimethylbenzene	< .001	mg/kg			WG622758	11/13/12 12:56
1,3-Dichlorobenzene	< .001	mg/kg			WG622758	11/13/12 12:56
1,3-Dichloropropane	< .001	mg/kg			WG622758	11/13/12 12:56
1,4-Dichlorobenzene	< .001	mg/kg			WG622758	11/13/12 12:56
2,2-Dichloropropane	< .001	mg/kg			WG622758	11/13/12 12:56
2-Butanone (MEK)	< .01	mg/kg			WG622758	11/13/12 12:56
2-Chloroethyl vinyl ether	< .05	mg/kg			WG622758	11/13/12 12:56
2-Chlorotoluene	< .001	mg/kg			WG622758	11/13/12 12:56
4-Chlorotoluene	< .001	mg/kg			WG622758	11/13/12 12:56
4-Methyl-2-pentanone (MIBK)	< .01	mg/kg			WG622758	11/13/12 12:56
Acetone	< .05	mg/kg			WG622758	11/13/12 12:56
Acrylonitrile	< .01	mg/kg			WG622758	11/13/12 12:56
Benzene	< .001	mg/kg			WG622758	11/13/12 12:56
Bromobenzene	< .001	mg/kg			WG622758	11/13/12 12:56
Bromodichloromethane	< .001	mg/kg			WG622758	11/13/12 12:56
Bromoform	< .001	mg/kg			WG622758	11/13/12 12:56
Bromomethane	< .005	mg/kg			WG622758	11/13/12 12:56
Carbon tetrachloride	< .001	mg/kg			WG622758	11/13/12 12:56
Chlorobenzene	< .001	mg/kg			WG622758	11/13/12 12:56
Chlorodibromomethane	< .001	mg/kg			WG622758	11/13/12 12:56
Chloroethane	< .005	mg/kg			WG622758	11/13/12 12:56
Chloroform	< .005	mg/kg			WG622758	11/13/12 12:56
Chloromethane	< .0025	mg/kg			WG622758	11/13/12 12:56
cis-1,2-Dichloroethene	< .001	mg/kg			WG622758	11/13/12 12:56
cis-1,3-Dichloropropene	< .001	mg/kg			WG622758	11/13/12 12:56
Di-isopropyl ether	< .001	mg/kg			WG622758	11/13/12 12:56
Dibromomethane	< .001	mg/kg			WG622758	11/13/12 12:56
Dichlorodifluoromethane	< .005	mg/kg			WG622758	11/13/12 12:56
Ethyl tert-butyl ether	< .001	mg/kg			WG622758	11/13/12 12:56
Ethylbenzene	< .001	mg/kg			WG622758	11/13/12 12:56
Hexachloro-1,3-butadiene	< .001	mg/kg			WG622758	11/13/12 12:56
Isopropylbenzene	< .001	mg/kg			WG622758	11/13/12 12:56
Methyl tert-butyl ether	< .001	mg/kg			WG622758	11/13/12 12:56
Methylene Chloride	< .005	mg/kg			WG622758	11/13/12 12:56
n-Butylbenzene	< .001	mg/kg			WG622758	11/13/12 12:56
n-Propylbenzene	< .001	mg/kg			WG622758	11/13/12 12:56
Naphthalene	< .005	mg/kg			WG622758	11/13/12 12:56

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Quality Assurance Report
Level II

L605622

December 12, 2012

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
p-Isopropyltoluene	< .001	mg/kg			WG622758	11/13/12 12:56
sec-Butylbenzene	< .001	mg/kg			WG622758	11/13/12 12:56
Styrene	< .001	mg/kg			WG622758	11/13/12 12:56
tert-Amyl Methyl Ether	< .001	mg/kg			WG622758	11/13/12 12:56
tert-Butyl alcohol	< .005	mg/kg			WG622758	11/13/12 12:56
tert-Butylbenzene	< .001	mg/kg			WG622758	11/13/12 12:56
Tetrachloroethene	< .001	mg/kg			WG622758	11/13/12 12:56
Toluene	< .005	mg/kg			WG622758	11/13/12 12:56
trans-1,2-Dichloroethene	< .001	mg/kg			WG622758	11/13/12 12:56
trans-1,3-Dichloropropene	< .001	mg/kg			WG622758	11/13/12 12:56
Trichloroethene	< .001	mg/kg			WG622758	11/13/12 12:56
Trichlorofluoromethane	< .005	mg/kg			WG622758	11/13/12 12:56
Vinyl chloride	< .001	mg/kg			WG622758	11/13/12 12:56
Xylenes, Total	< .003	mg/kg			WG622758	11/13/12 12:56
4-Bromofluorobenzene		% Rec.	103.4	67-133	WG622758	11/13/12 12:56
Dibromofluoromethane		% Rec.	97.10	72-135	WG622758	11/13/12 12:56
Toluene-d8		% Rec.	102.2	90-113	WG622758	11/13/12 12:56
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG622512	11/13/12 14:04
1,1,1-Trichloroethane	< .001	mg/l			WG622512	11/13/12 14:04
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG622512	11/13/12 14:04
1,1,2-Trichloroethane	< .001	mg/l			WG622512	11/13/12 14:04
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG622512	11/13/12 14:04
1,1-Dichloroethane	< .001	mg/l			WG622512	11/13/12 14:04
1,1-Dichloroethene	< .001	mg/l			WG622512	11/13/12 14:04
1,1-Dichloropropene	< .001	mg/l			WG622512	11/13/12 14:04
1,2,3-Trichlorobenzene	< .001	mg/l			WG622512	11/13/12 14:04
1,2,3-Trichloropropane	< .001	mg/l			WG622512	11/13/12 14:04
1,2,3-Trimethylbenzene	< .001	mg/l			WG622512	11/13/12 14:04
1,2,4-Trichlorobenzene	< .001	mg/l			WG622512	11/13/12 14:04
1,2,4-Trimethylbenzene	< .001	mg/l			WG622512	11/13/12 14:04
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG622512	11/13/12 14:04
1,2-Dibromoethane	< .001	mg/l			WG622512	11/13/12 14:04
1,2-Dichlorobenzene	< .001	mg/l			WG622512	11/13/12 14:04
1,2-Dichloroethane	< .001	mg/l			WG622512	11/13/12 14:04
1,2-Dichloropropane	< .001	mg/l			WG622512	11/13/12 14:04
1,3,5-Trimethylbenzene	< .001	mg/l			WG622512	11/13/12 14:04
1,3-Dichlorobenzene	< .001	mg/l			WG622512	11/13/12 14:04
1,3-Dichloropropane	< .001	mg/l			WG622512	11/13/12 14:04
1,4-Dichlorobenzene	< .001	mg/l			WG622512	11/13/12 14:04
2,2-Dichloropropane	< .001	mg/l			WG622512	11/13/12 14:04
2-Butanone (MEK)	< .01	mg/l			WG622512	11/13/12 14:04
2-Chloroethyl vinyl ether	< .05	mg/l			WG622512	11/13/12 14:04
2-Chlorotoluene	< .001	mg/l			WG622512	11/13/12 14:04
4-Chlorotoluene	< .001	mg/l			WG622512	11/13/12 14:04
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG622512	11/13/12 14:04
Acetone	< .05	mg/l			WG622512	11/13/12 14:04
Acrolein	< .025	mg/l			WG622512	11/13/12 14:04
Acrylonitrile	< .01	mg/l			WG622512	11/13/12 14:04
Benzene	< .001	mg/l			WG622512	11/13/12 14:04
Bromobenzene	< .001	mg/l			WG622512	11/13/12 14:04
Bromodichloromethane	< .001	mg/l			WG622512	11/13/12 14:04
Bromoform	< .001	mg/l			WG622512	11/13/12 14:04
Bromomethane	< .005	mg/l			WG622512	11/13/12 14:04
Carbon disulfide	< .001	mg/l			WG622512	11/13/12 14:04
Carbon tetrachloride	< .001	mg/l			WG622512	11/13/12 14:04
Chlorobenzene	< .001	mg/l			WG622512	11/13/12 14:04
Chlorodibromomethane	< .001	mg/l			WG622512	11/13/12 14:04

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December 12, 2012

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Chloroethane	< .005	mg/l			WG622512	11/13/12 14:04
Chloroform	< .005	mg/l			WG622512	11/13/12 14:04
Chloromethane	< .0025	mg/l			WG622512	11/13/12 14:04
cis-1,2-Dichloroethene	< .001	mg/l			WG622512	11/13/12 14:04
cis-1,3-Dichloropropene	< .001	mg/l			WG622512	11/13/12 14:04
Di-isopropyl ether	< .001	mg/l			WG622512	11/13/12 14:04
Dibromomethane	< .001	mg/l			WG622512	11/13/12 14:04
Dichlorodifluoromethane	< .005	mg/l			WG622512	11/13/12 14:04
Ethanol	< .1	mg/l			WG622512	11/13/12 14:04
Ethyl tert-butyl ether	< .001	mg/l			WG622512	11/13/12 14:04
Ethylbenzene	< .001	mg/l			WG622512	11/13/12 14:04
Hexachloro-1,3-butadiene	< .001	mg/l			WG622512	11/13/12 14:04
Isopropylbenzene	< .001	mg/l			WG622512	11/13/12 14:04
Methylene Chloride	< .005	mg/l			WG622512	11/13/12 14:04
n-Butylbenzene	< .001	mg/l			WG622512	11/13/12 14:04
n-Propylbenzene	< .001	mg/l			WG622512	11/13/12 14:04
Naphthalene	< .005	mg/l			WG622512	11/13/12 14:04
p-Isopropyltoluene	< .001	mg/l			WG622512	11/13/12 14:04
sec-Butylbenzene	< .001	mg/l			WG622512	11/13/12 14:04
Styrene	< .001	mg/l			WG622512	11/13/12 14:04
tert-Butylbenzene	< .001	mg/l			WG622512	11/13/12 14:04
Tetrachloroethene	< .001	mg/l			WG622512	11/13/12 14:04
Toluene	< .005	mg/l			WG622512	11/13/12 14:04
trans-1,2-Dichloroethene	< .001	mg/l			WG622512	11/13/12 14:04
trans-1,3-Dichloropropene	< .001	mg/l			WG622512	11/13/12 14:04
Trichloroethene	< .001	mg/l			WG622512	11/13/12 14:04
Trichlorofluoromethane	< .005	mg/l			WG622512	11/13/12 14:04
Vinyl chloride	< .001	mg/l			WG622512	11/13/12 14:04
Xylenes, Total	< .003	mg/l			WG622512	11/13/12 14:04
4-Bromofluorobenzene		% Rec.	107.8	82-120	WG622512	11/13/12 14:04
Dibromofluoromethane		% Rec.	109.2	82-126	WG622512	11/13/12 14:04
Toluene-d8		% Rec.	101.6	92-112	WG622512	11/13/12 14:04
TPH (GC/FID) High Fraction	< .1	mg/l			WG622687	11/14/12 11:09
o-Terphenyl		% Rec.	85.00	50-150	WG622687	11/14/12 11:09
Total Solids	< .1	%			WG622746	11/15/12 10:28
Methyl tert-butyl ether	< .001	mg/l			WG623150	11/14/12 19:00
tert-Amyl Methyl Ether	< .001	mg/l			WG623150	11/14/12 19:00
tert-Butyl alcohol	< .005	mg/l			WG623150	11/14/12 19:00
4-Bromofluorobenzene		% Rec.	93.96	82-120	WG623150	11/14/12 19:00
Dibromofluoromethane		% Rec.	95.88	82-126	WG623150	11/14/12 19:00
Toluene-d8		% Rec.	98.26	92-112	WG623150	11/14/12 19:00
1,1,1,2-Tetrachloroethane	< .001	mg/kg			WG623199	11/15/12 12:32
1,1,1-Trichloroethane	< .001	mg/kg			WG623199	11/15/12 12:32
1,1,2,2-Tetrachloroethane	< .001	mg/kg			WG623199	11/15/12 12:32
1,1,2-Trichloroethane	< .001	mg/kg			WG623199	11/15/12 12:32
1,1,2-Trichlorotrifluoroethane	< .001	mg/kg			WG623199	11/15/12 12:32
1,1-Dichloroethane	< .001	mg/kg			WG623199	11/15/12 12:32
1,1-Dichloroethene	< .001	mg/kg			WG623199	11/15/12 12:32
1,1-Dichloropropene	< .001	mg/kg			WG623199	11/15/12 12:32
1,2,3-Trichlorobenzene	< .001	mg/kg			WG623199	11/15/12 12:32
1,2,3-Trichloropropane	< .0025	mg/kg			WG623199	11/15/12 12:32

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Level II

L605622

December 12, 2012

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
1,2,3-Trimethylbenzene	< .001	mg/kg			WG623199	11/15/12 12:32
1,2,4-Trichlorobenzene	< .001	mg/kg			WG623199	11/15/12 12:32
1,2,4-Trimethylbenzene	< .001	mg/kg			WG623199	11/15/12 12:32
1,2-Dibromo-3-Chloropropane	< .005	mg/kg			WG623199	11/15/12 12:32
1,2-Dibromoethane	< .001	mg/kg			WG623199	11/15/12 12:32
1,2-Dichlorobenzene	< .001	mg/kg			WG623199	11/15/12 12:32
1,2-Dichloroethane	< .001	mg/kg			WG623199	11/15/12 12:32
1,2-Dichloropropane	< .001	mg/kg			WG623199	11/15/12 12:32
1,3,5-Trimethylbenzene	< .001	mg/kg			WG623199	11/15/12 12:32
1,3-Dichlorobenzene	< .001	mg/kg			WG623199	11/15/12 12:32
1,3-Dichloropropane	< .001	mg/kg			WG623199	11/15/12 12:32
1,4-Dichlorobenzene	< .001	mg/kg			WG623199	11/15/12 12:32
2,2-Dichloropropane	< .001	mg/kg			WG623199	11/15/12 12:32
2-Butanone (MEK)	< .01	mg/kg			WG623199	11/15/12 12:32
2-Chloroethyl vinyl ether	< .05	mg/kg			WG623199	11/15/12 12:32
2-Chlorotoluene	< .001	mg/kg			WG623199	11/15/12 12:32
4-Chlorotoluene	< .001	mg/kg			WG623199	11/15/12 12:32
4-Methyl-2-pentanone (MIBK)	< .01	mg/kg			WG623199	11/15/12 12:32
Acetone	< .05	mg/kg			WG623199	11/15/12 12:32
Acrylonitrile	< .01	mg/kg			WG623199	11/15/12 12:32
Benzene	< .001	mg/kg			WG623199	11/15/12 12:32
Bromobenzene	< .001	mg/kg			WG623199	11/15/12 12:32
Bromodichloromethane	< .001	mg/kg			WG623199	11/15/12 12:32
Bromoform	< .001	mg/kg			WG623199	11/15/12 12:32
Bromomethane	< .005	mg/kg			WG623199	11/15/12 12:32
Carbon tetrachloride	< .001	mg/kg			WG623199	11/15/12 12:32
Chlorobenzene	< .001	mg/kg			WG623199	11/15/12 12:32
Chlorodibromomethane	< .001	mg/kg			WG623199	11/15/12 12:32
Chloroethane	< .005	mg/kg			WG623199	11/15/12 12:32
Chloroform	< .005	mg/kg			WG623199	11/15/12 12:32
Chloromethane	< .0025	mg/kg			WG623199	11/15/12 12:32
cis-1,2-Dichloroethene	< .001	mg/kg			WG623199	11/15/12 12:32
cis-1,3-Dichloropropene	< .001	mg/kg			WG623199	11/15/12 12:32
Di-isopropyl ether	< .001	mg/kg			WG623199	11/15/12 12:32
Dibromomethane	< .001	mg/kg			WG623199	11/15/12 12:32
Dichlorodifluoromethane	< .005	mg/kg			WG623199	11/15/12 12:32
Ethyl tert-butyl ether	< .001	mg/kg			WG623199	11/15/12 12:32
Ethylbenzene	< .001	mg/kg			WG623199	11/15/12 12:32
Hexachloro-1,3-butadiene	< .001	mg/kg			WG623199	11/15/12 12:32
Isopropylbenzene	< .001	mg/kg			WG623199	11/15/12 12:32
Methyl tert-butyl ether	< .001	mg/kg			WG623199	11/15/12 12:32
Methylene Chloride	< .005	mg/kg			WG623199	11/15/12 12:32
n-Butylbenzene	< .001	mg/kg			WG623199	11/15/12 12:32
n-Propylbenzene	< .001	mg/kg			WG623199	11/15/12 12:32
Naphthalene	< .005	mg/kg			WG623199	11/15/12 12:32
p-Isopropyltoluene	< .001	mg/kg			WG623199	11/15/12 12:32
sec-Butylbenzene	< .001	mg/kg			WG623199	11/15/12 12:32
Styrene	< .001	mg/kg			WG623199	11/15/12 12:32
tert-Amyl Methyl Ether	< .001	mg/kg			WG623199	11/15/12 12:32
tert-Butyl alcohol	< .005	mg/kg			WG623199	11/15/12 12:32
tert-Butylbenzene	< .001	mg/kg			WG623199	11/15/12 12:32
Tetrachloroethene	< .001	mg/kg			WG623199	11/15/12 12:32
Toluene	< .005	mg/kg			WG623199	11/15/12 12:32
trans-1,2-Dichloroethene	< .001	mg/kg			WG623199	11/15/12 12:32
trans-1,3-Dichloropropene	< .001	mg/kg			WG623199	11/15/12 12:32
Trichloroethene	< .001	mg/kg			WG623199	11/15/12 12:32
Trichlorofluoromethane	< .005	mg/kg			WG623199	11/15/12 12:32
Vinyl chloride	< .001	mg/kg			WG623199	11/15/12 12:32
Xylenes, Total	< .003	mg/kg			WG623199	11/15/12 12:32

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Quality Assurance Report
Level II

L605622

December 12, 2012

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
4-Bromofluorobenzene		% Rec.	97.53	67-133		11/15/12 12:32
Dibromofluoromethane		% Rec.	97.70	72-135		11/15/12 12:32
Toluene-d8		% Rec.	98.22	90-113		11/15/12 12:32
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG622559	11/16/12 01:23
a,a,a-Trifluorotoluene(FID)		% Rec.	96.41	59-128	WG622559	11/16/12 01:23
TPH (GC/FID) High Fraction	< 4	mg/kg			WG623054	11/19/12 17:25
o-Terphenyl		% Rec.	77.20	50-150	WG623054	11/19/12 17:25

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Total Solids	%	79.0	80.1	1.47	5	L605622-05	WG622746

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
TPH (GC/FID) Low Fraction	mg/l	5.5	5.83	106.	70-124	WG622554
a,a,a-Trifluorotoluene(FID)				97.31	62-128	WG622554
1,1,1,2-Tetrachloroethane	mg/kg	.025	0.0266	107.	77-129	WG622758
1,1,1-Trichloroethane	mg/kg	.025	0.0268	107.	70-127	WG622758
1,1,2,2-Tetrachloroethane	mg/kg	.025	0.0253	101.	76-133	WG622758
1,1,2-Trichloroethane	mg/kg	.025	0.0261	105.	79-123	WG622758
1,1,2-Trichlorotrifluoroethane	mg/kg	.025	0.0326	131.	52-145	WG622758
1,1-Dichloroethane	mg/kg	.025	0.0269	108.	74-121	WG622758
1,1-Dichloroethene	mg/kg	.025	0.0296	118.	53-135	WG622758
1,1-Dichloropropene	mg/kg	.025	0.0266	107.	67-127	WG622758
1,2,3-Trichlorobenzene	mg/kg	.025	0.0283	113.	74-131	WG622758
1,2,3-Trichloropropane	mg/kg	.025	0.0246	98.6	75-135	WG622758
1,2,3-Trimethylbenzene	mg/kg	.025	0.0258	103.	76-128	WG622758
1,2,4-Trichlorobenzene	mg/kg	.025	0.0301	120.	72-130	WG622758
1,2,4-Trimethylbenzene	mg/kg	.025	0.0267	107.	75-131	WG622758
1,2-Dibromo-3-Chloropropane	mg/kg	.025	0.0273	109.	55-142	WG622758
1,2-Dibromoethane	mg/kg	.025	0.0267	107.	77-126	WG622758
1,2-Dichlorobenzene	mg/kg	.025	0.0266	107.	80-123	WG622758
1,2-Dichloroethane	mg/kg	.025	0.0250	100.	70-128	WG622758
1,2-Dichloropropane	mg/kg	.025	0.0256	102.	74-125	WG622758
1,3,5-Trimethylbenzene	mg/kg	.025	0.0274	109.	77-129	WG622758
1,3-Dichlorobenzene	mg/kg	.025	0.0270	108.	76-128	WG622758
1,3-Dichloropropane	mg/kg	.025	0.0258	103.	77-118	WG622758
1,4-Dichlorobenzene	mg/kg	.025	0.0272	109.	77-119	WG622758
2,2-Dichloropropane	mg/kg	.025	0.0277	111.	60-132	WG622758
2-Butanone (MEK)	mg/kg	.125	0.121	97.0	56-146	WG622758
2-Chloroethyl vinyl ether	mg/kg	.125	0.136	109.	17-179	WG622758
2-Chlorotoluene	mg/kg	.025	0.0268	107.	76-125	WG622758
4-Chlorotoluene	mg/kg	.025	0.0265	106.	76-125	WG622758
4-Methyl-2-pentanone (MIBK)	mg/kg	.125	0.132	106.	55-148	WG622758
Acetone	mg/kg	.125	0.102	81.6	47-155	WG622758
Acrylonitrile	mg/kg	.125	0.127	101.	50-155	WG622758
Benzene	mg/kg	.025	0.0261	104.	72-120	WG622758
Bromobenzene	mg/kg	.025	0.0256	102.	74-122	WG622758
Bromodichloromethane	mg/kg	.025	0.0255	102.	74-128	WG622758
Bromoform	mg/kg	.025	0.0273	109.	62-137	WG622758
Bromomethane	mg/kg	.025	0.0310	124.	38-180	WG622758
Carbon tetrachloride	mg/kg	.025	0.0261	104.	62-130	WG622758
Chlorobenzene	mg/kg	.025	0.0268	107.	77-124	WG622758

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Quality Assurance Report
Level II

L605622

December 12, 2012

Analyte	Units	Laboratory Control Sample Known Val	Result	% Rec	Limit	Batch
Chlorodibromomethane	mg/kg	.025	0.0265	106.	74-128	WG622758
Chloroethane	mg/kg	.025	0.0268	107.	46-173	WG622758
Chloroform	mg/kg	.025	0.0272	109.	76-122	WG622758
Chloromethane	mg/kg	.025	0.0255	102.	49-143	WG622758
cis-1,2-Dichloroethene	mg/kg	.025	0.0268	107.	73-123	WG622758
cis-1,3-Dichloropropene	mg/kg	.025	0.0265	106.	73-126	WG622758
Di-isopropyl ether	mg/kg	.025	0.0277	111.	64-131	WG622758
Dibromomethane	mg/kg	.025	0.0268	107.	75-127	WG622758
Dichlorodifluoromethane	mg/kg	.025	0.0251	100.	30-177	WG622758
Ethylbenzene	mg/kg	.025	0.0267	107.	76-126	WG622758
Hexachloro-1,3-butadiene	mg/kg	.025	0.0280	112.	71-134	WG622758
Isopropylbenzene	mg/kg	.025	0.0295	118.	70-128	WG622758
Methyl tert-butyl ether	mg/kg	.025	0.0279	112.	66-127	WG622758
Methylene Chloride	mg/kg	.025	0.0264	106.	67-124	WG622758
n-Butylbenzene	mg/kg	.025	0.0284	114.	71-133	WG622758
n-Propylbenzene	mg/kg	.025	0.0271	108.	76-126	WG622758
Naphthalene	mg/kg	.025	0.0276	110.	68-136	WG622758
p-Isopropyltoluene	mg/kg	.025	0.0284	113.	75-134	WG622758
sec-Butylbenzene	mg/kg	.025	0.0278	111.	75-132	WG622758
Styrene	mg/kg	.025	0.0277	111.	68-148	WG622758
tert-Butylbenzene	mg/kg	.025	0.0277	111.	75-132	WG622758
Tetrachloroethene	mg/kg	.025	0.0260	104.	70-131	WG622758
Toluene	mg/kg	.025	0.0252	101.	74-155	WG622758
trans-1,2-Dichloroethene	mg/kg	.025	0.0271	109.	63-126	WG622758
trans-1,3-Dichloropropene	mg/kg	.025	0.0274	110.	68-126	WG622758
Trichloroethene	mg/kg	.025	0.0261	104.	75-121	WG622758
Trichlorofluoromethane	mg/kg	.025	0.0267	107.	48-170	WG622758
Vinyl chloride	mg/kg	.025	0.0260	104.	54-144	WG622758
Xylenes, Total	mg/kg	.075	0.0803	107.	76-126	WG622758
4-Bromofluorobenzene				100.9	67-133	WG622758
Dibromofluoromethane				103.3	72-135	WG622758
Toluene-d8				103.7	90-113	WG622758
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0273	109.	77-128	WG622512
1,1,1-Trichloroethane	mg/l	.025	0.0235	94.0	71-126	WG622512
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0233	93.2	78-130	WG622512
1,1,2-Trichloroethane	mg/l	.025	0.0242	96.9	81-121	WG622512
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0271	109.	53-143	WG622512
1,1-Dichloroethane	mg/l	.025	0.0218	87.3	73-123	WG622512
1,1-Dichloroethene	mg/l	.025	0.0241	96.5	54-134	WG622512
1,1-Dichloropropene	mg/l	.025	0.0215	86.1	67-127	WG622512
1,2,3-Trichlorobenzene	mg/l	.025	0.0239	95.5	77-130	WG622512
1,2,3-Trichloropropane	mg/l	.025	0.0264	106.	68-130	WG622512
1,2,3-Trimethylbenzene	mg/l	.025	0.0216	86.5	77-126	WG622512
1,2,4-Trichlorobenzene	mg/l	.025	0.0242	96.7	76-127	WG622512
1,2,4-Trimethylbenzene	mg/l	.025	0.0252	101.	77-129	WG622512
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0241	96.4	55-142	WG622512
1,2-Dibromoethane	mg/l	.025	0.0258	103.	78-124	WG622512
1,2-Dichlorobenzene	mg/l	.025	0.0224	89.7	82-121	WG622512
1,2-Dichloroethane	mg/l	.025	0.0243	97.0	69-128	WG622512
1,2-Dichloropropane	mg/l	.025	0.0204	81.8	77-121	WG622512
1,3,5-Trimethylbenzene	mg/l	.025	0.0242	96.8	78-127	WG622512
1,3-Dichlorobenzene	mg/l	.025	0.0253	101.	77-127	WG622512
1,3-Dichloropropane	mg/l	.025	0.0241	96.4	78-117	WG622512
1,4-Dichlorobenzene	mg/l	.025	0.0222	88.8	79-117	WG622512
2,2-Dichloropropane	mg/l	.025	0.0242	96.8	63-130	WG622512
2-Butanone (MEK)	mg/l	.125	0.112	89.6	58-144	WG622512
2-Chloroethyl vinyl ether	mg/l	.125	0.0854	68.3	26-172	WG622512

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Quality Assurance Report
Level II

L605622

December 12, 2012

Analyte	Units	Laboratory Control Sample Known Val	Result	% Rec	Limit	Batch
2-Chlorotoluene	mg/l	.025	0.0236	94.4	78-123	WG622512
4-Chlorotoluene	mg/l	.025	0.0245	98.1	78-122	WG622512
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.122	98.0	58-147	WG622512
Acetone	mg/l	.125	0.112	89.2	49-153	WG622512
Acrolein	mg/l	.125	0.129	103.	10-181	WG622512
Acrylonitrile	mg/l	.125	0.125	99.7	53-153	WG622512
Benzene	mg/l	.025	0.0201	80.3	72-119	WG622512
Bromobenzene	mg/l	.025	0.0237	94.7	76-121	WG622512
Bromodichloromethane	mg/l	.025	0.0238	95.2	75-127	WG622512
Bromoform	mg/l	.025	0.0289	116.	61-136	WG622512
Bromomethane	mg/l	.025	0.0240	96.0	42-172	WG622512
Carbon disulfide	mg/l	.025	0.0267	107.	19-150	WG622512
Carbon tetrachloride	mg/l	.025	0.0242	96.7	63-129	WG622512
Chlorobenzene	mg/l	.025	0.0249	99.7	78-123	WG622512
Chlorodibromomethane	mg/l	.025	0.0264	106.	73-128	WG622512
Chloroethane	mg/l	.025	0.0237	95.0	52-164	WG622512
Chloroform	mg/l	.025	0.0231	92.3	76-122	WG622512
Chloromethane	mg/l	.025	0.0215	86.0	50-141	WG622512
cis-1,2-Dichloroethene	mg/l	.025	0.0215	85.8	75-121	WG622512
cis-1,3-Dichloropropene	mg/l	.025	0.0231	92.4	74-124	WG622512
Di-isopropyl ether	mg/l	.025	0.0225	89.8	66-129	WG622512
Dibromomethane	mg/l	.025	0.0233	93.1	77-124	WG622512
Dichlorodifluoromethane	mg/l	.025	0.0214	85.8	33-173	WG622512
Ethylbenzene	mg/l	.025	0.0241	96.5	77-124	WG622512
Hexachloro-1,3-butadiene	mg/l	.025	0.0207	82.6	71-134	WG622512
Isopropylbenzene	mg/l	.025	0.0273	109.	74-126	WG622512
Methylene Chloride	mg/l	.025	0.0184	73.7	67-122	WG622512
n-Butylbenzene	mg/l	.025	0.0232	92.6	74-130	WG622512
n-Propylbenzene	mg/l	.025	0.0241	96.5	77-125	WG622512
Naphthalene	mg/l	.025	0.0209	83.5	70-134	WG622512
p-Isopropyltoluene	mg/l	.025	0.0257	103.	77-132	WG622512
sec-Butylbenzene	mg/l	.025	0.0241	96.3	77-130	WG622512
Styrene	mg/l	.025	0.0256	102.	69-145	WG622512
tert-Butylbenzene	mg/l	.025	0.0254	101.	76-131	WG622512
Tetrachloroethene	mg/l	.025	0.0234	93.7	69-131	WG622512
Toluene	mg/l	.025	0.0210	84.1	75-114	WG622512
trans-1,2-Dichloroethene	mg/l	.025	0.0220	87.9	63-127	WG622512
trans-1,3-Dichloropropene	mg/l	.025	0.0223	89.3	69-124	WG622512
Trichloroethene	mg/l	.025	0.0221	88.6	69-131	WG622512
Trichlorofluoromethane	mg/l	.025	0.0268	107.	53-161	WG622512
Vinyl chloride	mg/l	.025	0.0229	91.8	55-142	WG622512
Xylenes, Total	mg/l	.075	0.0728	97.1	77-123	WG622512
4-Bromofluorobenzene				113.0	82-120	WG622512
Dibromofluoromethane				106.2	82-126	WG622512
Toluene-d8				103.4	92-112	WG622512
TPH (GC/FID) High Fraction	mg/l	1.5	1.50	99.9	50-150	WG622687
o-Terphenyl				85.70	50-150	WG622687
Total Solids	%	50	50.0	100.	85-115	WG622746
Methyl tert-butyl ether	mg/l	.025	0.0268	107.	67-127	WG623150
4-Bromofluorobenzene				91.74	82-120	WG623150
Dibromofluoromethane				97.59	82-126	WG623150
Toluene-d8				98.44	92-112	WG623150

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Quality Assurance Report
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December 12, 2012

Analyte	Units	Laboratory Control Sample Known Val	Result	% Rec	Limit	Batch
1,1,1,2-Tetrachloroethane	mg/kg	.025	0.0262	105.	77-129	WG623199
1,1,1-Trichloroethane	mg/kg	.025	0.0236	94.5	70-127	WG623199
1,1,2,2-Tetrachloroethane	mg/kg	.025	0.0245	98.0	76-133	WG623199
1,1,2-Trichloroethane	mg/kg	.025	0.0255	102.	79-123	WG623199
1,1,2-Trichlorotrifluoroethane	mg/kg	.025	0.0297	119.	52-145	WG623199
1,1-Dichloroethane	mg/kg	.025	0.0239	95.6	74-121	WG623199
1,1-Dichloroethene	mg/kg	.025	0.0291	116.	53-135	WG623199
1,1-Dichloropropene	mg/kg	.025	0.0242	96.9	67-127	WG623199
1,2,3-Trichlorobenzene	mg/kg	.025	0.0275	110.	74-131	WG623199
1,2,3-Trichloropropane	mg/kg	.025	0.0253	101.	75-135	WG623199
1,2,3-Trimethylbenzene	mg/kg	.025	0.0259	104.	76-128	WG623199
1,2,4-Trichlorobenzene	mg/kg	.025	0.0279	112.	72-130	WG623199
1,2,4-Trimethylbenzene	mg/kg	.025	0.0255	102.	75-131	WG623199
1,2-Dibromo-3-Chloropropane	mg/kg	.025	0.0270	108.	55-142	WG623199
1,2-Dibromoethane	mg/kg	.025	0.0259	104.	77-126	WG623199
1,2-Dichlorobenzene	mg/kg	.025	0.0267	107.	80-123	WG623199
1,2-Dichloroethane	mg/kg	.025	0.0227	91.0	70-128	WG623199
1,2-Dichloropropane	mg/kg	.025	0.0236	94.5	74-125	WG623199
1,3,5-Trimethylbenzene	mg/kg	.025	0.0259	104.	77-129	WG623199
1,3-Dichlorobenzene	mg/kg	.025	0.0254	102.	76-128	WG623199
1,3-Dichloropropane	mg/kg	.025	0.0250	99.9	77-118	WG623199
1,4-Dichlorobenzene	mg/kg	.025	0.0263	105.	77-119	WG623199
2,2-Dichloropropane	mg/kg	.025	0.0229	91.7	60-132	WG623199
2-Butanone (MEK)	mg/kg	.125	0.101	80.9	56-146	WG623199
2-Chloroethyl vinyl ether	mg/kg	.125	0.124	99.4	17-179	WG623199
2-Chlorotoluene	mg/kg	.025	0.0248	99.0	76-125	WG623199
4-Chlorotoluene	mg/kg	.025	0.0245	98.1	76-125	WG623199
4-Methyl-2-pentanone (MIBK)	mg/kg	.125	0.123	98.5	55-148	WG623199
Acetone	mg/kg	.125	0.0858	68.7	47-155	WG623199
Acrylonitrile	mg/kg	.125	0.116	92.7	50-155	WG623199
Benzene	mg/kg	.025	0.0239	95.6	72-120	WG623199
Bromobenzene	mg/kg	.025	0.0240	96.1	74-122	WG623199
Bromodichloromethane	mg/kg	.025	0.0232	92.8	74-128	WG623199
Bromoform	mg/kg	.025	0.0276	110.	62-137	WG623199
Bromomethane	mg/kg	.025	0.0259	103.	38-180	WG623199
Carbon tetrachloride	mg/kg	.025	0.0230	92.0	62-130	WG623199
Chlorobenzene	mg/kg	.025	0.0260	104.	77-124	WG623199
Chlorodibromomethane	mg/kg	.025	0.0266	106.	74-128	WG623199
Chloroethane	mg/kg	.025	0.0234	93.7	46-173	WG623199
Chloroform	mg/kg	.025	0.0233	93.2	76-122	WG623199
Chloromethane	mg/kg	.025	0.0218	87.1	49-143	WG623199
cis-1,2-Dichloroethene	mg/kg	.025	0.0241	96.4	73-123	WG623199
cis-1,3-Dichloropropene	mg/kg	.025	0.0246	98.2	73-126	WG623199
Di-isopropyl ether	mg/kg	.025	0.0235	94.1	64-131	WG623199
Dibromomethane	mg/kg	.025	0.0247	98.9	75-127	WG623199
Dichlorodifluoromethane	mg/kg	.025	0.0235	94.0	30-177	WG623199
Ethylbenzene	mg/kg	.025	0.0263	105.	76-126	WG623199
Hexachloro-1,3-butadiene	mg/kg	.025	0.0262	105.	71-134	WG623199
Isopropylbenzene	mg/kg	.025	0.0274	110.	70-128	WG623199
Methyl tert-butyl ether	mg/kg	.025	0.0250	100.	66-127	WG623199
Methylene Chloride	mg/kg	.025	0.0237	94.9	67-124	WG623199
n-Butylbenzene	mg/kg	.025	0.0264	105.	71-133	WG623199
n-Propylbenzene	mg/kg	.025	0.0253	101.	76-126	WG623199
Naphthalene	mg/kg	.025	0.0275	110.	68-136	WG623199
p-Isopropyltoluene	mg/kg	.025	0.0264	106.	75-134	WG623199
sec-Butylbenzene	mg/kg	.025	0.0262	105.	75-132	WG623199
Styrene	mg/kg	.025	0.0270	108.	68-148	WG623199
tert-Butylbenzene	mg/kg	.025	0.0271	109.	75-132	WG623199

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Quality Assurance Report
Level II

L605622

December 12, 2012

Analyte	Units	Laboratory Control Sample Known Val	Result	% Rec	Limit	Batch
Tetrachloroethene	mg/kg	.025	0.0273	109.	70-131	WG623199
Toluene	mg/kg	.025	0.0245	98.1	74-155	WG623199
trans-1,2-Dichloroethene	mg/kg	.025	0.0253	101.	63-126	WG623199
trans-1,3-Dichloropropene	mg/kg	.025	0.0264	105.	68-126	WG623199
Trichloroethene	mg/kg	.025	0.0256	102.	75-121	WG623199
Trichlorofluoromethane	mg/kg	.025	0.0239	95.8	48-170	WG623199
Vinyl chloride	mg/kg	.025	0.0226	90.2	54-144	WG623199
Xylenes, Total	mg/kg	.075	0.0788	105.	76-126	WG623199
4-Bromofluorobenzene				93.50	67-133	WG623199
Dibromofluoromethane				95.57	72-135	WG623199
Toluene-d8				99.01	90-113	WG623199
TPH (GC/FID) Low Fraction	mg/kg	5.5	6.11	111.	67-135	WG622559
a,a,a-Trifluorotoluene(FID)				102.5	59-128	WG622559
TPH (GC/FID) High Fraction	mg/kg	60	37.4	62.3	50-150	WG623054
o-Terphenyl				65.80	50-150	WG623054

Analyte	Units	Laboratory Control Sample Duplicate Result	Ref	%Rec	Limit	RPD	Limit	Batch
TPH (GC/FID) Low Fraction	mg/l	5.64	5.83	102.	70-124	3.38	20	WG622554
a,a,a-Trifluorotoluene(FID)				99.22	62-128			WG622554
1,1,1,2-Tetrachloroethane	mg/kg	0.0256	0.0266	102.	77-129	4.07	20	WG622758
1,1,1-Trichloroethane	mg/kg	0.0248	0.0268	99.0	70-127	7.85	20	WG622758
1,1,2,2-Tetrachloroethane	mg/kg	0.0243	0.0253	97.0	76-133	4.06	20	WG622758
1,1,2-Trichloroethane	mg/kg	0.0254	0.0261	101.	79-123	3.03	20	WG622758
1,1,2-Trichlorotrifluoroethane	mg/kg	0.0302	0.0326	121.	52-145	7.85	20	WG622758
1,1-Dichloroethane	mg/kg	0.0242	0.0269	97.0	74-121	10.5	20	WG622758
1,1-Dichloroethene	mg/kg	0.0269	0.0296	107.	53-135	9.75	20	WG622758
1,1-Dichloropropene	mg/kg	0.0249	0.0266	100.	67-127	6.84	20	WG622758
1,2,3-Trichlorobenzene	mg/kg	0.0258	0.0283	103.	74-131	9.28	20	WG622758
1,2,3-Trichloropropane	mg/kg	0.0236	0.0246	94.0	75-135	4.38	20	WG622758
1,2,3-Trimethylbenzene	mg/kg	0.0238	0.0258	95.0	76-128	8.06	20	WG622758
1,2,4-Trichlorobenzene	mg/kg	0.0271	0.0301	108.	72-130	10.2	20	WG622758
1,2,4-Trimethylbenzene	mg/kg	0.0256	0.0267	102.	75-131	4.36	20	WG622758
1,2-Dibromo-3-Chloropropane	mg/kg	0.0255	0.0273	102.	55-142	6.76	20	WG622758
1,2-Dibromoethane	mg/kg	0.0257	0.0267	103.	77-126	3.82	20	WG622758
1,2-Dichlorobenzene	mg/kg	0.0251	0.0266	100.	80-123	6.07	20	WG622758
1,2-Dichloroethane	mg/kg	0.0227	0.0250	91.0	70-128	9.87	20	WG622758
1,2-Dichloropropane	mg/kg	0.0245	0.0256	98.0	74-125	4.18	20	WG622758
1,3,5-Trimethylbenzene	mg/kg	0.0263	0.0274	105.	77-129	3.85	20	WG622758
1,3-Dichlorobenzene	mg/kg	0.0256	0.0270	102.	76-128	5.36	20	WG622758
1,3-Dichloropropane	mg/kg	0.0250	0.0258	100.	77-118	2.94	20	WG622758
1,4-Dichlorobenzene	mg/kg	0.0256	0.0272	102.	77-119	5.99	20	WG622758
2,2-Dichloropropane	mg/kg	0.0255	0.0277	102.	60-132	8.32	20	WG622758
2-Butanone (MEK)	mg/kg	0.112	0.121	89.0	56-146	8.20	20	WG622758
2-Chloroethyl vinyl ether	mg/kg	0.130	0.136	104.	17-179	4.24	22	WG622758
2-Chlorotoluene	mg/kg	0.0246	0.0268	98.0	76-125	8.62	20	WG622758
4-Chlorotoluene	mg/kg	0.0255	0.0265	102.	76-125	3.59	20	WG622758
4-Methyl-2-pentanone (MIBK)	mg/kg	0.127	0.132	102.	55-148	4.02	20	WG622758
Acetone	mg/kg	0.0907	0.102	72.0	47-155	11.7	22	WG622758
Acrylonitrile	mg/kg	0.114	0.127	91.0	50-155	10.6	20	WG622758
Benzene	mg/kg	0.0242	0.0261	97.0	72-120	7.58	20	WG622758
Bromobenzene	mg/kg	0.0250	0.0256	100.	74-122	2.30	20	WG622758

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Quality Assurance Report
Level II

L605622

December 12, 2012

		Laboratory Control Sample Duplicate						
Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
Bromodichloromethane	mg/kg	0.0242	0.0255	97.0	74-128	5.33	20	WG622758
Bromoform	mg/kg	0.0262	0.0273	105.	62-137	4.23	20	WG622758
Bromomethane	mg/kg	0.0275	0.0310	110.	38-180	12.2	20	WG622758
Carbon tetrachloride	mg/kg	0.0240	0.0261	96.0	62-130	8.14	20	WG622758
Chlorobenzene	mg/kg	0.0258	0.0268	103.	77-124	3.79	20	WG622758
Chlorodibromomethane	mg/kg	0.0261	0.0265	104.	74-128	1.60	20	WG622758
Chloroethane	mg/kg	0.0238	0.0268	95.0	46-173	11.9	20	WG622758
Chloroform	mg/kg	0.0248	0.0272	99.0	76-122	8.99	20	WG622758
Chloromethane	mg/kg	0.0225	0.0255	90.0	49-143	12.4	20	WG622758
cis-1,2-Dichloroethene	mg/kg	0.0240	0.0268	96.0	73-123	10.8	20	WG622758
cis-1,3-Dichloropropene	mg/kg	0.0256	0.0265	102.	73-126	3.60	20	WG622758
Di-isopropyl ether	mg/kg	0.0252	0.0277	101.	64-131	9.32	20	WG622758
Dibromomethane	mg/kg	0.0249	0.0268	100.	75-127	7.26	20	WG622758
Dichlorodifluoromethane	mg/kg	0.0229	0.0251	92.0	30-177	9.24	20	WG622758
Ethylbenzene	mg/kg	0.0263	0.0267	105.	76-126	1.64	20	WG622758
Hexachloro-1,3-butadiene	mg/kg	0.0251	0.0280	100.	71-134	11.0	20	WG622758
Isopropylbenzene	mg/kg	0.0282	0.0295	113.	70-128	4.54	20	WG622758
Methyl tert-butyl ether	mg/kg	0.0249	0.0279	100.	66-127	11.4	20	WG622758
Methylene Chloride	mg/kg	0.0242	0.0264	97.0	67-124	8.72	20	WG622758
n-Butylbenzene	mg/kg	0.0267	0.0284	107.	71-133	6.30	20	WG622758
n-Propylbenzene	mg/kg	0.0262	0.0271	105.	76-126	3.55	20	WG622758
Naphthalene	mg/kg	0.0248	0.0276	99.0	68-136	10.7	20	WG622758
p-Isopropyltoluene	mg/kg	0.0273	0.0284	109.	75-134	3.91	20	WG622758
sec-Butylbenzene	mg/kg	0.0269	0.0278	108.	75-132	3.42	20	WG622758
Styrene	mg/kg	0.0268	0.0277	107.	68-148	3.20	20	WG622758
tert-Butylbenzene	mg/kg	0.0268	0.0277	107.	75-132	3.30	20	WG622758
Tetrachloroethene	mg/kg	0.0253	0.0260	101.	70-131	2.81	20	WG622758
Toluene	mg/kg	0.0242	0.0252	97.0	74-155	4.04	20	WG622758
trans-1,2-Dichloroethene	mg/kg	0.0243	0.0271	97.0	63-126	11.2	20	WG622758
trans-1,3-Dichloropropene	mg/kg	0.0270	0.0274	108.	68-126	1.65	20	WG622758
Trichloroethene	mg/kg	0.0247	0.0261	99.0	75-121	5.43	20	WG622758
Trichlorofluoromethane	mg/kg	0.0244	0.0267	98.0	48-170	9.02	20	WG622758
Vinyl chloride	mg/kg	0.0231	0.0260	92.0	54-144	11.9	20	WG622758
Xylenes, Total	mg/kg	0.0774	0.0803	103.	76-126	3.72	20	WG622758
4-Bromofluorobenzene				102.1	67-133			WG622758
Dibromofluoromethane				98.78	72-135			WG622758
Toluene-d8				103.0	90-113			WG622758
1,1,1,2-Tetrachloroethane	mg/l	0.0292	0.0273	117.	77-128	6.40	20	WG622512
1,1,1-Trichloroethane	mg/l	0.0261	0.0235	104.	71-126	10.6	20	WG622512
1,1,2,2-Tetrachloroethane	mg/l	0.0250	0.0233	100.	78-130	6.92	20	WG622512
1,1,2-Trichloroethane	mg/l	0.0264	0.0242	105.	81-121	8.40	20	WG622512
1,1,2-Trichlorotrifluoroethane	mg/l	0.0306	0.0271	122.	53-143	11.9	20	WG622512
1,1-Dichloroethane	mg/l	0.0242	0.0218	97.0	73-123	10.2	20	WG622512
1,1-Dichloroethene	mg/l	0.0268	0.0241	107.	54-134	10.6	20	WG622512
1,1-Dichloropropene	mg/l	0.0243	0.0215	97.0	67-127	12.2	20	WG622512
1,2,3-Trichlorobenzene	mg/l	0.0284	0.0239	114.	77-130	17.5	20	WG622512
1,2,3-Trichloropropane	mg/l	0.0285	0.0264	114.	68-130	7.80	20	WG622512
1,2,3-Trimethylbenzene	mg/l	0.0251	0.0216	100.	77-126	15.0	20	WG622512
1,2,4-Trichlorobenzene	mg/l	0.0279	0.0242	112.	76-127	14.4	20	WG622512
1,2,4-Trimethylbenzene	mg/l	0.0268	0.0252	107.	77-129	5.93	20	WG622512
1,2-Dibromo-3-Chloropropane	mg/l	0.0286	0.0241	114.	55-142	17.1	20	WG622512
1,2-Dibromoethane	mg/l	0.0283	0.0258	113.	78-124	9.24	20	WG622512
1,2-Dichlorobenzene	mg/l	0.0257	0.0224	103.	82-121	13.7	20	WG622512
1,2-Dichloroethane	mg/l	0.0270	0.0243	108.	69-128	10.6	20	WG622512
1,2-Dichloropropane	mg/l	0.0243	0.0204	97.0	77-121	17.3	20	WG622512
1,3,5-Trimethylbenzene	mg/l	0.0259	0.0242	103.	78-127	6.63	20	WG622512
1,3-Dichlorobenzene	mg/l	0.0270	0.0253	108.	77-127	6.15	20	WG622512

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Quality Assurance Report
Level II

L605622

December 12, 2012

		Laboratory Control Sample Duplicate						
Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
1,3-Dichloropropane	mg/l	0.0261	0.0241	104.	78-117	7.79	20	WG622512
1,4-Dichlorobenzene	mg/l	0.0247	0.0222	99.0	79-117	10.6	20	WG622512
2,2-Dichloropropane	mg/l	0.0266	0.0242	106.	63-130	9.35	20	WG622512
2-Butanone (MEK)	mg/l	0.127	0.112	101.	58-144	12.4	20	WG622512
2-Chloroethyl vinyl ether	mg/l	0.0930	0.0854	74.0	26-172	8.49	22	WG622512
2-Chlorotoluene	mg/l	0.0270	0.0236	108.	78-123	13.2	20	WG622512
4-Chlorotoluene	mg/l	0.0257	0.0245	103.	78-122	4.55	20	WG622512
4-Methyl-2-pentanone (MIBK)	mg/l	0.138	0.122	110.	58-147	11.7	20	WG622512
Acetone	mg/l	0.127	0.112	101.	49-153	12.8	21	WG622512
Acrolein	mg/l	0.143	0.129	114.	10-181	10.2	30	WG622512
Acrylonitrile	mg/l	0.139	0.125	111.	53-153	10.9	20	WG622512
Benzene	mg/l	0.0222	0.0201	89.0	72-119	9.89	20	WG622512
Bromobenzene	mg/l	0.0249	0.0237	100.	76-121	5.22	20	WG622512
Bromodichloromethane	mg/l	0.0260	0.0238	104.	75-127	8.93	20	WG622512
Bromoform	mg/l	0.0304	0.0289	121.	61-136	4.79	20	WG622512
Bromomethane	mg/l	0.0267	0.0240	107.	42-172	10.5	20	WG622512
Carbon disulfide	mg/l	0.0295	0.0267	118.	19-150	9.88	20	WG622512
Carbon tetrachloride	mg/l	0.0270	0.0242	108.	63-129	10.9	20	WG622512
Chlorobenzene	mg/l	0.0264	0.0249	106.	78-123	5.86	20	WG622512
Chlorodibromomethane	mg/l	0.0292	0.0264	117.	73-128	10.0	20	WG622512
Chloroethane	mg/l	0.0253	0.0237	101.	52-164	6.50	20	WG622512
Chloroform	mg/l	0.0252	0.0231	101.	76-122	8.62	20	WG622512
Chloromethane	mg/l	0.0236	0.0215	94.0	50-141	9.11	20	WG622512
cis-1,2-Dichloroethene	mg/l	0.0242	0.0215	97.0	75-121	12.2	20	WG622512
cis-1,3-Dichloropropene	mg/l	0.0256	0.0231	102.	74-124	10.2	20	WG622512
Di-isopropyl ether	mg/l	0.0248	0.0225	99.0	66-129	9.71	20	WG622512
Dibromomethane	mg/l	0.0259	0.0233	104.	77-124	10.8	20	WG622512
Dichlorodifluoromethane	mg/l	0.0238	0.0214	95.0	33-173	10.3	20	WG622512
Ethylbenzene	mg/l	0.0261	0.0241	104.	77-124	8.03	20	WG622512
Hexachloro-1,3-butadiene	mg/l	0.0243	0.0207	97.0	71-134	16.3	20	WG622512
Isopropylbenzene	mg/l	0.0289	0.0273	116.	74-126	5.64	20	WG622512
Methylene Chloride	mg/l	0.0206	0.0184	82.0	67-122	11.3	20	WG622512
n-Butylbenzene	mg/l	0.0268	0.0232	107.	74-130	14.5	20	WG622512
n-Propylbenzene	mg/l	0.0258	0.0241	103.	77-125	6.60	20	WG622512
Naphthalene	mg/l	0.0241	0.0209	96.0	70-134	14.5	20	WG622512
p-Isopropyltoluene	mg/l	0.0279	0.0257	111.	77-132	7.95	20	WG622512
sec-Butylbenzene	mg/l	0.0261	0.0241	104.	77-130	8.02	20	WG622512
Styrene	mg/l	0.0284	0.0256	114.	69-145	10.5	20	WG622512
tert-Butylbenzene	mg/l	0.0270	0.0254	108.	76-131	6.05	20	WG622512
Tetrachloroethene	mg/l	0.0249	0.0234	100.	69-131	6.33	20	WG622512
Toluene	mg/l	0.0233	0.0210	93.0	75-114	10.4	20	WG622512
trans-1,2-Dichloroethene	mg/l	0.0240	0.0220	96.0	63-127	8.79	20	WG622512
trans-1,3-Dichloropropene	mg/l	0.0265	0.0223	106.	69-124	17.0	20	WG622512
Trichloroethene	mg/l	0.0242	0.0221	97.0	69-131	8.97	20	WG622512
Trichlorofluoromethane	mg/l	0.0297	0.0268	119.	53-161	10.4	20	WG622512
Vinyl chloride	mg/l	0.0246	0.0229	98.0	55-142	6.98	20	WG622512
Xylenes, Total	mg/l	0.0780	0.0728	104.	77-123	6.84	20	WG622512
4-Bromofluorobenzene				104.6	82-120			WG622512
Dibromofluoromethane				107.8	82-126			WG622512
Toluene-d8				103.7	92-112			WG622512
TPH (GC/FID) High Fraction	mg/l	1.42	1.50	95.0	50-150	5.19	20	WG622687
o-Terphenyl				86.90	50-150			WG622687
Methyl tert-butyl ether	mg/l	0.0299	0.0268	120.	67-127	10.9	20	WG623150
4-Bromofluorobenzene				93.35	82-120			WG623150
Dibromofluoromethane				98.33	82-126			WG623150

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BP Environmental
Gary Lasako
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Quality Assurance Report
Level II

L605622

December 12, 2012

		Laboratory Control Sample Duplicate						
Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
Toluene-d8				98.56	92-112			
1,1,1,2-Tetrachloroethane	mg/kg	0.0262	0.0262	105.	77-129	0.280	20	WG623199
1,1,1-Trichloroethane	mg/kg	0.0237	0.0236	95.0	70-127	0.260	20	WG623199
1,1,2,2-Tetrachloroethane	mg/kg	0.0238	0.0245	95.0	76-133	2.82	20	WG623199
1,1,2-Trichloroethane	mg/kg	0.0245	0.0255	98.0	79-123	3.78	20	WG623199
1,1,2-Trichlorotrifluoroethane	mg/kg	0.0303	0.0297	121.	52-145	1.99	20	WG623199
1,1-Dichloroethane	mg/kg	0.0238	0.0239	95.0	74-121	0.360	20	WG623199
1,1-Dichloroethene	mg/kg	0.0289	0.0291	116.	53-135	0.660	20	WG623199
1,1-Dichloropropene	mg/kg	0.0236	0.0242	94.0	67-127	2.47	20	WG623199
1,2,3-Trichlorobenzene	mg/kg	0.0280	0.0275	112.	74-131	1.82	20	WG623199
1,2,3-Trichloropropane	mg/kg	0.0247	0.0253	99.0	75-135	2.23	20	WG623199
1,2,3-Trimethylbenzene	mg/kg	0.0259	0.0259	104.	76-128	0.0800	20	WG623199
1,2,4-Trichlorobenzene	mg/kg	0.0285	0.0279	114.	72-130	2.09	20	WG623199
1,2,4-Trimethylbenzene	mg/kg	0.0252	0.0255	101.	75-131	1.33	20	WG623199
1,2-Dibromo-3-Chloropropane	mg/kg	0.0277	0.0270	111.	55-142	2.35	20	WG623199
1,2-Dibromoethane	mg/kg	0.0247	0.0259	99.0	77-126	4.82	20	WG623199
1,2-Dichlorobenzene	mg/kg	0.0265	0.0267	106.	80-123	0.760	20	WG623199
1,2-Dichloroethane	mg/kg	0.0219	0.0227	88.0	70-128	3.65	20	WG623199
1,2-Dichloropropane	mg/kg	0.0238	0.0236	95.0	74-125	0.680	20	WG623199
1,3,5-Trimethylbenzene	mg/kg	0.0255	0.0259	102.	77-129	1.52	20	WG623199
1,3-Dichlorobenzene	mg/kg	0.0248	0.0254	99.0	76-128	2.35	20	WG623199
1,3-Dichloropropane	mg/kg	0.0239	0.0250	96.0	77-118	4.50	20	WG623199
1,4-Dichlorobenzene	mg/kg	0.0258	0.0263	103.	77-119	1.89	20	WG623199
2,2-Dichloropropane	mg/kg	0.0237	0.0229	95.0	60-132	3.49	20	WG623199
2-Butanone (MEK)	mg/kg	0.102	0.101	81.0	56-146	0.620	20	WG623199
2-Chloroethyl vinyl ether	mg/kg	0.113	0.124	90.0	17-179	9.42	22	WG623199
2-Chlorotoluene	mg/kg	0.0245	0.0248	98.0	76-125	1.11	20	WG623199
4-Chlorotoluene	mg/kg	0.0238	0.0245	95.0	76-125	2.82	20	WG623199
4-Methyl-2-pentanone (MIBK)	mg/kg	0.123	0.123	98.0	55-148	0.380	20	WG623199
Acetone	mg/kg	0.0796	0.0858	64.0	47-155	7.51	22	WG623199
Acrylonitrile	mg/kg	0.114	0.116	91.0	50-155	1.93	20	WG623199
Benzene	mg/kg	0.0235	0.0239	94.0	72-120	1.54	20	WG623199
Bromobenzene	mg/kg	0.0234	0.0240	94.0	74-122	2.53	20	WG623199
Bromodichloromethane	mg/kg	0.0235	0.0232	94.0	74-128	1.12	20	WG623199
Bromoform	mg/kg	0.0264	0.0276	105.	62-137	4.46	20	WG623199
Bromomethane	mg/kg	0.0264	0.0259	106.	38-180	2.09	20	WG623199
Carbon tetrachloride	mg/kg	0.0230	0.0230	92.0	62-130	0.0500	20	WG623199
Chlorobenzene	mg/kg	0.0251	0.0260	100.	77-124	3.65	20	WG623199
Chlorodibromomethane	mg/kg	0.0254	0.0266	102.	74-128	4.54	20	WG623199
Chloroethane	mg/kg	0.0238	0.0234	95.0	46-173	1.79	20	WG623199
Chloroform	mg/kg	0.0231	0.0233	92.0	76-122	0.960	20	WG623199
Chloromethane	mg/kg	0.0215	0.0218	86.0	49-143	1.16	20	WG623199
cis-1,2-Dichloroethene	mg/kg	0.0242	0.0241	97.0	73-123	0.590	20	WG623199
cis-1,3-Dichloropropene	mg/kg	0.0239	0.0246	96.0	73-126	2.56	20	WG623199
Di-isopropyl ether	mg/kg	0.0235	0.0235	94.0	64-131	0.100	20	WG623199
Dibromomethane	mg/kg	0.0247	0.0247	99.0	75-127	0.120	20	WG623199
Dichlorodifluoromethane	mg/kg	0.0234	0.0235	94.0	30-177	0.240	20	WG623199
Ethylbenzene	mg/kg	0.0256	0.0263	102.	76-126	2.36	20	WG623199
Hexachloro-1,3-butadiene	mg/kg	0.0264	0.0262	106.	71-134	0.750	20	WG623199
Isopropylbenzene	mg/kg	0.0271	0.0274	108.	70-128	1.34	20	WG623199
Methyl tert-butyl ether	mg/kg	0.0249	0.0250	100.	66-127	0.530	20	WG623199
Methylene Chloride	mg/kg	0.0242	0.0237	97.0	67-124	2.11	20	WG623199
n-Butylbenzene	mg/kg	0.0261	0.0264	104.	71-133	0.910	20	WG623199
n-Propylbenzene	mg/kg	0.0249	0.0253	100.	76-126	1.76	20	WG623199
Naphthalene	mg/kg	0.0280	0.0275	112.	68-136	1.53	20	WG623199
p-Isopropyltoluene	mg/kg	0.0261	0.0264	104.	75-134	1.32	20	WG623199
sec-Butylbenzene	mg/kg	0.0257	0.0262	103.	75-132	1.76	20	WG623199
Styrene	mg/kg	0.0259	0.0270	104.	68-148	3.93	20	WG623199
tert-Butylbenzene	mg/kg	0.0266	0.0271	106.	75-132	2.17	20	WG623199

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Quality Assurance Report
Level II

L605622

December 12, 2012

Analyte	Units	Laboratory Control Sample Duplicate Result	Ref	%Rec	Limit	RPD	Limit	Batch
Tetrachloroethene	mg/kg	0.0265	0.0273	106.	70-131	2.90	20	WG623199
Toluene	mg/kg	0.0243	0.0245	97.0	74-155	0.890	20	WG623199
trans-1,2-Dichloroethene	mg/kg	0.0255	0.0253	102.	63-126	0.650	20	WG623199
trans-1,3-Dichloropropene	mg/kg	0.0254	0.0264	102.	68-126	3.62	20	WG623199
Trichloroethene	mg/kg	0.0250	0.0256	100.	75-121	2.13	20	WG623199
Trichlorofluoromethane	mg/kg	0.0237	0.0239	95.0	48-170	1.23	20	WG623199
Vinyl chloride	mg/kg	0.0228	0.0226	91.0	54-144	1.05	20	WG623199
Xylenes, Total	mg/kg	0.0770	0.0788	103.	76-126	2.18	20	WG623199
4-Bromofluorobenzene				92.18	67-133			WG623199
Dibromofluoromethane				94.77	72-135			WG623199
Toluene-d8				99.33	90-113			WG623199
TPH (GC/FID) Low Fraction	mg/kg	6.20	6.11	113.	67-135	1.40	20	WG622559
a,a,a-Trifluorotoluene(FID)				102.4	59-128			WG622559
TPH (GC/FID) High Fraction	mg/kg	38.9	37.4	65.0	50-150	3.94	20	WG623054
o-Terphenyl				68.10	50-150			WG623054

Analyte	Units	Matrix Spike MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
TPH (GC/FID) Low Fraction	mg/l	5.40	0	5.5	98.2	55-109	L605563-02	WG622554
a,a,a-Trifluorotoluene(FID)					96.25	62-128		WG622554
1,1,1,2-Tetrachloroethane	mg/kg	0.114	0	.025	91.3	49-135	L605607-02	WG622758
1,1,1-Trichloroethane	mg/kg	0.134	0	.025	107.	43-142	L605607-02	WG622758
1,1,2,2-Tetrachloroethane	mg/kg	0.105	0	.025	84.1	42-147	L605607-02	WG622758
1,1,2-Trichloroethane	mg/kg	0.113	0	.025	90.6	51-134	L605607-02	WG622758
1,1,2-Trichlorotrifluoroethane	mg/kg	0.158	0	.025	126.	25-156	L605607-02	WG622758
1,1-Dichloroethane	mg/kg	0.125	0	.025	99.7	50-131	L605607-02	WG622758
1,1-Dichloroethene	mg/kg	0.139	0	.025	111.	29-145	L605607-02	WG622758
1,1-Dichloropropene	mg/kg	0.129	0	.025	103.	40-136	L605607-02	WG622758
1,2,3-Trichlorobenzene	mg/kg	0.100	0	.025	80.1	13-142	L605607-02	WG622758
1,2,3-Trichloropropane	mg/kg	0.109	0	.025	86.8	41-149	L605607-02	WG622758
1,2,3-Trimethylbenzene	mg/kg	0.112	0	.025	89.4	33-146	L605607-02	WG622758
1,2,4-Trichlorobenzene	mg/kg	0.102	0	.025	81.8	12-140	L605607-02	WG622758
1,2,4-Trimethylbenzene	mg/kg	0.108	0	.025	86.2	29-143	L605607-02	WG622758
1,2-Dibromo-3-Chloropropane	mg/kg	0.124	0	.025	98.8	29-151	L605607-02	WG622758
1,2-Dibromoethane	mg/kg	0.112	0	.025	89.3	48-133	L605607-02	WG622758
1,2-Dichlorobenzene	mg/kg	0.109	0	.025	87.2	37-136	L605607-02	WG622758
1,2-Dichloroethane	mg/kg	0.123	0	.025	98.3	49-131	L605607-02	WG622758
1,2-Dichloropropane	mg/kg	0.115	0	.025	91.7	50-132	L605607-02	WG622758
1,3,5-Trimethylbenzene	mg/kg	0.112	0	.025	89.6	29-144	L605607-02	WG622758
1,3-Dichlorobenzene	mg/kg	0.0996	0	.025	79.7	26-140	L605607-02	WG622758
1,3-Dichloropropane	mg/kg	0.111	0	.025	88.9	50-126	L605607-02	WG622758
1,4-Dichlorobenzene	mg/kg	0.107	0	.025	85.5	34-132	L605607-02	WG622758
2,2-Dichloropropane	mg/kg	0.137	0	.025	110.	35-148	L605607-02	WG622758
2-Butanone (MEK)	mg/kg	0.626	0	.125	100.	40-149	L605607-02	WG622758
2-Chloroethyl vinyl ether	mg/kg	0.625	0	.125	100.	10-173	L605607-02	WG622758
2-Chlorotoluene	mg/kg	0.106	0	.025	84.8	34-136	L605607-02	WG622758
4-Chlorotoluene	mg/kg	0.105	0	.025	84.2	31-137	L605607-02	WG622758
4-Methyl-2-pentanone (MIBK)	mg/kg	0.625	0	.125	100.	37-153	L605607-02	WG622758
Acetone	mg/kg	0.497	0	.125	79.5	10-177	L605607-02	WG622758
Acrylonitrile	mg/kg	0.588	0	.125	94.1	33-159	L605607-02	WG622758
Benzene	mg/kg	0.122	0	.025	97.2	44-131	L605607-02	WG622758
Bromobenzene	mg/kg	0.105	0	.025	84.1	36-132	L605607-02	WG622758

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Quality Assurance Report
Level II

L605622

December 12, 2012

Analyte	Units	MS Res	Matrix Spike Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Bromodichloromethane	mg/kg	0.116	0	.025	92.4	48-134	L605607-02	WG622758
Bromoform	mg/kg	0.111	0	.025	88.6	34-141	L605607-02	WG622758
Bromomethane	mg/kg	0.136	0	.025	109.	19-173	L605607-02	WG622758
Carbon tetrachloride	mg/kg	0.129	0	.025	104.	36-140	L605607-02	WG622758
Chlorobenzene	mg/kg	0.109	0	.025	87.2	42-133	L605607-02	WG622758
Chlorodibromomethane	mg/kg	0.111	0	.025	88.9	45-135	L605607-02	WG622758
Chloroethane	mg/kg	0.128	0	.025	102.	16-178	L605607-02	WG622758
Chloroform	mg/kg	0.127	0	.025	101.	52-130	L605607-02	WG622758
Chloromethane	mg/kg	0.124	0	.025	99.3	28-147	L605607-02	WG622758
cis-1,2-Dichloroethene	mg/kg	0.117	0	.025	94.0	52-128	L605607-02	WG622758
cis-1,3-Dichloropropene	mg/kg	0.120	0	.025	96.3	46-131	L605607-02	WG622758
Di-isopropyl ether	mg/kg	0.124	0	.025	99.2	46-134	L605607-02	WG622758
Dibromomethane	mg/kg	0.118	0	.025	94.6	51-133	L605607-02	WG622758
Dichlorodifluoromethane	mg/kg	0.132	0	.025	106.	12-179	L605607-02	WG622758
Ethylbenzene	mg/kg	0.115	0	.025	91.7	38-139	L605607-02	WG622758
Hexachloro-1,3-butadiene	mg/kg	0.0997	0	.025	79.7	10-147	L605607-02	WG622758
Isopropylbenzene	mg/kg	0.124	0	.025	99.6	34-137	L605607-02	WG622758
Methyl tert-butyl ether	mg/kg	0.127	0	.025	102.	45-134	L605607-02	WG622758
Methylene Chloride	mg/kg	0.118	0	.025	94.1	41-133	L605607-02	WG622758
n-Butylbenzene	mg/kg	0.114	0	.025	91.2	19-149	L605607-02	WG622758
n-Propylbenzene	mg/kg	0.112	0	.025	89.4	27-142	L605607-02	WG622758
Naphthalene	mg/kg	0.108	0	.025	86.1	19-146	L605607-02	WG622758
p-Isopropyltoluene	mg/kg	0.112	0	.025	89.9	21-150	L605607-02	WG622758
sec-Butylbenzene	mg/kg	0.113	0	.025	90.3	25-148	L605607-02	WG622758
Styrene	mg/kg	0.111	0	.025	88.7	30-156	L605607-02	WG622758
tert-Butylbenzene	mg/kg	0.115	0	.025	92.2	32-146	L605607-02	WG622758
Tetrachloroethene	mg/kg	0.108	0	.025	86.7	35-139	L605607-02	WG622758
Toluene	mg/kg	0.114	0	.025	90.9	43-127	L605607-02	WG622758
trans-1,2-Dichloroethene	mg/kg	0.122	0	.025	97.5	41-132	L605607-02	WG622758
trans-1,3-Dichloropropene	mg/kg	0.120	0	.025	96.1	43-129	L605607-02	WG622758
Trichloroethene	mg/kg	0.118	0	.025	94.3	42-136	L605607-02	WG622758
Trichlorofluoromethane	mg/kg	0.133	0	.025	106.	20-178	L605607-02	WG622758
Vinyl chloride	mg/kg	0.131	0	.025	104.	30-157	L605607-02	WG622758
Xylenes, Total	mg/kg	0.338	0	.075	90.2	38-137	L605607-02	WG622758
4-Bromofluorobenzene					96.47	67-133		WG622758
Dibromofluoromethane					106.8	72-135		WG622758
Toluene-d8					103.7	90-113		WG622758
1,1,1,2-Tetrachloroethane	mg/l	0.0244	0	.025	97.7	71-130	L605663-09	WG622512
1,1,1-Trichloroethane	mg/l	0.0238	0	.025	95.3	58-137	L605663-09	WG622512
1,1,2,2-Tetrachloroethane	mg/l	0.0217	0	.025	86.6	64-149	L605663-09	WG622512
1,1,2-Trichloroethane	mg/l	0.0234	0	.025	93.7	73-128	L605663-09	WG622512
1,1,2-Trichlorotrifluoroethane	mg/l	0.0270	0	.025	108.	36-159	L605663-09	WG622512
1,1-Dichloroethane	mg/l	0.0216	0	.025	86.2	58-133	L605663-09	WG622512
1,1-Dichloroethene	mg/l	0.0241	0	.025	96.4	32-152	L605663-09	WG622512
1,1-Dichloropropene	mg/l	0.0209	0	.025	83.6	50-140	L605663-09	WG622512
1,2,3-Trichlorobenzene	mg/l	0.0240	0	.025	95.9	68-135	L605663-09	WG622512
1,2,3-Trichloropropane	mg/l	0.0246	0	.025	98.2	74-137	L605663-09	WG622512
1,2,3-Trimethylbenzene	mg/l	0.0217	0	.025	87.0	67-133	L605663-09	WG622512
1,2,4-Trichlorobenzene	mg/l	0.0242	0	.025	96.7	67-133	L605663-09	WG622512
1,2,4-Trimethylbenzene	mg/l	0.0232	0	.025	92.7	62-141	L605663-09	WG622512
1,2-Dibromo-3-Chloropropane	mg/l	0.0256	0	.025	102.	55-148	L605663-09	WG622512
1,2-Dibromoethane	mg/l	0.0240	0	.025	96.0	71-129	L605663-09	WG622512
1,2-Dichlorobenzene	mg/l	0.0225	0	.025	90.1	75-125	L605663-09	WG622512
1,2-Dichloroethane	mg/l	0.0237	0	.025	95.0	59-135	L605663-09	WG622512
1,2-Dichloropropane	mg/l	0.0208	0	.025	83.1	68-126	L605663-09	WG622512
1,3,5-Trimethylbenzene	mg/l	0.0227	0	.025	91.0	67-136	L605663-09	WG622512
1,3-Dichlorobenzene	mg/l	0.0234	0	.025	93.7	69-131	L605663-09	WG622512

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Est. 1970

BP Environmental
Gary Lasako
8615 Commerce Drive, Unit One

Easton, MD 21601

Quality Assurance Report
Level II

L605622

December 12, 2012

Analyte	Units	MS Res	Matrix Spike Ref Res	TV	% Rec	Limit	Ref Samp	Batch
1,3-Dichloropropane	mg/l	0.0223	0	.025	89.3	70-122	L605663-09	WG622512
1,4-Dichlorobenzene	mg/l	0.0221	0	.025	88.5	70-123	L605663-09	WG622512
2,2-Dichloropropane	mg/l	0.0239	0	.025	95.8	51-141	L605663-09	WG622512
2-Butanone (MEK)	mg/l	0.0737	0	.125	59.0	51-149	L605663-09	WG622512
2-Chloroethyl vinyl ether	mg/l	0.0221	0	.125	17.6	10-161	L605663-09	WG622512
2-Chlorotoluene	mg/l	0.0223	0	.025	89.4	65-133	L605663-09	WG622512
4-Chlorotoluene	mg/l	0.0225	0	.025	90.0	67-129	L605663-09	WG622512
4-Methyl-2-pentanone (MIBK)	mg/l	0.118	0	.125	94.5	53-154	L605663-09	WG622512
Acetone	mg/l	0.0509	0	.125	40.7	34-146	L605663-09	WG622512
Acrolein	mg/l	0.107	0	.125	85.3	10-189	L605663-09	WG622512
Acrylonitrile	mg/l	0.124	0	.125	99.1	49-162	L605663-09	WG622512
Benzene	mg/l	0.0200	0	.025	79.9	51-134	L605663-09	WG622512
Bromobenzene	mg/l	0.0218	0	.025	87.3	64-130	L605663-09	WG622512
Bromodichloromethane	mg/l	0.0234	0	.025	93.4	67-132	L605663-09	WG622512
Bromoform	mg/l	0.0274	0	.025	110.	59-137	L605663-09	WG622512
Bromomethane	mg/l	0.0233	0	.025	93.3	23-177	L605663-09	WG622512
Carbon disulfide	mg/l	0.0255	0	.025	102.	10-165	L605663-09	WG622512
Carbon tetrachloride	mg/l	0.0247	0	.025	98.9	49-140	L605663-09	WG622512
Chlorobenzene	mg/l	0.0232	0	.025	92.9	69-126	L605663-09	WG622512
Chlorodibromomethane	mg/l	0.0251	0	.025	100.	68-130	L605663-09	WG622512
Chloroethane	mg/l	0.0230	0	.025	91.8	32-177	L605663-09	WG622512
Chloroform	mg/l	0.0233	0	.025	93.4	64-130	L605663-09	WG622512
Chloromethane	mg/l	0.0214	0	.025	85.4	27-155	L605663-09	WG622512
cis-1,2-Dichloroethene	mg/l	0.0212	0	.025	84.8	54-137	L605663-09	WG622512
cis-1,3-Dichloropropene	mg/l	0.0221	0	.025	88.3	63-127	L605663-09	WG622512
Di-isopropyl ether	mg/l	0.0222	0	.025	88.7	58-133	L605663-09	WG622512
Dibromomethane	mg/l	0.0227	0	.025	90.8	68-131	L605663-09	WG622512
Dichlorodifluoromethane	mg/l	0.0222	0	.025	88.8	16-188	L605663-09	WG622512
Ethylbenzene	mg/l	0.0221	0	.025	88.3	64-135	L605663-09	WG622512
Hexachloro-1,3-butadiene	mg/l	0.0214	0	.025	85.4	64-140	L605663-09	WG622512
Isopropylbenzene	mg/l	0.0252	0	.025	101.	62-134	L605663-09	WG622512
Methylene Chloride	mg/l	0.0186	0	.025	74.5	52-130	L605663-09	WG622512
n-Butylbenzene	mg/l	0.0232	0	.025	92.7	62-142	L605663-09	WG622512
n-Propylbenzene	mg/l	0.0225	0	.025	90.2	62-137	L605663-09	WG622512
Naphthalene	mg/l	0.0201	0	.025	80.4	65-140	L605663-09	WG622512
p-Isopropyltoluene	mg/l	0.0244	0	.025	97.6	64-142	L605663-09	WG622512
sec-Butylbenzene	mg/l	0.0231	0	.025	92.3	67-139	L605663-09	WG622512
Styrene	mg/l	0.0239	0	.025	95.7	58-152	L605663-09	WG622512
tert-Butylbenzene	mg/l	0.0237	0	.025	95.0	66-139	L605663-09	WG622512
Tetrachloroethene	mg/l	0.0215	0	.025	86.1	56-139	L605663-09	WG622512
Toluene	mg/l	0.0203	0	.025	81.3	61-126	L605663-09	WG622512
trans-1,2-Dichloroethene	mg/l	0.0211	0	.025	84.3	45-137	L605663-09	WG622512
trans-1,3-Dichloropropene	mg/l	0.0241	0	.025	96.6	59-130	L605663-09	WG622512
Trichloroethene	mg/l	0.0215	0	.025	85.9	40-155	L605663-09	WG622512
Trichlorofluoromethane	mg/l	0.0266	0	.025	106.	35-177	L605663-09	WG622512
Vinyl chloride	mg/l	0.0221	0	.025	88.4	32-159	L605663-09	WG622512
Xylenes, Total	mg/l	0.0671	0	.075	89.4	64-133	L605663-09	WG622512
4-Bromofluorobenzene					104.2	82-120		WG622512
Dibromofluoromethane					109.4	82-126		WG622512
Toluene-d8					104.2	92-112		WG622512
Methyl tert-butyl ether	mg/l	0.0272	0	.025	109.	55-136	L605586-01	WG623150
4-Bromofluorobenzene					91.60	82-120		WG623150
Dibromofluoromethane					99.63	82-126		WG623150
Toluene-d8					99.71	92-112		WG623150
1,1,1,2-Tetrachloroethane	mg/kg	0.0994	0	.025	79.5	49-135	L606217-01	WG623199

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Analyte	Units	MS Res	Matrix Spike Ref Res	TV	% Rec	Limit	Ref Samp	Batch
1,1,1-Trichloroethane	mg/kg	0.0998	0	.025	79.8	43-142	L606217-01	WG623199
1,1,2,2-Tetrachloroethane	mg/kg	0.0923	0	.025	73.8	42-147	L606217-01	WG623199
1,1,2-Trichloroethane	mg/kg	0.0935	0	.025	74.8	51-134	L606217-01	WG623199
1,1,2-Trichlorotrifluoroethane	mg/kg	0.128	0	.025	103.	25-156	L606217-01	WG623199
1,1-Dichloroethane	mg/kg	0.0957	0	.025	76.5	50-131	L606217-01	WG623199
1,1-Dichloroethene	mg/kg	0.124	0	.025	99.4	29-145	L606217-01	WG623199
1,1-Dichloropropene	mg/kg	0.0985	0	.025	78.8	40-136	L606217-01	WG623199
1,2,3-Trichlorobenzene	mg/kg	0.0878	0	.025	70.2	13-142	L606217-01	WG623199
1,2,3-Trichloropropane	mg/kg	0.0960	0	.025	76.8	41-149	L606217-01	WG623199
1,2,3-Trimethylbenzene	mg/kg	0.0956	0	.025	76.5	33-146	L606217-01	WG623199
1,2,4-Trichlorobenzene	mg/kg	0.0904	0	.025	72.3	12-140	L606217-01	WG623199
1,2,4-Trimethylbenzene	mg/kg	0.0967	0	.025	77.4	29-143	L606217-01	WG623199
1,2-Dibromo-3-Chloropropane	mg/kg	0.106	0	.025	84.4	29-151	L606217-01	WG623199
1,2-Dibromoethane	mg/kg	0.0944	0	.025	75.5	48-133	L606217-01	WG623199
1,2-Dichlorobenzene	mg/kg	0.0944	0	.025	75.5	37-136	L606217-01	WG623199
1,2-Dichloroethane	mg/kg	0.0843	0	.025	67.4	49-131	L606217-01	WG623199
1,2-Dichloropropane	mg/kg	0.0916	0	.025	73.3	50-132	L606217-01	WG623199
1,3,5-Trimethylbenzene	mg/kg	0.0990	0	.025	79.2	29-144	L606217-01	WG623199
1,3-Dichlorobenzene	mg/kg	0.0921	0	.025	73.7	26-140	L606217-01	WG623199
1,3-Dichloropropane	mg/kg	0.0914	0	.025	73.1	50-126	L606217-01	WG623199
1,4-Dichlorobenzene	mg/kg	0.0940	0	.025	75.2	34-132	L606217-01	WG623199
2,2-Dichloropropane	mg/kg	0.0988	0	.025	79.0	35-148	L606217-01	WG623199
2-Butanone (MEK)	mg/kg	0.317	0	.125	50.6	40-149	L606217-01	WG623199
2-Chloroethyl vinyl ether	mg/kg	0.417	0	.125	66.7	10-173	L606217-01	WG623199
2-Chlorotoluene	mg/kg	0.0943	0	.025	75.4	34-136	L606217-01	WG623199
4-Chlorotoluene	mg/kg	0.0913	0	.025	73.0	31-137	L606217-01	WG623199
4-Methyl-2-pentanone (MIBK)	mg/kg	0.470	0	.125	75.3	37-153	L606217-01	WG623199
Acetone	mg/kg	0.202	0	.125	32.4	10-177	L606217-01	WG623199
Acrylonitrile	mg/kg	0.449	0	.125	71.8	33-159	L606217-01	WG623199
Benzene	mg/kg	0.0939	0	.025	75.1	44-131	L606217-01	WG623199
Bromobenzene	mg/kg	0.0887	0	.025	71.0	36-132	L606217-01	WG623199
Bromodichloromethane	mg/kg	0.0892	0	.025	71.3	48-134	L606217-01	WG623199
Bromoform	mg/kg	0.101	0	.025	80.6	34-141	L606217-01	WG623199
Bromomethane	mg/kg	0.110	0	.025	88.3	19-173	L606217-01	WG623199
Carbon tetrachloride	mg/kg	0.0976	0	.025	78.0	36-140	L606217-01	WG623199
Chlorobenzene	mg/kg	0.0976	0	.025	78.1	42-133	L606217-01	WG623199
Chlorodibromomethane	mg/kg	0.0970	0	.025	77.6	45-135	L606217-01	WG623199
Chloroethane	mg/kg	0.101	0	.025	81.2	16-178	L606217-01	WG623199
Chloroform	mg/kg	0.0916	0	.025	73.3	52-130	L606217-01	WG623199
Chloromethane	mg/kg	0.0926	0	.025	74.1	28-147	L606217-01	WG623199
cis-1,2-Dichloroethene	mg/kg	0.0959	0	.025	76.7	52-128	L606217-01	WG623199
cis-1,3-Dichloropropene	mg/kg	0.0904	0	.025	72.3	46-131	L606217-01	WG623199
Di-isopropyl ether	mg/kg	0.0890	0	.025	71.2	46-134	L606217-01	WG623199
Dibromomethane	mg/kg	0.0931	0	.025	74.5	51-133	L606217-01	WG623199
Dichlorodifluoromethane	mg/kg	0.101	0	.025	81.1	12-179	L606217-01	WG623199
Ethylbenzene	mg/kg	0.102	0	.025	81.9	38-139	L606217-01	WG623199
Hexachloro-1,3-butadiene	mg/kg	0.0903	0	.025	72.2	10-147	L606217-01	WG623199
Isopropylbenzene	mg/kg	0.108	0	.025	86.4	34-137	L606217-01	WG623199
Methyl tert-butyl ether	mg/kg	0.0938	0	.025	75.0	45-134	L606217-01	WG623199
Methylene Chloride	mg/kg	0.0953	0	.025	76.2	41-133	L606217-01	WG623199
n-Butylbenzene	mg/kg	0.0966	0	.025	77.3	19-149	L606217-01	WG623199
n-Propylbenzene	mg/kg	0.0987	0	.025	79.0	27-142	L606217-01	WG623199
Naphthalene	mg/kg	0.0957	0	.025	76.6	19-146	L606217-01	WG623199
p-Isopropyltoluene	mg/kg	0.101	0	.025	81.1	21-150	L606217-01	WG623199
sec-Butylbenzene	mg/kg	0.101	0	.025	81.1	25-148	L606217-01	WG623199
Styrene	mg/kg	0.0980	0	.025	78.4	30-156	L606217-01	WG623199
tert-Butylbenzene	mg/kg	0.105	0	.025	84.0	32-146	L606217-01	WG623199
Tetrachloroethene	mg/kg	0.107	0	.025	85.8	35-139	L606217-01	WG623199
Toluene	mg/kg	0.0963	0	.025	77.0	43-127	L606217-01	WG623199

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Analyte	Units	MS Res	Matrix Spike Ref Res	TV	% Rec	Limit	Ref Samp	Batch
trans-1,2-Dichloroethene	mg/kg	0.104	0	.025	83.1	41-132	L606217-01	WG623199
trans-1,3-Dichloropropene	mg/kg	0.0954	0	.025	76.3	43-129	L606217-01	WG623199
Trichloroethene	mg/kg	0.101	0	.025	80.4	42-136	L606217-01	WG623199
Trichlorofluoromethane	mg/kg	0.102	0	.025	81.8	20-178	L606217-01	WG623199
Vinyl chloride	mg/kg	0.100	0	.025	80.0	30-157	L606217-01	WG623199
Xylenes, Total	mg/kg	0.305	0	.075	81.3	38-137	L606217-01	WG623199
4-Bromofluorobenzene					93.35	67-133		WG623199
Dibromofluoromethane					95.13	72-135		WG623199
Toluene-d8					98.69	90-113		WG623199
TPH (GC/FID) Low Fraction	mg/kg	3.22	0	5.5	11.7*	55-109	L605607-10	WG622559
a,a,a-Trifluorotoluene(FID)					96.91	59-128		WG622559
TPH (GC/FID) High Fraction	mg/kg	40.5	0	60	67.5	50-150	L605525-01	WG623054
o-Terphenyl					75.20	50-150		WG623054

Analyte	Units	MSD	Matrix Spike Duplicate Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
TPH (GC/FID) Low Fraction	mg/l	4.92	5.40	89.4	55-109	9.40	20	L605563-02	WG622554
a,a,a-Trifluorotoluene(FID)				95.30	62-128				WG622554
1,1,1,2-Tetrachloroethane	mg/kg	0.113	0.114	90.3	49-135	1.07	23	L605607-02	WG622758
1,1,1-Trichloroethane	mg/kg	0.114	0.134	91.1	43-142	15.9	24	L605607-02	WG622758
1,1,2,2-Tetrachloroethane	mg/kg	0.0988	0.105	79.0	42-147	6.19	25	L605607-02	WG622758
1,1,2-Trichloroethane	mg/kg	0.111	0.113	88.5	51-134	2.30	21	L605607-02	WG622758
1,1,2-Trichlorotrifluoroethane	mg/kg	0.138	0.158	110.	25-156	13.3	29	L605607-02	WG622758
1,1-Dichloroethane	mg/kg	0.109	0.125	87.0	50-131	13.7	21	L605607-02	WG622758
1,1-Dichloroethene	mg/kg	0.126	0.139	101.	29-145	9.66	28	L605607-02	WG622758
1,1-Dichloropropene	mg/kg	0.111	0.129	89.0	40-136	15.1	24	L605607-02	WG622758
1,2,3-Trichlorobenzene	mg/kg	0.0877	0.100	70.1	13-142	13.3	33	L605607-02	WG622758
1,2,3-Trichloropropane	mg/kg	0.100	0.109	80.2	41-149	7.88	28	L605607-02	WG622758
1,2,3-Trimethylbenzene	mg/kg	0.0986	0.112	78.8	33-146	12.5	27	L605607-02	WG622758
1,2,4-Trichlorobenzene	mg/kg	0.0911	0.102	72.9	12-140	11.5	32	L605607-02	WG622758
1,2,4-Trimethylbenzene	mg/kg	0.103	0.108	82.5	29-143	4.36	30	L605607-02	WG622758
1,2-Dibromo-3-Chloropropane	mg/kg	0.116	0.124	92.4	29-151	6.68	31	L605607-02	WG622758
1,2-Dibromoethane	mg/kg	0.110	0.112	88.0	48-133	1.51	22	L605607-02	WG622758
1,2-Dichlorobenzene	mg/kg	0.0983	0.109	78.6	37-136	10.3	25	L605607-02	WG622758
1,2-Dichloroethane	mg/kg	0.0971	0.123	77.7	49-131	23.5*	20	L605607-02	WG622758
1,2-Dichloropropane	mg/kg	0.107	0.115	85.3	50-132	7.26	21	L605607-02	WG622758
1,3,5-Trimethylbenzene	mg/kg	0.107	0.112	85.4	29-144	4.89	30	L605607-02	WG622758
1,3-Dichlorobenzene	mg/kg	0.0965	0.0996	77.2	26-140	3.13	28	L605607-02	WG622758
1,3-Dichloropropane	mg/kg	0.108	0.111	86.5	50-126	2.76	22	L605607-02	WG622758
1,4-Dichlorobenzene	mg/kg	0.0957	0.107	76.6	34-132	11.0	26	L605607-02	WG622758
2,2-Dichloropropane	mg/kg	0.118	0.137	94.5	35-148	15.0	26	L605607-02	WG622758
2-Butanone (MEK)	mg/kg	0.519	0.626	83.1	40-149	18.6	27	L605607-02	WG622758
2-Chloroethyl vinyl ether	mg/kg	0.558	0.625	89.4	10-173	11.3	33	L605607-02	WG622758
2-Chlorotoluene	mg/kg	0.102	0.106	81.8	34-136	3.62	28	L605607-02	WG622758
4-Chlorotoluene	mg/kg	0.0989	0.105	79.1	31-137	6.20	27	L605607-02	WG622758
4-Methyl-2-pentanone (MIBK)	mg/kg	0.567	0.625	90.7	37-153	9.83	27	L605607-02	WG622758
Acetone	mg/kg	0.424	0.497	67.8	10-177	15.8	28	L605607-02	WG622758
Acrylonitrile	mg/kg	0.520	0.588	83.3	33-159	12.2	26	L605607-02	WG622758
Benzene	mg/kg	0.108	0.122	86.5	44-131	11.7	21	L605607-02	WG622758
Bromobenzene	mg/kg	0.0981	0.105	78.4	36-132	6.99	26	L605607-02	WG622758
Bromodichloromethane	mg/kg	0.105	0.116	83.9	48-134	9.71	20	L605607-02	WG622758
Bromoform	mg/kg	0.112	0.111	89.5	34-141	1.01	24	L605607-02	WG622758

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Analyte	Units	Matrix Spike Duplicate MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Bromomethane	mg/kg	0.128	0.136	102.	19-173	6.25	25	L605607-02	WG622758
Carbon tetrachloride	mg/kg	0.113	0.129	90.1	36-140	13.9	26	L605607-02	WG622758
Chlorobenzene	mg/kg	0.106	0.109	85.0	42-133	2.52	24	L605607-02	WG622758
Chlorodibromomethane	mg/kg	0.110	0.111	88.2	45-135	0.820	23	L605607-02	WG622758
Chloroethane	mg/kg	0.118	0.128	94.6	16-178	7.59	25	L605607-02	WG622758
Chloroform	mg/kg	0.110	0.127	87.7	52-130	14.4	21	L605607-02	WG622758
Chloromethane	mg/kg	0.113	0.124	90.7	28-147	9.08	23	L605607-02	WG622758
cis-1,2-Dichloroethene	mg/kg	0.106	0.117	85.0	52-128	10.0	21	L605607-02	WG622758
cis-1,3-Dichloropropene	mg/kg	0.107	0.120	85.4	46-131	12.0	21	L605607-02	WG622758
Di-isopropyl ether	mg/kg	0.108	0.124	86.5	46-134	13.7	20	L605607-02	WG622758
Dibromomethane	mg/kg	0.108	0.118	86.1	51-133	9.35	21	L605607-02	WG622758
Dichlorodifluoromethane	mg/kg	0.117	0.132	93.4	12-179	12.4	27	L605607-02	WG622758
Ethylbenzene	mg/kg	0.112	0.115	89.9	38-139	2.02	27	L605607-02	WG622758
Hexachloro-1,3-butadiene	mg/kg	0.0844	0.0997	67.5	10-147	16.6	37	L605607-02	WG622758
Isopropylbenzene	mg/kg	0.121	0.124	96.7	34-137	2.90	29	L605607-02	WG622758
Methyl tert-butyl ether	mg/kg	0.108	0.127	86.6	45-134	16.0	22	L605607-02	WG622758
Methylene Chloride	mg/kg	0.103	0.118	82.6	41-133	13.0	28	L605607-02	WG622758
n-Butylbenzene	mg/kg	0.0953	0.114	76.2	19-149	18.0	32	L605607-02	WG622758
n-Propylbenzene	mg/kg	0.106	0.112	84.6	27-142	5.52	29	L605607-02	WG622758
Naphthalene	mg/kg	0.0961	0.108	76.9	19-146	11.3	30	L605607-02	WG622758
p-Isopropyltoluene	mg/kg	0.107	0.112	85.8	21-150	4.69	31	L605607-02	WG622758
sec-Butylbenzene	mg/kg	0.107	0.113	85.4	25-148	5.58	31	L605607-02	WG622758
Styrene	mg/kg	0.109	0.111	87.0	30-156	2.00	26	L605607-02	WG622758
tert-Butylbenzene	mg/kg	0.113	0.115	90.7	32-146	1.66	30	L605607-02	WG622758
Tetrachloroethene	mg/kg	0.107	0.108	85.9	35-139	0.980	27	L605607-02	WG622758
Toluene	mg/kg	0.105	0.114	84.1	43-127	7.71	21	L605607-02	WG622758
trans-1,2-Dichloroethene	mg/kg	0.110	0.122	88.0	41-132	10.2	23	L605607-02	WG622758
trans-1,3-Dichloropropene	mg/kg	0.112	0.120	89.9	43-129	6.65	23	L605607-02	WG622758
Trichloroethene	mg/kg	0.112	0.118	89.8	42-136	4.84	23	L605607-02	WG622758
Trichlorofluoromethane	mg/kg	0.118	0.133	94.6	20-178	11.8	30	L605607-02	WG622758
Vinyl chloride	mg/kg	0.118	0.131	94.6	30-157	9.93	24	L605607-02	WG622758
Xylenes, Total	mg/kg	0.331	0.338	88.2	38-137	2.26	26	L605607-02	WG622758
4-Bromofluorobenzene				99.62	67-133				WG622758
Dibromofluoromethane				99.41	72-135				WG622758
Toluene-d8				102.6	90-113				WG622758
1,1,1,2-Tetrachloroethane	mg/l	0.0276	0.0244	110.	71-130	12.2	20	L605663-09	WG622512
1,1,1-Trichloroethane	mg/l	0.0248	0.0238	99.3	58-137	4.10	20	L605663-09	WG622512
1,1,2,2-Tetrachloroethane	mg/l	0.0230	0.0217	92.0	64-149	6.04	20	L605663-09	WG622512
1,1,2-Trichloroethane	mg/l	0.0249	0.0234	99.4	73-128	5.97	20	L605663-09	WG622512
1,1,2-Trichlorotrifluoroethane	mg/l	0.0291	0.0270	116.	36-159	7.39	21	L605663-09	WG622512
1,1-Dichloroethane	mg/l	0.0226	0.0216	90.3	58-133	4.64	20	L605663-09	WG622512
1,1-Dichloroethene	mg/l	0.0258	0.0241	103.	32-152	6.88	20	L605663-09	WG622512
1,1-Dichloropropene	mg/l	0.0225	0.0209	90.0	50-140	7.45	20	L605663-09	WG622512
1,2,3-Trichlorobenzene	mg/l	0.0253	0.0240	101.	68-135	5.59	20	L605663-09	WG622512
1,2,3-Trichloropropane	mg/l	0.0266	0.0246	106.	74-137	7.99	20	L605663-09	WG622512
1,2,3-Trimethylbenzene	mg/l	0.0228	0.0217	91.2	67-133	4.74	20	L605663-09	WG622512
1,2,4-Trichlorobenzene	mg/l	0.0252	0.0242	101.	67-133	4.21	20	L605663-09	WG622512
1,2,4-Trimethylbenzene	mg/l	0.0250	0.0232	99.8	62-141	7.40	20	L605663-09	WG622512
1,2-Dibromo-3-Chloropropane	mg/l	0.0249	0.0256	99.7	55-148	2.51	22	L605663-09	WG622512
1,2-Dibromoethane	mg/l	0.0267	0.0240	107.	71-129	10.5	20	L605663-09	WG622512
1,2-Dichlorobenzene	mg/l	0.0239	0.0225	95.5	75-125	5.82	20	L605663-09	WG622512
1,2-Dichloroethane	mg/l	0.0259	0.0237	104.	59-135	8.66	20	L605663-09	WG622512
1,2-Dichloropropane	mg/l	0.0218	0.0208	87.2	68-126	4.83	20	L605663-09	WG622512
1,3,5-Trimethylbenzene	mg/l	0.0243	0.0227	97.1	67-136	6.53	20	L605663-09	WG622512
1,3-Dichlorobenzene	mg/l	0.0251	0.0234	100.	69-131	6.83	20	L605663-09	WG622512
1,3-Dichloropropane	mg/l	0.0242	0.0223	96.7	70-122	7.89	20	L605663-09	WG622512
1,4-Dichlorobenzene	mg/l	0.0236	0.0221	94.4	70-123	6.39	20	L605663-09	WG622512

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BP Environmental
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Quality Assurance Report
Level II

L605622

December 12, 2012

Analyte	Units	Matrix Spike MSD	Ref	Duplicate %Rec	Limit	RPD	Limit	Ref Samp	Batch
2,2-Dichloropropane	mg/l	0.0256	0.0239	102.	51-141	6.68	20	L605663-09	WG622512
2-Butanone (MEK)	mg/l	0.0810	0.0737	64.8	51-149	9.39	22	L605663-09	WG622512
2-Chloroethyl vinyl ether	mg/l	0.00366	0.0221	2.92*	10-161	143.*	40	L605663-09	WG622512
2-Chlorotoluene	mg/l	0.0244	0.0223	97.6	65-133	8.81	20	L605663-09	WG622512
4-Chlorotoluene	mg/l	0.0246	0.0225	98.4	67-129	8.96	20	L605663-09	WG622512
4-Methyl-2-pentanone (MIBK)	mg/l	0.123	0.118	98.2	53-154	3.81	21	L605663-09	WG622512
Acetone	mg/l	0.0504	0.0509	40.4	34-146	0.840	22	L605663-09	WG622512
Acrolein	mg/l	0.109	0.107	87.2	10-189	2.23	30	L605663-09	WG622512
Acrylonitrile	mg/l	0.130	0.124	104.	49-162	4.58	20	L605663-09	WG622512
Benzene	mg/l	0.0210	0.0200	84.0	51-134	4.93	20	L605663-09	WG622512
Bromobenzene	mg/l	0.0238	0.0218	95.0	64-130	8.50	20	L605663-09	WG622512
Bromodichloromethane	mg/l	0.0244	0.0234	97.8	67-132	4.54	20	L605663-09	WG622512
Bromoform	mg/l	0.0295	0.0274	118.	59-137	7.34	20	L605663-09	WG622512
Bromomethane	mg/l	0.0251	0.0233	100.	23-177	7.35	21	L605663-09	WG622512
Carbon disulfide	mg/l	0.0273	0.0255	109.	10-165	6.77	22	L605663-09	WG622512
Carbon tetrachloride	mg/l	0.0256	0.0247	102.	49-140	3.40	20	L605663-09	WG622512
Chlorobenzene	mg/l	0.0252	0.0232	101.	69-126	8.30	20	L605663-09	WG622512
Chlorodibromomethane	mg/l	0.0272	0.0251	109.	68-130	7.92	20	L605663-09	WG622512
Chloroethane	mg/l	0.0242	0.0230	97.0	32-177	5.46	21	L605663-09	WG622512
Chloroform	mg/l	0.0245	0.0233	97.8	64-130	4.70	20	L605663-09	WG622512
Chloromethane	mg/l	0.0229	0.0214	91.4	27-155	6.78	20	L605663-09	WG622512
cis-1,2-Dichloroethene	mg/l	0.0228	0.0212	91.0	54-137	7.09	20	L605663-09	WG622512
cis-1,3-Dichloropropene	mg/l	0.0224	0.0221	89.6	63-127	1.51	20	L605663-09	WG622512
Di-isopropyl ether	mg/l	0.0241	0.0222	96.6	58-133	8.52	20	L605663-09	WG622512
Dibromomethane	mg/l	0.0242	0.0227	96.7	68-131	6.35	20	L605663-09	WG622512
Dichlorodifluoromethane	mg/l	0.0239	0.0222	95.5	16-188	7.26	22	L605663-09	WG622512
Ethylbenzene	mg/l	0.0246	0.0221	98.5	64-135	10.9	20	L605663-09	WG622512
Hexachloro-1,3-butadiene	mg/l	0.0225	0.0214	90.0	64-140	5.26	20	L605663-09	WG622512
Isopropylbenzene	mg/l	0.0278	0.0252	111.	62-134	10.1	20	L605663-09	WG622512
Methylene Chloride	mg/l	0.0194	0.0186	77.6	52-130	3.99	20	L605663-09	WG622512
n-Butylbenzene	mg/l	0.0250	0.0232	100.	62-142	7.56	20	L605663-09	WG622512
n-Propylbenzene	mg/l	0.0246	0.0225	98.5	62-137	8.84	20	L605663-09	WG622512
Naphthalene	mg/l	0.0215	0.0201	85.9	65-140	6.69	20	L605663-09	WG622512
p-Isopropyltoluene	mg/l	0.0262	0.0244	105.	64-142	7.18	20	L605663-09	WG622512
sec-Butylbenzene	mg/l	0.0249	0.0231	99.7	67-139	7.72	20	L605663-09	WG622512
Styrene	mg/l	0.0261	0.0239	104.	58-152	8.74	20	L605663-09	WG622512
tert-Butylbenzene	mg/l	0.0259	0.0237	104.	66-139	8.84	20	L605663-09	WG622512
Tetrachloroethene	mg/l	0.0239	0.0215	95.5	56-139	10.4	20	L605663-09	WG622512
Toluene	mg/l	0.0216	0.0203	86.4	61-126	6.14	20	L605663-09	WG622512
trans-1,2-Dichloroethene	mg/l	0.0220	0.0211	87.8	45-137	4.14	20	L605663-09	WG622512
trans-1,3-Dichloropropene	mg/l	0.0247	0.0241	99.0	59-130	2.47	20	L605663-09	WG622512
Trichloroethene	mg/l	0.0224	0.0215	89.8	40-155	4.44	20	L605663-09	WG622512
Trichlorofluoromethane	mg/l	0.0276	0.0266	110.	35-177	3.62	23	L605663-09	WG622512
Vinyl chloride	mg/l	0.0239	0.0221	95.8	32-159	7.95	21	L605663-09	WG622512
Xylenes, Total	mg/l	0.0741	0.0671	98.8	64-133	9.92	20	L605663-09	WG622512
4-Bromofluorobenzene				106.1	82-120				WG622512
Dibromofluoromethane				107.9	82-126				WG622512
Toluene-d8				102.7	92-112				WG622512
Methyl tert-butyl ether	mg/l	0.0249	0.0272	99.6	55-136	8.75	20	L605586-01	WG623150
4-Bromofluorobenzene				92.31	82-120				WG623150
Dibromofluoromethane				98.96	82-126				WG623150
Toluene-d8				97.57	92-112				WG623150
1,1,1,2-Tetrachloroethane	mg/kg	0.0976	0.0994	78.1	49-135	1.82	23	L606217-01	WG623199
1,1,1-Trichloroethane	mg/kg	0.102	0.0998	81.5	43-142	2.09	24	L606217-01	WG623199
1,1,2,2-Tetrachloroethane	mg/kg	0.0919	0.0923	73.5	42-147	0.380	25	L606217-01	WG623199

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BP Environmental
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Quality Assurance Report
Level II

L605622

December 12, 2012

Analyte	Units	Matrix Spike Duplicate MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
1,1,2-Trichloroethane	mg/kg	0.0906	0.0935	72.5	51-134	3.19	21	L606217-01	WG623199
1,1,2-Trichlorotrifluoroethane	mg/kg	0.134	0.128	107.	25-156	4.12	29	L606217-01	WG623199
1,1-Dichloroethane	mg/kg	0.0980	0.0957	78.4	50-131	2.46	21	L606217-01	WG623199
1,1-Dichloroethene	mg/kg	0.127	0.124	102.	29-145	2.27	28	L606217-01	WG623199
1,1-Dichloropropene	mg/kg	0.0993	0.0985	79.4	40-136	0.840	24	L606217-01	WG623199
1,2,3-Trichlorobenzene	mg/kg	0.0900	0.0878	72.0	13-142	2.50	33	L606217-01	WG623199
1,2,3-Trichloropropane	mg/kg	0.0945	0.0960	75.6	41-149	1.59	28	L606217-01	WG623199
1,2,3-Trimethylbenzene	mg/kg	0.0955	0.0956	76.4	33-146	0.100	27	L606217-01	WG623199
1,2,4-Trichlorobenzene	mg/kg	0.0910	0.0904	72.8	12-140	0.710	32	L606217-01	WG623199
1,2,4-Trimethylbenzene	mg/kg	0.0952	0.0967	76.2	29-143	1.57	30	L606217-01	WG623199
1,2-Dibromo-3-Chloropropane	mg/kg	0.109	0.106	87.2	29-151	3.20	31	L606217-01	WG623199
1,2-Dibromoethane	mg/kg	0.0903	0.0944	72.2	48-133	4.48	22	L606217-01	WG623199
1,2-Dichlorobenzene	mg/kg	0.0947	0.0944	75.8	37-136	0.280	25	L606217-01	WG623199
1,2-Dichloroethane	mg/kg	0.0847	0.0843	67.8	49-131	0.560	20	L606217-01	WG623199
1,2-Dichloropropane	mg/kg	0.0931	0.0916	74.5	50-132	1.64	21	L606217-01	WG623199
1,3,5-Trimethylbenzene	mg/kg	0.0977	0.0990	78.2	29-144	1.34	30	L606217-01	WG623199
1,3-Dichlorobenzene	mg/kg	0.0887	0.0921	70.9	26-140	3.82	28	L606217-01	WG623199
1,3-Dichloropropane	mg/kg	0.0869	0.0914	69.6	50-126	4.97	22	L606217-01	WG623199
1,4-Dichlorobenzene	mg/kg	0.0912	0.0940	73.0	34-132	2.97	26	L606217-01	WG623199
2,2-Dichloropropane	mg/kg	0.104	0.0988	83.2	35-148	5.13	26	L606217-01	WG623199
2-Butanone (MEK)	mg/kg	0.344	0.317	55.1	40-149	8.43	27	L606217-01	WG623199
2-Chloroethyl vinyl ether	mg/kg	0.428	0.417	68.4	10-173	2.55	33	L606217-01	WG623199
2-Chlorotoluene	mg/kg	0.0925	0.0943	74.0	34-136	1.89	28	L606217-01	WG623199
4-Chlorotoluene	mg/kg	0.0875	0.0913	70.0	31-137	4.16	27	L606217-01	WG623199
4-Methyl-2-pentanone (MIBK)	mg/kg	0.491	0.470	78.6	37-153	4.34	27	L606217-01	WG623199
Acetone	mg/kg	0.210	0.202	33.6	10-177	3.93	28	L606217-01	WG623199
Acrylonitrile	mg/kg	0.472	0.449	75.5	33-159	5.05	26	L606217-01	WG623199
Benzene	mg/kg	0.0952	0.0939	76.1	44-131	1.34	21	L606217-01	WG623199
Bromobenzene	mg/kg	0.0859	0.0887	68.7	36-132	3.22	26	L606217-01	WG623199
Bromodichloromethane	mg/kg	0.0892	0.0892	71.4	48-134	0.100	20	L606217-01	WG623199
Bromoform	mg/kg	0.0982	0.101	78.5	34-141	2.63	24	L606217-01	WG623199
Bromomethane	mg/kg	0.114	0.110	91.3	19-173	3.35	25	L606217-01	WG623199
Carbon tetrachloride	mg/kg	0.100	0.0976	80.2	36-140	2.73	26	L606217-01	WG623199
Chlorobenzene	mg/kg	0.0941	0.0976	75.3	42-133	3.72	24	L606217-01	WG623199
Chlorodibromomethane	mg/kg	0.0928	0.0970	74.2	45-135	4.45	23	L606217-01	WG623199
Chloroethane	mg/kg	0.104	0.101	83.0	16-178	2.30	25	L606217-01	WG623199
Chloroform	mg/kg	0.0919	0.0916	73.5	52-130	0.320	21	L606217-01	WG623199
Chloromethane	mg/kg	0.0946	0.0926	75.7	28-147	2.08	23	L606217-01	WG623199
cis-1,2-Dichloroethene	mg/kg	0.0967	0.0959	77.4	52-128	0.890	21	L606217-01	WG623199
cis-1,3-Dichloropropene	mg/kg	0.0898	0.0904	71.8	46-131	0.710	21	L606217-01	WG623199
Di-isopropyl ether	mg/kg	0.0898	0.0890	71.9	46-134	0.970	20	L606217-01	WG623199
Dibromomethane	mg/kg	0.0950	0.0931	76.0	51-133	1.95	21	L606217-01	WG623199
Dichlorodifluoromethane	mg/kg	0.105	0.101	84.0	12-179	3.53	27	L606217-01	WG623199
Ethylbenzene	mg/kg	0.101	0.102	80.6	38-139	1.59	27	L606217-01	WG623199
Hexachloro-1,3-butadiene	mg/kg	0.0932	0.0903	74.6	10-147	3.23	37	L606217-01	WG623199
Isopropylbenzene	mg/kg	0.107	0.108	85.2	34-137	1.29	29	L606217-01	WG623199
Methyl tert-butyl ether	mg/kg	0.0971	0.0938	77.7	45-134	3.47	22	L606217-01	WG623199
Methylene Chloride	mg/kg	0.0981	0.0953	78.5	41-133	2.92	28	L606217-01	WG623199
n-Butylbenzene	mg/kg	0.0974	0.0966	77.9	19-149	0.850	32	L606217-01	WG623199
n-Propylbenzene	mg/kg	0.0966	0.0987	77.2	27-142	2.22	29	L606217-01	WG623199
Naphthalene	mg/kg	0.0999	0.0957	79.9	19-146	4.28	30	L606217-01	WG623199
p-Isopropyltoluene	mg/kg	0.0997	0.101	79.7	21-150	1.68	31	L606217-01	WG623199
sec-Butylbenzene	mg/kg	0.0998	0.101	79.8	25-148	1.52	31	L606217-01	WG623199
Styrene	mg/kg	0.0943	0.0980	75.4	30-156	3.86	26	L606217-01	WG623199
tert-Butylbenzene	mg/kg	0.102	0.105	81.4	32-146	3.13	30	L606217-01	WG623199
Tetrachloroethene	mg/kg	0.104	0.107	82.9	35-139	3.42	27	L606217-01	WG623199
Toluene	mg/kg	0.0980	0.0963	78.4	43-127	1.79	21	L606217-01	WG623199
trans-1,2-Dichloroethene	mg/kg	0.107	0.104	85.4	41-132	2.77	23	L606217-01	WG623199
trans-1,3-Dichloropropene	mg/kg	0.0945	0.0954	75.6	43-129	0.970	23	L606217-01	WG623199

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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BP Environmental
Gary Lasako
8615 Commerce Drive, Unit One

Easton, MD 21601

Quality Assurance Report
Level II

L605622

December 12, 2012

Analyte	Units	MSD	Matrix Spike Ref	Duplicate %Rec	Limit	RPD	Limit	Ref Samp	Batch
Trichloroethene	mg/kg	0.103	0.101	82.0	42-136	1.98	23	L606217-01	WG623199
Trichlorofluoromethane	mg/kg	0.105	0.102	84.3	20-178	2.96	30	L606217-01	WG623199
Vinyl chloride	mg/kg	0.102	0.100	81.6	30-157	1.87	24	L606217-01	WG623199
Xylenes, Total	mg/kg	0.299	0.305	79.8	38-137	1.86	26	L606217-01	WG623199
4-Bromofluorobenzene				90.74	67-133				WG623199
Dibromofluoromethane				98.03	72-135				WG623199
Toluene-d8				101.0	90-113				WG623199
TPH (GC/FID) Low Fraction	mg/kg	17.1	3.22	62.0	55-109	137.*	20	L605607-10	WG622559
a,a,a-Trifluorotoluene(FID)				98.74	59-128				WG622559
TPH (GC/FID) High Fraction	mg/kg	43.6	40.5	72.6	50-150	7.29	20	L605525-01	WG623054
o-Terphenyl				79.10	50-150				WG623054

Batch number /Run number / Sample number cross reference

WG622554: R2439097: L605622-06
WG622758: R2441340: L605622-01 03 04 05
WG622512: R2442177: L605622-06
WG622687: R2442217: L605622-06
WG622746: R2443341: L605622-01 02 03 04 05
WG623150: R2443459: L605622-06
WG623199: R2444557: L605622-01 02 03
WG622559: R2445440: L605622-01 02 03 04 05
WG623054: R2449602: L605622-01 02 03 04 05

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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BP Environmental
Gary Lasako
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Easton, MD 21601

Quality Assurance Report
Level II

L605622

December 12, 2012

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

BP Environmental

8615 Commerce Drive, Unit One
Easton,MD 21601

Billing information:

Accounts Payable
8615 Commerce Drive, Unit One

Easton,MD 21601

H220

Chain of Custody
Page 1 of 1

ESC LAB SCIENCES
12065 Lebanon Road
Mt. Juliet, TN 37122

Phone: (800) 767-5859
Phone: (615) 758-5858
Fax: (615) 758-5859

Report to: Gary Lasako

Email: admin@bpenvironmental.net

Project Description: LSI

City/State Collected

Phone: (410) 819-0919
FAX:

Client Project #: HJ-101-01

Lab Project #: BPENV-H+J-101-01

Collected by (print): GARY LASAKO

Site/Facility ID#: 11762

P.O.#: H+J-101-01

Collected by (signature): Gary K Lasako

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed

Email? ___No X Yes
FAX? ___No ___Yes

Acctnum: BPENV (lab use only)
Template/Prelogin: T82769/ P410090
Cooler #: 10-29 M
Shipped Via: FedEX Ground

Analysis/Container/Preservative

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	DRO 100ml Amb-HCl	DRO 4ozClr-NoPres	GRO / VOC SCREEN 2ozClr-NoPres	GRO 40mlAmb HCl	TS 4ozClr-NoPres	V8260 40ml/NaBiS/Syr/MeOH	V8260OXY 40mlAmb-HCl	Remarks/Contaminant	Sample # (lab only)
SB-01 15'-17'	GRAB	SS		8NOV12	0920	6		X	X		X	X		RUN	L605622-01
SB-01 41'-43'		SS			1150	6		X	X		X	X			02
SB-03 11'-13'		SS			1450	6		X	X		X	X			03
SB-03 34'-36'		SS			1500	6		X	X		X	X			04
SB-04 34'-36'		SS			1630	6		X	X		X	X			05
		SS				6		X	X		X	X			
		SS				6		X	X		X	X			
		SS				6		X	X		X	X			
TW-01	GRAB	GW		8NOV12	1645	3	X			X			X	RUN	06
TRIP BLANK	GRAB	OT		9NOV12	1300									HOLD	

*Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other LAB-SUPPLIED LSI 4ND

Remarks:

pH ___ Temp ___

Flow ___ Other ___

5413-1730 3922

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Gary K Lasako	8NOV12	1345	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)
			[illegible]

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐

Temp: 3.4C Bottles Received: 34

Date: 11/10/12 Time: 0900

Condition: TD (lab use only)

COC Seal Intact: ✓ Y ___ N ___ NA

pH Checked: <2

NCF:

APPENDIX D

12065 Lebanon Rd.
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Gary Lasako
BP Environmental
8615 Commerce Drive, Unit One
Easton, MD 21601

Report Summary

Wednesday December 12, 2012

Report Number: L606271
Samples Received: 11/14/12
Client Project: HJ-101-01

Description: LSI

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By: _____

Craig Cothron , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197, FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1, TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.
Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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Case Narrative

Wednesday December 12, 2012

Report Number: L606271
Samples Received: 11/14/12
Client Project: HJ-101-01

Description: LSI

Other Comments

L60627-03 V9 : Surrogate recovered low and outside limits in WG LCSD.

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REPORT OF ANALYSIS

Gary Lasako
BP Environmental
8615 Commerce Drive, Unit One
Easton, MD 21601

December 12, 2012

ESC Sample # : L606271-01

Date Received : November 14, 2012
Description : LSI

Site ID : 11762

Sample ID : PRODUCT LINE EX 2.75 FT

Project # : HJ-101-01

Collected By : Gary Lasko
Collection Date : 11/12/12 12:20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	84.2	0.100	%	2540G	11/19/12	1
TPH (GC/FID) Low Fraction	0.80	0.10	mg/kg	8015	11/18/12	1
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	99.6		% Rec.	8015	11/18/12	1
Volatiles - Oxygenates						
Acetone	BDL	0.050	mg/kg	8260B	11/17/12	1
Acrylonitrile	BDL	0.010	mg/kg	8260B	11/17/12	1
Benzene	0.0014	0.0010	mg/kg	8260B	11/17/12	1
Bromobenzene	BDL	0.0010	mg/kg	8260B	11/17/12	1
Bromodichloromethane	BDL	0.0010	mg/kg	8260B	11/17/12	1
Bromoform	BDL	0.0010	mg/kg	8260B	11/17/12	1
Bromomethane	BDL	0.0050	mg/kg	8260B	11/17/12	1
n-Butylbenzene	BDL	0.0010	mg/kg	8260B	11/17/12	1
sec-Butylbenzene	BDL	0.0010	mg/kg	8260B	11/17/12	1
tert-Butylbenzene	BDL	0.0010	mg/kg	8260B	11/17/12	1
Carbon tetrachloride	BDL	0.0010	mg/kg	8260B	11/17/12	1
Chlorobenzene	BDL	0.0010	mg/kg	8260B	11/17/12	1
Chlorodibromomethane	BDL	0.0010	mg/kg	8260B	11/17/12	1
Chloroethane	BDL	0.0050	mg/kg	8260B	11/17/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/kg	8260B	11/17/12	1
Chloroform	BDL	0.0050	mg/kg	8260B	11/17/12	1
Chloromethane	BDL	0.0025	mg/kg	8260B	11/17/12	1
2-Chlorotoluene	BDL	0.0010	mg/kg	8260B	11/17/12	1
4-Chlorotoluene	BDL	0.0010	mg/kg	8260B	11/17/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/kg	8260B	11/17/12	1
1,2-Dibromoethane	BDL	0.0010	mg/kg	8260B	11/17/12	1
Dibromomethane	BDL	0.0010	mg/kg	8260B	11/17/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/kg	8260B	11/17/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/kg	8260B	11/17/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/kg	8260B	11/17/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/kg	8260B	11/17/12	1
1,1-Dichloroethane	BDL	0.0010	mg/kg	8260B	11/17/12	1
1,2-Dichloroethane	BDL	0.0010	mg/kg	8260B	11/17/12	1
1,1-Dichloroethene	BDL	0.0010	mg/kg	8260B	11/17/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/kg	8260B	11/17/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/kg	8260B	11/17/12	1
1,2-Dichloropropane	BDL	0.0010	mg/kg	8260B	11/17/12	1
1,1-Dichloropropene	BDL	0.0010	mg/kg	8260B	11/17/12	1
1,3-Dichloropropane	BDL	0.0010	mg/kg	8260B	11/17/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/kg	8260B	11/17/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/kg	8260B	11/17/12	1
2,2-Dichloropropane	BDL	0.0010	mg/kg	8260B	11/17/12	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Gary Lasako
BP Environmental
8615 Commerce Drive, Unit One
Easton, MD 21601

December 12, 2012

ESC Sample # : L606271-01

Site ID : 11762

Project # : HJ-101-01

Date Received : November 14, 2012
Description : LSI

Sample ID : PRODUCT LINE EX 2.75 FT

Collected By : Gary Lasko
Collection Date : 11/12/12 12:20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Di-isopropyl ether	BDL	0.0010	mg/kg	8260B	11/17/12	1
Ethylbenzene	BDL	0.0010	mg/kg	8260B	11/17/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/kg	8260B	11/17/12	1
Isopropylbenzene	BDL	0.0010	mg/kg	8260B	11/17/12	1
p-Isopropyltoluene	0.0021	0.0010	mg/kg	8260B	11/17/12	1
2-Butanone (MEK)	BDL	0.010	mg/kg	8260B	11/17/12	1
Methylene Chloride	BDL	0.0050	mg/kg	8260B	11/17/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/kg	8260B	11/17/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/kg	8260B	11/17/12	1
Naphthalene	0.0085	0.0050	mg/kg	8260B	11/17/12	1
n-Propylbenzene	BDL	0.0010	mg/kg	8260B	11/17/12	1
Styrene	BDL	0.0010	mg/kg	8260B	11/17/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/kg	8260B	11/17/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/kg	8260B	11/17/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/kg	8260B	11/17/12	1
Tetrachloroethene	BDL	0.0010	mg/kg	8260B	11/17/12	1
Toluene	BDL	0.0050	mg/kg	8260B	11/17/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/kg	8260B	11/17/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/kg	8260B	11/17/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/kg	8260B	11/17/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/kg	8260B	11/17/12	1
Trichloroethene	BDL	0.0010	mg/kg	8260B	11/17/12	1
Trichlorofluoromethane	BDL	0.0050	mg/kg	8260B	11/17/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/kg	8260B	11/17/12	1
1,2,4-Trimethylbenzene	0.017	0.0010	mg/kg	8260B	11/17/12	1
1,2,3-Trimethylbenzene	0.012	0.0010	mg/kg	8260B	11/17/12	1
1,3,5-Trimethylbenzene	0.011	0.0010	mg/kg	8260B	11/17/12	1
Vinyl chloride	BDL	0.0010	mg/kg	8260B	11/17/12	1
Xylenes, Total	0.0090	0.0030	mg/kg	8260B	11/17/12	1
Ethanol	BDL	0.10	mg/kg	8260B	11/17/12	1
Ethyl tert-butyl ether	BDL	0.0010	mg/kg	8260B	11/17/12	1
t-Amyl Alcohol	BDL	0.050	mg/kg	8260B	11/17/12	1
tert-Butyl alcohol	0.024	0.0050	mg/kg	8260B	11/17/12	1
tert-Amyl Methyl Ether	BDL	0.0010	mg/kg	8260B	11/17/12	1
Surrogate Recovery						
Toluene-d8	94.8		% Rec.	8260B	11/17/12	1
Dibromofluoromethane	96.5		% Rec.	8260B	11/17/12	1
4-Bromofluorobenzene	92.2		% Rec.	8260B	11/17/12	1
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	11/20/12	1
Surrogate recovery(%)						
o-Terphenyl	74.3		% Rec.	3546/DRO	11/20/12	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
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.
Reported: 12/12/12 13:54 Printed: 12/12/12 13:54

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REPORT OF ANALYSIS

Gary Lasako
BP Environmental
8615 Commerce Drive, Unit One
Easton, MD 21601

December 12, 2012

ESC Sample # : L606271-02

Site ID : 11762

Project # : HJ-101-01

Date Received : November 14, 2012
Description : LSI

Sample ID : TFMP-01

Collected By : Gary Lasko
Collection Date : 11/12/12 09:30

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	120	1.6	5.0	mg/l		8015	11/15/12	50
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	96.7			% Rec.		8015	11/15/12	50
Volatile Organics								
Acetone	U	0.46	5.0	mg/l		8260B	11/15/12	100
Acrolein	U	0.89	5.0	mg/l		8260B	11/15/12	100
Acrylonitrile	U	0.19	1.0	mg/l		8260B	11/15/12	100
Benzene	4.5	0.033	0.10	mg/l		8260B	11/15/12	100
Bromobenzene	U	0.035	0.10	mg/l		8260B	11/15/12	100
Bromodichloromethane	U	0.038	0.10	mg/l		8260B	11/15/12	100
Bromoform	U	0.047	0.10	mg/l		8260B	11/15/12	100
Bromomethane	U	0.087	0.50	mg/l		8260B	11/15/12	100
n-Butylbenzene	U	0.036	0.10	mg/l		8260B	11/15/12	100
sec-Butylbenzene	U	0.036	0.10	mg/l		8260B	11/15/12	100
tert-Butylbenzene	U	0.040	0.10	mg/l		8260B	11/15/12	100
Carbon disulfide	U	0.028	0.10	mg/l		8260B	11/15/12	100
Carbon tetrachloride	U	0.038	0.10	mg/l		8260B	11/15/12	100
Chlorobenzene	U	0.035	0.10	mg/l		8260B	11/15/12	100
Chlorodibromomethane	U	0.033	0.10	mg/l		8260B	11/15/12	100
Chloroethane	U	0.045	0.50	mg/l		8260B	11/15/12	100
2-Chloroethyl vinyl ether	U	0.30	5.0	mg/l		8260B	11/15/12	100
Chloroform	U	0.032	0.50	mg/l		8260B	11/15/12	100
Chloromethane	U	0.028	0.25	mg/l		8260B	11/15/12	100
2-Chlorotoluene	U	0.038	0.10	mg/l		8260B	11/15/12	100
4-Chlorotoluene	U	0.035	0.10	mg/l		8260B	11/15/12	100
1,2-Dibromo-3-Chloropropane	U	0.13	0.50	mg/l		8260B	11/15/12	100
1,2-Dibromoethane	U	0.038	0.10	mg/l		8260B	11/15/12	100
Dibromomethane	U	0.035	0.10	mg/l		8260B	11/15/12	100
1,2-Dichlorobenzene	U	0.035	0.10	mg/l		8260B	11/15/12	100
1,3-Dichlorobenzene	U	0.022	0.10	mg/l		8260B	11/15/12	100
1,4-Dichlorobenzene	U	0.027	0.10	mg/l		8260B	11/15/12	100
Dichlorodifluoromethane	U	0.055	0.50	mg/l		8260B	11/15/12	100
1,1-Dichloroethane	U	0.026	0.10	mg/l		8260B	11/15/12	100
1,2-Dichloroethane	U	0.036	0.10	mg/l		8260B	11/15/12	100
1,1-Dichloroethene	U	0.040	0.10	mg/l		8260B	11/15/12	100
cis-1,2-Dichloroethene	U	0.026	0.10	mg/l		8260B	11/15/12	100
trans-1,2-Dichloroethene	U	0.040	0.10	mg/l		8260B	11/15/12	100
1,2-Dichloropropane	U	0.031	0.10	mg/l		8260B	11/15/12	100
1,1-Dichloropropene	U	0.035	0.10	mg/l		8260B	11/15/12	100
1,3-Dichloropropane	U	0.037	0.10	mg/l		8260B	11/15/12	100
cis-1,3-Dichloropropene	U	0.042	0.10	mg/l		8260B	11/15/12	100
trans-1,3-Dichloropropene	U	0.042	0.10	mg/l		8260B	11/15/12	100
2,2-Dichloropropane	U	0.032	0.10	mg/l		8260B	11/15/12	100

U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Gary Lasako
BP Environmental
8615 Commerce Drive, Unit One
Easton, MD 21601

December 12, 2012

ESC Sample # : L606271-02

Site ID : 11762

Project # : HJ-101-01

Date Received : November 14, 2012
Description : LSI

Sample ID : TFMP-01

Collected By : Gary Lasko
Collection Date : 11/12/12 09:30

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Ethylbenzene	2.6	0.038	0.10	mg/l		8260B	11/15/12	100
Hexachloro-1,3-butadiene	U	0.026	0.10	mg/l		8260B	11/15/12	100
Isopropylbenzene	0.13	0.033	0.10	mg/l		8260B	11/15/12	100
p-Isopropyltoluene	U	0.035	0.10	mg/l		8260B	11/15/12	100
2-Butanone (MEK)	U	0.39	1.0	mg/l		8260B	11/15/12	100
Methylene Chloride	U	0.084	0.50	mg/l		8260B	11/15/12	100
4-Methyl-2-pentanone (MIBK)	U	0.21	1.0	mg/l		8260B	11/15/12	100
Naphthalene	0.36	0.059	0.50	mg/l	J	8260B	11/15/12	100
n-Propylbenzene	0.23	0.035	0.10	mg/l		8260B	11/15/12	100
Styrene	0.033	0.031	0.10	mg/l	J	8260B	11/15/12	100
1,1,1,2-Tetrachloroethane	U	0.038	0.10	mg/l		8260B	11/15/12	100
1,1,2,2-Tetrachloroethane	U	0.058	0.10	mg/l		8260B	11/15/12	100
1,1,2-Trichlorotrifluoroethane	U	0.030	0.10	mg/l		8260B	11/15/12	100
Tetrachloroethene	U	0.037	0.10	mg/l		8260B	11/15/12	100
Toluene	37.	0.78	5.0	mg/l		8260B	11/19/12	1000
1,2,3-Trichlorobenzene	U	0.023	0.10	mg/l		8260B	11/15/12	100
1,2,4-Trichlorobenzene	U	0.021	0.10	mg/l		8260B	11/15/12	100
1,1,1-Trichloroethane	U	0.032	0.10	mg/l		8260B	11/15/12	100
1,1,2-Trichloroethane	U	0.038	0.10	mg/l		8260B	11/15/12	100
Trichloroethene	U	0.040	0.10	mg/l		8260B	11/15/12	100
Trichlorofluoromethane	U	0.12	0.50	mg/l		8260B	11/15/12	100
1,2,3-Trichloropropane	U	0.081	0.25	mg/l		8260B	11/15/12	100
1,2,4-Trimethylbenzene	1.9	0.037	0.10	mg/l		8260B	11/15/12	100
1,2,3-Trimethylbenzene	0.46	0.032	0.10	mg/l		8260B	11/15/12	100
1,3,5-Trimethylbenzene	0.45	0.039	0.10	mg/l		8260B	11/15/12	100
Vinyl chloride	U	0.026	0.10	mg/l		8260B	11/15/12	100
Xylenes, Total	12.	0.11	0.30	mg/l		8260B	11/15/12	100
Di-isopropyl ether	0.070	0.032	0.10	mg/l	J	8260B	11/15/12	100
Ethanol	U	4.2	10.	mg/l		8260B	11/15/12	100
Ethyl tert-butyl ether	0.028	0.027	0.10	mg/l	J	8260B	11/15/12	100
Methyl tert-butyl ether	0.16	0.037	0.10	mg/l		8260B	11/15/12	100
t-Amyl Alcohol	1.2	0.49	5.0	mg/l	J	8260B	11/15/12	100
tert-Butyl alcohol	U	0.24	0.50	mg/l		8260B	11/15/12	100
tert-Amyl Methyl Ether	0.028	0.026	0.10	mg/l	J	8260B	11/15/12	100
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	11/15/12	100
Dibromofluoromethane	93.8			% Rec.		8260B	11/15/12	100
4-Bromofluorobenzene	108.			% Rec.		8260B	11/15/12	100
TPH (GC/FID) High Fraction	14.	0.046	0.50	mg/l		DRO	11/20/12	5
Surrogate recovery(%)								
o-Terphenyl	60.1			% Rec.		DRO	11/20/12	5

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REPORT OF ANALYSIS

Gary Lasako
BP Environmental
8615 Commerce Drive, Unit One
Easton, MD 21601

December 12, 2012

ESC Sample # : L606271-03

Site ID : 11762

Project # : HJ-101-01

Date Received : November 14, 2012
Description : LSI

Sample ID : TFMP-02

Collected By : Gary Lasko
Collection Date : 11/12/12 09:55

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	75.	1.6	5.0	mg/l		8015	11/18/12	50
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	98.2			% Rec.		8015	11/18/12	50
Volatile Organics								
Acetone	U	0.46	5.0	mg/l		8260B	11/15/12	100
Acrolein	U	0.89	5.0	mg/l		8260B	11/15/12	100
Acrylonitrile	U	0.19	1.0	mg/l		8260B	11/15/12	100
Benzene	1.3	0.033	0.10	mg/l		8260B	11/15/12	100
Bromobenzene	U	0.035	0.10	mg/l		8260B	11/15/12	100
Bromodichloromethane	U	0.038	0.10	mg/l		8260B	11/15/12	100
Bromoform	U	0.047	0.10	mg/l		8260B	11/15/12	100
Bromomethane	U	0.087	0.50	mg/l		8260B	11/15/12	100
n-Butylbenzene	U	0.036	0.10	mg/l		8260B	11/15/12	100
sec-Butylbenzene	U	0.036	0.10	mg/l		8260B	11/15/12	100
tert-Butylbenzene	U	0.040	0.10	mg/l		8260B	11/15/12	100
Carbon disulfide	U	0.028	0.10	mg/l		8260B	11/15/12	100
Carbon tetrachloride	U	0.038	0.10	mg/l		8260B	11/15/12	100
Chlorobenzene	U	0.035	0.10	mg/l		8260B	11/15/12	100
Chlorodibromomethane	U	0.033	0.10	mg/l		8260B	11/15/12	100
Chloroethane	U	0.045	0.50	mg/l		8260B	11/15/12	100
2-Chloroethyl vinyl ether	U	0.30	5.0	mg/l		8260B	11/15/12	100
Chloroform	U	0.032	0.50	mg/l		8260B	11/15/12	100
Chloromethane	U	0.028	0.25	mg/l		8260B	11/15/12	100
2-Chlorotoluene	U	0.038	0.10	mg/l		8260B	11/15/12	100
4-Chlorotoluene	U	0.035	0.10	mg/l		8260B	11/15/12	100
1,2-Dibromo-3-Chloropropane	U	0.13	0.50	mg/l		8260B	11/15/12	100
1,2-Dibromoethane	U	0.038	0.10	mg/l		8260B	11/15/12	100
Dibromomethane	U	0.035	0.10	mg/l		8260B	11/15/12	100
1,2-Dichlorobenzene	U	0.035	0.10	mg/l		8260B	11/15/12	100
1,3-Dichlorobenzene	U	0.022	0.10	mg/l		8260B	11/15/12	100
1,4-Dichlorobenzene	U	0.027	0.10	mg/l		8260B	11/15/12	100
Dichlorodifluoromethane	U	0.055	0.50	mg/l		8260B	11/15/12	100
1,1-Dichloroethane	U	0.026	0.10	mg/l		8260B	11/15/12	100
1,2-Dichloroethane	U	0.036	0.10	mg/l		8260B	11/15/12	100
1,1-Dichloroethene	U	0.040	0.10	mg/l		8260B	11/15/12	100
cis-1,2-Dichloroethene	U	0.026	0.10	mg/l		8260B	11/15/12	100
trans-1,2-Dichloroethene	U	0.040	0.10	mg/l		8260B	11/15/12	100
1,2-Dichloropropane	U	0.031	0.10	mg/l		8260B	11/15/12	100
1,1-Dichloropropene	U	0.035	0.10	mg/l		8260B	11/15/12	100
1,3-Dichloropropane	U	0.037	0.10	mg/l		8260B	11/15/12	100
cis-1,3-Dichloropropene	U	0.042	0.10	mg/l		8260B	11/15/12	100
trans-1,3-Dichloropropene	U	0.042	0.10	mg/l		8260B	11/15/12	100
2,2-Dichloropropane	U	0.032	0.10	mg/l		8260B	11/15/12	100

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REPORT OF ANALYSIS

Gary Lasako
BP Environmental
8615 Commerce Drive, Unit One
Easton, MD 21601

December 12, 2012

ESC Sample # : L606271-03

Site ID : 11762

Project # : HJ-101-01

Date Received : November 14, 2012
Description : LSI

Sample ID : TFMP-02

Collected By : Gary Lasko
Collection Date : 11/12/12 09:55

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Ethylbenzene	2.3	0.038	0.10	mg/l		8260B	11/15/12	100
Hexachloro-1,3-butadiene	U	0.026	0.10	mg/l		8260B	11/15/12	100
Isopropylbenzene	0.15	0.033	0.10	mg/l		8260B	11/15/12	100
p-Isopropyltoluene	U	0.035	0.10	mg/l		8260B	11/15/12	100
2-Butanone (MEK)	U	0.39	1.0	mg/l		8260B	11/15/12	100
Methylene Chloride	U	0.084	0.50	mg/l		8260B	11/15/12	100
4-Methyl-2-pentanone (MIBK)	U	0.21	1.0	mg/l		8260B	11/15/12	100
Naphthalene	0.39	0.059	0.50	mg/l	J	8260B	11/15/12	100
n-Propylbenzene	0.26	0.035	0.10	mg/l		8260B	11/15/12	100
Styrene	U	0.031	0.10	mg/l		8260B	11/15/12	100
1,1,1,2-Tetrachloroethane	U	0.038	0.10	mg/l		8260B	11/15/12	100
1,1,2,2-Tetrachloroethane	U	0.058	0.10	mg/l		8260B	11/15/12	100
1,1,2-Trichlorotrifluoroethane	U	0.030	0.10	mg/l		8260B	11/15/12	100
Tetrachloroethene	U	0.037	0.10	mg/l		8260B	11/15/12	100
Toluene	17.	0.078	0.50	mg/l		8260B	11/15/12	100
1,2,3-Trichlorobenzene	U	0.023	0.10	mg/l		8260B	11/15/12	100
1,2,4-Trichlorobenzene	U	0.021	0.10	mg/l		8260B	11/15/12	100
1,1,1-Trichloroethane	U	0.032	0.10	mg/l		8260B	11/15/12	100
1,1,2-Trichloroethane	U	0.038	0.10	mg/l		8260B	11/15/12	100
Trichloroethene	U	0.040	0.10	mg/l		8260B	11/15/12	100
Trichlorofluoromethane	U	0.12	0.50	mg/l		8260B	11/15/12	100
1,2,3-Trichloropropane	U	0.081	0.25	mg/l		8260B	11/15/12	100
1,2,4-Trimethylbenzene	2.1	0.037	0.10	mg/l		8260B	11/15/12	100
1,2,3-Trimethylbenzene	0.52	0.032	0.10	mg/l		8260B	11/15/12	100
1,3,5-Trimethylbenzene	0.49	0.039	0.10	mg/l		8260B	11/15/12	100
Vinyl chloride	U	0.026	0.10	mg/l		8260B	11/15/12	100
Xylenes, Total	11.	0.11	0.30	mg/l		8260B	11/15/12	100
Di-isopropyl ether	U	0.032	0.10	mg/l		8260B	11/15/12	100
Ethanol	U	4.2	10.	mg/l		8260B	11/15/12	100
Ethyl tert-butyl ether	U	0.027	0.10	mg/l		8260B	11/15/12	100
Methyl tert-butyl ether	0.058	0.037	0.10	mg/l	J	8260B	11/15/12	100
t-Amyl Alcohol	0.90	0.49	5.0	mg/l	J	8260B	11/15/12	100
tert-Butyl alcohol	U	0.24	0.50	mg/l		8260B	11/15/12	100
tert-Amyl Methyl Ether	U	0.026	0.10	mg/l		8260B	11/15/12	100
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	11/15/12	100
Dibromofluoromethane	93.7			% Rec.		8260B	11/15/12	100
4-Bromofluorobenzene	106.			% Rec.		8260B	11/15/12	100
TPH (GC/FID) High Fraction	18.	0.046	0.50	mg/l	BV9	DRO	11/19/12	5
Surrogate recovery(%)								
o-Terphenyl	60.9			% Rec.		DRO	11/19/12	5

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Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L606271-02	WG623194	SAMP	Naphthalene	R2444057	J
	WG623194	SAMP	Styrene	R2444057	J
	WG623194	SAMP	Di-isopropyl ether	R2444057	J
	WG623194	SAMP	Ethyl tert-butyl ether	R2444057	J
	WG623194	SAMP	t-Amyl Alcohol	R2444057	J
	WG623194	SAMP	tert-Amyl Methyl Ether	R2444057	J
L606271-03	WG623826	SAMP	TPH (GC/FID) High Fraction	R2452517	BV9
	WG623194	SAMP	Naphthalene	R2444057	J
	WG623194	SAMP	Methyl tert-butyl ether	R2444057	J
	WG623194	SAMP	t-Amyl Alcohol	R2444057	J

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
B	(EPA) - The indicated compound was found in the associated method blank as well as the laboratory sample.
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
V9	(ESC) - Additional QC Info: Please refer to the Case Narrative provided with the report.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods,it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Differrence.

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

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BP Environmental
Gary Lasako
8615 Commerce Drive, Unit One

Easton, MD 21601

Quality Assurance Report
Level II

L606271

December 12, 2012

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
TPH (GC/FID) Low Fraction	< .1	mg/l			WG623201	11/15/12 12:13
a,a,a-Trifluorotoluene(FID)		% Rec.	96.09	62-128	WG623201	11/15/12 12:13
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG623194	11/15/12 12:54
1,1,1-Trichloroethane	< .001	mg/l			WG623194	11/15/12 12:54
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG623194	11/15/12 12:54
1,1,2-Trichloroethane	< .001	mg/l			WG623194	11/15/12 12:54
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG623194	11/15/12 12:54
1,1-Dichloroethane	< .001	mg/l			WG623194	11/15/12 12:54
1,1-Dichloroethene	< .001	mg/l			WG623194	11/15/12 12:54
1,1-Dichloropropene	< .001	mg/l			WG623194	11/15/12 12:54
1,2,3-Trichlorobenzene	< .001	mg/l			WG623194	11/15/12 12:54
1,2,3-Trichloropropane	< .001	mg/l			WG623194	11/15/12 12:54
1,2,3-Trimethylbenzene	< .001	mg/l			WG623194	11/15/12 12:54
1,2,4-Trichlorobenzene	< .001	mg/l			WG623194	11/15/12 12:54
1,2,4-Trimethylbenzene	< .001	mg/l			WG623194	11/15/12 12:54
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG623194	11/15/12 12:54
1,2-Dibromoethane	< .001	mg/l			WG623194	11/15/12 12:54
1,2-Dichlorobenzene	< .001	mg/l			WG623194	11/15/12 12:54
1,2-Dichloroethane	< .001	mg/l			WG623194	11/15/12 12:54
1,2-Dichloropropane	< .001	mg/l			WG623194	11/15/12 12:54
1,3,5-Trimethylbenzene	< .001	mg/l			WG623194	11/15/12 12:54
1,3-Dichlorobenzene	< .001	mg/l			WG623194	11/15/12 12:54
1,3-Dichloropropane	< .001	mg/l			WG623194	11/15/12 12:54
1,4-Dichlorobenzene	< .001	mg/l			WG623194	11/15/12 12:54
2,2-Dichloropropane	< .001	mg/l			WG623194	11/15/12 12:54
2-Butanone (MEK)	< .01	mg/l			WG623194	11/15/12 12:54
2-Chloroethyl vinyl ether	< .05	mg/l			WG623194	11/15/12 12:54
2-Chlorotoluene	< .001	mg/l			WG623194	11/15/12 12:54
4-Chlorotoluene	< .001	mg/l			WG623194	11/15/12 12:54
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG623194	11/15/12 12:54
Acetone	< .05	mg/l			WG623194	11/15/12 12:54
Acrolein	< .025	mg/l			WG623194	11/15/12 12:54
Acrylonitrile	< .01	mg/l			WG623194	11/15/12 12:54
Benzene	< .001	mg/l			WG623194	11/15/12 12:54
Bromobenzene	< .001	mg/l			WG623194	11/15/12 12:54
Bromodichloromethane	< .001	mg/l			WG623194	11/15/12 12:54
Bromoform	< .001	mg/l			WG623194	11/15/12 12:54
Bromomethane	< .005	mg/l			WG623194	11/15/12 12:54
Carbon disulfide	< .001	mg/l			WG623194	11/15/12 12:54
Carbon tetrachloride	< .001	mg/l			WG623194	11/15/12 12:54
Chlorobenzene	< .001	mg/l			WG623194	11/15/12 12:54
Chlorodibromomethane	< .001	mg/l			WG623194	11/15/12 12:54
Chloroethane	< .005	mg/l			WG623194	11/15/12 12:54
Chloroform	< .005	mg/l			WG623194	11/15/12 12:54
Chloromethane	< .0025	mg/l			WG623194	11/15/12 12:54
cis-1,2-Dichloroethene	< .001	mg/l			WG623194	11/15/12 12:54
cis-1,3-Dichloropropene	< .001	mg/l			WG623194	11/15/12 12:54
Di-isopropyl ether	< .001	mg/l			WG623194	11/15/12 12:54
Dibromomethane	< .001	mg/l			WG623194	11/15/12 12:54
Dichlorodifluoromethane	< .005	mg/l			WG623194	11/15/12 12:54
Ethanol	< .1	mg/l			WG623194	11/15/12 12:54
Ethyl tert-butyl ether	< .001	mg/l			WG623194	11/15/12 12:54
Ethylbenzene	< .001	mg/l			WG623194	11/15/12 12:54
Hexachloro-1,3-butadiene	< .001	mg/l			WG623194	11/15/12 12:54
Isopropylbenzene	< .001	mg/l			WG623194	11/15/12 12:54
Methyl tert-butyl ether	< .001	mg/l			WG623194	11/15/12 12:54
Methylene Chloride	< .005	mg/l			WG623194	11/15/12 12:54

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BP Environmental
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Easton, MD 21601

Quality Assurance Report
Level II

L606271

December 12, 2012

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
n-Butylbenzene	< .001	mg/l			WG623194	11/15/12 12:54
n-Propylbenzene	< .001	mg/l			WG623194	11/15/12 12:54
Naphthalene	< .005	mg/l			WG623194	11/15/12 12:54
p-Isopropyltoluene	< .001	mg/l			WG623194	11/15/12 12:54
sec-Butylbenzene	< .001	mg/l			WG623194	11/15/12 12:54
Styrene	< .001	mg/l			WG623194	11/15/12 12:54
tert-Amyl Methyl Ether	< .001	mg/l			WG623194	11/15/12 12:54
tert-Butyl alcohol	< .005	mg/l			WG623194	11/15/12 12:54
tert-Butylbenzene	< .001	mg/l			WG623194	11/15/12 12:54
Tetrachloroethene	< .001	mg/l			WG623194	11/15/12 12:54
Toluene	< .005	mg/l			WG623194	11/15/12 12:54
trans-1,2-Dichloroethene	< .001	mg/l			WG623194	11/15/12 12:54
trans-1,3-Dichloropropene	< .001	mg/l			WG623194	11/15/12 12:54
Trichloroethene	< .001	mg/l			WG623194	11/15/12 12:54
Trichlorofluoromethane	< .005	mg/l			WG623194	11/15/12 12:54
Vinyl chloride	< .001	mg/l			WG623194	11/15/12 12:54
Xylenes, Total	< .003	mg/l			WG623194	11/15/12 12:54
4-Bromofluorobenzene		% Rec.	106.1	82-120	WG623194	11/15/12 12:54
Dibromofluoromethane		% Rec.	95.66	82-126	WG623194	11/15/12 12:54
Toluene-d8		% Rec.	103.4	92-112	WG623194	11/15/12 12:54
1,1,1,2-Tetrachloroethane	< .001	mg/kg			WG623530	11/16/12 20:19
1,1,1-Trichloroethane	< .001	mg/kg			WG623530	11/16/12 20:19
1,1,2,2-Tetrachloroethane	< .001	mg/kg			WG623530	11/16/12 20:19
1,1,2-Trichloroethane	< .001	mg/kg			WG623530	11/16/12 20:19
1,1,2-Trichlorotrifluoroethane	< .001	mg/kg			WG623530	11/16/12 20:19
1,1-Dichloroethane	< .001	mg/kg			WG623530	11/16/12 20:19
1,1-Dichloroethene	< .001	mg/kg			WG623530	11/16/12 20:19
1,1-Dichloropropene	< .001	mg/kg			WG623530	11/16/12 20:19
1,2,3-Trichlorobenzene	< .001	mg/kg			WG623530	11/16/12 20:19
1,2,3-Trichloropropane	< .0025	mg/kg			WG623530	11/16/12 20:19
1,2,3-Trimethylbenzene	< .001	mg/kg			WG623530	11/16/12 20:19
1,2,4-Trichlorobenzene	< .001	mg/kg			WG623530	11/16/12 20:19
1,2,4-Trimethylbenzene	< .001	mg/kg			WG623530	11/16/12 20:19
1,2-Dibromo-3-Chloropropane	< .005	mg/kg			WG623530	11/16/12 20:19
1,2-Dibromoethane	< .001	mg/kg			WG623530	11/16/12 20:19
1,2-Dichlorobenzene	< .001	mg/kg			WG623530	11/16/12 20:19
1,2-Dichloroethane	< .001	mg/kg			WG623530	11/16/12 20:19
1,2-Dichloropropane	< .001	mg/kg			WG623530	11/16/12 20:19
1,3,5-Trimethylbenzene	< .001	mg/kg			WG623530	11/16/12 20:19
1,3-Dichlorobenzene	< .001	mg/kg			WG623530	11/16/12 20:19
1,3-Dichloropropane	< .001	mg/kg			WG623530	11/16/12 20:19
1,4-Dichlorobenzene	< .001	mg/kg			WG623530	11/16/12 20:19
2,2-Dichloropropane	< .001	mg/kg			WG623530	11/16/12 20:19
2-Butanone (MEK)	< .01	mg/kg			WG623530	11/16/12 20:19
2-Chloroethyl vinyl ether	< .05	mg/kg			WG623530	11/16/12 20:19
2-Chlorotoluene	< .001	mg/kg			WG623530	11/16/12 20:19
4-Chlorotoluene	< .001	mg/kg			WG623530	11/16/12 20:19
4-Methyl-2-pentanone (MIBK)	< .01	mg/kg			WG623530	11/16/12 20:19
Acetone	< .05	mg/kg			WG623530	11/16/12 20:19
Acrylonitrile	< .01	mg/kg			WG623530	11/16/12 20:19
Benzene	< .001	mg/kg			WG623530	11/16/12 20:19
Bromobenzene	< .001	mg/kg			WG623530	11/16/12 20:19
Bromodichloromethane	< .001	mg/kg			WG623530	11/16/12 20:19
Bromoform	< .001	mg/kg			WG623530	11/16/12 20:19
Bromomethane	< .005	mg/kg			WG623530	11/16/12 20:19
Carbon tetrachloride	< .001	mg/kg			WG623530	11/16/12 20:19
Chlorobenzene	< .001	mg/kg			WG623530	11/16/12 20:19

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Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Chlorodibromomethane	< .001	mg/kg			WG623530	11/16/12 20:19
Chloroethane	< .005	mg/kg			WG623530	11/16/12 20:19
Chloroform	< .005	mg/kg			WG623530	11/16/12 20:19
Chloromethane	< .0025	mg/kg			WG623530	11/16/12 20:19
cis-1,2-Dichloroethene	< .001	mg/kg			WG623530	11/16/12 20:19
cis-1,3-Dichloropropene	< .001	mg/kg			WG623530	11/16/12 20:19
Di-isopropyl ether	< .001	mg/kg			WG623530	11/16/12 20:19
Dibromomethane	< .001	mg/kg			WG623530	11/16/12 20:19
Dichlorodifluoromethane	< .005	mg/kg			WG623530	11/16/12 20:19
Ethyl tert-butyl ether	< .001	mg/kg			WG623530	11/16/12 20:19
Ethylbenzene	< .001	mg/kg			WG623530	11/16/12 20:19
Hexachloro-1,3-butadiene	< .001	mg/kg			WG623530	11/16/12 20:19
Isopropylbenzene	< .001	mg/kg			WG623530	11/16/12 20:19
Methyl tert-butyl ether	< .001	mg/kg			WG623530	11/16/12 20:19
Methylene Chloride	< .005	mg/kg			WG623530	11/16/12 20:19
n-Butylbenzene	< .001	mg/kg			WG623530	11/16/12 20:19
n-Propylbenzene	< .001	mg/kg			WG623530	11/16/12 20:19
Naphthalene	< .005	mg/kg			WG623530	11/16/12 20:19
p-Isopropyltoluene	< .001	mg/kg			WG623530	11/16/12 20:19
sec-Butylbenzene	< .001	mg/kg			WG623530	11/16/12 20:19
Styrene	< .001	mg/kg			WG623530	11/16/12 20:19
tert-Amyl Methyl Ether	< .001	mg/kg			WG623530	11/16/12 20:19
tert-Butyl alcohol	< .005	mg/kg			WG623530	11/16/12 20:19
tert-Butylbenzene	< .001	mg/kg			WG623530	11/16/12 20:19
Tetrachloroethene	< .001	mg/kg			WG623530	11/16/12 20:19
Toluene	< .005	mg/kg			WG623530	11/16/12 20:19
trans-1,2-Dichloroethene	< .001	mg/kg			WG623530	11/16/12 20:19
trans-1,3-Dichloropropene	< .001	mg/kg			WG623530	11/16/12 20:19
Trichloroethene	< .001	mg/kg			WG623530	11/16/12 20:19
Trichlorofluoromethane	< .005	mg/kg			WG623530	11/16/12 20:19
Vinyl chloride	< .001	mg/kg			WG623530	11/16/12 20:19
Xylenes, Total	< .003	mg/kg			WG623530	11/16/12 20:19
4-Bromofluorobenzene		% Rec.	97.19	67-133	WG623530	11/16/12 20:19
Dibromofluoromethane		% Rec.	93.46	72-135	WG623530	11/16/12 20:19
Toluene-d8		% Rec.	96.54	90-113	WG623530	11/16/12 20:19
TPH (GC/FID) Low Fraction	< .1	mg/l			WG623595	11/17/12 18:36
a,a,a-Trifluorotoluene(FID)		% Rec.	96.99	62-128	WG623595	11/17/12 18:36
Total Solids	< .1	%			WG623300	11/19/12 11:46
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG623434	11/18/12 03:09
a,a,a-Trifluorotoluene(FID)		% Rec.	95.36	59-128	WG623434	11/18/12 03:09
Toluene	< .005	mg/l			WG623968	11/19/12 13:39
4-Bromofluorobenzene		% Rec.	102.3	82-120	WG623968	11/19/12 13:39
Dibromofluoromethane		% Rec.	95.71	82-126	WG623968	11/19/12 13:39
Toluene-d8		% Rec.	100.8	92-112	WG623968	11/19/12 13:39
TPH (GC/FID) High Fraction	< .1	mg/l			WG623903	11/20/12 10:08
o-Terphenyl		% Rec.	56.60	50-150	WG623903	11/20/12 10:08
TPH (GC/FID) High Fraction	< 4	mg/kg			WG623812	11/20/12 15:28

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Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
o-Terphenyl		% Rec.	73.00	50-150		11/20/12 15:28
TPH (GC/FID) High Fraction	< .1	mg/l			WG623826	11/19/12 07:08
o-Terphenyl		% Rec.	61.10	50-150	WG623826	11/19/12 07:08

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Total Solids	%	84.0	83.5	0.0416	5	L606280-06	WG623300

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
TPH (GC/FID) Low Fraction	mg/l	5.5	6.20	113.	70-124	WG623201
a,a,a-Trifluorotoluene(FID)				102.8	62-128	WG623201
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0247	98.8	77-128	WG623194
1,1,1-Trichloroethane	mg/l	.025	0.0251	101.	71-126	WG623194
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0224	89.7	78-130	WG623194
1,1,2-Trichloroethane	mg/l	.025	0.0233	93.1	81-121	WG623194
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0297	119.	53-143	WG623194
1,1-Dichloroethane	mg/l	.025	0.0251	101.	73-123	WG623194
1,1-Dichloroethene	mg/l	.025	0.0285	114.	54-134	WG623194
1,1-Dichloropropene	mg/l	.025	0.0258	103.	67-127	WG623194
1,2,3-Trichlorobenzene	mg/l	.025	0.0250	99.8	77-130	WG623194
1,2,3-Trichloropropane	mg/l	.025	0.0227	90.8	68-130	WG623194
1,2,3-Trimethylbenzene	mg/l	.025	0.0230	92.1	77-126	WG623194
1,2,4-Trichlorobenzene	mg/l	.025	0.0265	106.	76-127	WG623194
1,2,4-Trimethylbenzene	mg/l	.025	0.0260	104.	77-129	WG623194
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0220	88.1	55-142	WG623194
1,2-Dibromoethane	mg/l	.025	0.0240	96.1	78-124	WG623194
1,2-Dichlorobenzene	mg/l	.025	0.0237	94.7	82-121	WG623194
1,2-Dichloroethane	mg/l	.025	0.0223	89.3	69-128	WG623194
1,2-Dichloropropane	mg/l	.025	0.0251	100.	77-121	WG623194
1,3,5-Trimethylbenzene	mg/l	.025	0.0262	105.	78-127	WG623194
1,3-Dichlorobenzene	mg/l	.025	0.0257	103.	77-127	WG623194
1,3-Dichloropropane	mg/l	.025	0.0233	93.3	78-117	WG623194
1,4-Dichlorobenzene	mg/l	.025	0.0239	95.7	79-117	WG623194
2,2-Dichloropropane	mg/l	.025	0.0251	100.	63-130	WG623194
2-Butanone (MEK)	mg/l	.125	0.0970	77.6	58-144	WG623194
2-Chloroethyl vinyl ether	mg/l	.125	0.128	103.	26-172	WG623194
2-Chlorotoluene	mg/l	.025	0.0248	99.3	78-123	WG623194
4-Chlorotoluene	mg/l	.025	0.0252	101.	78-122	WG623194
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.114	91.4	58-147	WG623194
Acetone	mg/l	.125	0.0751	60.1	49-153	WG623194
Acrolein	mg/l	.125	0.122	97.7	10-181	WG623194
Acrylonitrile	mg/l	.125	0.113	90.2	53-153	WG623194
Benzene	mg/l	.025	0.0246	98.6	72-119	WG623194
Bromobenzene	mg/l	.025	0.0237	94.7	76-121	WG623194
Bromodichloromethane	mg/l	.025	0.0239	95.8	75-127	WG623194
Bromoform	mg/l	.025	0.0251	100.	61-136	WG623194
Bromomethane	mg/l	.025	0.0274	110.	42-172	WG623194
Carbon disulfide	mg/l	.025	0.0302	121.	19-150	WG623194
Carbon tetrachloride	mg/l	.025	0.0237	94.9	63-129	WG623194
Chlorobenzene	mg/l	.025	0.0248	99.1	78-123	WG623194
Chlorodibromomethane	mg/l	.025	0.0236	94.4	73-128	WG623194
Chloroethane	mg/l	.025	0.0243	97.4	52-164	WG623194
Chloroform	mg/l	.025	0.0240	96.1	76-122	WG623194
Chloromethane	mg/l	.025	0.0233	93.4	50-141	WG623194

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Analyte	Units	Laboratory Control Sample Known Val	Result	% Rec	Limit	Batch
cis-1,2-Dichloroethene	mg/l	.025	0.0251	100.	75-121	WG623194
cis-1,3-Dichloropropene	mg/l	.025	0.0249	99.6	74-124	WG623194
Di-isopropyl ether	mg/l	.025	0.0247	98.9	66-129	WG623194
Dibromomethane	mg/l	.025	0.0242	96.8	77-124	WG623194
Dichlorodifluoromethane	mg/l	.025	0.0234	93.7	33-173	WG623194
Ethylbenzene	mg/l	.025	0.0262	105.	77-124	WG623194
Hexachloro-1,3-butadiene	mg/l	.025	0.0268	107.	71-134	WG623194
Isopropylbenzene	mg/l	.025	0.0279	112.	74-126	WG623194
Methyl tert-butyl ether	mg/l	.025	0.0245	98.2	67-127	WG623194
Methylene Chloride	mg/l	.025	0.0237	94.8	67-122	WG623194
n-Butylbenzene	mg/l	.025	0.0257	103.	74-130	WG623194
n-Propylbenzene	mg/l	.025	0.0260	104.	77-125	WG623194
Naphthalene	mg/l	.025	0.0231	92.5	70-134	WG623194
p-Isopropyltoluene	mg/l	.025	0.0279	112.	77-132	WG623194
sec-Butylbenzene	mg/l	.025	0.0270	108.	77-130	WG623194
Styrene	mg/l	.025	0.0272	109.	69-145	WG623194
tert-Butylbenzene	mg/l	.025	0.0271	108.	76-131	WG623194
Tetrachloroethene	mg/l	.025	0.0262	105.	69-131	WG623194
Toluene	mg/l	.025	0.0245	98.0	75-114	WG623194
trans-1,2-Dichloroethene	mg/l	.025	0.0257	103.	63-127	WG623194
trans-1,3-Dichloropropene	mg/l	.025	0.0237	94.9	69-124	WG623194
Trichloroethene	mg/l	.025	0.0263	105.	69-131	WG623194
Trichlorofluoromethane	mg/l	.025	0.0258	103.	53-161	WG623194
Vinyl chloride	mg/l	.025	0.0242	97.0	55-142	WG623194
Xylenes, Total	mg/l	.075	0.0773	103.	77-123	WG623194
4-Bromofluorobenzene				102.6	82-120	WG623194
Dibromofluoromethane				96.18	82-126	WG623194
Toluene-d8				103.1	92-112	WG623194
1,1,1,2-Tetrachloroethane	mg/kg	.025	0.0250	100.	77-129	WG623530
1,1,1-Trichloroethane	mg/kg	.025	0.0242	96.8	70-127	WG623530
1,1,2,2-Tetrachloroethane	mg/kg	.025	0.0228	91.0	76-133	WG623530
1,1,2-Trichloroethane	mg/kg	.025	0.0237	94.8	79-123	WG623530
1,1,2-Trichlorotrifluoroethane	mg/kg	.025	0.0246	98.5	52-145	WG623530
1,1-Dichloroethane	mg/kg	.025	0.0240	95.8	74-121	WG623530
1,1-Dichloroethene	mg/kg	.025	0.0239	95.7	53-135	WG623530
1,1-Dichloropropene	mg/kg	.025	0.0241	96.6	67-127	WG623530
1,2,3-Trichlorobenzene	mg/kg	.025	0.0252	101.	74-131	WG623530
1,2,3-Trichloropropane	mg/kg	.025	0.0234	93.7	75-135	WG623530
1,2,3-Trimethylbenzene	mg/kg	.025	0.0249	99.4	76-128	WG623530
1,2,4-Trichlorobenzene	mg/kg	.025	0.0254	101.	72-130	WG623530
1,2,4-Trimethylbenzene	mg/kg	.025	0.0254	102.	75-131	WG623530
1,2-Dibromo-3-Chloropropane	mg/kg	.025	0.0234	93.7	55-142	WG623530
1,2-Dibromoethane	mg/kg	.025	0.0246	98.3	77-126	WG623530
1,2-Dichlorobenzene	mg/kg	.025	0.0249	99.8	80-123	WG623530
1,2-Dichloroethane	mg/kg	.025	0.0237	94.9	70-128	WG623530
1,2-Dichloropropane	mg/kg	.025	0.0252	101.	74-125	WG623530
1,3,5-Trimethylbenzene	mg/kg	.025	0.0251	101.	77-129	WG623530
1,3-Dichlorobenzene	mg/kg	.025	0.0250	100.	76-128	WG623530
1,3-Dichloropropane	mg/kg	.025	0.0240	96.1	77-118	WG623530
1,4-Dichlorobenzene	mg/kg	.025	0.0240	96.0	77-119	WG623530
2,2-Dichloropropane	mg/kg	.025	0.0236	94.5	60-132	WG623530
2-Butanone (MEK)	mg/kg	.125	0.110	88.2	56-146	WG623530
2-Chloroethyl vinyl ether	mg/kg	.125	0.132	106.	17-179	WG623530
2-Chlorotoluene	mg/kg	.025	0.0240	95.9	76-125	WG623530
4-Chlorotoluene	mg/kg	.025	0.0248	99.0	76-125	WG623530
4-Methyl-2-pentanone (MIBK)	mg/kg	.125	0.117	93.2	55-148	WG623530
Acetone	mg/kg	.125	0.0994	79.6	47-155	WG623530

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

BP Environmental
Gary Lasako
8615 Commerce Drive, Unit One

Easton, MD 21601

Quality Assurance Report
Level II

L606271

December 12, 2012

Analyte	Units	Laboratory Control Sample Known Val	Result	% Rec	Limit	Batch
Acrylonitrile	mg/kg	.125	0.110	87.7	50-155	WG623530
Benzene	mg/kg	.025	0.0238	95.1	72-120	WG623530
Bromobenzene	mg/kg	.025	0.0242	97.0	74-122	WG623530
Bromodichloromethane	mg/kg	.025	0.0255	102.	74-128	WG623530
Bromoform	mg/kg	.025	0.0255	102.	62-137	WG623530
Bromomethane	mg/kg	.025	0.0285	114.	38-180	WG623530
Carbon tetrachloride	mg/kg	.025	0.0235	94.1	62-130	WG623530
Chlorobenzene	mg/kg	.025	0.0254	102.	77-124	WG623530
Chlorodibromomethane	mg/kg	.025	0.0252	101.	74-128	WG623530
Chloroethane	mg/kg	.025	0.0281	112.	46-173	WG623530
Chloroform	mg/kg	.025	0.0238	95.3	76-122	WG623530
Chloromethane	mg/kg	.025	0.0237	95.0	49-143	WG623530
cis-1,2-Dichloroethene	mg/kg	.025	0.0242	96.8	73-123	WG623530
cis-1,3-Dichloropropene	mg/kg	.025	0.0256	102.	73-126	WG623530
Di-isopropyl ether	mg/kg	.025	0.0234	93.4	64-131	WG623530
Dibromomethane	mg/kg	.025	0.0258	103.	75-127	WG623530
Dichlorodifluoromethane	mg/kg	.025	0.0253	101.	30-177	WG623530
Ethylbenzene	mg/kg	.025	0.0254	102.	76-126	WG623530
Hexachloro-1,3-butadiene	mg/kg	.025	0.0269	108.	71-134	WG623530
Isopropylbenzene	mg/kg	.025	0.0251	100.	70-128	WG623530
Methyl tert-butyl ether	mg/kg	.025	0.0233	93.1	66-127	WG623530
Methylene Chloride	mg/kg	.025	0.0243	97.3	67-124	WG623530
n-Butylbenzene	mg/kg	.025	0.0248	99.3	71-133	WG623530
n-Propylbenzene	mg/kg	.025	0.0251	100.	76-126	WG623530
Naphthalene	mg/kg	.025	0.0253	101.	68-136	WG623530
p-Isopropyltoluene	mg/kg	.025	0.0257	103.	75-134	WG623530
sec-Butylbenzene	mg/kg	.025	0.0249	99.6	75-132	WG623530
Styrene	mg/kg	.025	0.0265	106.	68-148	WG623530
tert-Butylbenzene	mg/kg	.025	0.0257	103.	75-132	WG623530
Tetrachloroethene	mg/kg	.025	0.0249	99.7	70-131	WG623530
Toluene	mg/kg	.025	0.0245	97.9	74-155	WG623530
trans-1,2-Dichloroethene	mg/kg	.025	0.0253	101.	63-126	WG623530
trans-1,3-Dichloropropene	mg/kg	.025	0.0254	102.	68-126	WG623530
Trichloroethene	mg/kg	.025	0.0259	103.	75-121	WG623530
Trichlorofluoromethane	mg/kg	.025	0.0247	98.9	48-170	WG623530
Vinyl chloride	mg/kg	.025	0.0242	96.9	54-144	WG623530
Xylenes, Total	mg/kg	.075	0.0761	101.	76-126	WG623530
4-Bromofluorobenzene				96.43	67-133	WG623530
Dibromofluoromethane				95.55	72-135	WG623530
Toluene-d8				98.11	90-113	WG623530
TPH (GC/FID) Low Fraction	mg/l	5.5	5.64	103.	70-124	WG623595
a,a,a-Trifluorotoluene(FID)				102.7	62-128	WG623595
Total Solids	%	50	50.0	100.	85-115	WG623300
TPH (GC/FID) Low Fraction	mg/kg	5.5	4.79	87.0	67-135	WG623434
a,a,a-Trifluorotoluene(FID)				90.76	59-128	WG623434
Toluene	mg/l	.025	0.0252	101.	75-114	WG623968
4-Bromofluorobenzene				97.18	82-120	WG623968
Dibromofluoromethane				98.12	82-126	WG623968
Toluene-d8				98.61	92-112	WG623968

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Analyte	Units	Laboratory Control Sample Known Val	Result	% Rec	Limit	Batch
TPH (GC/FID) High Fraction	mg/l	1.5	1.15	76.8	50-150	WG623903
o-Terphenyl				52.30	50-150	WG623903
TPH (GC/FID) High Fraction	mg/kg	60	45.3	75.5	50-150	WG623812
o-Terphenyl				74.50	50-150	WG623812
TPH (GC/FID) High Fraction	mg/l	1.5	1.12	74.7	50-150	WG623826
o-Terphenyl				51.30	50-150	WG623826

Analyte	Units	Laboratory Control Sample Duplicate Result	Ref	%Rec	Limit	RPD	Limit	Batch
TPH (GC/FID) Low Fraction	mg/l	6.17	6.20	112.	70-124	0.500	20	WG623201
a,a,a-Trifluorotoluene(FID)				102.5	62-128			WG623201
1,1,1,2-Tetrachloroethane	mg/l	0.0244	0.0247	98.0	77-128	1.08	20	WG623194
1,1,1-Trichloroethane	mg/l	0.0244	0.0251	98.0	71-126	2.79	20	WG623194
1,1,2,2-Tetrachloroethane	mg/l	0.0231	0.0224	92.0	78-130	2.93	20	WG623194
1,1,2-Trichloroethane	mg/l	0.0234	0.0233	94.0	81-121	0.460	20	WG623194
1,1,2-Trichlorotrifluoroethane	mg/l	0.0287	0.0297	115.	53-143	3.48	20	WG623194
1,1-Dichloroethane	mg/l	0.0245	0.0251	98.0	73-123	2.75	20	WG623194
1,1-Dichloroethene	mg/l	0.0272	0.0285	109.	54-134	4.55	20	WG623194
1,1-Dichloropropene	mg/l	0.0249	0.0258	100.	67-127	3.51	20	WG623194
1,2,3-Trichlorobenzene	mg/l	0.0254	0.0250	102.	77-130	1.86	20	WG623194
1,2,3-Trichloropropane	mg/l	0.0235	0.0227	94.0	68-130	3.25	20	WG623194
1,2,3-Trimethylbenzene	mg/l	0.0225	0.0230	90.0	77-126	2.12	20	WG623194
1,2,4-Trichlorobenzene	mg/l	0.0263	0.0265	105.	76-127	0.950	20	WG623194
1,2,4-Trimethylbenzene	mg/l	0.0255	0.0260	102.	77-129	1.79	20	WG623194
1,2-Dibromo-3-Chloropropane	mg/l	0.0246	0.0220	98.0	55-142	11.1	20	WG623194
1,2-Dibromoethane	mg/l	0.0243	0.0240	97.0	78-124	1.00	20	WG623194
1,2-Dichlorobenzene	mg/l	0.0233	0.0237	93.0	82-121	1.79	20	WG623194
1,2-Dichloroethane	mg/l	0.0226	0.0223	90.0	69-128	1.12	20	WG623194
1,2-Dichloropropane	mg/l	0.0248	0.0251	99.0	77-121	0.880	20	WG623194
1,3,5-Trimethylbenzene	mg/l	0.0252	0.0262	101.	78-127	3.77	20	WG623194
1,3-Dichlorobenzene	mg/l	0.0252	0.0257	101.	77-127	1.67	20	WG623194
1,3-Dichloropropane	mg/l	0.0236	0.0233	94.0	78-117	1.12	20	WG623194
1,4-Dichlorobenzene	mg/l	0.0230	0.0239	92.0	79-117	3.75	20	WG623194
2,2-Dichloropropane	mg/l	0.0251	0.0251	100.	63-130	0.230	20	WG623194
2-Butanone (MEK)	mg/l	0.103	0.0970	82.0	58-144	5.94	20	WG623194
2-Chloroethyl vinyl ether	mg/l	0.131	0.128	105.	26-172	2.16	22	WG623194
2-Chlorotoluene	mg/l	0.0240	0.0248	96.0	78-123	3.26	20	WG623194
4-Chlorotoluene	mg/l	0.0242	0.0252	97.0	78-122	3.92	20	WG623194
4-Methyl-2-pentanone (MIBK)	mg/l	0.121	0.114	97.0	58-147	5.99	20	WG623194
Acetone	mg/l	0.0802	0.0751	64.0	49-153	6.54	21	WG623194
Acrolein	mg/l	0.128	0.122	102.	10-181	4.77	30	WG623194
Acrylonitrile	mg/l	0.116	0.113	93.0	53-153	3.26	20	WG623194
Benzene	mg/l	0.0240	0.0246	96.0	72-119	2.56	20	WG623194
Bromobenzene	mg/l	0.0235	0.0237	94.0	76-121	0.550	20	WG623194
Bromodichloromethane	mg/l	0.0238	0.0239	95.0	75-127	0.510	20	WG623194
Bromoform	mg/l	0.0248	0.0251	99.0	61-136	1.10	20	WG623194
Bromomethane	mg/l	0.0268	0.0274	107.	42-172	2.19	20	WG623194
Carbon disulfide	mg/l	0.0290	0.0302	116.	19-150	3.86	20	WG623194
Carbon tetrachloride	mg/l	0.0227	0.0237	91.0	63-129	4.35	20	WG623194
Chlorobenzene	mg/l	0.0242	0.0248	97.0	78-123	2.50	20	WG623194
Chlorodibromomethane	mg/l	0.0237	0.0236	95.0	73-128	0.370	20	WG623194
Chloroethane	mg/l	0.0241	0.0243	96.0	52-164	1.04	20	WG623194

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L606271

December 12, 2012

		Laboratory Control Sample Duplicate						
Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
Chloroform	mg/l	0.0235	0.0240	94.0	76-122	2.03	20	WG623194
Chloromethane	mg/l	0.0228	0.0233	91.0	50-141	2.19	20	WG623194
cis-1,2-Dichloroethene	mg/l	0.0246	0.0251	98.0	75-121	2.17	20	WG623194
cis-1,3-Dichloropropene	mg/l	0.0245	0.0249	98.0	74-124	1.54	20	WG623194
Di-isopropyl ether	mg/l	0.0247	0.0247	99.0	66-129	0.160	20	WG623194
Dibromomethane	mg/l	0.0241	0.0242	96.0	77-124	0.300	20	WG623194
Dichlorodifluoromethane	mg/l	0.0221	0.0234	88.0	33-173	5.80	20	WG623194
Ethylbenzene	mg/l	0.0252	0.0262	101.	77-124	3.75	20	WG623194
Hexachloro-1,3-butadiene	mg/l	0.0259	0.0268	104.	71-134	3.32	20	WG623194
Isopropylbenzene	mg/l	0.0269	0.0279	108.	74-126	3.73	20	WG623194
Methyl tert-butyl ether	mg/l	0.0256	0.0245	102.	67-127	4.29	20	WG623194
Methylene Chloride	mg/l	0.0238	0.0237	95.0	67-122	0.220	20	WG623194
n-Butylbenzene	mg/l	0.0246	0.0257	98.0	74-130	4.37	20	WG623194
n-Propylbenzene	mg/l	0.0251	0.0260	100.	77-125	3.63	20	WG623194
Naphthalene	mg/l	0.0244	0.0231	98.0	70-134	5.50	20	WG623194
p-Isopropyltoluene	mg/l	0.0272	0.0279	109.	77-132	2.59	20	WG623194
sec-Butylbenzene	mg/l	0.0260	0.0270	104.	77-130	3.76	20	WG623194
Styrene	mg/l	0.0262	0.0272	105.	69-145	3.41	20	WG623194
tert-Butylbenzene	mg/l	0.0263	0.0271	105.	76-131	2.75	20	WG623194
Tetrachloroethene	mg/l	0.0253	0.0262	101.	69-131	3.53	20	WG623194
Toluene	mg/l	0.0238	0.0245	95.0	75-114	2.96	20	WG623194
trans-1,2-Dichloroethene	mg/l	0.0253	0.0257	101.	63-127	1.53	20	WG623194
trans-1,3-Dichloropropene	mg/l	0.0238	0.0237	95.0	69-124	0.200	20	WG623194
Trichloroethene	mg/l	0.0257	0.0263	103.	69-131	2.30	20	WG623194
Trichlorofluoromethane	mg/l	0.0250	0.0258	100.	53-161	3.22	20	WG623194
Vinyl chloride	mg/l	0.0233	0.0242	93.0	55-142	4.03	20	WG623194
Xylenes, Total	mg/l	0.0756	0.0773	101.	77-123	2.22	20	WG623194
4-Bromofluorobenzene				104.0	82-120			WG623194
Dibromofluoromethane				97.17	82-126			WG623194
Toluene-d8				103.6	92-112			WG623194
1,1,1,2-Tetrachloroethane	mg/kg	0.0254	0.0250	101.	77-129	1.33	20	WG623530
1,1,1-Trichloroethane	mg/kg	0.0245	0.0242	98.0	70-127	1.21	20	WG623530
1,1,2,2-Tetrachloroethane	mg/kg	0.0246	0.0228	98.0	76-133	7.86	20	WG623530
1,1,2-Trichloroethane	mg/kg	0.0251	0.0237	100.	79-123	5.86	20	WG623530
1,1,2-Trichlorotrifluoroethane	mg/kg	0.0250	0.0246	100.	52-145	1.33	20	WG623530
1,1-Dichloroethane	mg/kg	0.0240	0.0240	96.0	74-121	0.220	20	WG623530
1,1-Dichloroethene	mg/kg	0.0247	0.0239	99.0	53-135	3.38	20	WG623530
1,1-Dichloropropene	mg/kg	0.0242	0.0241	97.0	67-127	0.190	20	WG623530
1,2,3-Trichlorobenzene	mg/kg	0.0258	0.0252	103.	74-131	2.28	20	WG623530
1,2,3-Trichloropropane	mg/kg	0.0246	0.0234	98.0	75-135	4.76	20	WG623530
1,2,3-Trimethylbenzene	mg/kg	0.0246	0.0249	98.0	76-128	1.10	20	WG623530
1,2,4-Trichlorobenzene	mg/kg	0.0243	0.0254	97.0	72-130	4.33	20	WG623530
1,2,4-Trimethylbenzene	mg/kg	0.0254	0.0254	102.	75-131	0.0100	20	WG623530
1,2-Dibromo-3-Chloropropane	mg/kg	0.0255	0.0234	102.	55-142	8.31	20	WG623530
1,2-Dibromoethane	mg/kg	0.0255	0.0246	102.	77-126	3.66	20	WG623530
1,2-Dichlorobenzene	mg/kg	0.0244	0.0249	98.0	80-123	2.27	20	WG623530
1,2-Dichloroethane	mg/kg	0.0241	0.0237	96.0	70-128	1.44	20	WG623530
1,2-Dichloropropane	mg/kg	0.0251	0.0252	100.	74-125	0.360	20	WG623530
1,3,5-Trimethylbenzene	mg/kg	0.0257	0.0251	103.	77-129	2.14	20	WG623530
1,3-Dichlorobenzene	mg/kg	0.0252	0.0250	101.	76-128	0.430	20	WG623530
1,3-Dichloropropane	mg/kg	0.0248	0.0240	99.0	77-118	3.34	20	WG623530
1,4-Dichlorobenzene	mg/kg	0.0241	0.0240	96.0	77-119	0.550	20	WG623530
2,2-Dichloropropane	mg/kg	0.0237	0.0236	95.0	60-132	0.500	20	WG623530
2-Butanone (MEK)	mg/kg	0.120	0.110	96.0	56-146	8.61	20	WG623530
2-Chloroethyl vinyl ether	mg/kg	0.133	0.132	106.	17-179	0.310	22	WG623530
2-Chlorotoluene	mg/kg	0.0244	0.0240	98.0	76-125	1.84	20	WG623530
4-Chlorotoluene	mg/kg	0.0249	0.0248	99.0	76-125	0.410	20	WG623530

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		Laboratory Control Sample Duplicate						
Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
4-Methyl-2-pentanone (MIBK)	mg/kg	0.126	0.117	101.	55-148	7.88	20	WG623530
Acetone	mg/kg	0.110	0.0994	88.0	47-155	10.2	22	WG623530
Acrylonitrile	mg/kg	0.119	0.110	95.0	50-155	7.84	20	WG623530
Benzene	mg/kg	0.0239	0.0238	95.0	72-120	0.290	20	WG623530
Bromobenzene	mg/kg	0.0248	0.0242	99.0	74-122	2.41	20	WG623530
Bromodichloromethane	mg/kg	0.0248	0.0255	99.0	74-128	2.89	20	WG623530
Bromoform	mg/kg	0.0259	0.0255	104.	62-137	1.69	20	WG623530
Bromomethane	mg/kg	0.0274	0.0285	110.	38-180	3.91	20	WG623530
Carbon tetrachloride	mg/kg	0.0241	0.0235	96.0	62-130	2.35	20	WG623530
Chlorobenzene	mg/kg	0.0253	0.0254	101.	77-124	0.470	20	WG623530
Chlorodibromomethane	mg/kg	0.0266	0.0252	106.	74-128	5.38	20	WG623530
Chloroethane	mg/kg	0.0271	0.0281	108.	46-173	3.68	20	WG623530
Chloroform	mg/kg	0.0242	0.0238	97.0	76-122	1.31	20	WG623530
Chloromethane	mg/kg	0.0233	0.0237	93.0	49-143	1.74	20	WG623530
cis-1,2-Dichloroethene	mg/kg	0.0247	0.0242	99.0	73-123	1.91	20	WG623530
cis-1,3-Dichloropropene	mg/kg	0.0255	0.0256	102.	73-126	0.350	20	WG623530
Di-isopropyl ether	mg/kg	0.0237	0.0234	95.0	64-131	1.28	20	WG623530
Dibromomethane	mg/kg	0.0258	0.0258	103.	75-127	0.250	20	WG623530
Dichlorodifluoromethane	mg/kg	0.0249	0.0253	100.	30-177	1.37	20	WG623530
Ethylbenzene	mg/kg	0.0256	0.0254	102.	76-126	0.760	20	WG623530
Hexachloro-1,3-butadiene	mg/kg	0.0263	0.0269	105.	71-134	2.36	20	WG623530
Isopropylbenzene	mg/kg	0.0254	0.0251	102.	70-128	1.18	20	WG623530
Methyl tert-butyl ether	mg/kg	0.0241	0.0233	96.0	66-127	3.46	20	WG623530
Methylene Chloride	mg/kg	0.0236	0.0243	94.0	67-124	3.10	20	WG623530
n-Butylbenzene	mg/kg	0.0244	0.0248	97.0	71-133	1.86	20	WG623530
n-Propylbenzene	mg/kg	0.0253	0.0251	101.	76-126	1.05	20	WG623530
Naphthalene	mg/kg	0.0267	0.0253	107.	68-136	5.12	20	WG623530
p-Isopropyltoluene	mg/kg	0.0257	0.0257	103.	75-134	0.0100	20	WG623530
sec-Butylbenzene	mg/kg	0.0252	0.0249	101.	75-132	1.08	20	WG623530
Styrene	mg/kg	0.0260	0.0265	104.	68-148	1.88	20	WG623530
tert-Butylbenzene	mg/kg	0.0261	0.0257	104.	75-132	1.66	20	WG623530
Tetrachloroethene	mg/kg	0.0259	0.0249	104.	70-131	4.04	20	WG623530
Toluene	mg/kg	0.0242	0.0245	97.0	74-155	1.16	20	WG623530
trans-1,2-Dichloroethene	mg/kg	0.0248	0.0253	99.0	63-126	1.90	20	WG623530
trans-1,3-Dichloropropene	mg/kg	0.0258	0.0254	103.	68-126	1.40	20	WG623530
Trichloroethene	mg/kg	0.0256	0.0259	102.	75-121	1.05	20	WG623530
Trichlorofluoromethane	mg/kg	0.0247	0.0247	99.0	48-170	0.220	20	WG623530
Vinyl chloride	mg/kg	0.0240	0.0242	96.0	54-144	0.880	20	WG623530
Xylenes, Total	mg/kg	0.0770	0.0761	103.	76-126	1.22	20	WG623530
4-Bromofluorobenzene				95.16	67-133			WG623530
Dibromofluoromethane				94.10	72-135			WG623530
Toluene-d8				96.39	90-113			WG623530
TPH (GC/FID) Low Fraction	mg/l	6.00	5.64	109.	70-124	6.27	20	WG623595
a,a,a-Trifluorotoluene(FID)				103.0	62-128			WG623595
TPH (GC/FID) Low Fraction	mg/kg	5.07	4.79	92.0	67-135	5.76	20	WG623434
a,a,a-Trifluorotoluene(FID)				91.67	59-128			WG623434
Toluene	mg/l	0.0242	0.0252	97.0	75-114	4.26	20	WG623968
4-Bromofluorobenzene				99.64	82-120			WG623968
Dibromofluoromethane				99.53	82-126			WG623968
Toluene-d8				102.2	92-112			WG623968
TPH (GC/FID) High Fraction	mg/l	1.24	1.15	82.0	50-150	7.20	20	WG623903

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Quality Assurance Report
Level II

L606271

December 12, 2012

Analyte	Units	Laboratory Control Sample Duplicate Result	Ref	%Rec	Limit	RPD	Limit	Batch
o-Terphenyl				56.90	50-150			
TPH (GC/FID) High Fraction	mg/kg	45.5	45.3	76.0	50-150	0.470	20	WG623812
o-Terphenyl				75.40	50-150			WG623812
TPH (GC/FID) High Fraction	mg/l	1.15	1.12	77.0	50-150	3.04	20	WG623826
o-Terphenyl				48.80*	50-150			WG623826

Analyte	Units	Matrix Spike MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
TPH (GC/FID) Low Fraction	mg/l	6.21	0	5.5	113.*	55-109	L605915-02	WG623201
a,a,a-Trifluorotoluene(FID)					102.8	62-128		WG623201
1,1,1,2-Tetrachloroethane	mg/l	0.0249	0	.025	99.8	71-130	L606075-03	WG623194
1,1,1-Trichloroethane	mg/l	0.0257	0	.025	103.	58-137	L606075-03	WG623194
1,1,2,2-Tetrachloroethane	mg/l	0.0226	0	.025	90.5	64-149	L606075-03	WG623194
1,1,2-Trichloroethane	mg/l	0.0238	0	.025	95.2	73-128	L606075-03	WG623194
1,1,2-Trichlorotrifluoroethane	mg/l	0.0326	0	.025	130.	36-159	L606075-03	WG623194
1,1-Dichloroethane	mg/l	0.0253	0	.025	101.	58-133	L606075-03	WG623194
1,1-Dichloroethene	mg/l	0.0304	0	.025	122.	32-152	L606075-03	WG623194
1,1-Dichloropropene	mg/l	0.0267	0	.025	107.	50-140	L606075-03	WG623194
1,2,3-Trichlorobenzene	mg/l	0.0246	0	.025	98.2	68-135	L606075-03	WG623194
1,2,3-Trichloropropane	mg/l	0.0228	0	.025	91.4	74-137	L606075-03	WG623194
1,2,3-Trimethylbenzene	mg/l	0.0271	0.00411	.025	92.1	67-133	L606075-03	WG623194
1,2,4-Trichlorobenzene	mg/l	0.0267	0	.025	107.	67-133	L606075-03	WG623194
1,2,4-Trimethylbenzene	mg/l	0.0333	0.00740	.025	104.	62-141	L606075-03	WG623194
1,2-Dibromo-3-Chloropropane	mg/l	0.0229	0	.025	91.5	55-148	L606075-03	WG623194
1,2-Dibromoethane	mg/l	0.0239	0	.025	95.6	71-129	L606075-03	WG623194
1,2-Dichlorobenzene	mg/l	0.0237	0	.025	94.9	75-125	L606075-03	WG623194
1,2-Dichloroethane	mg/l	0.0222	0	.025	89.0	59-135	L606075-03	WG623194
1,2-Dichloropropane	mg/l	0.0248	0	.025	99.4	68-126	L606075-03	WG623194
1,3,5-Trimethylbenzene	mg/l	0.0277	0.00130	.025	106.	67-136	L606075-03	WG623194
1,3-Dichlorobenzene	mg/l	0.0257	0	.025	103.	69-131	L606075-03	WG623194
1,3-Dichloropropane	mg/l	0.0236	0	.025	94.4	70-122	L606075-03	WG623194
1,4-Dichlorobenzene	mg/l	0.0245	0	.025	98.2	70-123	L606075-03	WG623194
2,2-Dichloropropane	mg/l	0.0271	0	.025	108.	51-141	L606075-03	WG623194
2-Butanone (MEK)	mg/l	0.0858	0	.125	68.6	51-149	L606075-03	WG623194
2-Chloroethyl vinyl ether	mg/l	0.0249	0	.125	19.9	10-161	L606075-03	WG623194
2-Chlorotoluene	mg/l	0.0308	0.00570	.025	100.	65-133	L606075-03	WG623194
4-Chlorotoluene	mg/l	0.0266	0.00110	.025	102.	67-129	L606075-03	WG623194
4-Methyl-2-pentanone (MIBK)	mg/l	0.112	0	.125	89.8	53-154	L606075-03	WG623194
Acetone	mg/l	0.0508	0	.125	40.6	34-146	L606075-03	WG623194
Acrolein	mg/l	0.129	0	.125	104.	10-189	L606075-03	WG623194
Acrylonitrile	mg/l	0.114	0	.125	91.0	49-162	L606075-03	WG623194
Benzene	mg/l	0.102	0.0770	.025	101.	51-134	L606075-03	WG623194
Bromobenzene	mg/l	0.0244	0	.025	97.4	64-130	L606075-03	WG623194
Bromodichloromethane	mg/l	0.0252	0	.025	101.	67-132	L606075-03	WG623194
Bromoform	mg/l	0.0254	0	.025	101.	59-137	L606075-03	WG623194
Bromomethane	mg/l	0.0276	0	.025	110.	23-177	L606075-03	WG623194
Carbon disulfide	mg/l	0.0326	0	.025	130.	10-165	L606075-03	WG623194
Carbon tetrachloride	mg/l	0.0245	0	.025	97.8	49-140	L606075-03	WG623194
Chlorobenzene	mg/l	0.0267	0.00160	.025	100.	69-126	L606075-03	WG623194
Chlorodibromomethane	mg/l	0.0247	0	.025	98.6	68-130	L606075-03	WG623194
Chloroethane	mg/l	0.0249	0	.025	99.5	32-177	L606075-03	WG623194
Chloroform	mg/l	0.0337	0.00950	.025	96.7	64-130	L606075-03	WG623194
Chloromethane	mg/l	0.0236	0	.025	94.5	27-155	L606075-03	WG623194
cis-1,2-Dichloroethene	mg/l	0.0253	0	.025	101.	54-137	L606075-03	WG623194

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Analyte	Units	MS Res	Matrix Spike Ref Res	TV	% Rec	Limit	Ref Samp	Batch
cis-1,3-Dichloropropene	mg/l	0.0248	0	.025	99.0	63-127	L606075-03	WG623194
Di-isopropyl ether	mg/l	0.0253	0	.025	101.	58-133	L606075-03	WG623194
Dibromomethane	mg/l	0.0240	0	.025	95.8	68-131	L606075-03	WG623194
Dichlorodifluoromethane	mg/l	0.0233	0	.025	93.1	16-188	L606075-03	WG623194
Ethylbenzene	mg/l	0.0394	0.0120	.025	110.	64-135	L606075-03	WG623194
Hexachloro-1,3-butadiene	mg/l	0.0262	0	.025	105.	64-140	L606075-03	WG623194
Isopropylbenzene	mg/l	0.0307	0.00220	.025	114.	62-134	L606075-03	WG623194
Methyl tert-butyl ether	mg/l	0.0539	0.0290	.025	99.5	55-136	L606075-03	WG623194
Methylene Chloride	mg/l	0.0237	0	.025	94.7	52-130	L606075-03	WG623194
n-Butylbenzene	mg/l	0.0268	0	.025	107.	62-142	L606075-03	WG623194
n-Propylbenzene	mg/l	0.0284	0.00190	.025	106.	62-137	L606075-03	WG623194
Naphthalene	mg/l	0.0317	0.00860	.025	92.6	65-140	L606075-03	WG623194
p-Isopropyltoluene	mg/l	0.0285	0	.025	114.	64-142	L606075-03	WG623194
sec-Butylbenzene	mg/l	0.0278	0	.025	111.	67-139	L606075-03	WG623194
Styrene	mg/l	0.0273	0	.025	109.	58-152	L606075-03	WG623194
tert-Butylbenzene	mg/l	0.0276	0	.025	110.	66-139	L606075-03	WG623194
Tetrachloroethene	mg/l	0.0277	0	.025	111.	56-139	L606075-03	WG623194
Toluene	mg/l	0.0275	0	.025	110.	61-126	L606075-03	WG623194
trans-1,2-Dichloroethene	mg/l	0.0265	0	.025	106.	45-137	L606075-03	WG623194
trans-1,3-Dichloropropene	mg/l	0.0243	0	.025	97.4	59-130	L606075-03	WG623194
Trichloroethene	mg/l	0.0267	0	.025	107.	40-155	L606075-03	WG623194
Trichlorofluoromethane	mg/l	0.0263	0	.025	105.	35-177	L606075-03	WG623194
Vinyl chloride	mg/l	0.0248	0	.025	99.4	32-159	L606075-03	WG623194
Xylenes, Total	mg/l	0.123	0.0429	.075	106.	64-133	L606075-03	WG623194
4-Bromofluorobenzene					103.0	82-120		WG623194
Dibromofluoromethane					97.17	82-126		WG623194
Toluene-d8					103.7	92-112		WG623194
1,1,1,2-Tetrachloroethane	mg/kg	0.115	0	.025	91.8	49-135	L606625-01	WG623530
1,1,1-Trichloroethane	mg/kg	0.101	0	.025	80.6	43-142	L606625-01	WG623530
1,1,2,2-Tetrachloroethane	mg/kg	0.114	0	.025	90.9	42-147	L606625-01	WG623530
1,1,2-Trichloroethane	mg/kg	0.112	0	.025	89.4	51-134	L606625-01	WG623530
1,1,2-Trichlorotrifluoroethane	mg/kg	0.104	0	.025	83.3	25-156	L606625-01	WG623530
1,1-Dichloroethane	mg/kg	0.0960	0	.025	76.8	50-131	L606625-01	WG623530
1,1-Dichloroethene	mg/kg	0.0878	0	.025	70.3	29-145	L606625-01	WG623530
1,1-Dichloropropene	mg/kg	0.0929	0	.025	74.3	40-136	L606625-01	WG623530
1,2,3-Trichlorobenzene	mg/kg	0.109	0	.025	87.1	13-142	L606625-01	WG623530
1,2,3-Trichloropropane	mg/kg	0.115	0	.025	92.3	41-149	L606625-01	WG623530
1,2,3-Trimethylbenzene	mg/kg	0.104	0	.025	83.6	33-146	L606625-01	WG623530
1,2,4-Trichlorobenzene	mg/kg	0.109	0	.025	86.8	12-140	L606625-01	WG623530
1,2,4-Trimethylbenzene	mg/kg	0.111	0	.025	88.5	29-143	L606625-01	WG623530
1,2-Dibromo-3-Chloropropane	mg/kg	0.121	0	.025	97.1	29-151	L606625-01	WG623530
1,2-Dibromoethane	mg/kg	0.115	0	.025	92.0	48-133	L606625-01	WG623530
1,2-Dichlorobenzene	mg/kg	0.107	0	.025	85.8	37-136	L606625-01	WG623530
1,2-Dichloroethane	mg/kg	0.100	0	.025	80.3	49-131	L606625-01	WG623530
1,2-Dichloropropane	mg/kg	0.105	0	.025	84.0	50-132	L606625-01	WG623530
1,3,5-Trimethylbenzene	mg/kg	0.112	0	.025	89.7	29-144	L606625-01	WG623530
1,3-Dichlorobenzene	mg/kg	0.108	0	.025	86.3	26-140	L606625-01	WG623530
1,3-Dichloropropane	mg/kg	0.111	0	.025	88.9	50-126	L606625-01	WG623530
1,4-Dichlorobenzene	mg/kg	0.105	0	.025	83.6	34-132	L606625-01	WG623530
2,2-Dichloropropane	mg/kg	0.0994	0	.025	79.5	35-148	L606625-01	WG623530
2-Butanone (MEK)	mg/kg	0.642	0	.125	103.	40-149	L606625-01	WG623530
2-Chloroethyl vinyl ether	mg/kg	0.608	0	.125	97.2	10-173	L606625-01	WG623530
2-Chlorotoluene	mg/kg	0.108	0	.025	86.2	34-136	L606625-01	WG623530
4-Chlorotoluene	mg/kg	0.108	0	.025	86.6	31-137	L606625-01	WG623530
4-Methyl-2-pentanone (MIBK)	mg/kg	0.611	0	.125	97.8	37-153	L606625-01	WG623530
Acetone	mg/kg	0.678	0	.125	108.	10-177	L606625-01	WG623530
Acrylonitrile	mg/kg	0.512	0	.125	81.8	33-159	L606625-01	WG623530

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Analyte	Units	MS Res	Matrix Spike Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Benzene	mg/kg	0.0941	0	.025	75.2	44-131	L606625-01	WG623530
Bromobenzene	mg/kg	0.107	0	.025	86.0	36-132	L606625-01	WG623530
Bromodichloromethane	mg/kg	0.110	0	.025	87.8	48-134	L606625-01	WG623530
Bromoform	mg/kg	0.118	0	.025	94.7	34-141	L606625-01	WG623530
Bromomethane	mg/kg	0.100	0	.025	80.2	19-173	L606625-01	WG623530
Carbon tetrachloride	mg/kg	0.0937	0	.025	75.0	36-140	L606625-01	WG623530
Chlorobenzene	mg/kg	0.110	0	.025	88.1	42-133	L606625-01	WG623530
Chlorodibromomethane	mg/kg	0.121	0	.025	96.6	45-135	L606625-01	WG623530
Chloroethane	mg/kg	0.107	0	.025	85.6	16-178	L606625-01	WG623530
Chloroform	mg/kg	0.103	0	.025	82.5	52-130	L606625-01	WG623530
Chloromethane	mg/kg	0.0894	0	.025	71.5	28-147	L606625-01	WG623530
cis-1,2-Dichloroethene	mg/kg	0.0976	0	.025	78.1	52-128	L606625-01	WG623530
cis-1,3-Dichloropropene	mg/kg	0.112	0	.025	89.9	46-131	L606625-01	WG623530
Di-isopropyl ether	mg/kg	0.0986	0	.025	78.9	46-134	L606625-01	WG623530
Dibromomethane	mg/kg	0.109	0	.025	87.0	51-133	L606625-01	WG623530
Dichlorodifluoromethane	mg/kg	0.106	0	.025	84.8	12-179	L606625-01	WG623530
Ethylbenzene	mg/kg	0.112	0	.025	89.3	38-139	L606625-01	WG623530
Hexachloro-1,3-butadiene	mg/kg	0.110	0	.025	88.0	10-147	L606625-01	WG623530
Isopropylbenzene	mg/kg	0.118	0	.025	94.1	34-137	L606625-01	WG623530
Methyl tert-butyl ether	mg/kg	0.101	0	.025	80.5	45-134	L606625-01	WG623530
Methylene Chloride	mg/kg	0.0922	0	.025	73.8	41-133	L606625-01	WG623530
n-Butylbenzene	mg/kg	0.107	0	.025	85.2	19-149	L606625-01	WG623530
n-Propylbenzene	mg/kg	0.110	0	.025	88.2	27-142	L606625-01	WG623530
Naphthalene	mg/kg	0.115	0	.025	91.7	19-146	L606625-01	WG623530
p-Isopropyltoluene	mg/kg	0.114	0	.025	91.2	21-150	L606625-01	WG623530
sec-Butylbenzene	mg/kg	0.110	0	.025	87.9	25-148	L606625-01	WG623530
Styrene	mg/kg	0.117	0	.025	93.8	30-156	L606625-01	WG623530
tert-Butylbenzene	mg/kg	0.114	0	.025	91.5	32-146	L606625-01	WG623530
Tetrachloroethene	mg/kg	0.103	0	.025	82.2	35-139	L606625-01	WG623530
Toluene	mg/kg	0.102	0	.025	81.5	43-127	L606625-01	WG623530
trans-1,2-Dichloroethene	mg/kg	0.0892	0	.025	71.4	41-132	L606625-01	WG623530
trans-1,3-Dichloropropene	mg/kg	0.117	0	.025	93.4	43-129	L606625-01	WG623530
Trichloroethene	mg/kg	0.100	0	.025	80.0	42-136	L606625-01	WG623530
Trichlorofluoromethane	mg/kg	0.0985	0	.025	78.8	20-178	L606625-01	WG623530
Vinyl chloride	mg/kg	0.0937	0	.025	75.0	30-157	L606625-01	WG623530
Xylenes, Total	mg/kg	0.334	0	.075	89.0	38-137	L606625-01	WG623530
4-Bromofluorobenzene					96.71	67-133		WG623530
Dibromofluoromethane					95.64	72-135		WG623530
Toluene-d8					97.79	90-113		WG623530
TPH (GC/FID) Low Fraction	mg/l	5.81	0	5.5	106.	55-109	L606106-01	WG623595
a,a,a-Trifluorotoluene(FID)					102.3	62-128		WG623595
TPH (GC/FID) Low Fraction	mg/kg	21.4	0	5.5	77.7	55-109	L606502-01	WG623434
a,a,a-Trifluorotoluene(FID)					89.35	59-128		WG623434
Toluene	mg/l	0.128	0.0630	.025	260.*	61-126	L606711-12	WG623968
4-Bromofluorobenzene					94.12	82-120		WG623968
Dibromofluoromethane					99.58	82-126		WG623968
Toluene-d8					97.87	92-112		WG623968
TPH (GC/FID) High Fraction	mg/kg	40.7	0	60	67.9	50-150	L606227-01	WG623812
o-Terphenyl					62.20	50-150		WG623812

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Quality Assurance Report
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December 12, 2012

Analyte	Units	MSD	Matrix Spike Ref	Duplicate %Rec	Limit	RPD	Limit	Ref Samp	Batch
TPH (GC/FID) Low Fraction	mg/l	6.22	6.21	113.*	55-109	0.0600	20	L605915-02	WG623201
a,a,a-Trifluorotoluene(FID)				102.2	62-128				WG623201
1,1,1,2-Tetrachloroethane	mg/l	0.0245	0.0249	97.9	71-130	1.83	20	L606075-03	WG623194
1,1,1-Trichloroethane	mg/l	0.0254	0.0257	102.	58-137	1.18	20	L606075-03	WG623194
1,1,2,2-Tetrachloroethane	mg/l	0.0230	0.0226	91.9	64-149	1.49	20	L606075-03	WG623194
1,1,2-Trichloroethane	mg/l	0.0237	0.0238	94.8	73-128	0.470	20	L606075-03	WG623194
1,1,2-Trichlorotrifluoroethane	mg/l	0.0304	0.0326	122.	36-159	6.92	21	L606075-03	WG623194
1,1-Dichloroethane	mg/l	0.0245	0.0253	98.0	58-133	3.40	20	L606075-03	WG623194
1,1-Dichloroethene	mg/l	0.0270	0.0304	108.	32-152	11.8	20	L606075-03	WG623194
1,1-Dichloropropene	mg/l	0.0260	0.0267	104.	50-140	2.72	20	L606075-03	WG623194
1,2,3-Trichlorobenzene	mg/l	0.0247	0.0246	98.9	68-135	0.660	20	L606075-03	WG623194
1,2,3-Trichloropropane	mg/l	0.0230	0.0228	92.1	74-137	0.840	20	L606075-03	WG623194
1,2,3-Trimethylbenzene	mg/l	0.0266	0.0271	90.1	67-133	1.85	20	L606075-03	WG623194
1,2,4-Trichlorobenzene	mg/l	0.0265	0.0267	106.	67-133	0.650	20	L606075-03	WG623194
1,2,4-Trimethylbenzene	mg/l	0.0330	0.0333	102.	62-141	0.900	20	L606075-03	WG623194
1,2-Dibromo-3-Chloropropane	mg/l	0.0234	0.0229	93.6	55-148	2.22	22	L606075-03	WG623194
1,2-Dibromoethane	mg/l	0.0241	0.0239	96.3	71-129	0.790	20	L606075-03	WG623194
1,2-Dichlorobenzene	mg/l	0.0235	0.0237	94.0	75-125	0.960	20	L606075-03	WG623194
1,2-Dichloroethane	mg/l	0.0219	0.0222	87.5	59-135	1.61	20	L606075-03	WG623194
1,2-Dichloropropane	mg/l	0.0246	0.0248	98.3	68-126	1.09	20	L606075-03	WG623194
1,3,5-Trimethylbenzene	mg/l	0.0271	0.0277	103.	67-136	2.32	20	L606075-03	WG623194
1,3-Dichlorobenzene	mg/l	0.0253	0.0257	101.	69-131	1.23	20	L606075-03	WG623194
1,3-Dichloropropane	mg/l	0.0237	0.0236	94.8	70-122	0.470	20	L606075-03	WG623194
1,4-Dichlorobenzene	mg/l	0.0239	0.0245	95.5	70-123	2.74	20	L606075-03	WG623194
2,2-Dichloropropane	mg/l	0.0263	0.0271	105.	51-141	2.92	20	L606075-03	WG623194
2-Butanone (MEK)	mg/l	0.0897	0.0858	71.8	51-149	4.48	22	L606075-03	WG623194
2-Chloroethyl vinyl ether	mg/l	0.00301	0.0249	2.41*	10-161	157.*	40	L606075-03	WG623194
2-Chlorotoluene	mg/l	0.0302	0.0308	98.2	65-133	1.68	20	L606075-03	WG623194
4-Chlorotoluene	mg/l	0.0259	0.0266	99.4	67-129	2.56	20	L606075-03	WG623194
4-Methyl-2-pentanone (MIBK)	mg/l	0.116	0.112	92.9	53-154	3.36	21	L606075-03	WG623194
Acetone	mg/l	0.0515	0.0508	41.2	34-146	1.52	22	L606075-03	WG623194
Acrolein	mg/l	0.132	0.129	105.	10-189	1.70	30	L606075-03	WG623194
Acrylonitrile	mg/l	0.115	0.114	91.8	49-162	0.860	20	L606075-03	WG623194
Benzene	mg/l	0.0989	0.102	87.6	51-134	3.45	20	L606075-03	WG623194
Bromobenzene	mg/l	0.0238	0.0244	95.0	64-130	2.45	20	L606075-03	WG623194
Bromodichloromethane	mg/l	0.0250	0.0252	100.	67-132	0.900	20	L606075-03	WG623194
Bromoform	mg/l	0.0255	0.0254	102.	59-137	0.490	20	L606075-03	WG623194
Bromomethane	mg/l	0.0265	0.0276	106.	23-177	4.02	21	L606075-03	WG623194
Carbon disulfide	mg/l	0.0301	0.0326	120.	10-165	8.12	22	L606075-03	WG623194
Carbon tetrachloride	mg/l	0.0237	0.0245	94.6	49-140	3.31	20	L606075-03	WG623194
Chlorobenzene	mg/l	0.0264	0.0267	99.3	69-126	1.09	20	L606075-03	WG623194
Chlorodibromomethane	mg/l	0.0243	0.0247	97.1	68-130	1.54	20	L606075-03	WG623194
Chloroethane	mg/l	0.0238	0.0249	95.2	32-177	4.44	21	L606075-03	WG623194
Chloroform	mg/l	0.0328	0.0337	93.3	64-130	2.51	20	L606075-03	WG623194
Chloromethane	mg/l	0.0232	0.0236	92.9	27-155	1.70	20	L606075-03	WG623194
cis-1,2-Dichloroethene	mg/l	0.0246	0.0253	98.4	54-137	2.69	20	L606075-03	WG623194
cis-1,3-Dichloropropene	mg/l	0.0245	0.0248	97.9	63-127	1.17	20	L606075-03	WG623194
Di-isopropyl ether	mg/l	0.0250	0.0253	99.8	58-133	1.19	20	L606075-03	WG623194
Dibromomethane	mg/l	0.0239	0.0240	95.7	68-131	0.160	20	L606075-03	WG623194
Dichlorodifluoromethane	mg/l	0.0229	0.0233	91.7	16-188	1.49	22	L606075-03	WG623194
Ethylbenzene	mg/l	0.0386	0.0394	106.	64-135	2.15	20	L606075-03	WG623194
Hexachloro-1,3-butadiene	mg/l	0.0252	0.0262	101.	64-140	4.25	20	L606075-03	WG623194
Isopropylbenzene	mg/l	0.0304	0.0307	113.	62-134	1.03	20	L606075-03	WG623194
Methyl tert-butyl ether	mg/l	0.0544	0.0539	102.	55-136	1.01	20	L606075-03	WG623194
Methylene Chloride	mg/l	0.0229	0.0237	91.7	52-130	3.21	20	L606075-03	WG623194
n-Butylbenzene	mg/l	0.0257	0.0268	103.	62-142	4.12	20	L606075-03	WG623194
n-Propylbenzene	mg/l	0.0277	0.0284	103.	62-137	2.53	20	L606075-03	WG623194
Naphthalene	mg/l	0.0331	0.0317	98.2	65-140	4.32	20	L606075-03	WG623194

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Quality Assurance Report
Level II

L606271

December 12, 2012

Analyte	Units	Matrix Spike MSD	Ref	Duplicate %Rec	Limit	RPD	Limit	Ref Samp	Batch
p-Isopropyltoluene	mg/l	0.0278	0.0285	111.	64-142	2.23	20	L606075-03	WG623194
sec-Butylbenzene	mg/l	0.0274	0.0278	110.	67-139	1.54	20	L606075-03	WG623194
Styrene	mg/l	0.0270	0.0273	108.	58-152	0.970	20	L606075-03	WG623194
tert-Butylbenzene	mg/l	0.0271	0.0276	108.	66-139	1.84	20	L606075-03	WG623194
Tetrachloroethene	mg/l	0.0270	0.0277	108.	56-139	2.49	20	L606075-03	WG623194
Toluene	mg/l	0.0268	0.0275	107.	61-126	2.60	20	L606075-03	WG623194
trans-1,2-Dichloroethene	mg/l	0.0257	0.0265	103.	45-137	3.17	20	L606075-03	WG623194
trans-1,3-Dichloropropene	mg/l	0.0240	0.0243	96.0	59-130	1.43	20	L606075-03	WG623194
Trichloroethene	mg/l	0.0260	0.0267	104.	40-155	2.62	20	L606075-03	WG623194
Trichlorofluoromethane	mg/l	0.0256	0.0263	102.	35-177	2.89	23	L606075-03	WG623194
Vinyl chloride	mg/l	0.0240	0.0248	95.8	32-159	3.65	21	L606075-03	WG623194
Xylenes, Total	mg/l	0.119	0.123	102.	64-133	2.98	20	L606075-03	WG623194
4-Bromofluorobenzene				104.3	82-120				WG623194
Dibromofluoromethane				96.13	82-126				WG623194
Toluene-d8				103.4	92-112				WG623194
1,1,1,2-Tetrachloroethane	mg/kg	0.119	0.115	95.4	49-135	3.83	23	L606625-01	WG623530
1,1,1-Trichloroethane	mg/kg	0.114	0.101	91.4	43-142	12.6	24	L606625-01	WG623530
1,1,2,2-Tetrachloroethane	mg/kg	0.119	0.114	95.1	42-147	4.49	25	L606625-01	WG623530
1,1,2-Trichloroethane	mg/kg	0.120	0.112	95.7	51-134	6.84	21	L606625-01	WG623530
1,1,2-Trichlorotrifluoroethane	mg/kg	0.120	0.104	95.9	25-156	14.1	29	L606625-01	WG623530
1,1-Dichloroethane	mg/kg	0.111	0.0960	89.2	50-131	14.9	21	L606625-01	WG623530
1,1-Dichloroethene	mg/kg	0.102	0.0878	81.6	29-145	14.9	28	L606625-01	WG623530
1,1-Dichloropropene	mg/kg	0.109	0.0929	87.2	40-136	16.0	24	L606625-01	WG623530
1,2,3-Trichlorobenzene	mg/kg	0.114	0.109	91.0	13-142	4.40	33	L606625-01	WG623530
1,2,3-Trichloropropane	mg/kg	0.120	0.115	96.3	41-149	4.32	28	L606625-01	WG623530
1,2,3-Trimethylbenzene	mg/kg	0.112	0.104	89.5	33-146	6.86	27	L606625-01	WG623530
1,2,4-Trichlorobenzene	mg/kg	0.112	0.109	89.8	12-140	3.33	32	L606625-01	WG623530
1,2,4-Trimethylbenzene	mg/kg	0.120	0.111	95.7	29-143	7.82	30	L606625-01	WG623530
1,2-Dibromo-3-Chloropropane	mg/kg	0.127	0.121	101.	29-151	4.30	31	L606625-01	WG623530
1,2-Dibromoethane	mg/kg	0.123	0.115	98.5	48-133	6.81	22	L606625-01	WG623530
1,2-Dichlorobenzene	mg/kg	0.113	0.107	90.2	37-136	4.96	25	L606625-01	WG623530
1,2-Dichloroethane	mg/kg	0.112	0.100	89.8	49-131	11.2	20	L606625-01	WG623530
1,2-Dichloropropane	mg/kg	0.118	0.105	94.8	50-132	12.1	21	L606625-01	WG623530
1,3,5-Trimethylbenzene	mg/kg	0.123	0.112	98.5	29-144	9.34	30	L606625-01	WG623530
1,3-Dichlorobenzene	mg/kg	0.115	0.108	92.2	26-140	6.60	28	L606625-01	WG623530
1,3-Dichloropropane	mg/kg	0.117	0.111	93.3	50-126	4.80	22	L606625-01	WG623530
1,4-Dichlorobenzene	mg/kg	0.111	0.105	88.8	34-132	5.97	26	L606625-01	WG623530
2,2-Dichloropropane	mg/kg	0.116	0.0994	93.0	35-148	15.6	26	L606625-01	WG623530
2-Butanone (MEK)	mg/kg	0.714	0.642	114.	40-149	10.6	27	L606625-01	WG623530
2-Chloroethyl vinyl ether	mg/kg	0.652	0.608	104.	10-173	6.99	33	L606625-01	WG623530
2-Chlorotoluene	mg/kg	0.114	0.108	91.5	34-136	5.98	28	L606625-01	WG623530
4-Chlorotoluene	mg/kg	0.116	0.108	92.8	31-137	6.99	27	L606625-01	WG623530
4-Methyl-2-pentanone (MIBK)	mg/kg	0.666	0.611	107.	37-153	8.57	27	L606625-01	WG623530
Acetone	mg/kg	0.747	0.678	120.	10-177	9.68	28	L606625-01	WG623530
Acrylonitrile	mg/kg	0.568	0.512	90.9	33-159	10.5	26	L606625-01	WG623530
Benzene	mg/kg	0.107	0.0941	85.7	44-131	13.0	21	L606625-01	WG623530
Bromobenzene	mg/kg	0.114	0.107	90.9	36-132	5.57	26	L606625-01	WG623530
Bromodichloromethane	mg/kg	0.119	0.110	94.9	48-134	7.68	20	L606625-01	WG623530
Bromoform	mg/kg	0.126	0.118	101.	34-141	6.11	24	L606625-01	WG623530
Bromomethane	mg/kg	0.117	0.100	93.7	19-173	15.5	25	L606625-01	WG623530
Carbon tetrachloride	mg/kg	0.110	0.0937	88.0	36-140	16.0	26	L606625-01	WG623530
Chlorobenzene	mg/kg	0.119	0.110	95.0	42-133	7.47	24	L606625-01	WG623530
Chlorodibromomethane	mg/kg	0.124	0.121	99.5	45-135	2.94	23	L606625-01	WG623530
Chloroethane	mg/kg	0.125	0.107	100.	16-178	15.7	25	L606625-01	WG623530
Chloroform	mg/kg	0.115	0.103	91.8	52-130	10.6	21	L606625-01	WG623530
Chloromethane	mg/kg	0.102	0.0894	81.9	28-147	13.5	23	L606625-01	WG623530
cis-1,2-Dichloroethene	mg/kg	0.110	0.0976	88.3	52-128	12.3	21	L606625-01	WG623530

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Quality Assurance Report
Level II

L606271

December 12, 2012

Analyte	Units	MSD	Matrix Spike Duplicate Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
cis-1,3-Dichloropropene	mg/kg	0.121	0.112	97.2	46-131	7.78	21	L606625-01	WG623530
Di-isopropyl ether	mg/kg	0.110	0.0986	87.7	46-134	10.6	20	L606625-01	WG623530
Dibromomethane	mg/kg	0.121	0.109	96.5	51-133	10.4	21	L606625-01	WG623530
Dichlorodifluoromethane	mg/kg	0.123	0.106	98.2	12-179	14.7	27	L606625-01	WG623530
Ethylbenzene	mg/kg	0.119	0.112	95.4	38-139	6.63	27	L606625-01	WG623530
Hexachloro-1,3-butadiene	mg/kg	0.124	0.110	99.1	10-147	11.9	37	L606625-01	WG623530
Isopropylbenzene	mg/kg	0.128	0.118	103.	34-137	8.80	29	L606625-01	WG623530
Methyl tert-butyl ether	mg/kg	0.110	0.101	88.3	45-134	9.23	22	L606625-01	WG623530
Methylene Chloride	mg/kg	0.104	0.0922	83.5	41-133	12.4	28	L606625-01	WG623530
n-Butylbenzene	mg/kg	0.117	0.107	93.6	19-149	9.31	32	L606625-01	WG623530
n-Propylbenzene	mg/kg	0.120	0.110	96.3	27-142	8.70	29	L606625-01	WG623530
Naphthalene	mg/kg	0.125	0.115	99.7	19-146	8.36	30	L606625-01	WG623530
p-Isopropyltoluene	mg/kg	0.124	0.114	98.9	21-150	8.13	31	L606625-01	WG623530
sec-Butylbenzene	mg/kg	0.120	0.110	96.0	25-148	8.84	31	L606625-01	WG623530
Styrene	mg/kg	0.123	0.117	98.8	30-156	5.13	26	L606625-01	WG623530
tert-Butylbenzene	mg/kg	0.124	0.114	99.4	32-146	8.34	30	L606625-01	WG623530
Tetrachloroethene	mg/kg	0.114	0.103	90.8	35-139	9.96	27	L606625-01	WG623530
Toluene	mg/kg	0.115	0.102	91.7	43-127	11.8	21	L606625-01	WG623530
trans-1,2-Dichloroethene	mg/kg	0.106	0.0892	84.5	41-132	16.8	23	L606625-01	WG623530
trans-1,3-Dichloropropene	mg/kg	0.128	0.117	103.	43-129	9.60	23	L606625-01	WG623530
Trichloroethene	mg/kg	0.115	0.100	92.4	42-136	14.4	23	L606625-01	WG623530
Trichlorofluoromethane	mg/kg	0.116	0.0985	92.4	20-178	15.9	30	L606625-01	WG623530
Vinyl chloride	mg/kg	0.110	0.0937	88.3	30-157	16.3	24	L606625-01	WG623530
Xylenes, Total	mg/kg	0.360	0.334	96.0	38-137	7.60	26	L606625-01	WG623530
4-Bromofluorobenzene				95.93	67-133				WG623530
Dibromofluoromethane				98.82	72-135				WG623530
Toluene-d8				98.96	90-113				WG623530
TPH (GC/FID) Low Fraction	mg/l	6.00	5.81	109.	55-109	3.11	20	L606106-01	WG623595
a,a,a-Trifluorotoluene(FID)				102.5	62-128				WG623595
TPH (GC/FID) Low Fraction	mg/kg	23.8	21.4	86.5	55-109	10.7	20	L606502-01	WG623434
a,a,a-Trifluorotoluene(FID)				91.03	59-128				WG623434
Toluene	mg/l	0.112	0.128	198.*	61-126	12.9	20	L606711-12	WG623968
4-Bromofluorobenzene				104.8	82-120				WG623968
Dibromofluoromethane				106.8	82-126				WG623968
Toluene-d8				101.6	92-112				WG623968
TPH (GC/FID) High Fraction	mg/kg	44.3	40.7	73.9	50-150	8.48	20	L606227-01	WG623812
o-Terphenyl				65.10	50-150				WG623812

Batch number /Run number / Sample number cross reference

WG623201: R2444038: L606271-02
WG623194: R2444057: L606271-02 03
WG623530: R2446779: L606271-01
WG623595: R2447018: L606271-03
WG623300: R2447600: L606271-01
WG623434: R2448297: L606271-01
WG623968: R2449119: L606271-02
WG623903: R2449888: L606271-02
WG623812: R2451318: L606271-01
WG623826: R2452517: L606271-03

* * Calculations are performed prior to rounding of reported values.
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Quality Assurance Report
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The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

BP Environmental

8615 Commerce Drive. Unit One
Easton,MD 21601

Billing information:

Accounts Payable
8615 Commerce Drive, Unit One

Easton,MD 21601

Chain of Custody G157 Page 1 of 1

ESC LAB SCIENCES
12065 Lebanon Road
Mt. Juliet, TN 37122

Phone: (800) 767-5859
Phone: (615) 758-5858
Fax: (615) 758-5859

Report to: Gary Lasako

Email: admin@bpenvironmental.net

Project Description: LSI

City/State Collected: Cambridge, MD

Phone: (410) 819-0919
FAX:

Client Project #: HJ-101-01

Lab Project #: BPENV-H+J-101-01

Collected by (print): GARY LASAKO

Site/Facility ID#: 11762

P.O.#: H+J-101-01

Collected by (signature): Gary K Lasako

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed

Email? ___No X Yes
FAX? ___No ___Yes

Acctnum: BPENV (lab use only)
Template/Prelogin: T82769 P410090
Cooler #: 10-29 MS
Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	DRO 100ml Amb-HCl	DRO 4ozClr-NoPres	GRO / VOC SCREEN 2ozClr-NoPres	GRO 40mlAmb HCl	TS 4ozClr-NoPres	V8260 40ml/NaBiS/Syr/MeOH	V8260OXY 40mlAmb-HCl	Remarks/Contaminant	Sample # (lab only)
PRODUCT LINE EX 2.75'	GRAB	SS	2.75'	12 NOV 12	1220	6		X	X		X	X		RUN	L606271-01
TEMP-01	GRAB	GW	—	12 NOV 12	0930	6	X			X			X	RUN	02
TEMP-02	GRAB	GW	—	12 NOV 12	0955	6	X			X			X	RUN	03
TRIP BLANK	GRAB	~~GW~~ OT	—	13 NOV 12	1230	~~18~~	~~X~~			~~X~~			~~X~~	HOLD	
		GW				6	X			X			X		
		GW				6	X			X			X		
		GW				6	X			X			X		
		GW				6	X			X			X		
		SS				6		X	X		X	X			

*Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other LAB SUPPLIED LIQUID

pH _____ Temp _____

Flow _____ Other _____

Remarks:

5413476 9911

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐	Condition: (lab use only)
Gary K Lasako	13 NOV 12	1245			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.7° Bottles Received: 18	COC Seal Intact: ___Y ___N ✓ NA
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 11/14/12 Time: 0900	pH Checked: NCF:

BP Environmental, Inc.
P: 410.819.0919 / 302.629.6505
F: 410.819.6555 / 302.629.6722

APPENDIX E

C1 10593 — SEQUENCE NO (DEP USE ONLY) — (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

STATE OF MARYLAND
WELL COMPLETION REPORT
FILL IN THIS FORM COMPLETELY
PLEASE PRINT OR TYPE

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED

COUNTY NUMBER: 2

PERMIT NO FROM PERMIT TO DRILL WELL: AA-97-85-7?

DATE Received: 0012819 85

DATE WELL COMPLETED: 10 01 85

Depth of Well: 110 (TO NEAREST FOOT)

OWNER: Washington Homes

STREET OR RFD: 7149 Lawsell Farm TOWN: Hanover

SUBDIVISION: Ridgewood SECTION: LOT: 9

WELL LOG
Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	Check if water bearing
Brown Sand	0	18	
Brown & White Clay	18	45	
Red Clay	45	80	
Brown Sand	80	110	X

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box): (Y) N

TYPE OF GROUTING MATERIAL

CEMENT [C M] BENTONITE CLAY [B C]

NO OF BAGS 2 NO POUNDS 100

GALLONS OF WATER 30

DEPTH OF GROUT SEAL (to nearest foot) from 0 (top) to 20 (bottom) (enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below

[S T] STEEL [C O] CONCRETE [P L] PLASTIC [O T] OTHER

MAIN CASING TYPE	Nominal diameter (on (main) casing (nearest inch)	Total depth of main casing (nearest foot)
PC	4	100

OTHER CASING (if used)

BACK CASING	diameter inch	depth (feet) from	to

SCREEN RECORD
screen type or open hole insert appropriate code below

[S T] STEEL [B R] BRASS BRONZE [H O] OPEN HOLE [P L] PLASTIC [O T] OTHER

C2

SCREEN	TYPE	DEPTH (nearest ft.)	
1	PC	100	110
2			
3			

SLOT NO 020

DIAMETER OF SCREEN 4 (NEAREST INCH)

GRAVEL PACK from 90 to 110

IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 66

DEP USE ONLY (NOT TO BE FILLED IN BY DRILLER)

T — TELESCOPE CASING; (E.R.O.S.) — LOG INDICATOR; WD — OTHER DATA

C3

PUMPING TEST

HOURS PUMPED (nearest hour) 5

PUMPING RATE (gal per min to nearest gal) 10

METHOD USED TO MEASURE PUMPING RATE: Air

WATER LEVEL (distance from land surface)

BEFORE PUMPING 70

WHEN PUMPING 85

TYPE OF PUMP USED (for test)

[A] air [P] piston [T] turbine [C] centrifugal [R] rotary [O] other (describe below) [J] jet [S] submersible

PUMP INSTALLED
DRILLER WILL INSTALL PUMP (CIRCLE) (YES or NO): (YES) NO

IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS EXCEPT HOME USE

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX - SEE ABOVE: S

CAPACITY: GALLONS PER MINUTE (to nearest gallon) 9

PUMP HORSE POWER .50

PUMP COLUMN LENGTH (nearest ft.) 80

CASING HEIGHT (circle appropriate box and enter casing height) [+] above [−] below LAND SURFACE 1 (nearest foot)

CIRCLE APPROPRIATE LETTER
A — A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED

E — ELECTRIC LOG OBTAINED

P — TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 08.03.01 WELL CONSTRUCTION AND IN COMPLIANCE WITH ALL CONDITIONS STATED IN THE PERMIT CONSTRUCTION PERMIT, AND THAT THE INFORMATION PROVIDED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DATE: 10

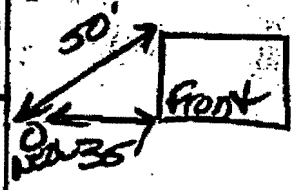
DRILLER SIGNATURE

PRINT NAME SIGNATURE ON APPLICATION

[illegible] DRILLER (Dept. of Water or Journeyman) [illegible] IF DIFFERENT FROM DRILLER

LOCATION OF WELL ON LOT
SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND/OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)

N



01 4336 — SEQUENCE NO. (DEIV USE ONLY)
(THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

STATE OF MARYLAND
WELL COMPLETION REPORT
FILL IN THIS FORM COMPLETELY
PLEASE PRINT OR TYPE

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

COUNTY NUMBER

ST/CO USE ONLY — DATE Received: 09 12 94

DATE WELL COMPLETED: 09 06 94

Depth of Well: 200 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL": AA-92-1914

OWNER: BENNETT WALTER (last name / first name)

STREET OR RFD: 727 MD. RT. 3 SOUTH TOWN: GAMBRILLS

SUBDIVISION: SECTION: LOT:

WELL LOG
Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	Check if water bearing
BROWN CLAY	0	5	
BROWN CLAY/SAND	5	15	
BROWN CLAY	15	20	
GRAY CLAY	20	30	
SHALE/STONE	30	31	
GRAVEL	31	45	
GRAY CLAY	45	50	
WHITE/RED CLAY	50	55	
WHITE/RED CLAY + SAND	55	65	
WHITE CLAY	65	70	
SAND	70	74	
WHITE CLAY/SAND	74	105	
WHITE CLAY	105	112	
GOOD SAND	112	122	
WHITE CLAY	122	130	
GOOD SAND	130	137	
RED CLAY	137	150	
GRAY CLAY	150	170	
WHITE CLAY	170	186	
WHITE CLAY + SAND	186	200	XXX

IN HARD ROCK AREAS, IDENTIFY SPECIFICALLY WHERE SATURATED FRACTURES WERE OBSERVED.

WELL HYDROFRACTURED: yes [Y] no [N]

CIRCLE APPROPRIATE LETTER
- A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED
- E ELECTRIC LOG OBTAINED
- P TEST-WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS IDENT. NO.: 32-4

DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION): Michael S. Fink

SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box): yes [Y] no [N]

TYPE OF GROUTING MATERIAL: CEMENT [CM] BENTONITE CLAY [BC]

NO. OF BAGS: 12 NO. OF POUNDS: 600

GALLONS OF WATER:

DEPTH OF GROUT SEAL (to nearest foot): from 0 ft. (TOP) to 40 ft. (BOTTOM)

CASING RECORD
(Enter casing types — insert appropriate code below)

[ST] STEEL [CO] CONCRETE [PL] PLASTIC [OT] OTHER

MAIN CASING TYPE	Nominal diameter top (main) casing (nearest inch)	Total depth of main casing (nearest foot)
PL	4	193

OTHER CASING (if used)

EACH CASING	diameter (inch)	depth (feet) from	to

SCREEN RECORD
(enter type or open hole — insert appropriate code below)

[ST] STEEL [BR] BRASS BRONZE [HO] OPEN HOLE [PL] PLASTIC [OT] OTHER

EACH SCREEN	TYPE	DEPTH (nearest ft.) from	to
1	PL	193	200
2			

SLOT SIZE: 0.04 in.

DIAMETER OF SCREEN: 2 (NEAREST INCH)

GRAVEL PACK: from 193 to 200

IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)

T (TO) — (E.R.D.S.) — W.O. (74 75 76)

TELEVISION CASING — LOG INDICATION — OTHER DATA

COUNTY

PUMPING TEST
HOURS PUMPED (nearest hour): 3

PUMPING RATE (gal. per min to nearest gal.): 6

METHOD USED TO MEASURE PUMPING RATE: 5 GAL BUCKET

WATER LEVEL (distance from land surface)

BEFORE PUMPING: 12

WHEN PUMPING: 105

TYPE OF PUMP USED (for test): [A] air [P] piston [T] turbine [C] centrifugal [R] rotary [O] other (describe below) [J] jet [S] submersible

PUMP INSTALLED
DRILLER WILL INSTALL PUMP (CIRCLE) (YES or NO): YES NO

IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS EXCEPT ONE USE

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX - SEE ABOVE: S

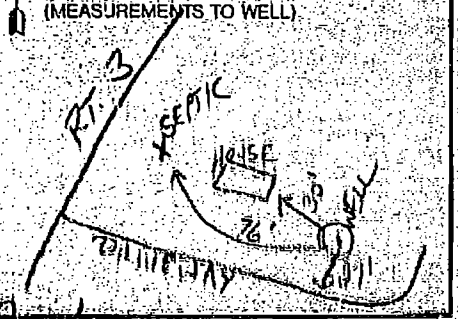
CAPACITY: GALLONS PER MINUTE (to nearest gallon): 5

PUMP HORSE POWER: .5

PUMP COLUMN LENGTH (nearest ft.): 185

CASING HEIGHT (circle appropriate box and enter casing height): + above / − below LAND SURFACE: 1 (nearest foot)

LOCATION OF WELL ON LOT
SHOW PERMANENT BUILDINGS AS BUILDING, SEPTIC TANKS, AND/OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)



Rept #3

C 1 3377 — SEQUENCE NO. (DENV USE ONLY)
(THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

STATE OF MARYLAND
WELL COMPLETION REPORT
FILL IN THIS FORM COMPLETELY
PLEASE PRINT OR TYPE

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

COUNTY NUMBER: 02

ST/CO USE ONLY
DATE Received: 07 29 06

DATE WELL COMPLETED:

Depth of Well: 206 (TO NEAREST FOOT)

entered 9/8/06

PERMIT NO. FROM "PERMIT TO DRILL WELL": AA-914-0551

OWNER Jackson, Raymond
STREET OR RFD 436 Sawgrass Court (last name / first name) TOWN Westminister, MD 21058
SUBDIVISION ____ SECTION 738 Maryland Rt 3 LOT ____

WELL LOG
Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	Check if water bearing
Top Soil	0	2	
Brown Clay & Gravel	2	10	
Grey Clay	10	31	
Red Sand & Sand Stone	31	37	
Gravel & Brown Sand	37	140	
Red & White Clay	147	190	
Brown & White Sand	190	206	xx

IN HARD ROCK AREAS, IDENTIFY SPECIFICALLY WHERE SATURATED FRACTURES WERE OBSERVED.

WELL HYDROFRACTURED: yes Y / no N

CIRCLE APPROPRIATE LETTER
- A A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED
- E ELECTRIC LOG OBTAINED
- P TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS IDENT. NO. 1 [illegible] 738

DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

Denton J. Welford
SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box): yes Y / no N
TYPE OF GROUTING MATERIAL
CEMENT CM — BENTONITE CLAY BC
NO. OF BAGS 50 NO. OF POUNDS 1000
GALLONS OF WATER 500
DEPTH OF GROUT SEAL (to nearest foot)
from 3 ft. (TOP) to 160 ft. (BOTTOM) (enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below
- ST STEEL
- CO CONCRETE
- PL PLASTIC
- OT OTHER

MAIN CASING TYPE	Nominal diameter top (main) casing (nearest inch)	Total depth of main casing (nearest foot)
PL	4	199

OTHER CASING (if used) — EACH CASING

diameter inch	depth (feet) from	to

SCREEN RECORD
screen type or open hole — Insert appropriate code below
- ST STEEL
- BR BRASS BRONZE
- HO OPEN HOLE
- PL PLASTIC
- OT OTHER

C 2

EACH SCREEN		DEPTH (nearest ft.)	
1	PL	199	206
2			
3			

SLOT SIZE 1 .020 3 ____
DIAMETER OF SCREEN 2 (NEAREST INCH)

GRAVEL PACK from 191 to 206

IF WELL DRILLED WAS FLOWING WELL: INSERT F IN BOX 68

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)
T — (E.R.O.S.) — W Q
TELESCOPE CASING — LOG INDICATOR — OTHER DATA

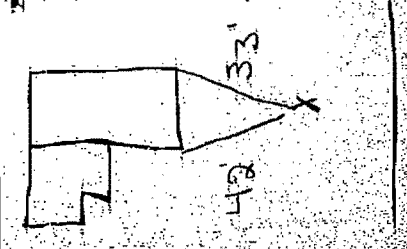
C 3

PUMPING TEST
HOURS PUMPED (nearest hour): 2
PUMPING RATE (gal. per min. to nearest gal.): 50
METHOD USED TO MEASURE PUMPING RATE: AIR
WATER LEVEL (distance from land surface)
BEFORE PUMPING: 78
WHEN PUMPING: 105

TYPE OF PUMP USED (for test)
- A air
- P piston
- T turbine
- C centrifugal
- R rotary
- O other (describe below)
- J jet
- S submersible

PUMP INSTALLED
DRILLER WILL INSTALL PUMP (CIRCLE) (YES or NO): YES / NO
IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS EXCEPT HOME USE.
TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX - SEE ABOVE: S
CAPACITY: GALLONS PER MINUTE (to nearest gallon): 10
PUMP HORSE POWER: 1
PUMP COLUMN LENGTH (nearest ft.): 150
CASING HEIGHT (circle appropriate box and enter casing height): + above / − below LAND SURFACE ..... 1 (nearest foot)

LOCATION OF WELL ON LOT
SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND/OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)



C 1 15656 SEQUENCE NO. (MDE USE ONLY)

1 24 3 6 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

STATE OF MARYLAND
WELL COMPLETION REPORT
FILL IN THIS FORM COMPLETELY
PLEASE TYPE

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

COUNTY NUMBER 02

ST/CO USE ONLY
DATE Received MM 5 DD 31 YY 01 (8–13)

DATE WELL COMPLETED MM 05 DD 08 YY 01 (15–20)

Depth of Well 206 (22–26) (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL" AA-94-6525 (28–37)

OWNER Mona Builders
STREET OR RFD ~~2026 Thersan Court (3835 Md. Rt. #3 N)~~ TOWN ~~Gambrills, Md. 21054~~
SUBDIVISION SECTION LOT

WELL LOG
Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	check if water bearing
Top Soil	0	2	
Brown clay and gravel	2	10	
Green Clay	10	31	
Red sand and sand stone	31	37	
Gravel and brown sand	37	147	
Red and white clay	147	185	
Brown and white sand	185	206	X

NUMBER OF UNSUCCESSFUL WELLS:

WELL HYDROFRACTURED yes Y no N

CIRCLE APPROPRIATE LETTER
- A A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED
- E ELECTRIC LOG OBTAINED
- P TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO. M S D 161
Robert P. Copsey
DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO. M S D 161
ROBERT P. COPSEY

SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box) yes Y (43) no N (44)

TYPE OF GROUTING MATERIAL (Circle one) CEMENT CM BENTONITE CLAY BC

NO. OF BAGS 14 (45–46) NO. OF POUNDS 300 (47–50)

GALLONS OF WATER 350

DEPTH OF GROUT SEAL (to nearest foot) from 3 (48–52) TOP ft. to 150 (54–58) BOTTOM ft. (enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below

ST STEEL, CO CONCRETE, PL PLASTIC, OT OTHER

MAIN CASING TYPE	Nominal diameter top (main) casing (nearest inch)	Total depth of main casing (nearest foot)
PL (60–61)	4 (63–64)	199 (66–70)

EACH CASING — OTHER CASING (if used)

diameter inch	depth (feet) from	to

SCREEN RECORD
screen type or open hole insert appropriate code below

ST STEEL, BR BRASS, BRONZE, HO OPEN HOLE, PL PLASTIC, OT OTHER

C 2 (1–2)

DEPTH (nearest ft.)

EACH SCREEN			
1	PL (8–9)	199 (11–15)	206 (17–21)
2	(23–24)	(26–30)	(32–36)
3	(38–39)	(41–45)	(47–51)

SLOT SIZE 1 .016 2 3

DIAMETER OF SCREEN 2 (56–60) (NEAREST INCH)

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68: from 181 to 206

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)
T (70) (E.R.O.S.) (72) W Q (74–76)
TELESCOPE CASING LOG INDICATOR OTHER DATA

C 3 (1–2)

PUMPING TEST
HOURS PUMPED (nearest hour) 2 (8–9)

PUMPING RATE (gal. per min.) 50 (11–15)

METHOD USED TO MEASURE PUMPING RATE AIR

WATER LEVEL (distance from land surface)

BEFORE PUMPING 75 (17–20) ft.

WHEN PUMPING 105 (22–25) ft.

TYPE OF PUMP USED (for test)
A air (27), P piston (27), T turbine (27), C centrifugal (27), R rotary (27), O other (describe below) (27), J jet (27), S submersible (27)

PUMP INSTALLED
DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) YES NO

IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29. S (29)

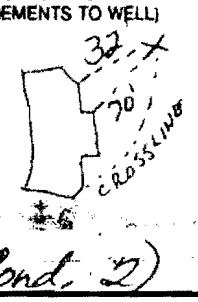
CAPACITY: GALLONS PER MINUTE (to nearest gallon) 12 (31–35)

PUMP HORSE POWER .75 (37–41)

PUMP COLUMN LENGTH (nearest ft.) 130' (43–47)

CASING HEIGHT (circle appropriate box and enter casing height)
+ above (48), – below (49) — LAND SURFACE (50–51) (nearest) foot)

LOCATION OF WELL ON LOT
SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND /OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)



N (Cont. 2)

DENV-CR00 COUNTY

C 1 **12730** SEQUENCE NO. (MDE USE ONLY)

(THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

STATE OF MARYLAND
WELL COMPLETION REPORT
FILL IN THIS FORM COMPLETELY
PLEASE TYPE

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

COUNTY NUMBER: 02

ST/CO USE ONLY — DATE Received: 04/05/02

DATE WELL COMPLETED: 05 15 02

Depth of Well: 342 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL": AA - 94 - 1975

OWNER: [illegible], LEO (LEO'S VACATION CENTER

STREET OR RFD: [illegible] TOWN: [illegible], MD. 21032

SUBDIVISION: SECTION: LOT:

WELL LOG
Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	CHECK if water bearing
TOP SOIL	0	3	
BROWN CLAY & GRAVEL	2	20	
GREEN CLAY	20	65	
ROCK	65	67	
GRAVEL	67	130	
WHITE CLAY	130	140	
BROWN SAND & CLAY	140	155	
RED SAND	155	200	
WHITE CLAY	200	210	
WHITE SAND & GRAVEL	210	250	
WHITE CLAY	250	260	
WHITE SAND & CLAY	260	280	
WHITE SAND	280	342	X
RED CLAY	342	360	

NUMBER OF UNSUCCESSFUL WELLS:

WELL HYDROFRACTURED: YES Y / NO N

CIRCLE APPROPRIATE LETTER
- A — A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED
- E — ELECTRIC LOG OBTAINED
- P — TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO.: MSD 161

DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO.: MSD 161

ROBERT P. COPSEY

SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box): YES Y / NO N

TYPE OF GROUTING MATERIAL (Circle one): CEMENT CM — BENTONITE CLAY BC

NO. OF BAGS: 25 NO. OF POUNDS: 4250

GALLONS OF WATER: 625

DEPTH OF GROUT SEAL (to nearest foot): from 3 ft. TOP to 300 ft. BOTTOM (enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below: ST STEEL — CO CONCRETE — PL PLASTIC — OT OTHER

MAIN CASING TYPE	Nominal diameter top (main) casing (nearest inch)	Total depth of main casing (nearest foot)
PL	4	332

OTHER CASING (if used)

EACH CASING	diameter inch	depth (feet) from	to

SCREEN RECORD
screen type or open hole insert appropriate code below: ST STEEL — BR BRASS — BRONZE — PL PLASTIC — HO OPEN HOLE — OT OTHER

EACH SCREEN	TYPE	DEPTH (nearest ft.)	
1	PL	332	342
2			
3			

SLOT SIZE 1: .010 2: 3:

DIAMETER OF SCREEN: 2 (NEAREST INCH)

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68: from 3 to 300

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)

T (E.R.O.S.) W Q

TELESCOPE CASING — LOG INDICATOR — OTHER DATA

C 3 — PUMPING TEST
HOURS PUMPED (nearest hour): 2

PUMPING RATE (gal per min.): 5

METHOD USED TO MEASURE PUMPING RATE: AIR

WATER LEVEL (distance from land surface)

BEFORE PUMPING: 108 ft.

WHEN PUMPING: 150 ft.

TYPE OF PUMP USED (for test): A air — P piston — T turbine — C centrifugal — R rotary — O other (describe below) — J jet — S submersible

PUMP INSTALLED
DRILLER INSTALLED PUMP (CIRCLE) (YES or NO): YES / NO

IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29.: 5

CAPACITY: GALLONS PER MINUTE (to nearest gallon): 12

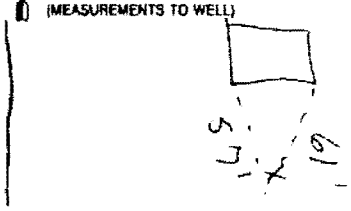
PUMP HORSE POWER: 1.

PUMP COLUMN LENGTH (nearest ft.): 160

CASING HEIGHT (circle appropriate box and enter casing height) + above / − below LAND SURFACE (nearest foot)

LOCATION OF WELL ON LOT

SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND /OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)



DENV.CR50 COUNTY

Radius 150'

5