Groundwater
& Environmental Services, Inc.

1350 Blair Drive, Suite A • Odenton, Maryland 21113 • (800) 220-3606 • (410) 721-3733

February 24, 2017

Ms. Susan Bull
Maryland Department of the Environment
Oil Control Program
1800 Washington Blvd
Baltimore, Maryland 21230-1719

RE: **UST Removal Activities Report Addendum**
Bel Air Xtra Fuels
2476 Churchville Road,
Bel Air, Maryland
MDE Case No. 2013-0007-HA and 2011-0112-HA

Dear Ms. Bull:

Groundwater & Environmental Services, Inc. (GES), on behalf of Drake Petroleum Inc. (Drake), is pleased to submit this Underground Storage Tank (UST) Removal Activities Report Addendum for the property located at 2476 Churchville Road, Bel Air, MD, detailing additional post-UST removal activities which included:

- Re-installation of monitoring well MW-7R (January 11, 2017);
- Removal of the canopy (January 12 – 17, 2017);
- Excavation of the D-4 dispenser area to collect a confirmation soil sample which delineated impacts exhibited in the previous sample from 3.5 feet below grade (fbg) in which MTBE exceeded the MDE standard (January 18, 2017);
- Subsequent excavation of the entire canopy area (January 18 – 25, 2017) ; and
- Disposal of impacted soils at Clean Earth of Greater Washington located at 6520 Dower house Road, Upper Marlboro, Maryland 20772 (Clean Earth (January 19, 24 and 25, 2017).

As documented in the UST Removal Activities Report submitted to the MDE on January 18, 2017, previous confirmation sampling and excavation activities were conducted for the removal of two (2) 8,000-gallon single-walled regular gasoline steel (Buffhide) USTs, one (1) 8,000-gallon single-walled diesel steel (Buffhide) UST, one (1) 8,000-gallon single-walled kerosene steel (Buffhide) UST and one (1) 10,000-gallon single-walled premium gasoline steel (Buffhide) UST along with associated dispensers and single-walled fiberglass reinforced piping (FRP). A site map showing the location of various site features including the limits of the excavations and soil sample locations can be found attached as **Figure 1** and a soil sample location and analytical map is attached as **Figure 2** showing former UST system features as well as soil sample locations with representative analytical data. The UST Workplan Addendum MDE approval is attached as **Appendix A**.

Field Activities

On January 11, 2017, Allied Well Drilling (Allied), with oversight from GES re-installed previously abandoned monitoring well MW-7 approximately three (3) feet to the north of the former location and identified the new well as groundwater monitoring well MW-7R. The new monitoring well was installed to 25 fbg using a Geoprobe 7822 DT drill rig (Geoprobe). During the installation activities soils were continuously evaluated for lithology, physical characterization and field screened using a calibrated photoionization detector (PID).

Soil samples were collected continuously using five (5) foot long, acetate sleeves advanced by the Geoprobe until boring termination at 25 fbg. Each continuous sample interval was screened with a PID to determine the presence

and general degree of VOC concentrations within the soil profile. Following the initial open-air screening a portion of each sample was containerized and allowed to equilibrate with ambient air temperature. Headspace PID readings were then collected for each containerized sample. Two soil samples were collected from monitoring well MW-7R for laboratory analysis from approximately 15 – 17 fbg (MW-7R(15-17)) and 17 – 19 fbg (MW-7R(17-19)) as the highest PID concentrations (greater than 15,000 parts per million (ppm)) were detected at these depths and the soils from these depths are in close proximity to the historical water table. Soil sample analytical results and chain of custody documentation are attached within **Appendix B**. Soil lithological descriptions, PID readings detected and well construction details from the installation of groundwater monitoring well MW-7R can be found on the boring log attached within **Appendix C**.

Following the collection of soil samples, monitoring well MW-7R was advanced to 25 fbg using hollow stem augers. Monitoring well MW-7R was constructed using 4-inch diameter polyvinyl chloride (PVC) with fifteen (15) feet of 0.020 micron machine slotted screen and ten (10) feet of 4-inch diameter PVC casing. No. 2 (#2) sand pack was placed in the annulus to two (2) feet above the well screen with bentonite two (2) feet above the sand pack. After the bentonite was added to the annulus and hydrated, grout was added to approximately one (1) fbg. Monitoring well MW-7R was completed within a 2-foot by 2-foot concrete pad and eight (8) inch manhole. After installation monitoring well MW-7R was developed, but as groundwater was slow to enter the monitoring well very little water was produced (<1 gallon) during the initial development activities. Purge water produced during the initial development of monitoring well MW-7R was filtered through activated carbon and onto a permeable surface. Further development and recharge was conducted on February 9, 2017, prior to the collection of the first groundwater sample. Purge water produced during the initial development of monitoring well MW-7R was filtered through carbon and onto a permeable surface. Soil produced during monitoring well installation activities was stockpiled to be transported off-site at a later date with impacted soils excavated from the canopy area. Additionally, GES performed a top of casing elevation (TOCE) survey utilizing a sight glass and rod to determine casing elevation of monitoring well MW-7R in relation to the current groundwater monitoring well network.

The canopy was removed beginning January 11, 2017. Post-UST removal additional excavation activities were conducted between January 18 and January 25, 2017. During the additional excavation the following activities were conducted:

- Soils were screened with a calibrated PID to measure volatile organic compound (VOC) concentrations. Soils and all non-native backfill materials (pea gravel) which exhibited concentrations greater than approximately 25 ppm were separated and stockpiled for transport and disposal at Clean Earth;
- Soils were excavated and samples were collected using the excavator;
- Soil samples were bottled in laboratory supplied bottleware and placed on ice. The samples were shipped via FedEx to Accutest Laboratories in Dayton, New Jersey (Accutest).
- Soil samples submitted to Accutest were analyzed for Full Suite VOCs including fuel oxygenates and naphthalene via Environmental Protection Agency (EPA) Method 8260/5035, and total petroleum hydrocarbons – gasoline range organics (TPH-GRO) and total petroleum hydrocarbons – diesel range organics (TPH-DRO) via EPA Method 8015/5035. Confirmation soil sampling analytical data can be found attached within **Table 1** and **Table 2**. Laboratory reports and chain of custody documentation can be found attached within **Appendix B**.
- During excavation activities groundwater was not noted within the excavation; therefore, de-watering was not necessary, but after the completion of the excavation and during backfilling activities groundwater rose to within the excavation to approximately 19 fbg.

GES on behalf of Drake arrived on site on January 18, 2017, after the removal of the canopy, to document the delineation of dispenser area sample location D-4 through further excavation and to collect a confirmation soil sample as the previous confirmation sample collected from D-4 at 3.5 feet exhibited a methyl tertiary butyl ether (MTBE) concentration of 106 micrograms per kilogram (µg/kg) exceeding the MDE Protection of Groundwater Standard of 12 µg/kg. Dispenser area D-4 was excavated to a depth of seven (7) fbg where a PID reading of 0.0

ppm was measured. Based on this PID reading a confirmation soil sample was submitted for laboratory analysis from D-4 at seven (7) fbg (**Figure 1**). Laboratory reports and chain of custody documentation can be found within **Appendix B**. After the collection of confirmation soil sample D-4(7'), further over-excavation was continued to assess and remove deeper impacted soils as detected during the installation of nearby monitoring well MW-7R. As shown on **Table 3** PID VOC concentrations increased from 0.0 ppm at seven (7) fbg to greater than 15,000 ppm at 17 fbg before decreasing again. The concentrations detected were similar to those detected within soil samples screened during the installation of monitoring well MW-7R. The over-excavation of the D-4 dispenser area was terminated at 21 fbg as the excavator could not reach any deeper. Following the over-excavation of the D-4 area the D-1 and D-2 sample areas were over-excavated inside the footers to the maximum reach of the excavator at 21 fbg (**Figure 1**). Screening data from these areas, as shown on **Table 3,** resembled data collected from the D-4 area with elevated PID VOC concentrations and based on the data collected Drake requested the over-excavation of the entire canopy area, around footers, to remove and dispose of as much impacted soil as possible. UST Services Corportaion, with oversight from GES, began over-excavating the canopy area starting on the east to a termination depth of 21 fbg and stockpiling soil on plastic sheeting.

On January 19, 2017 over-excavation activities of the canopy area continued and stockpiled impacted soils were loaded into transport trucks to be disposed of at Clean Earth. A total of 503.68 tons of impacted soils were loaded off-site for disposal on January 19, 2017 (**Appendix D**). In between loading trucks over-excavation of the canopy area continued towards the west. The canopy area was excavated down to the maximum excavator depth of 21 fbg while still exhibiting adsorbed phase impacts in native soils based on PID VOC readings detected in soil screening locations P-1(21'), P-2(21') and P-3(21'). Based on the adsorbed phase impacts detected in soils from the bottom of the canopy area excavation and the dimensions of the excavation, an additional 495.90 pounds of Oxygen Release Compound Advanced (ORC Advanced®) pellets were purchased and delivered to the site on January 23, 2017. The calculation for this treatment is as follows: the total weight of ORC Advanced® pellets to be applied to the excavation is 495.90 pounds and the product releases 17 percent (%) oxygen by weight of product. The ORC Advanced® pellets have the same % oxygen by weight as the ORC Advanced® product (both are 17 % compared with 10 % by weight for the traditional ORC). The targeted treatment zone is a three (3) foot thickness over an approximately 1,500 square foot area (approximately 420,780 pounds of soil). The concentration of ORC over this targeted treatment zone is 0.0011 pounds of ORC per pound of soil, or approximately 0.1 % weight of ORC per weight of soil. This equals approximately 3 pounds of ORC Advanced® pellets per cubic yard of backfill in the treatment zone.

Continuing on January 24, 2017, GES personnel oversaw impacted soils loaded into trucks and transported off-site for disposal at Clean Earth. A total of 97.61 tons of impacted soils were removed from the site on January 24, 2017 and disposed of at Clean Earth (**Appendix D**). The remainder of the canopy area was over-excavated on January 24, 2017 with impacted soils stockpiled on plastic. After the completion of the over-excavation activities #57 crushed stone (certified backfill) was delivered to the site and back fill of the excavation began. The ORC Advanced® pellets were added to the certified clean backfill material between 17 and 20 fbg to enhance aerobic biodegradation of remaining impacts through direct contact. The ORC Advanced® was mixed into the clean backfill using the excavator bucket.

The remainder impacted stockpiled soil was loaded into transport trucks on January 25, 2017 and transported off-site for disposal at Clean Earth. A total of 122.44 tons of impacted soils were removed from the site on January 25, 2017 and disposed of at Clean Earth (**Appendix D**). A total of 723.73 tons of impacted soils were disposed of off-site at Clean Earth during the over-excavation of the canopy area as well as the waste soils produced during the installation of monitoring well MW-7R.

Soil Sampling Data

The two soil samples, MW-7R(15-17) and MW-7R(17-19) collected from the installation of monitoring well MW-7R exhibited concentrations of total xylenes, MTBE and naphthalene which exceeded the MDE Protection of Groundwater Standards with concentrations increasing in the deeper sample collected from 17 – 19 fbg (**Table 1**).

The area surrounding monitoring well MW-7R was excavated to the extent possible and impacted soils were transported off-site for disposal. Additionally, the UST system was removed from the site as reported in the UST Removal Activities Report submitted to the MDE on January 18, 2017; therefore, these impacted soils will continue to naturally biodegrade through aerobic processes with enhancement from the recently added ORC Advanced® pellets to the close proximity surrounding excavation areas. Furthermore it should be noted that down-gradient confirmation samples collected from the UST excavation exhibit concentrations of constituents of concern below their respective MDE Protection of Groundwater Standards horizontally delineating the exceedances detected in the samples collected from monitoring well MW-7R (**Figure 2**).

An additional confirmation soil sample for laboratory analysis was collected at the site on January 18, 2017 from seven (7) fbg at the dispenser D-4 location after the initial sample collected from 3.5 fbg at the D-4 location exhibited an MTBE concentration of 106 µg/kg which exceeded the MDE Protection of Groundwater Standard of 12 µg/kg. The sample collected on January 18, 2017 from the D-4 location at seven (7) fbg exhibited no constituents of concern exceeding their respective MDE Protection of Groundwater Standards and none detected above laboratory method detection limits (MDL) except MTBE at a concentration of 5 µg/kg (**Table 1**). Based on the comparison of these results to the confirmation sample collected from the D-4 location at 3.5 feet the impacts in this area from the previous dispenser are considered delineated and have been removed. Laboratory reports and chain of custody documentation can be found attached within **Appendix B**.

Conclusions

Confirmation soil sample D-4(7') collected from the D-4 dispenser area on January 18, 2017, exhibited concentrations of COCs below MDE Protection of Groundwater Standards and showed a decrease in MTBE concentrations compared to the sampled collected from the same location at 3.5 feet. The D-4 dispenser area location is now considered delineated with the additional over-excavation and removal of impacted soils from any impacts that originated from the dispenser. Vertical delineation has been completed across the site as shown analytical sample data within **Table 1** and PID screening data included within **Table 3**. Groundwater was not initially observed within the UST excavation, but began to rise into the excavation to approximately 19 fbg just before backfilling began and liquid phase hydrocarbons were not observed. Note that historically groundwater has ranged from approximately 7 fbg to 22 fbg with a more recently depressed water table recently. A total of 723.73 tons of impacted soils were transported off-site and disposed of at Clean Earth (**Appendix D**) as additional remediation of the historical releases. An additional 495.90 pounds of ORC Advanced® pellets were mixed into the certified clean backfill (#57 crushed stone) between 17 and 20 feet within the canopy area excavation to enhance aerobic biodegradation of remaining impacts through direct contact. The re-installation of monitoring well MW-7, renamed MW-7R, was completed and the quarterly groundwater sampling event was conducted on February 9, 2017. The data collected during this event will be reported in the Second Quarter 2017 Report.

GES appreciates the continued guidance of the MDE on this project. If you have any questions or would like additional information please contact Andrea Taylorson-Collins at extension 3703.

Sincerely,
Groundwater & Environmental Services, Inc.

Prepared By:

Timothy Boswell
Case Manager/Hydrogeologist

Reviewed By:

Andrea Taylorson-Collins
Senior Project Manager

Enclosures
C: Eric Harvey, Drake Petroleum Company via Electronic submittal
GES File (PSID #: 629704)

FIGURES

DRAFTED BY: W.A.W.	SOIL SAMPLE AND EXCAVATION LOCATION MAP
CHECKED BY: TB	BEL AIR XTRA FUELS 2476 CHURCHVILLE ROAD BEL AIR, MARYLAND
REVIEWED BY: ATC	Groundwater & Environmental Services, Inc. 1350 BLAIR DRIVE, SUITE A, ODENTON, MD 21113
NORTH	SCALE IN FEET: 0 APPROXIMATE 30 / DATE: 2–13–17 / FIGURE: 1

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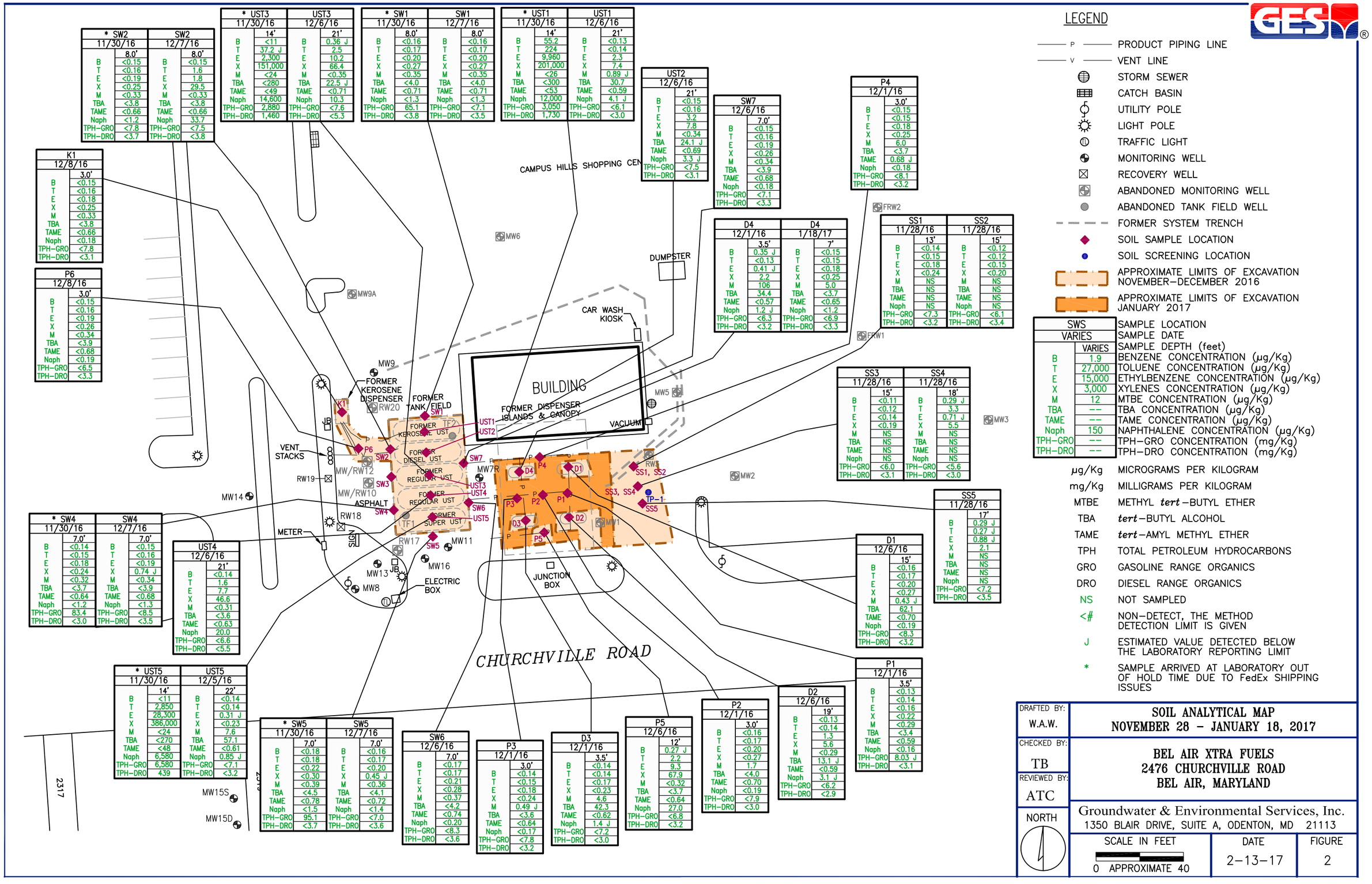


LEGEND

- PRODUCT PIPING LINE
- VENT LINE
- STORM SEWER
- CATCH BASIN
- UTILITY POLE
- LIGHT POLE
- TRAFFIC LIGHT
- MONITORING WELL
- RECOVERY WELL
- ABANDONED MONITORING WELL
- ABANDONED TANK FIELD WELL
- FORMER SYSTEM TRENCH
- SOIL SAMPLE LOCATION
- SOIL SCREENING LOCATION
- APPROXIMATE LIMITS OF EXCAVATION NOVEMBER–DECEMBER 2016
- APPROXIMATE LIMITS OF EXCAVATION JANUARY 2017

SWS	SAMPLE LOCATION
VARIES	SAMPLE DATE
VARIES	SAMPLE DEPTH (feet)
B 1.9	BENZENE CONCENTRATION (µg/Kg)
T 27,000	TOLUENE CONCENTRATION (µg/Kg)
E 15,000	ETHYLBENZENE CONCENTRATION (µg/Kg)
X 3,000	XYLENES CONCENTRATION (µg/Kg)
M 12	MTBE CONCENTRATION (µg/Kg)
TBA --	TBA CONCENTRATION (µg/Kg)
TAME --	TAME CONCENTRATION (µg/Kg)
Naph 150	NAPHTHALENE CONCENTRATION (µg/Kg)
TPH-GRO --	TPH-GRO CONCENTRATION (mg/Kg)
TPH-DRO --	TPH-DRO CONCENTRATION (mg/Kg)

µg/Kg	MICROGRAMS PER KILOGRAM
mg/Kg	MILLIGRAMS PER KILOGRAM
MTBE	METHYL *tert*–BUTYL ETHER
TBA	*tert*–BUTYL ALCOHOL
TAME	*tert*–AMYL METHYL ETHER
TPH	TOTAL PETROLEUM HYDROCARBONS
GRO	GASOLINE RANGE ORGANICS
DRO	DIESEL RANGE ORGANICS
NS	NOT SAMPLED
<#	NON–DETECT, THE METHOD DETECTION LIMIT IS GIVEN
J	ESTIMATED VALUE DETECTED BELOW THE LABORATORY REPORTING LIMIT
*	SAMPLE ARRIVED AT LABORATORY OUT OF HOLD TIME DUE TO FedEx SHIPPING ISSUES

DRAFTED BY: W.A.W.
CHECKED BY: TB
REVIEWED BY: ATC
NORTH

SOIL ANALYTICAL MAP
NOVEMBER 28 – JANUARY 18, 2017

BEL AIR XTRA FUELS
2476 CHURCHVILLE ROAD
BEL AIR, MARYLAND

Groundwater & Environmental Services, Inc.
1350 BLAIR DRIVE, SUITE A, ODENTON, MD 21113

SCALE IN FEET: 0 APPROXIMATE 40
DATE: 2–13–17
FIGURE: 2

M:\Graphics\0400-Crofton\Drake Petroleum\Bel Air\Bel Air SM.dwg, B-40, 2/14/2017 7:55:16 AM, wwesterlund

TABLES

Table 1

Soil Analytical Data Summary

Drake - Bel Air #7805
2476 Churchville Road
Bel Air, Maryland

Sample Location	Date	Maximum PID (ppm)	Depth fbg	Benzene (µg/kg)	Toluene (µg/kg)	Ethylbenzene (µg/kg)	Total Xylenes (µg/kg)	MTBE (µg/kg)	TBA (µg/kg)	TAME (µg/kg)	Naphthalene (µg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)
Protection of Groundwater			-	1.9	27,000	15,000	3,000	12	-	-	150	-	-
D-1(15')	12/06/16	8.1	15	<0.16	<0.17	<0.20	<0.27	0.43 J	62.1	<0.70	<0.19	<8.3	<3.2
D-2(19')	12/06/16	298.7	19	<0.13	<0.14	1.3	5.6	<0.29	13.1 J	<0.59	3.1 J	<6.2	<2.9
D-3	12/01/16	0.4	3.5	<0.14	<0.14	<0.17	<0.23	4.6	42.3	<0.62	1.4 J	<7.2	<3.0
D-4	12/01/16	0.2	3.5	0.35 J	<0.13	0.41 J	2.2	**106**	34.4	<0.57	1.2 J	<6.3	<3.2
D-4(7')	01/18/17	0.0	7.0	<0.15	<0.15	<0.18	<0.25	5.0	<3.7	<0.65	<1.2	<6.9	<3.3
K-1(3')	12/08/16	0.0	3.0	<0.15	<0.16	<0.18	<0.25	<0.33	<3.8	<0.66	<0.18	<7.8	<3.1
P-1	12/01/16	16.8	3.5	<0.13	<0.14	<0.16	<0.22	<0.29	<3.4	<0.59	<0.16	8.03 J	<3.1
P-2	12/01/16	1.0	3.0	<0.16	<0.17	<0.20	<0.27	1.7	<4.0	<0.70	<0.19	<7.9	<3.0
P-3	12/01/16	0.0	3.0	<0.14	<0.15	<0.18	<0.24	0.49 J	<3.6	<0.64	<0.17	<7.8	<3.2
P-4	12/01/16	0.7	3.0	<0.15	<0.15	<0.18	<0.25	6.0	<3.7	0.68 J	<0.18	<8.1	<3.2
P-5(12')	12/06/16	311.6	12	0.27 J	2.2	9.3	67.9	<0.32	<3.7	<0.64	27.0	<6.8	<3.2
P-6	12/08/16	10.8	3.0	<0.15	<0.16	<0.19	<0.26	<0.34	<3.9	<0.68	<0.19	<6.5	<3.3
UST-1(14')*	11/30/16	1,098	14	**55.2**	224	9,960	**201,000**	**<26**	<300	<53	**12,000**	3,050	1,730
UST-1(21')	12/06/16	181.6	21	<0.13	<0.14	2.3	7.4	0.89 J	30.7	<0.59	4.1 J	<6.1	<3.0
UST-2(21')	12/06/16	212.7	21	<0.15	<0.16	3.2	7.8	<0.34	24.1 J	<0.69	3.3 J	<7.5	<3.1
UST-3(14')*	11/30/16	2,105	14	**<11**	37.2 J	2,300	**151,000**	**<24**	<280	<49	**14,600**	2,880	1,460
UST-3(21')	12/06/16	311.8	21	0.36 J	2.5	10.2	66.4	<0.35	22.5 J	<0.71	10.3	<7.6	<5.3
UST-4(21')	12/06/16	261.2	21	<0.14	1.6	7.7	46.6	<0.31	<3.6	<0.63	20.0	<6.6	<5.5
UST-5(14')*	11/30/16	2,105	14	**<11**	2,850	**28,300**	**386,000**	**<24**	<270	<48	**6,580**	6,580	439
UST-5(22')	12/05/16	7.1	22	<0.14	<0.14	0.31 J	<0.23	7.6	57.1	<0.61	0.85 J	<7.1	<3.2

Table 1

Soil Analytical Data Summary

Drake - Bel Air #7805
2476 Churchville Road
Bel Air, Maryland

Sample Location	Date	Maximum PID (ppm)	Depth fbg	Benzene (µg/kg)	Toluene (µg/kg)	Ethylbenzene (µg/kg)	Total Xylenes (µg/kg)	MTBE (µg/kg)	TBA (µg/kg)	TAME (µg/kg)	Naphthalene (µg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)
Protection of Groundwater			-	1.9	27,000	15,000	3,000	12	-	-	150	-	-
SW-1*	11/30/16	6.6	8.0	<0.16	<0.17	<0.20	<0.27	<0.35	<4.0	<0.71	<1.3	65.1	<3.8
SW-1	12/07/16	1.3	8.0	<0.16	<0.17	<0.20	<0.27	<0.35	<4.0	<0.71	<1.3	<7.1	<3.5
SW-2*	11/30/16	1.7	8.0	<0.15	<0.16	<0.19	<0.25	<0.33	<3.8	<0.66	<1.2	<7.8	<3.7
SW-2	12/07/16	0.8	8.0	<0.15	1.6	1.8	29.5	<0.33	<3.8	<0.66	33.7	<7.5	<3.8
SW-3	11/30/16	1.7	8.0	-	-	-	-	-	-	-	-	-	-
SW-4*	11/30/16	4.4	7.0	<0.14	<0.15	<0.18	<0.24	<0.32	<3.7	<0.64	<1.2	83.4	<3.0
SW-4	12/07/16	4.3	7.0	<0.15	<0.16	<0.19	0.74 J	<0.34	<3.9	<0.68	<1.3	<8.5	<3.5
SW-5*	11/30/16	0.2	7.0	<0.18	<0.18	<0.22	<0.30	<0.39	<4.5	<0.78	<1.5	95.1	<3.7
SW-5	12/07/16	0.2	7.0	<0.16	<0.17	<0.20	0.45 J	<0.36	<4.1	<0.72	<1.4	<7.0	<3.6
SW-6	12/06/16	3.7	7.0	<0.17	<0.17	<0.21	<0.28	<0.37	<4.2	<0.74	<0.20	<8.3	<3.6
SW-7	12/06/16	1.2	7.0	<0.15	<0.16	<0.19	<0.26	<0.34	<3.9	<0.68	<0.18	<7.1	<3.3
MW-7R(15-17)	01/11/17	398.1	15-17	**<11**	<11	1,060	**3,710**	**26.1**	<280	<49	**1,250**	72.0	<8.1
MW-7R(17-19)	01/11/17	14,195	17-19	**<7.8**	1,480	13,400	**78,500**	**<17**	<200	<35	**7,720**	836	47.6
SS-1	11/28/16	0.0	13	<0.14	<0.15	<0.18	<0.24	-	-	-	-	<7.3	<3.2
SS-2	11/28/16	341.2	15	<0.12	<0.12	<0.15	<0.20	-	-	-	-	<6.1	<3.4
SS-3	11/28/16	128.7	15	<0.11	<0.12	<0.14	<0.19	-	-	-	-	<6.0	<3.1
SS-4	11/28/16	327.0	18	0.29 J	3.3	0.71 J	5.5	-	-	-	-	<5.6	<3.0
SS-5	11/28/16	16.7	17	0.29 J	0.27 J	0.88 J	2.1	-	-	-	-	<7.2	<3.5

Soil Analytical Data Summary

Drake - Bel Air #7805
2476 Churchville Road
Bel Air, Maryland

Sample Location	Date	Maximum PID (ppm)	Depth fbg	Benzene (µg/kg)	Toluene (µg/kg)	Ethylbenzene (µg/kg)	Total Xylenes (µg/kg)	MTBE (µg/kg)	TBA (µg/kg)	TAME (µg/kg)	Naphthalene (µg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)
Protection of Groundwater			-	1.9	27,000	15,000	3,000	12	-	-	150	-	-

Notes:

* = Sample arrived at laboratory out of hold time due to Fedex shipping issues
<# = Non-Detect, the method detection limit is given
fbg = feet below grade
ppm = Parts per million
PID = Photoionization detector
MTBE = Methyl-tertiary Butyl-ether
TBA = tert-butyl alcohol
TAME = tert-amyl methyl-ether
TPH-GRO = Total Petroleum Hydrocarbons - Gasoline Range Organics
TPH-DRO = Total Petroleum Hydrocarbons - Diesel Range Organics
µg/kg = Micrograms per kilogram
mg/kg = milligrams per kilogram
J = Estimated value detected below the laboratory reporting limit

Table 2

Soil Analytical Data Summary - Metals

Drake - Bel Air #7805
2476 Churchville Road
Bel Air, Maryland

Sample Location	Date	Maximum PID (ppm)	Depth fbg	Total Arsenic (mg/kg)	Total Chromium (mg/kg)	Total Lead (mg/kg)	Hexavalent Chromium (mg/kg)
Residential Clean-up Standard				0.43	23	400	23
SS-1	11/28/16	0.0	13	**<2.4**	3.7	9.3	<0.46
SS-2	11/28/16	341.2	15	**2.3**	7.3	5.1	<0.47
SS-3	11/28/16	128.7	15	**3.2**	3.5	14.5	<0.47
SS-4	11/28/16	327.0	18	**<2.3**	3.3	8.6	<0.47
SS-5	11/28/16	16.7	17	**<12**	<6.1	13.2	0.49

Notes:

<# = Non-Detect, the method detection limit is given
fbg = feet below grade
ppm = Parts per million
PID = Photoionization detector
mg/kg = milligrams per kilogram

Table 3

PID Screening Data Summary

Drake - Bel Air #7805
2476 Churchville Road
Bel Air, Maryland

Sample Location	Date	Depth fbg	PID Reading (ppm)	Comments
UST-1*	**11/30/2016**	**14'**	**1,098**	
UST-1	**12/6/2016**	**21'**	**181.6**	**excavator reached maximum depth**
UST-2	11/30/2016	14'	1,014	
UST-2	**12/6/2016**	**21'**	**212.7**	**excavator reached maximum depth**
UST-3*	**11/30/2016**	**14'**	**2,105**	
UST-3	12/5/2016	20'	551.1	
UST-3	**12/6/2016**	**21'**	**311.8**	**excavator reached maximum depth**
UST-4	11/30/2016	14'	2,662	
UST-4	12/5/2016	20'	466.1	
UST-4	**12/6/2016**	**21'**	**261.2**	**excavator reached maximum depth**
UST-5*	**11/30/2016**	**14'**	**2,105**	
UST-5	12/2/2016	17'	178.1	
UST-5	12/5/2016	18'	1,508	
UST-5	**12/5/2016**	**22'**	**7.1**	**excavator reached maximum depth**
SW-1*	**11/30/2016**	**8'**	**6.6**	**reached lab out of hold time**
SW-1	**12/7/2016**	**8'**	**1.3**	**sample re-collected**
SW-2*	**11/30/2016**	**8'**	**1.7**	**reached lab out of hold time**
SW-2	**12/7/2016**	**8'**	**0.8**	**sample re-collected**
SW-3	**11/30/2016**	**8'**	**1.7**	**used for screening purposes only**
SW-4*	**11/30/2016**	**8'**	**4.4**	**reached lab out of hold time**
SW-4	**12/7/2016**	**8'**	**4.3**	**sample re-collected**
SW-5*	**11/30/2016**	**8'**	**0.2**	**reached lab out of hold time**
SW-5	**12/7/2016**	**8'**	**0.2**	**sample re-collected**
SW-6	**12/6/2016**	**8'**	**3.7**	
SW-7	**12/6/2016**	**8'**	**1.2**	
D-1	12/1/2016	2.5'	114.9	
D-1	12/1/2016	3.5'	1,126	
D-1	12/2/2016	5.5'	1,226	
D-1	12/2/2016	7.5'	1,105	
D-1	12/2/2016	9.5'	2,892	
D-1	**12/6/2016**	**15'**	**8.1**	**excavator reached maximum depth**
D-1	1/18/2017	21'	11,267	excavator reached maximum depth

Table 3

PID Screening Data Summary

Drake - Bel Air #7805
2476 Churchville Road
Bel Air, Maryland

Sample Location	Date	Depth fbg	PID Reading (ppm)	Comments
D-2	12/1/2016	4'	965.7	
D-2	12/2/2016	7.5'	1,898	
D-2	12/2/2016	9.5'	2,028	
D-2	12/6/2016	15'	1,232	
D-2	**12/6/2016**	**19'**	**298.7**	**excavator reached maximum depth**
D-2	1/18/2017	4'	267.3	
D-2	1/18/2017	6'	897.4	
D-2	1/18/2017	8'	1,964	
D-2	1/18/2017	10'	2,597	
D-2	1/18/2017	14'	6,973	
D-2	1/18/2017	18'	8,297	
D-2	1/18/2017	21'	>15,000	excavator reached maximum depth
D-3	**12/1/2016**	**5.5'**	**0.4**	
D-4	**12/1/2016**	**3.5'**	**0.2**	
D-4	**1/18/2017**	**7'**	**0.0**	
D-4	1/18/2017	17'	>15,000	
D-4	1/18/2017	19'	1,692	
D-4	1/18/2017	21'	987.1	
Kerosene	12/8/2016	1'	78.1	
Kerosene	**12/8/2016**	**3'**	**0.0**	
P-1	**12/1/2016**	**3.5'**	**16.8**	
P-1	1/18/2017	21'	8,692	excavator reached maximum depth
P-2	**12/1/2016**	**3'**	**1.0**	
P-2	1/18/2017	21'	6,273	excavator reached maximum depth
P-3	**12/1/2016**	**3'**	**0.0**	
P-3	1/18/2017	21'	1,974	excavator reached maximum depth
P-4	**12/1/2016**	**3'**	**0.7**	
P-5	12/1/2016	3.5'	259	
P-5	12/1/2016	5'	1890	
P-5	12/1/2016	7.5'	2168	
P-5	12/1/2016	8.5'	1876	
P-5	12/1/2016	9.5'	2555	
P-5	**12/6/2016**	**12'**	**311.6**	**excavator reached maximum depth**
P-6	**12/8/2016**	**3'**	**10.8**	
TP	12/7/2016	15'	1,986	
TP	12/7/2016	17'	1,027	
TP	12/7/2016	19'	672.1	
TP	12/7/2016	21'	319.2	excavator reached maximum depth

Notes:
PID = photoionization detector
ppm = parts per million
Bold = sample submitted for laboratory analysis
* = sample received by laboratory out of hold time after getting lost while under Fedex custody
fbg = feet below grade

APPENDIX A

MDE Correspondence

psid# 618548
recd. 11-29-16

Denise Woodring

From: Jeannette Debartolomeo -MDE- <jeannette.debartolomeo@maryland.gov>
Sent: Tuesday, November 29, 2016 3:05 PM
To: Andrea Taylorson-Collins; I-Global Companies:Eric Harvey
Cc: Susan Bull; Timothy Boswell; Denise Woodring; Jeannette Debartolomeo -MDE-; Andrew Miller; Chris Ralston; Mark Mank -MDE-; EFaneuil@globalp.com
Subject: UST Removal Work Plan, MDE Case Nos. 2011-0112HA and 2013-0007HA
Attachments: 11-0112HA_Work Plan Approval_11-29-16.pdf

All,
The Department has reviewed the *UST Removal Work Plan* and *Addendum*. Attached is our approval letter, with some minor modifications to the proposal.

If there are questions, please let us know.

Thanks.

--
Jeannette DeBartolomeo
MDE-OCP
1800 Washington Blvd.
Suite 620
Baltimore, MD 21230
410-537-3427 (o)
410-537-3092 (f)
jeannette.debartolomeo@maryland.gov

Maryland
Department of
the Environment

Larry Hogan
Governor

Boyd Rutherford
Lieutenant Governor

Ben Grumbles
Secretary

November 29, 2016

Mr. David Went
Global Partners, LP
Alliance Energy Gasoline Division
800 South Street, Suite 500
P.O. Box 549290
Waltham MA 02454

Ms. Florence Rosen
Rosen Associates Management Corporation
33 South Jericho Road
Jericho NY 11753

RE: WORK PLAN APPROVAL
Case No. 2011-0112-HA
Bel Air Xtramart No. 7805
2476 East Churchville Road, Bel Air
Harford County, Maryland
Facility I.D. No. 12391

Dear Mr. Went and Ms. Rosen:

On November 14, 2016, representatives of Global Partners, LP (Mr. Eric Harvey), UST Services Corporation (Mr. Ron Kingsbury), Groundwater Environmental Services, Inc. (Ms. Andrea Taylorson-Collins), and the Maryland Department of the Environment's (the Department) Oil Control Program (Ms. Susan Bull and Ms. Jeannette DeBartolomeo) attended a meeting at the above-referenced facility to discuss the upcoming underground storage tank (UST) removal and soil excavation activities. Several items were discussed including:

- **Monitoring well abandonment**. Pre-removal monitoring well abandonment activities were conducted on November 21, 2016. The following monitoring wells were abandoned: MW-11; RW-10; RW-12; RW-17; RW-20; and MW-7. Monitoring well casings will be removed when possible during abandonment activities. Upon completion of UST excavation activities, monitoring well MW-7 will be replaced in an area as close to the abandoned location as possible.

- **Remediation system**. The last discharge samples were collected from the remediation system on November 14, 2016. The system will be relocated to the rear of the convenience store building so the carbon in the system can be used to treat any groundwater encountered during tank removal activities. Any water encountered will be stored in a frac tank and slowly discharged in accordance with the NPDES permit.

- **Soil excavation**. Soil characterization sample(s) will be collected within the first 1 to 2 days of beginning tank excavation/prep activities and run on a rapid turnaround so the majority of soils excavated can be removed and directly hauled off site to Clean Earth. Test pits will be dug in the areas around the piping and canopy as needed to assist in determining the extent of soil contamination for excavation purposes. The canopy can be removed pending permission from the property owner.

- **Work Plan.** The *UST Removal Work Plan*, dated November 8, 2016, included a proposal to use Oxygen Release Compound (ORC®) following excavation of petroleum impacted soils, with 2.5 to 3 pounds of ORC pellets applied per cubic yard of backfill in the excavation. Groundwater and Environmental Services, Inc. (GES) will provide the Department with the concentration of ORC to be used. The Department requires enhanced testing of adjacent supply wells prior to and after the addition of ORC into the tank excavation. To address the enhanced monitoring requirements, Global Partners LP and GES submitted the *UST Removal Work Plan Addendum*, dated November 17, 2016.

Based on our review of the *UST Removal Work Plan* and the *UST Removal Work Plan Addendum*, the Department approves the *Work Plans* for immediate implementation, contingent upon the following modifications:

1) Sampling of the following off-site drinking water supply wells must be conducted: 2303, 2317, 2319, 2401A, and 2401C Churchville Road; 1 (influent), 3, 5, 7, 9, and 10 Meadow Spring Drive, prior to and six months after the application of ORC.

   A. Samples must be collected at **both** the nearest point of entry into the house (e.g., pressure tank) **and** from an end use spigot in the living quarters of the home. Sample locations must be thoroughly documented to ensure repeatability and validity of sampling.

   B. The Department will require analysis of samples in **both** the filtered and unfiltered format. All samples collected must be analyzed for total lead, dissolved lead, arsenic, and total chromium via EPA Method 200.7/200.8 and hexavalent chromium via EPA Method 218.7.

   C. The Department will review the data provided to determine the best time for recollection of potential additional "after" application samples.

2) Groundwater samples must be collected from monitoring wells MW-8, MW-9, MW-14, MW-15S, MW-15D, MW-16S, MW-16I/D, MW-17S, MW-17I/D, RW-18, and RW-19.

   A. The Department will require analysis of samples in **both** the filtered and unfiltered format. All samples collected must be analyzed for total lead, dissolved lead, arsenic, and total chromium via EPA Method 200.7/200.8 and hexavalent chromium via EPA Method 218.7.

   B. Sampling of the monitoring wells must be conducted prior to and three months following the ORC event.

3) During test pit sampling for soil disposal characterization samples, you propose to collect additional soil samples from the test pits to analyze for total lead, arsenic, total chromium, and hexavalent chromium content. The Department approves the soil sampling plan as proposed.

If you have any questions, please contact the case manager, Ms. Jeannette DeBartolomeo, at 410-537-3427 (email: jeannette.debartolomeo@maryland.gov) or me at 410-537-3499 (email: susan.bull@maryland.gov).

Sincerely,

Susan R. Bull, Western Region Section Head
Remediation and State Lead Division
Oil Control Program

SRB/nln

cc: Mr. Eric Harvey (Global Partners, LP)
Ms. Andrea Taylorson-Collins (GES, Inc.)
Mr. Ron Kingsbury (UST Services Corp.)
Ms. Cari Bisco (Harford County Health Dept.)
Mr. Andrew B. Miller
Mr. Christopher H. Ralston
Ms. Hilary Miller

APPENDIX B

Laboratory Report and Chain of Custody Documentation

e-Hardcopy 2.0
Automated Report

Technical Report for

Drake Petroleum Company, Inc.

GESMD:PC# 007805 Bel Air Xtra Fuels, 2476 Churchville Road, Bel Air, MD 0403053

SGS Accutest Job Number: JC35337

Sampling Date: 01/11/17

Report to:

mdlabs@gesonline.com
ataylorsoncollins@gesonline.com

ATTN: Distribution5

Total number of pages in report: **19**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Nancy Cole
Laboratory Director

Client Service contact: Victoria Pushkova 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (L-A-B L2248)

Sections: 1 2 3 4

Table of Contents

Sample Summary

Drake Petroleum Company, Inc.

Job No: JC35337

GESMD:PC# 007805 Bel Air Xtra Fuels, 2476 Churchville Road, Bel Air, MD
Project No: 0403053

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC35337-1	01/11/17	12:00	TB	01/12/17	SO	Soil	MW-7R(15-17)
JC35337-2	01/11/17	12:10	TB	01/12/17	SO	Soil	MW-7R(17-19)

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Summary of Hits

Job Number: JC35337
Account: Drake Petroleum Company, Inc.
Project: GESMD:PC# 007805 Bel Air Xtra Fuels, 2476 Churchville Road, Bel Air, MD
Collected: 01/11/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC35337-1	**MW-7R(15-17)**					
n-Butylbenzene [a]		357	180	14	ug/kg	SW846 8260C
sec-Butylbenzene [a]		125 J	180	14	ug/kg	SW846 8260C
Ethylbenzene [a]		1060	91	14	ug/kg	SW846 8260C
Isopropylbenzene [a]		201	180	14	ug/kg	SW846 8260C
p-Isopropyltoluene [a]		86.5 J	180	22	ug/kg	SW846 8260C
Methyl Tert Butyl Ether [a]		26.1 J	91	24	ug/kg	SW846 8260C
Naphthalene [a]		1250	460	91	ug/kg	SW846 8260C
n-Propylbenzene [a]		639	180	18	ug/kg	SW846 8260C
1,2,4-Trimethylbenzene [a]		5240	180	16	ug/kg	SW846 8260C
1,3,5-Trimethylbenzene [a]		1560	180	15	ug/kg	SW846 8260C
m,p-Xylene [a]		3630	91	20	ug/kg	SW846 8260C
o-Xylene [a]		79.2 J	91	18	ug/kg	SW846 8260C
Xylene (total) [a]		3710	91	18	ug/kg	SW846 8260C
TPH-GRO (C6-C10)		72.0	18	9.2	mg/kg	SW846 8015C
JC35337-2	**MW-7R(17-19)**					
n-Butylbenzene		2900	130	9.9	ug/kg	SW846 8260C
sec-Butylbenzene		1010	130	10	ug/kg	SW846 8260C
Ethylbenzene		13400	650	97	ug/kg	SW846 8260C
Isopropylbenzene		2160	130	10	ug/kg	SW846 8260C
p-Isopropyltoluene		705	130	16	ug/kg	SW846 8260C
Naphthalene		7720	330	65	ug/kg	SW846 8260C
n-Propylbenzene		6620	130	13	ug/kg	SW846 8260C
Toluene		1480	65	8.2	ug/kg	SW846 8260C
1,2,4-Trimethylbenzene		54300	1300	110	ug/kg	SW846 8260C
1,3,5-Trimethylbenzene		16500	1300	110	ug/kg	SW846 8260C
m,p-Xylene		57400	650	140	ug/kg	SW846 8260C
o-Xylene		21100	650	130	ug/kg	SW846 8260C
Xylene (total)		78500	650	130	ug/kg	SW846 8260C
TPH-GRO (C6-C10)		836	13	6.6	mg/kg	SW846 8015C
TPH-DRO (C10-C28)		47.6	21	6.2	mg/kg	SW846 8015C

(a) Diluted due to high concentration of target compound.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW-7R(15-17)		
Lab Sample ID:	JC35337-1	**Date Sampled:**	01/11/17
Matrix:	SO - Soil	**Date Received:**	01/12/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	68.1
Project:	GESMD:PC# 007805 Bel Air Xtra Fuels, 2476 Churchville Road, Bel Air, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	D246726.D	1	01/16/17	TP	01/13/17 08:00	n/a	VD9980
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.4 g	5.0 ml	100 ul
Run #2			

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	910	460	ug/kg	
71-43-2	Benzene	ND	46	11	ug/kg	
108-86-1	Bromobenzene	ND	460	14	ug/kg	
74-97-5	Bromochloromethane	ND	460	29	ug/kg	
75-27-4	Bromodichloromethane	ND	180	14	ug/kg	
75-25-2	Bromoform	ND	460	24	ug/kg	
74-83-9	Bromomethane	ND	460	44	ug/kg	
78-93-3	2-Butanone (MEK)	ND	910	160	ug/kg	
104-51-8	n-Butylbenzene	357	180	14	ug/kg	
135-98-8	sec-Butylbenzene	125	180	14	ug/kg	J
98-06-6	tert-Butylbenzene	ND	180	14	ug/kg	
56-23-5	Carbon tetrachloride	ND	180	15	ug/kg	
108-90-7	Chlorobenzene	ND	180	15	ug/kg	
75-00-3	Chloroethane	ND	460	39	ug/kg	
67-66-3	Chloroform	ND	180	22	ug/kg	
74-87-3	Chloromethane	ND	460	19	ug/kg	
95-49-8	o-Chlorotoluene	ND	180	19	ug/kg	
106-43-4	p-Chlorotoluene	ND	180	22	ug/kg	
108-20-3	Di-Isopropyl ether	ND	180	12	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	180	44	ug/kg	
124-48-1	Dibromochloromethane	ND	180	14	ug/kg	
106-93-4	1,2-Dibromoethane	ND	91	22	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	91	16	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	91	13	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	91	14	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	460	50	ug/kg	
75-34-3	1,1-Dichloroethane	ND	91	17	ug/kg	
107-06-2	1,2-Dichloroethane	ND	91	16	ug/kg	
75-35-4	1,1-Dichloroethene	ND	91	14	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	91	40	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	91	14	ug/kg	
78-87-5	1,2-Dichloropropane	ND	180	28	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-7R(15-17)
Lab Sample ID: JC35337-1 **Date Sampled:** 01/11/17
Matrix: SO - Soil **Date Received:** 01/12/17
Method: SW846 8260C SW846 5035 **Percent Solids:** 68.1
Project: GESMD:PC# 007805 Bel Air Xtra Fuels, 2476 Churchville Road, Bel Air, MD

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
142-28-9	1,3-Dichloropropane	ND	180	18	ug/kg	
594-20-7	2,2-Dichloropropane	ND	180	14	ug/kg	
563-58-6	1,1-Dichloropropene	ND	180	15	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	180	18	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	180	20	ug/kg	
100-41-4	Ethylbenzene	1060	91	14	ug/kg	
87-68-3	Hexachlorobutadiene	ND	460	14	ug/kg	
98-82-8	Isopropylbenzene	201	180	14	ug/kg	
99-87-6	p-Isopropyltoluene	86.5	180	22	ug/kg	J
1634-04-4	Methyl Tert Butyl Ether	26.1	91	24	ug/kg	J
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	460	78	ug/kg	
74-95-3	Methylene bromide	ND	460	34	ug/kg	
75-09-2	Methylene chloride	ND	460	91	ug/kg	
91-20-3	Naphthalene	1250	460	91	ug/kg	
103-65-1	n-Propylbenzene	639	180	18	ug/kg	
100-42-5	Styrene	ND	180	13	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	2300	280	ug/kg	
994-05-8	tert-Amyl Methyl Ether	ND	180	49	ug/kg	
637-92-3	tert-Butyl Ethyl Ether	ND	180	24	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	180	19	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	180	22	ug/kg	
127-18-4	Tetrachloroethene	ND	180	26	ug/kg	
108-88-3	Toluene	ND	91	11	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	460	46	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	460	46	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	180	15	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	180	30	ug/kg	
79-01-6	Trichloroethene	ND	91	17	ug/kg	
75-69-4	Trichlorofluoromethane	ND	460	57	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	460	70	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	5240	180	16	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	1560	180	15	ug/kg	
75-01-4	Vinyl chloride	ND	180	18	ug/kg	
	m,p-Xylene	3630	91	20	ug/kg	
95-47-6	o-Xylene	79.2	91	18	ug/kg	J
1330-20-7	Xylene (total)	3710	91	18	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		70-122%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-7R(15-17)		
Lab Sample ID:	JC35337-1	**Date Sampled:**	01/11/17
Matrix:	SO - Soil	**Date Received:**	01/12/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	68.1
Project:	GESMD:PC# 007805 Bel Air Xtra Fuels, 2476 Churchville Road, Bel Air, MD		

VOA Full List + Oxygenates

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	106%		68-124%
2037-26-5	Toluene-D8	105%		77-125%
460-00-4	4-Bromofluorobenzene	105%		72-130%

(a) Diluted due to high concentration of target compound.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-7R(15-17)		
Lab Sample ID:	JC35337-1	**Date Sampled:**	01/11/17
Matrix:	SO - Soil	**Date Received:**	01/12/17
Method:	SW846 8015C SW846 5035	**Percent Solids:**	68.1
Project:	GESMD:PC# 007805 Bel Air Xtra Fuels, 2476 Churchville Road, Bel Air, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LM86718.D	1	01/13/17	EC	01/13/17 08:00	n/a	GLM3429
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.4 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	72.0	18	9.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	95%		70-116%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-7R(15-17)
Lab Sample ID: JC35337-1 **Date Sampled:** 01/11/17
Matrix: SO - Soil **Date Received:** 01/12/17
Method: SW846 8015C SW846 3546 **Percent Solids:** 68.1
Project: GESMD:PC# 007805 Bel Air Xtra Fuels, 2476 Churchville Road, Bel Air, MD

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7Y20812.D	1	01/15/17	TL	01/13/17	OP99829	G7Y832
Run #2							

	Initial Weight	Final Volume
Run #1	5.2 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	28	8.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	82%		13-142%
16416-32-3	Tetracosane-d50	81%		12-141%
438-22-2	5a-Androstane	76%		13-142%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-7R(17-19)
Lab Sample ID: JC35337-2 **Date Sampled:** 01/11/17
Matrix: SO - Soil **Date Received:** 01/12/17
Method: SW846 8260C SW846 5035 **Percent Solids:** 85.1
Project: GESMD:PC# 007805 Bel Air Xtra Fuels, 2476 Churchville Road, Bel Air, MD

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	D246727.D	1	01/16/17	TP	01/13/17 08:00	n/a	VD9980
Run #2	D246732.D	1	01/16/17	TP	01/13/17 08:00	n/a	VD9980

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.2 g	5.0 ml	100 ul
Run #2	5.2 g	5.0 ml	10.0 ul

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	650	330	ug/kg	
71-43-2	Benzene	ND	33	7.8	ug/kg	
108-86-1	Bromobenzene	ND	330	10	ug/kg	
74-97-5	Bromochloromethane	ND	330	21	ug/kg	
75-27-4	Bromodichloromethane	ND	130	9.9	ug/kg	
75-25-2	Bromoform	ND	330	17	ug/kg	
74-83-9	Bromomethane	ND	330	32	ug/kg	
78-93-3	2-Butanone (MEK)	ND	650	110	ug/kg	
104-51-8	n-Butylbenzene	2900	130	9.9	ug/kg	
135-98-8	sec-Butylbenzene	1010	130	10	ug/kg	
98-06-6	tert-Butylbenzene	ND	130	10	ug/kg	
56-23-5	Carbon tetrachloride	ND	130	11	ug/kg	
108-90-7	Chlorobenzene	ND	130	11	ug/kg	
75-00-3	Chloroethane	ND	330	28	ug/kg	
67-66-3	Chloroform	ND	130	16	ug/kg	
74-87-3	Chloromethane	ND	330	14	ug/kg	
95-49-8	o-Chlorotoluene	ND	130	13	ug/kg	
106-43-4	p-Chlorotoluene	ND	130	16	ug/kg	
108-20-3	Di-Isopropyl ether	ND	130	8.7	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	130	32	ug/kg	
124-48-1	Dibromochloromethane	ND	130	9.8	ug/kg	
106-93-4	1,2-Dibromoethane	ND	65	16	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	65	11	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	65	8.9	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	65	10	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	330	36	ug/kg	
75-34-3	1,1-Dichloroethane	ND	65	12	ug/kg	
107-06-2	1,2-Dichloroethane	ND	65	11	ug/kg	
75-35-4	1,1-Dichloroethene	ND	65	10	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	65	29	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	65	10	ug/kg	
78-87-5	1,2-Dichloropropane	ND	130	20	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-7R(17-19)
Lab Sample ID: JC35337-2 **Date Sampled:** 01/11/17
Matrix: SO - Soil **Date Received:** 01/12/17
Method: SW846 8260C SW846 5035 **Percent Solids:** 85.1
Project: GESMD:PC# 007805 Bel Air Xtra Fuels, 2476 Churchville Road, Bel Air, MD

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
142-28-9	1,3-Dichloropropane	ND	130	13	ug/kg	
594-20-7	2,2-Dichloropropane	ND	130	10	ug/kg	
563-58-6	1,1-Dichloropropene	ND	130	10	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	130	13	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	130	14	ug/kg	
100-41-4	Ethylbenzene	13400 [a]	650	97	ug/kg	
87-68-3	Hexachlorobutadiene	ND	330	10	ug/kg	
98-82-8	Isopropylbenzene	2160	130	10	ug/kg	
99-87-6	p-Isopropyltoluene	705	130	16	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	65	17	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	330	55	ug/kg	
74-95-3	Methylene bromide	ND	330	25	ug/kg	
75-09-2	Methylene chloride	ND	330	65	ug/kg	
91-20-3	Naphthalene	7720	330	65	ug/kg	
103-65-1	n-Propylbenzene	6620	130	13	ug/kg	
100-42-5	Styrene	ND	130	9.5	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	1600	200	ug/kg	
994-05-8	tert-Amyl Methyl Ether	ND	130	35	ug/kg	
637-92-3	tert-Butyl Ethyl Ether	ND	130	17	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	130	14	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	130	16	ug/kg	
127-18-4	Tetrachloroethene	ND	130	18	ug/kg	
108-88-3	Toluene	1480	65	8.2	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	330	33	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	330	33	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	130	11	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	130	21	ug/kg	
79-01-6	Trichloroethene	ND	65	12	ug/kg	
75-69-4	Trichlorofluoromethane	ND	330	41	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	330	50	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	54300 [a]	1300	110	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	16500 [a]	1300	110	ug/kg	
75-01-4	Vinyl chloride	ND	130	13	ug/kg	
	m,p-Xylene	57400 [a]	650	140	ug/kg	
95-47-6	o-Xylene	21100 [a]	650	130	ug/kg	
1330-20-7	Xylene (total)	78500 [a]	650	130	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%	98%	70-122%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-7R(17-19)		
Lab Sample ID:	JC35337-2	**Date Sampled:**	01/11/17
Matrix:	SO - Soil	**Date Received:**	01/12/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	85.1
Project:	GESMD:PC# 007805 Bel Air Xtra Fuels, 2476 Churchville Road, Bel Air, MD		

VOA Full List + Oxygenates

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	112%	101%	68-124%
2037-26-5	Toluene-D8	108%	105%	77-125%
460-00-4	4-Bromofluorobenzene	101%	105%	72-130%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-7R(17-19)		
Lab Sample ID:	JC35337-2	**Date Sampled:**	01/11/17
Matrix:	SO - Soil	**Date Received:**	01/12/17
Method:	SW846 8015C SW846 5035	**Percent Solids:**	85.1
Project:	GESMD:PC# 007805 Bel Air Xtra Fuels, 2476 Churchville Road, Bel Air, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LM86719.D	1	01/13/17	EC	01/13/17 08:00	n/a	GLM3429
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.2 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	836	13	6.6	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	96%		70-116%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-7R(17-19)		
Lab Sample ID:	JC35337-2	**Date Sampled:**	01/11/17
Matrix:	SO - Soil	**Date Received:**	01/12/17
Method:	SW846 8015C SW846 3546	**Percent Solids:**	85.1
Project:	GESMD:PC# 007805 Bel Air Xtra Fuels, 2476 Churchville Road, Bel Air, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7Y20813.D	1	01/15/17	TL	01/13/17	OP99829	G7Y832
Run #2							

	Initial Weight	Final Volume
Run #1	5.5 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	47.6	21	6.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	77%		13-142%
16416-32-3	Tetracosane-d50	79%		12-141%
438-22-2	5a-Androstane	74%		13-142%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SGS ACCUTEST

CHAIN OF CUSTODY

SGS Accutest - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

PAGE 1 OF 1

FED-EX Tracking #	Bottle Order Control #
SGS Accutest Quote #	SGS Accutest Job # JC35337

Client / Reporting Information

Company Name: Drake Petroleum Company, Inc.
Street Address: 15 NE Industrial Road
City / State / Zip: Branford, CT 06405
Project Contact / E-mail: Andrea Taylorson-Collins ataylorsoncollins@gesonline.com
Phone # / Fax #: 800-220-3606x3703 / 410-721-3733
Sampler(s) Name(s) / Phone #: Tim Boswell

Project Information

Project Name: Drake Bel Air Xtramart #7805
Street: 2476 Churchville Road
City / State: Bel Air / MD
Project #: 0403053
Client Purchase Order #: Bill Direct to Drake 7805
Project Manager: Andrea Taylorson-Collins

Billing Information (if different from Report to)

Company Name
Street Address
City / State / Zip
Attention:

Requested Analysis (see TEST CODE sheet)

SGS Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	8260 Full Suite VOCs including fuel oxygenates & naphthalene	8015 TPH-DRO	8015 TPH-GRO	LAB USE ONLY
1	MW-7R (15-17)	* 1	1/11/17	1200	TB	SO	7					7				X	X	X	D45
2	MW-7R (17-19)	* 1	1/11/17	1210	TB	SO	7					7				X	X	X	H176
																			P18
																			14P5
																			4999

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Turnaround Time (Business days)

- [x] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day RUSH
- [ ] 2 Day RUSH
- [ ] 1 Day RUSH
- [ ] other

Emergency & Rush T/A data available VIA Lablink

Approved By (SGS Accutest PM): / Date:

INITIAL ~~ASSESSMENT~~ 3ASM

LABEL VERIFICATION TV

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NJ Data of Known Quality Protocol Reporting
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

mdlabs@gesonline.com, ataylorsoncollins@gesonline.com,
ges@equisonline.com
* Recieved 3 Encores
o Recieved 1 25Gram Encore
Sample inventory is verified upon receipt in the Laboratory

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		1/12/17 0800	Donna Marple			
2				D. Marple	1/12/17 12:15	
3		1-12-17 1635				
4						
5						

Custody Seal # ☐ Intact ☐ Not intact
Preserved where applicable ☐
On Ice ☒ DL
Cooler Temp. 4.7 3.6 3.2

JC35337: Chain of Custody
Page 1 of 3

SGS Accutest Sample Receipt Summary

Job Number: JC35337 **Client:** Drake Petroleum **Project:** Drake Bel Air Xtramart #7805

Date / Time Received: 1/12/2017 12:15:00 PM **Delivery Method:** Accutest Courier **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (4.7); Cooler 2: (3.6); Cooler 3: (3.2);

Cooler Temps (Corrected) °C: Cooler 1: (3.9); Cooler 2: (2.8); Cooler 3: (2.4);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	3		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments -1 & -2 DRO, GRO, and 8260 requested. For volatiles, we rec'd 3x 5 gram encores and 1x 25 gram SPLP encore. Please verify if SPLP VOC is needed.

SM089-02
Rev. Date 12/1/16

Responded to by: VP

Response Date: 1/13

Response:

SPLP VOC is not needed.

JC35337: Chain of Custody
Page 3 of 3

e-Hardcopy 2.0
Automated Report

Technical Report for

Drake Petroleum Company, Inc.

GESMD:PC# 007805 Bel Air Xtra Fuels, 2476 Churchville Road, Bel Air, MD 0403053

SGS Accutest Job Number: JC35757

Sampling Date: 01/18/17

Report to:

1350 Blair Drive
Suite A
Odenton, MD 21113
ataylorsoncollins@gesonline.com; mdlabs@gesonline.com;
viktoriya.pushkova@sgs.com
ATTN: Andrea Taylorson-Collins

Total number of pages in report: **13**

NELAP ACCREDITED TNI LABORATORY

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Nancy Cole
Laboratory Director

Client Service contact: Victoria Pushkova 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (L-A-B L2248)

Sections: 1 2 3 4

Table of Contents

Sample Summary

Drake Petroleum Company, Inc.

Job No: JC35757

GESMD:PC# 007805 Bel Air Xtra Fuels, 2476 Churchville Road, Bel Air, MD
Project No: 0403053

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC35757-1	01/18/17	09:30	TB	01/19/17	SO	Soil	D-4 (7')

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Summary of Hits

Job Number: JC35757
Account: Drake Petroleum Company, Inc.
Project: GESMD:PC# 007805 Bel Air Xtra Fuels, 2476 Churchville Road, Bel Air, MD
Collected: 01/18/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC35757-1	**D-4 (7')**					
Methyl Tert Butyl Ether		5.0	1.2	0.32	ug/kg	SW846 8260C
1,2,4-Trimethylbenzene		0.30 J	2.4	0.21	ug/kg	SW846 8260C

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: D-4 (7')
Lab Sample ID: JC35757-1 **Date Sampled:** 01/18/17
Matrix: SO - Soil **Date Received:** 01/19/17
Method: SW846 8260C SW846 5035 **Percent Solids:** 85.3
Project: GESMD:PC# 007805 Bel Air Xtra Fuels, 2476 Churchville Road, Bel Air, MD

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X169714.D	1	01/20/17	TP	01/19/17 13:50	n/a	VX7222
Run #2							

	Initial Weight
Run #1	4.8 g
Run #2	

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	12	6.1	ug/kg	
71-43-2	Benzene	ND	0.61	0.15	ug/kg	
108-86-1	Bromobenzene	ND	6.1	0.19	ug/kg	
74-97-5	Bromochloromethane	ND	6.1	0.39	ug/kg	
75-27-4	Bromodichloromethane	ND	2.4	0.19	ug/kg	
75-25-2	Bromoform	ND	6.1	0.32	ug/kg	
74-83-9	Bromomethane	ND	6.1	0.59	ug/kg	
78-93-3	2-Butanone (MEK)	ND	12	2.1	ug/kg	
104-51-8	n-Butylbenzene	ND	2.4	0.19	ug/kg	
135-98-8	sec-Butylbenzene	ND	2.4	0.19	ug/kg	
98-06-6	tert-Butylbenzene	ND	2.4	0.19	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.4	0.20	ug/kg	
108-90-7	Chlorobenzene	ND	2.4	0.20	ug/kg	
75-00-3	Chloroethane	ND	6.1	0.52	ug/kg	
67-66-3	Chloroform	ND	2.4	0.29	ug/kg	
74-87-3	Chloromethane	ND	6.1	0.26	ug/kg	
95-49-8	o-Chlorotoluene	ND	2.4	0.25	ug/kg	
106-43-4	p-Chlorotoluene	ND	2.4	0.30	ug/kg	
108-20-3	Di-Isopropyl ether	ND	2.4	0.16	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.4	0.59	ug/kg	
124-48-1	Dibromochloromethane	ND	2.4	0.18	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.2	0.30	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.2	0.21	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.2	0.17	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.2	0.19	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	6.1	0.67	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.2	0.23	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.2	0.21	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.2	0.19	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	1.2	0.53	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	1.2	0.19	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.4	0.38	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: D-4 (7')
Lab Sample ID: JC35757-1 **Date Sampled:** 01/18/17
Matrix: SO - Soil **Date Received:** 01/19/17
Method: SW846 8260C SW846 5035 **Percent Solids:** 85.3
Project: GESMD:PC# 007805 Bel Air Xtra Fuels, 2476 Churchville Road, Bel Air, MD

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
142-28-9	1,3-Dichloropropane	ND	2.4	0.24	ug/kg	
594-20-7	2,2-Dichloropropane	ND	2.4	0.19	ug/kg	
563-58-6	1,1-Dichloropropene	ND	2.4	0.19	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	2.4	0.24	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	2.4	0.27	ug/kg	
100-41-4	Ethylbenzene	ND	1.2	0.18	ug/kg	
87-68-3	Hexachlorobutadiene	ND	6.1	0.19	ug/kg	
98-82-8	Isopropylbenzene	ND	2.4	0.19	ug/kg	
99-87-6	p-Isopropyltoluene	ND	2.4	0.30	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	5.0	1.2	0.32	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	6.1	1.0	ug/kg	
74-95-3	Methylene bromide	ND	6.1	0.46	ug/kg	
75-09-2	Methylene chloride	ND	6.1	1.2	ug/kg	
91-20-3	Naphthalene	ND	6.1	1.2	ug/kg	
103-65-1	n-Propylbenzene	ND	2.4	0.24	ug/kg	
100-42-5	Styrene	ND	2.4	0.18	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	31	3.7	ug/kg	
994-05-8	tert-Amyl Methyl Ether	ND	2.4	0.65	ug/kg	
637-92-3	tert-Butyl Ethyl Ether	ND	2.4	0.32	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	2.4	0.26	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.4	0.29	ug/kg	
127-18-4	Tetrachloroethene	ND	2.4	0.34	ug/kg	
108-88-3	Toluene	ND	1.2	0.15	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	6.1	0.61	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	6.1	0.61	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.4	0.20	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.4	0.39	ug/kg	
79-01-6	Trichloroethene	ND	1.2	0.23	ug/kg	
75-69-4	Trichlorofluoromethane	ND	6.1	0.77	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	6.1	0.94	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	0.30	2.4	0.21	ug/kg	J
108-67-8	1,3,5-Trimethylbenzene	ND	2.4	0.20	ug/kg	
75-01-4	Vinyl chloride	ND	2.4	0.25	ug/kg	
	m,p-Xylene	ND	1.2	0.27	ug/kg	
95-47-6	o-Xylene	ND	1.2	0.25	ug/kg	
1330-20-7	Xylene (total)	ND	1.2	0.25	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		70-122%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	D-4 (7')		
Lab Sample ID:	JC35757-1	**Date Sampled:**	01/18/17
Matrix:	SO - Soil	**Date Received:**	01/19/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	85.3
Project:	GESMD:PC# 007805 Bel Air Xtra Fuels, 2476 Churchville Road, Bel Air, MD		

VOA Full List + Oxygenates

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	109%		68-124%
2037-26-5	Toluene-D8	103%		77-125%
460-00-4	4-Bromofluorobenzene	108%		72-130%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	D-4 (7')		
Lab Sample ID:	JC35757-1	**Date Sampled:**	01/18/17
Matrix:	SO - Soil	**Date Received:**	01/19/17
Method:	SW846 8015C SW846 5035	**Percent Solids:**	85.3
Project:	GESMD:PC# 007805 Bel Air Xtra Fuels, 2476 Churchville Road, Bel Air, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LM86902.D	1	01/20/17	KC	01/19/17 13:50	n/a	GLM3437
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.9 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	14	6.9	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	91%		70-116%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: D-4 (7')
Lab Sample ID: JC35757-1 **Date Sampled:** 01/18/17
Matrix: SO - Soil **Date Received:** 01/19/17
Method: SW846 8015C SW846 3546 **Percent Solids:** 85.3
Project: GESMD:PC# 007805 Bel Air Xtra Fuels, 2476 Churchville Road, Bel Air, MD

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Z60033.D	1	01/23/17	KP	01/21/17	OP99993	G2Z2262
Run #2							

	Initial Weight	Final Volume
Run #1	10.2 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	11	3.3	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	83%		13-142%
16416-32-3	Tetracosane-d50	85%		12-141%
438-22-2	5a-Androstane	85%		13-142%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SGS ACCUTEST

CHAIN OF CUSTODY

SGS Accutest - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

PAGE 1 OF 1

FED-EX Tracking # 7853 5567 0521 | Bottle Order Control #
SGS Accutest Quote # | SGS Accutest Job # JC35757

Client / Reporting Information

Company Name: Drake Petroleum Company
Street Address: 15 NE Industrial Rd.
City: Branford State: CT Zip: 06405
Project Contact: Andrea Taylorsen-Collins E-mail:
Phone #: 860-220-3600x3703 Fax #:
Sampler(s) Name(s): Tim Boswell Phone #: 704-706-5165

Project Information

Project Name: Drake Bel Air #7005
Street: 2476 Churchville Rd.
City: Bel Air State: MD
Project #: 045353
Client Purchase Order #: Direct to Drake-7805
Project Manager: Andrea Taylorsen-Collins

Billing Information (If different from Report to)

Company Name:
Street Address:
City State Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Full Suite VOCs + oxy and naphthalene (8260)
TPH-GRO (8015)
TPH-DRO (8015)

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

SGS Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	Ni Water	MEOH	ENCORE	Full Suite VOCs + oxy and naphthalene (8260)	TPH-GRO (8015)	TPH-DRO (8015)	LAB USE ONLY
1	D-4 (7')	o	1/18/17	0930	TB	SO	5					5				X	X	X	D25 TS 14RA 49112

Turnaround Time (Business days)

- [x] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day RUSH
- [ ] 2 Day RUSH
- [ ] 1 Day RUSH
- [ ] other

Emergency & Rush T/A data available VIA Lablink

Approved by (SGS Accutest PM): / Date:
INITIAL ASESSMENT AM 1/18
LABEL VERIFICATION MJ

Data Deliverable Information

- [ ] Commercial "a" (Level 1)
- [ ] Commercial "b" *Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] *NJ Data of Known Quality Protocol Reporting*
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [x] EDD Format
- [ ] Other

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

equis@gesonline.com
ndlabs@gesonline.com
ataylorsoncollins@gesonline.com
Sample inventory is verified upon receipt in the Laboratory

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	1/18/17 1600	1 Fedex	2 Fedex	1/19/17 955	2
Relinquished by Sampler: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by Sampler: 5	Date Time:	Received By: 5	Custody Seal # ☐ Intact ☐ Not Intact	Preserved where applicable ☐	On Ice ☐ Cooler Temp. 2.6 IP

4.1 4

SGS Accutest Sample Receipt Summary

Job Number: JC35757 **Client:** _____ **Project:** _____

Date / Time Received: 1/19/2017 9:55:00 AM **Delivery Method:** _____ **Airbill #'s:** _____

Cooler Temps (Raw Measured) °C: Cooler 1: (2.6);

Cooler Temps (Corrected) °C: Cooler 1: (4.0);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

SM089-02
Rev. Date 12/1/16

JC35757: Chain of Custody
Page 2 of 2

APPENDIX C

Boring Log

BORING LOG

ID NO. **MW-7R**

Groundwater and Environmental Services, Inc.

PROJECT: **0403053**
ADDRESS: **2476 Churchville Road, Bel Air, Maryland**
Drake Bel Air #7805

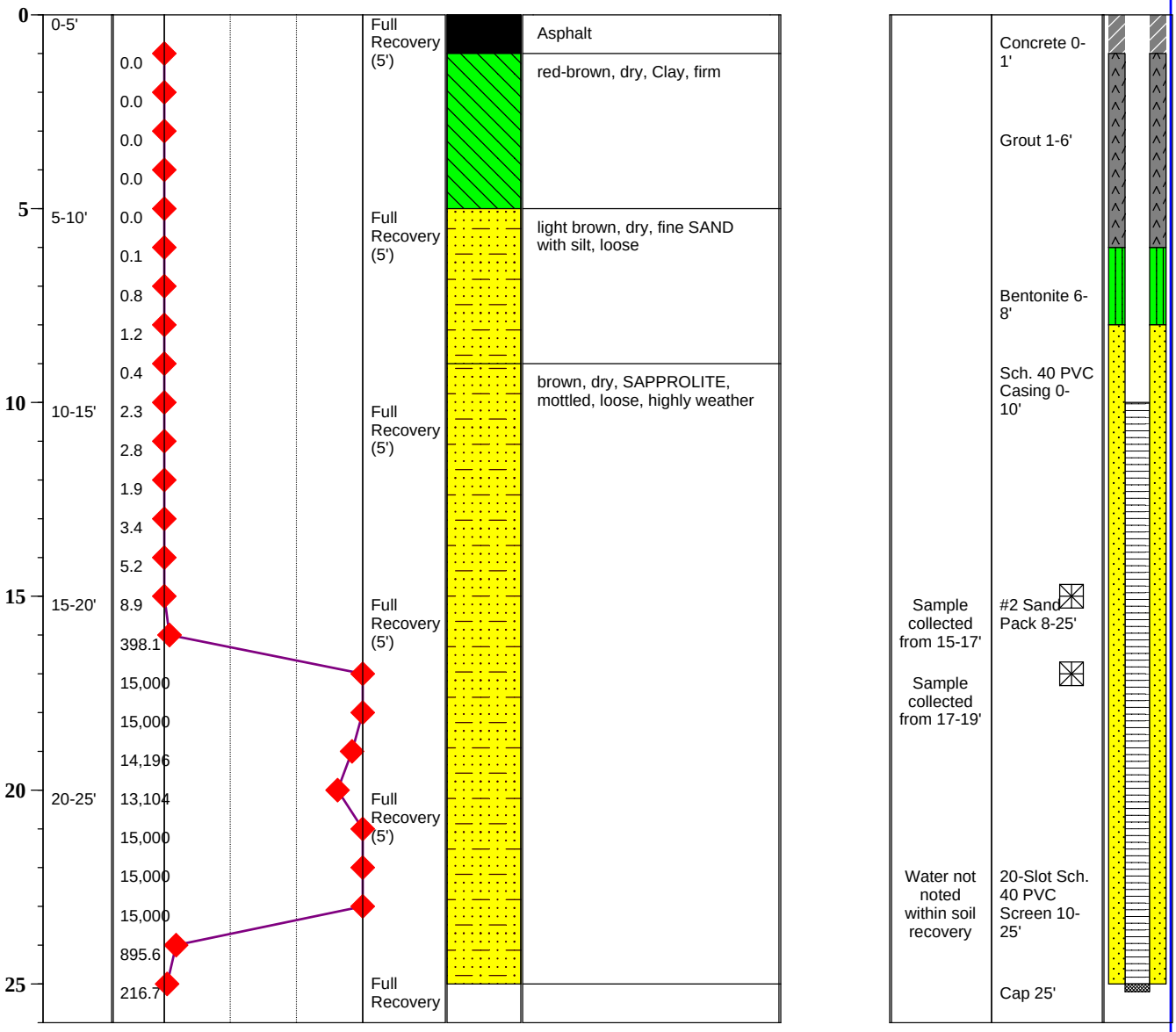
WATER DEPTH: **24.19**
BOREHOLE DIA.: **10 1/4"**

TOTAL DEPTH: **25'**
CASING EL.: **402.76**
WELL DIA.: **4"**

Logged By: **Tim Boswell**
Dates Drilled: **1/11/2017**
Drilling Company: **Allied Well Drilling**

Drilling Method: **Hollow Stem Augers**
Sampling Method: **Direct Push 5' acetate sleeves**
Soil Class. System: **Unified Soil Classification System**
Field Screening: **PID, 10.6 eV Lamp**

Depth (feet)	Sample Interval (feet)	Field Screen: Total Organic Volatiles (ppm) 0 – 15,000	Recovery (feet)	Sample Lithology	Stratigraphy	Comments	Completion Details
0	0-5'	0.0, 0.0, 0.0, 0.0, 0.0	Full Recovery (5')	Asphalt; red-brown, dry, Clay, firm		Sample collected from 15-17'	Concrete 0-1'; Grout 1-6'
5	5-10'	0.0, 0.1, 0.8, 1.2, 0.4	Full Recovery (5')	light brown, dry, fine SAND with silt, loose		Sample collected from 17-19'	Bentonite 6-8'; Sch. 40 PVC Casing 0-10'
10	10-15'	2.3, 2.8, 1.9, 3.4, 5.2	Full Recovery (5')	brown, dry, SAPPROLITE, mottled, loose, highly weather		Water not noted within soil recovery	#2 Sand Pack 8-25'
15	15-20'	8.9, 398.1, 15,000, 15,000, 14,196	Full Recovery (5')				
20	20-25'	13,104, 15,000, 15,000, 15,000, 895.6, 216.7	Full Recovery (5')				20-Slot Sch. 40 PVC Screen 10-25'; Cap 25'
25			Full Recovery				



LEGEND

Proportion Descriptions:
Trace = <10% Some = <50%
Little = <25% And = 50%

Symbol Key:
Water Level
Sample Location

" = inches
' = feet
ppm = parts per million
eV = electron volt

Well ID: MW-7R

Groundwater & Environmental Services, Inc.
1350 Blair Drive, Suite A, Odenton, Maryland 800.220.3606 Fax 410.721.3733

APPENDIX D

Waste Manifests - Soil

Clean Earth of Greater Washington, LLC

Profile GTN

Transactions from 01/01/2017 through 01/31/2017
Inbound and Outbound Tickets
Third Party and Intercompany Customers
Sent and Unsent Tickets
Full Details

Ticket	Date	Truck	In / Out	Manifest	Customer	Gross	Tare	Net
163190084 - Drake - Bel Air Xtramart #7805					Global Job Number: 142901			
700000561456	01/19/17	19WILTSHIRE6	I	001	DRA116-DRAKE PETROLEUM CORP INC	43.31	13.62	29.69
700000561463	01/19/17	19G&J1	I	003	DRA116-DRAKE PETROLEUM CORP INC	41.59	14.48	27.11
700000561466	01/19/17	19WILTSHIRE9	I	002	DRA116-DRAKE PETROLEUM CORP INC	41.09	13.04	28.05
700000561470	01/19/17	19KMAR01	I	005	DRA116-DRAKE PETROLEUM CORP INC	43.11	13.70	29.41
700000561477	01/19/17	19WILTSHIRE4	I	006	DRA116-DRAKE PETROLEUM CORP INC	35.99	12.70	23.29
700000561483	01/19/17	19WILTSHIRE5	I	004	DRA116-DRAKE PETROLEUM CORP INC	37.34	12.96	24.38
700000561487	01/19/17	19190TRUCKING	I	007	DRA116-DRAKE PETROLEUM CORP INC	30.36	14.30	16.06
700000561534	01/19/17	19LADYV1	I	008	DRA116-DRAKE PETROLEUM CORP INC	37.61	12.52	25.09
700000561791	01/19/17	19WILTSHIRE6	I	1446898	DRA116-DRAKE PETROLEUM CORP INC	42.38	13.62	28.76
700000561806	01/19/17	19KMAR01	I	1446899	DRA116-DRAKE PETROLEUM CORP INC	42.79	13.70	29.09
700000561868	01/19/17	19WILTSHIRE4	I	1446901	DRA116-DRAKE PETROLEUM CORP INC	40.63	12.70	27.93
700000561870	01/19/17	19WILTSHIRE9	I	1446900	DRA116-DRAKE PETROLEUM CORP INC	43.05	13.04	30.01
700000561950	01/19/17	19G&J1	I	1446904	DRA116-DRAKE PETROLEUM CORP INC	41.27	14.48	26.79
700000561954	01/19/17	19LADYV1	I	1446906	DRA116-DRAKE PETROLEUM CORP INC	40.44	12.52	27.92
700000561968	01/19/17	19WILTSHIRE5	I	1446902	DRA116-DRAKE PETROLEUM CORP INC	40.62	12.96	27.66
700000561972	01/19/17	19C&R7	I	1446905	DRA116-DRAKE PETROLEUM CORP INC	42.16	14.56	27.60
700000562014	01/19/17	19C&R8	I	1446907	DRA116-DRAKE PETROLEUM CORP INC	38.43	15.15	23.28
700000562018	01/19/17	19C&R14	I	1446903	DRA116-DRAKE PETROLEUM CORP INC	39.16	12.45	26.71
700000562048	01/19/17	19C&R3	I	1446908	DRA116-DRAKE PETROLEUM CORP INC	37.84	12.99	24.85
700000563804	01/24/17	19WILTSHIRE8	I	1446923	DRA116-DRAKE PETROLEUM CORP INC	49.96	14.84	35.12
700000563842	01/24/17	19WILTSHIRE6	I	1446924	DRA116-DRAKE PETROLEUM CORP INC	45.09	13.62	31.47
700000563877	01/24/17	19KMAR01	I	1446926	DRA116-DRAKE PETROLEUM CORP INC	44.72	13.70	31.02
700000564072	01/25/17	19WILTSHIRE7	I	1446928	DRA116-DRAKE PETROLEUM CORP INC	45.55	14.82	30.73
700000564271	01/25/17	19KMAR01	I	1446938	DRA116-DRAKE PETROLEUM CORP INC	44.41	13.70	30.71

Ticket	Date	Truck	In / Out	Manifest	Customer	Gross	Tare	Net
163190084 - Drake - Bel Air Xtramart #7805					Global Job Number: 142901			
700000564286	01/25/17	19WILTSHIRE6	I	1446937	DRA116-DRAKE PETROLEUM CORP INC	41.85	13.62	28.23
700000564332	01/25/17	19WILTSHIRE9	I	1446936	DRA116-DRAKE PETROLEUM CORP INC	45.81	13.04	32.77
163190084 - Drake - Bel Air Xtramart #7805								723.73
26 tickets								

Report Grand Totals

723.73

26 tickets